



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

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PUBLICATIONS AVAILABLE FROM THE SPCNI TREASURER

Check List of Named PCI Cultivars

Lewis Lawyer, Editor: 48 pages. Lists and describes Pacific Coast native iris and named hybrids through 1990. \$5.00 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.

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.

FROM THE EDITOR

We would like to compile a resume file about our members, and to do this we need some information from you about your garden.

Approximately how many clumps of PCI do you grow? Are these mostly from seed or are they plants of named varieties? Have you ever made any crosses or saved seed from open-pollinated pods for planting in your garden? Are you interested in species or in growing species? Do you grow PCI because of your general love of flowers, for a love of a specific type of flower, because they go well with your type of garden plan? How long have you known or grown PCI? Are there any topics which you would like to see discussed more fully in the ALMANAC? Having answers to these questions would help us in our selection of topics for future issues.

On page 5 is an announcement about the new Check List. For those of you not acquainted with this publication, its primary purpose is to list and describe each named PCI cultivar known to have been

introduced or grown in someone's garden. It also has other interesting information about the PCI and the hybridizers who introduced them. If this type of information would be of interest to you, we suggest you invest in a copy.

I would also like to suggest that any of you who have never participated in one of our "Expeditions", consider doing so this coming May. Members who have gone on previous trips must have enjoyed themselves, because we get a lot of repeat business. The one coming up this year should be a must for those of you living in northern California and southern Oregon. I know that it is a long way to drive, but if the High Divide area is anywhere near as spectacular as it was to us last year, I guarantee you won't be disappointed. Come on along! The looking's fine! And don't forget to bring your camera.

And film!



SEED HAVES, HAVE-NOTS, AND WANTS

Information from Louis & Caroline Fry
Transmitted by Adele Lawyer

Seed Chairmen, Louis and Caroline Fry, inform us that seed of the following species are either running low or have been completely depleted: *I. bracteata*, *I. chrysophylla*, *I. fernaldii*, *I. hartwegii*, and *I. purdyi*. Although they usually receive seed from our members in the late summer or fall to replenish our supplies, they wanted to inform you of the items which they particularly need at this time. Seed from these and other species which would be in your seed-gathering routes later this year would be much appreciated. Please label your contributions with the species or name, the source location, and the color of the flower, or other special plant or flower characteristics, if known. Open-pollinated or hand-pollinated seed from named varieties, either individual or mixed, would also be appreciated.

Some members have written Louis Fry with requests for specific items. Those which the Frys have been unable to fill to date are: *I. purdyi* for Rob Potterton and Joan Trevithick, *I. tenuissima* subsp. *purdyiformis* for Louis Fry and Jean Peyrard, true "Valley Banner" for Margaret Lundquist, *I. hartwegii* subsp. *australis* for Michael Ford, seed from John White and other cold-climate growers for Ruth Mougey, yellow form of *I. macrosiphon* for Bob Ward, and *I. hartwegii* subsp. *pinetorum* for Louis Fry. We hope it will be possible for our readers to collect these items for us.

It is fortunate that PCI seed does not lose its viability in storage, and holdover seed which was initially of high vitality will continue to germinate well. For this reason, we list the same seed source of items for more than one year if supplies

of that lot are sufficient. Open-pollinated seed of named cultivars is replenished yearly because collecting them does not involve leaving the confines of one's own garden.

Louis Fry also reports on what he calls the "popularity parade". The following items were most requested:

Nineteen orders for *I. tenuis*; 17 for *I. tenax* collected on Monument Peak, OR; 14 for *I. macrosiphon*, Marin County, CA; 12

each for "Sierra Butterflies", (Lawyer), *I. fernaldii*, (hand-pollinated by Frys), and *I. munzii*, (hand-pollinated by Frys); 11 each for *I. bracteata* from Whiskey Creek, OR, *I. tenax* from Botkin Creek, OR, and *I. tenax* collected on Silver Star Mountain SW Washington at 3000 ft. elevation; 10 for *I. chrysophylla* near Detroit Dam, OR; 9 for Lawyer sdlg. X Lawyer sdlg., (munzii flower on vigorous plant); and 8 for *I. in-nominata alba*, (cream white form).

NEWS FLASH

One of our members, Kim Blaxland, of Pennsylvania, is the overall winner of the British Iris Society's Year Book pho-

tography contest. She won with her photograph of *Iris chrysophylla* taken on SPCNI's EXPEDITION 1991!

DARA EMERY

From a note by *Carol J. Bornstein*, Santa Barbara Botanic Garden

Dara E. Emery of Santa Barbara passed away on Wednesday, February 12, 1992 following a brief illness.

Dara was born in Los Angeles, California on July 26, 1922. He graduated from Hollywood High School in 1941 and worked for one year for the Vega Aircraft Corporation in Burbank. He spent three years in the U. S. army, serving for a time with the medical corps in France. Following the war, he attended California Polytechnic College at San Dimas and San Luis Obispo where he majored in Ornamental Horticulture. After receiving a BS degree and a secondary teaching credential, he taught for two years at San Fernando Junior High School.

Dara moved to Santa Barbara in 1955 when he was hired by the Santa Barbara Botanic Garden as their first horticulturist. In this capacity he was responsible for growing thousands of plants propagated annually for the Garden. At that time he also began a plant breeding and selection program to develop native plants of especially pleasing form, color,

or adaptability for home gardens. More than a dozen new cultivars have been introduced to the nursery trade as the result of his work, including the white iris, CANYON SNOW, winner of the 1979 Mitchell Award, and the most popular iris in a recent SPCNI poll.

In 1981, Mr. Emery became the Botanic Garden's first full-time plant breeder. He retired from this position in 1990 but continued his plant breeding of native plants in an emeritus capacity. Dara's contribution to the advancement of native plant horticulture throughout California is widely recognized.

In addition to writing numerous articles and publications on native plant propagation, he authored the book, *Seed Propagation of California Native Plants*, and served on the Advisory Council for the Jepson Flora of California at UC Berkeley.

Contributions to his memory may be made to the Dara Emery Memorial Fund at the Santa Barbara Botanic Garden or to the American Cancer Society.

PCI CHECK LIST REVISED

Lewis Lawyer

The newly revised Check List of the Pacific Coast Iris cultivars and species is ready for release. This issue, the fourth such revision, contains 48 pages, and includes all registrations through the latest (1990) AIS publication of such data. It is available from the SPCNI Secretary-Treasurer for \$5.00, postpaid, or \$4.00 if picked up at her address or wherever else it is available. We plan to have copies for distribution at the AIS National Convention and the 1992 SPCNI Expedition at Crescent City.

The substance of the contents closely follows that of the Third Edition, but the layout and type-style follows the format used in the ALMANAC. The contents are divided into 4 parts. Part 1, "Named Cultivars", includes named PCI cultivars, named selected species, and named inter-series garden hybrids: Cal-Sibes, etc. Part 2, "Species", includes a list of species and

subspecies, natural hybrids, synonyms and common names, and natural habitats. Part 3, "Supplemental Information", includes a listing of the originators and their cultivars, registrants by year, and two new sections described in the paragraph below. Part 4 is a section on awards.

Part 3 of the new Check List, as noted above, contains two new sections. The first is a list of the species and named cultivars most often used by hybridizers in subsequent crosses, and the number of such progeny for each. The second is a brief historical summary of the hybridizers involved in the evolution of the PCI from the wild species of the late 18th and early 19th centuries, to the myriad of elegant named cultivars now available.

The color print, below, shows two of the 645 cultivars included in the new checklist.



Amiguita (Nies, 1951) and Endless (Ghio, 1985)
fraternize in the Lawyer garden

SPCNI EXPEDITION 1992

Adele Lawyer

The dates for the 1992 Expedition are Saturday, May 16th, and Sunday, the 17th, and those of you who can spare the time may well wish to extend the weekend for one or two additional days, since you will be in an area where a generous concentration of *Californicae* species can be viewed both north and south of our base at Crescent City, California. Please note this location because, although we initially announced that Arcata or Eureka would be our starting point, we could get no accommodations on those dates since they coincided with graduation at Cal State University at Arcata.

The Best Western Northwoods Inn at Crescent City is the headquarters motel, and our bus will depart and return to this inn on Saturday. There are other motels and recreational vehicle facilities available, however, and if you decide to sign on, a list of these will be part of your information packet.

Air transportation direct to Crescent City is more costly than it would be to a large metropolitan city, but it is available through United Express. Round trip fare from San Francisco was \$243 when I inquired. Air transportation is also available from Seattle, and Portland. Still another alternative will be discussed at the end of this article.

On Saturday, May 16, we will be traveling by bus out of Crescent City to Smith River and Rowdy Creek Road to the High Divide and Low Divide Roads in Six Rivers National Park in the Siskiyou Range. Although the altitude reached is only about 2500 feet, the vegetation has an alpine look, with many neat clumps of wild flowers in addition to *Iris innominata*.

This area, which we visited last year, is a natural rock garden, and there are lovely views of ocean and mountains along the way. The roads wander all the way to Whiskey Creek near O'Brien, Oregon; but although not a far distance, this would require a 4-wheel drive vehicle, something a bus is certainly not!

We may wish to spend the whole day looking and photographing on the roads here, but we should push on. Then, on and off Highway 199, we will see *I.*

bracteata, *thompsonii*, *douglasiana* and hybrids between them.

On Saturday evening we will get together for a program which will feature a presentation by Carol Wilson who, along with her husband, Clyde Calvin, will be helping to identify native flowers and shrubs with which we may not be familiar. Carol was the senior author of a paper which was reprinted in the Fall 1990 *Almanac*, indicating that *Iris thompsonii* should have species status. She is presently engaged in a study to clarify the subspecies of *I. tenax*. It may well be that *I. tenax* subs. *klamathensis* also deserves to be a separate species.



Blue-violet Form of *Iris innominata*
High Divide area

We will caravan on Sunday instead of using a bus, and the stops on that day are dependent on the pace of the previous day. The feature of the day will be a visit to Larry Moss' garden at Big Lagoon, near Trinidad. His garden is one of the most beautiful we have ever seen. It has a natural woodland feel, containing rhododendrons, and a marvelous collection of special perennials, featuring Pacificas, along with many other types of iris. We were particularly overwhelmed by his thriving

bed of *Meconopsis betonicifolia*, the sensational, blue Himalayan poppy, which may well be in bloom during our visit.

Larry Moss, who has taken responsibility for local arrangements on this trip, is quite a remarkable person. Members will remember his article in the Fall 1990 issue of the *Almanac*, in which he tells why he chose to take up residence in this coastal area where temperatures avoid extremes, there is adequate rain combined with good drainage, and a loamy acid soil. He complains that if he throws a PCI in the compost heap, it will grow.



Lavender Form of *Iris innominata*
High Divide area

He has designed a beautiful home with a garden in harmony with the structure. In fact he does some garden design work, mainly woodland and perennial gardens. He is presently the Executive Director of the Smith River Alliance, (the organization responsible for establishing the Smith River National Recreation Area). He has also been the National Conservation Director for the Sierra Club, the Deputy Secretary for Resources for the State of California, and the Executive Director of the Planning and Conservation League. He also plays the guitar, and has even taught and performed professionally with this instrument.

Those who will not be driving to Crescent City should let us know so that we can see if transportation with others can be arranged. Also let us know if you would like to share motel rooms or transportation, (either as a passenger or a driver)

with others. Participants could possibly be picked up at the Oakland or Portland airports by individuals living near those areas.

Please send a deposit of \$30 to Adele Lawyer, SPCNI Secretary, by April 10 to reserve space for the trip. Also let her know about transportation plans and whether you would like to share a room. Reservations for the motel have to be made through SPCNI in order to take advantage of the discount. Most of you will want to stay Friday night as well as Saturday at the Northwoods, since the bus will be leaving from there at about 8 am Saturday morning. Let us know your preference. Box lunches for Saturday and Sunday, and bus transportation for Saturday will be included in the arrangements made by SPCNI. A packet with details on the trip and arrangements is being prepared by Larry Moss and will be sent to you after receiving your deposit, or if you are interested in hearing more details before committing to the trip.

For those of you who are interested, we have arranged an optional supplemental itinerary. We have made an appointment to meet with Mr. Max Creasy, Botanist at the U. S. Forest Service station at Orleans on May 15, the Friday preceding the trek at Crescent City. He has agreed to guide us to an area where we can see *Iris tenax* subsp. *klamathensis*. Orleans is possibly the most out-of-the-way location in all of California, but it is the only place in the world where you can see *Iris tenax* subsp. *klamathensis* growing in the wild. The plan is to stay overnight at the Best Western Tsewenaldin Inn at Hoopa on Thursday night, and meet with Max, and our own iris expert, Carole Wilson, at Orleans Friday morning. Orleans is about a 30 minute drive from Hoopa. We should have ample time to see and photograph the iris at Orleans, since the drive on to Crescent City from Orleans takes only about 3 hours.

Hoopa is in the Hoopa Indian Reservation on State Highway 96 between highway 299 at Willow Creek and I 5 north of Yreka, and is about 30 minutes from Orleans. To get there take highway 299 west from Redding or east from Arcata, and turn north on 96 at Willow Creek. From there it is 12 miles to Hoopa. Although we will attempt to stay together as much as possible for meals etc., reservations, transportation, and food for this part of the trip are on your own.

A TENAX-CHRYSOPHYLLA HABITAT

L. G. Cruger Roseburg, Oregon

We took a drive to the Mill Pond Park one evening in early June and noticed a lot of wild irises along the road. Knowing you would be interested, we went back the next day, explored the area more thoroughly, and took photographs. It is well worth a visit if anyone is in the area.

To get there, go about 20 miles east out of Roseburg on Highway 138 to the town of Glide. Four miles after the bridge leaving Glide, turn left on Rock Creek Road, (Highway 78). The road goes for about 6 miles to Mill Pond Park. One mile up the road the irises start. They are a mixture of *Iris tenax* and *Iris chrysophylla*. At the road sign of 501, (3 miles),

there are what appear to be hybrids between *tenax* and *chrysophylla*. At road sign 611, (BLM Road 25-2-29.0), there are many *I. tenax* of varying color, some being extremely dark purple. There are more *I. chrysophylla* and less *I. tenax* the closer you get to Mill Pond. I think you will enjoy the area.

Ed. note: L. G. (Bud) Cruger was a long-time associate of Lewis and Adele Lawyer at Del Monte Corporation, Agricultural Research Department, where he was in charge of vegetable breeding at the time of his recent retirement. The photos below were taken by him along Rock Creek Road. Note perianth tube length.



I. tenax



I. tenax - chrysophylla



I. chrysophylla

PACIFICAS FIND A NEW ADVOCATE

Kathy Millar, Duncan, B.C., Canada

I started growing irises in 1987 after discovering that there were other kinds of irises besides the ones that look like grass, (Mom said they were "Flags"). Actually, the reason I stumbled on this startling information was due to my wedding invitations. I had decided to make them myself and wanted to illustrate them with the sketch of a flower. I don't know why I decided on an iris, I guess it was just Fate. To find some iris pictures, I went to the Agriculture and Forestry Library at the University of British Columbia, where I was currently studying agriculture.

Well, I couldn't believe there were so many books on irises! The periodical section even carried the AIS Bulletin. To make a long story short, I fell in love with species iris, joined the AIS, and started hunting down these elusive "other than TB" irises.

At first I collected the easy-to-find *reticulatas* and Dutch irises, but soon discovered wonderful gems in local gardens. One of these gems called "Oregon iris", had formed a small colony under some large shrubs in a friend's garden. Apparently they had been there when she purchased

the property, and she had already owned the place at least a decade. They were very small-flowered and of various pale lavender shades. Of course I asked for a plant and was kindly given several divisions. Unfortunately, this took place in the hot, dry weather of summer, (It was the right time to move TB's wasn't it?), and I lost every one of them. Since then, however, I have located other PCI's and most have flourished, even the ones collected by a friend while traveling through Oregon, (*Iris tenax* and *I. douglasiana*).

Then I discovered Laurie's Garden, (Lorena Reid's), and I was truly in iris heaven. Unfortunately, the few species PCI's I ordered from her did not survive; however, I did buy a packet of seeds.

Two years later, some of the seedlings bloomed. Please understand that until that time I had never laid eyes on any hybrid PCI's. Well, were they pretty! And then, the next year, more bloomed. Now I was up to my ears in these things and absolutely sold on them. They grow like grass up here on Vancouver Island, even through our "cold" winters where the thermometer dove down to -1°F. They tolerate the summer drought and my awful, sandy soil, and even do well in pots.

The next logical step was to join the SPCNI and put an order in to Joe Ghio. In the meantime I opened a small iris and hosta nursery and began to speak at local garden clubs on species iris. Because I had so many flowering seedlings this season, I was also able to start using them in my landscape designs. (My husband runs the landscaping end of our business). I feel that PCI's are ideal landscape material because they are relatively compact, evergreen, tolerant to sun or partial shade, and adapted to our droughty summers and acidic soil, - and they are even deer resistant!

In my nursery, some of the PCI's are pot-grown, and some are planted in the ground. They seem to tolerate a wide range of soil types and grow very vigorously in a peat-perlite-vermiculite mix which I favor as a potting medium. Seeds are started in cell packs in either a soil-compost mix or the previously described mix. I try to have them sown by December, and leave them outside to chill. By February, I bring them into an unheated greenhouse just to speed up the germination; but I really can't swear as to how effective this is, as my records are not well

kept. I really enjoy growing them from seed. Putting them on a greenhouse bench makes it easier to get up close to see them. I certainly enjoy watching those little guys poke through the soil.

Some seeds are germinated outside in rows, but they don't transplant as well as those from the cell packs where they can be easily popped out with almost no root disturbance. From the cells, the seedlings go into 2 1/4" rose pots, (longer than normal), where they are grown on for the rest of the season. Ideally, they are then potted up into 1-gallon nursery pots in the fall, but I guess next spring will have to do. This fall I put some right into the garden (in desperation), and I will be very interested in comparing their growth to the rest of the batch still in their little pots waiting for spring transplanting. While the 1-gallon plants are left outside sunk into sawdust, the small pots are put into coldframes or the unheated greenhouse.

I use very little fertilizer, relying instead on compost and leaf mold. This isn't because I am "organic", but a matter of time and effort. The PCI's receive just one dose of soluble 15-30-15, so I may not get as much growth as I could, but by growing them "hard" they may be more reliably winter hardy.

I have several goals in respect to irises. First, simply to grow both species and hybrids, and enjoy them. Next, to spread the "gospel" through educational talks, my nursery, and by utilizing them in my landscape designs. I am aware of only one other nursery in Canada that presently grows and sells PCI's. It is farther east in my province and experiences lower winter temperatures. Finally, I want to hybridize. To date, I have registered two hybrids; one from seed sown about 20 years ago by a gardener in Victoria, and the other from seed (Thompson and Morgan) sown in 1987. I am introducing them in my 1992 catalog. PCI's are one of the most satisfying irises to hybridize and grow because they set seed easily, germinate readily, and can bloom in two years after sowing. They are, of course, extremely beautiful, too!

In the short time that I have belonged to the SPCNI, I have been very impressed with the *Almanac*. The articles are interesting and informative. I especially enjoyed the article on Joe Ghio. When you are as isolated from iris people as I am, it is a pleasure to "meet" other members via

the written word. And the photos are great, especially for someone who has never seen a Joe Ghio "Cadillac"!

I will be coming on the Expedition this year. I also want to extend an invitation to anyone who finds themselves in my neck of the woods. We live about 34 miles north of Victoria on Vancouver Island

just outside the small town of Duncan. Our 3 acres of gravelly hillside is mostly covered in Douglas fir and some cedar, just the sort of habitat a PCI should like. Peak bloom is around mid-May. Our phone number is (604)748-4615 and (604) 748-0487 (messages). Gary and I and the cats look forward to meeting you!

THE BIG FREEZE

Compiled by *Lewis Lawyer*

In the spring, 1991 issue of the ALMANAC we included some information gleaned from the "big freeze" of December, 1990. We ran out of space in the last issue, but will now continue that discussion with some information which has since become available.

THE BIG FREEZE, IV

Larry Moss, Trinidad, CA

I enjoyed the recent issue of the ALMANAC, and thought I would send my thoughts along while they are fresh. [April 24, 1991]

I liked the article on cultivars although I can't muster up the enthusiasm for CANYON SNOW which some others exhibit. Perhaps if I lived in another climate I could.

As to the freeze, the temperatures in my garden were very similar to yours, with a low of 18°F one night. The cold winds were ferocious when the front first moved in, 50 miles per hour when the temperature was 30°F. The temperature of 20°F in Eureka at the weather station tied one other year for the lowest ever recorded. We also had a couple of other cold spells at the end of December and the first part of January with temperatures as low as 24°F.

The native PCI were not damaged by the weather although the blooming season is the latest it has ever been. The first blossom of *I. douglasiana* didn't open until April 22, although it turned out to be a normal to heavy bloom year.

The hybrids that have been in the garden for over a year all came through fine, although many of the plants seem to have shortened bloom stalks and new growth is somewhat retarded.

Last year, in October, I put in 28 new cultivars, (most of them from Joe Ghio's Bayview Gardens). Obviously they didn't have much opportunity to establish themselves before the freeze so I expected a lot of dead plants this spring. Fortunately my expectations were not realized. Only Ghio's HERALD has definitely died and SIERRA BUTTERFLIES doesn't look as if it is happy. The other 26 seem to be established, although many have not put out as many new shoots as they normally would have. I noticed in the *Almanac* that PEANUT GALLERY was prominently mentioned as a casualty. In my garden Peanut Gallery was one of the plants I purchased from Ghio and planted last October. It is one of the healthiest new plants and has 4 or 5 bloomstalks.

My garden may be fortunate in that all the plants are fairly well-shaded during the winter months, and in most places, drainage is extremely good. So I feel that new transplants are fairly safe here if they weren't killed during December of 1990.

THE BIG FREEZE, V ANOTHER THOUGHT

Claude Derr, Estacada, OR

Looking back at the cold spells, it looks as if any plant that was growing in solid soil seemed to make it alright. The ones I replanted into loose soil, even with a lot of new growth showing, I lost. I feel that once a plant has been in one spot long enough, the ground has a chance to settle down and become more compact around the plant. When I cultivate between my beds, the next day I find a lot of moisture in the ground, but the solid ground does not do that.

A friend used to tell me to mulch new plants the first year. After that I think the ground has enough time to pack down around the plant to protect it. I had *Iris japonica* in the ground for a year, and the cold never bothered it. The cold didn't hurt the wild *I. tenax* on the hill.

Most of the soils in the wild where I have dug seem to be compact with a lot of fine gravel for good drainage. Maybe if we pack the soil around the plants when we plant them we will have better luck, and maybe once they are planted we should not disturb the soil around them.

THE BIG FREEZE, VI

Bill Ferrell, Philomath, OR

Like those of you from California, we were hit with an early freeze last December. In fact it was pretty severe, with temperatures here only slightly above zero Fahrenheit. What's worse, there was no snow on the ground.

I'm especially vulnerable because I grow my plants in pots. The freeze took me a bit by surprise, and I didn't get plastic to cover them before the first night the hard freeze hit. Another side of this weather problem was the warm weather which we had in late January and early February. It brings things out of dormancy and then drops the other shoe! I waited for another cold snap to give the whammy to the ones that didn't get whacked by the early freeze. I think this is properly called "weather paranoia." Most Oregonians suffer it to some degree.

It didn't freeze again, but it's been cloudy and rainy ever since, - the wettest, coldest spring I can remember. It makes it easy to grow seedlings but there is lots of rot, leaf spot on the tall-bearded, etc. It seems to me that there ought to be a lot more selection for disease resistance. Our tall-bearded really look awful in spite of three sprayings with Benlate for leaf spot control. It has rained so much that I've hesitated to spray unless there's a promise of at least 24 hours without rain. Those opportunities have been rare.

The bad weather did spur me on to look into growing my PCIs in raised beds. That sounds easy, but my soil is heavy clay subsoil, so I must manufacture my own, using river loam and bark dust. We have lots of bark dust here as you can imagine. I'd be interested to know if any of you have had

experience with growing PCIs in this way. Among other things, I hope to be able to grow more sensitive things such as *munzii* hybrids here under those conditions.

In the following table I've summarized my experience with the survival of the PCIs following the freeze. My results are for plants grown in pots, which makes the selection process quite severe. The survival of new plants is terrible under such conditions. I lost all 20 of the new plants I obtained last fall and they are not reported here. The only ones listed are those which had been established for at least a year.

1: Cultivars Unaffected

Agnes James, Deepening Shadows*,
Fairy Chimes, Gone Native, Linda Vista,
Mini-Ma, Montara, Napa Valley,
On and On, Peanut Gallery, Rainbow
Island, Rio Del Mar, Simply Wild,
Something Wild, and Up All Night.

2: Cultivars Damaged

A' Sante, Campaigner, Canyon Snow*,
Clarice Richards, Cup of Tea, Gold
Angel, Joey, Lone Prairie, Vasona*,
and Western Queen.

3: Cultivars Dead or Near-Dead

Aztec Robe, Banbury Beauty, Banbury
Gnome, Big Wheel, Bonnie Doon,
California Mystique, California
Sunshine, Canyon Snow*, Carbonera,
Deepening Shadows*, Del Rey, Ego
Trip, Endless, Gabrielino Indian,
Going West, Ignacio, Junipero,
Lemonade Springs, Mimsey, Pescadero,
Pomponio, Rincon, Roaring Camp,
San Tomas, Sierra Stars, Small Town,
Solid Citizen, Sombriel, Stroke of
Midnight, Three Cornered Hat, Tia
Maria, Vasona*, and Western Movie.

* Some plants of these cultivars are in another category also.

THE BIG FREEZE, VII

Lewis Lawyer Oakland CA

It is with a feeling of humility that I must confess that there may still be a few details we don't quite understand about frost or freeze injury to the PCI. When Adele and I were attending the Japanese iris convention in Portland this June, we had an opportunity to take a few notes on freeze injury in the PCI at the Aitken

garden in Vancouver. We had no trouble with the good plants. They came through the freeze with no damage and were growing lushly. With the dead plants, however, we couldn't be absolutely sure what killed them, although with some it was quite obvious. In the table below, we have placed the cultivars in the three classes used by Bill Ferrell: those whose plants were unaffected, those with frost-damaged plants, and those whose plants had succumbed to the cold.

1: Cultivars unaffected

Deepening Shadows, Drive You Wild, Montara, Night Editor, Ojai, Pacific Coastline, Pacific Frost, Pacific Rim, Pampanio, Roaring Camp, and Tunitas.

2: Cultivars Damaged

Ano Nuevo, Big Wheel, California Mystique, Endless, Idylwild, Laguna Creek, Las Olas, Peanut Gallery, Small Town, and Solid Citizen.

3: Cultivars Dead or Near-Dead

Bottom Dollar, Butano, Cupertino, Elberta Peach, Foreign Exchange, Long Shot, Moraga, Napa Valley, Queen Califia, Rare Reward, Sierra Dell, Stroke of Midnight, and Uvas.

It was obvious when I compared various lists of freeze-damaged cultivars that there was far from complete agreement on which cultivars were resistant and which were susceptible. I decided to determine the coefficient of correlation in the severity of frost injury to those cultivars found on more than one list. For those of you who are unfamiliar with the term, "coefficient of correlation", it is a statistical procedure which gives you a number indicating the degree of correlation between two sets of data.

The answer ranges between +1 and -1. An answer of "+1" indicates a perfect correlation. In this case it would mean that all cultivars killed by frost in one garden would also be killed in other gardens, and that all frost damage was the result of the genetic make-up of the cultivar. An answer of "-1" would indicate a negative correlation, and a "0" indicates no correlation at all. In this case, a "0" would mean that frost kill was random, and that the genetic make-up of the cultivars was not a factor.

Actually, the coefficient of correlation was +0.195 which means that there were some genetic differences in frost susceptibility of the various cultivars, but also

that something else even more important was involved.

One of the factors other than genetic, and possibly the most important, is how long and how well the plant had been established before the freeze occurred. In this case, however, all of the plants in the survey were established for one year or more.

Actively-growing plant tissue is usually more frost susceptible than dormant or hardened tissue. For this reason, what happened to a plant in the few days preceding a freeze can be very important.

Microclimates can be influential, although in this particular freeze, the accompanying wind would certainly diminish the possibility of pockets of colder air.

Whatever the cause, it is hard to explain why Peanut Gallery could have been untouched in two gardens, killed in another garden, and damaged severely in still another. Why would Deepening Shadows be unscathed in one area of the Ferrell garden, but be killed in the Aitken's garden and in another section of the Ferrell garden? We had Sierra Dell growing in two areas of our garden in unprotected gallon pots, none of which was even slightly injured. It was killed in the Aitken and Bennett Jones gardens, but unscathed in the Robert Schreiner garden where the temperature dropped to 2 degrees.

All of this shows that there are factors other than genetic involved in frost injury, but it doesn't mean that genetic resistance is not important. Only five of the cultivars in this survey were selected in areas where freezing temperatures were involved in their selection. A high degree of genetic resistance to freezing could conceivably have eliminated all of the recorded deaths, even in the face of the many other factors involved.

Before closing, I want to mention another item discovered since the first review in the spring, 1991 ALMANAC. As noted in that article, almost all of our losses occurred in seedling beds which had been lined out earlier that same year. These losses eventually totaled 40 percent, and almost all the deaths were to plants which, typical of *I. munzii*-derived plants, had not increased well. Most showed symptoms within a week, and most had varying degrees of obvious leaf damage.

Two plots, however, one with 10 plants and the other with 5, behaved quite differently. None of the plants in these two

plots exhibited leaf damage when they were graded in March, but starting in mid April the leaves of all the plants in both plots started to turn brown, and within a month all were dead. A few individual plants in other plots behaved the same way, no leaf damage at the time of the freeze, but followed by the gradual browning of all the leaves, each of which remained in a stiff, dry, upright position.

I don't know for certain, but it seems to

me that the only explanation would be that these plants exhibited a different genetic factor for frost resistance in the leaves than in the roots, and that the roots of the plants in these two plots were killed despite the lack of injury to the leaves. In early September, one of the 10 plants in the largest plot, sent up a single shoot which six months later is still very much alive. None of the other 23 plants recovered.

THE BIG FIRE, RECIPROCAL OF FROST

Adele Lawyer

Our 1990-91 experience with unaccustomed extremes of cold was shared with the entire West Coast of the United States, and reactions of plants of many genera have been widely documented. Now, through the devastating wild fire in the hills of Oakland and Berkeley, we are learning more about reactions of plants to the other end of the spectrum, - extreme heat!

The wild fire that sprang upon our hills in October was like a dragon from hell, breathing 2000 degree fire on everything in it's path. Homes, trees, flowers, insects, lizards, squirrels, pets, and humans on it's route were destroyed in an instant. And the Pacific Coast Iris which were a feature in several gardens, disappeared along with every other living thing touched by the flames.



In December the PCI's were just starting to poke through the ground.



On our second visit in March the plants were growing to perfection.

Across the street, at the Gordon Piper property, which was destroyed, house and all, by the fire, their extensive collection of tall bearded iris were also vigorously poking their succulent heads through the charcoal.

To be up to date for this *Almanac* issue, we again went to the Wilson's on March 6. Workman were hustling about with carpentry work, and they had buried the



Even the strongest PCI's had a hard time here, but if you look carefully, there are 5 or 6 leaves on the edge of the bank!

Pacifica bed we had photographed earlier with a conglomerate of debris from the partially destroyed house.

The PCI's in an adjoining bed, however, looked wonderful! The foliage was bright green, the clumps discrete and clean, and an early purple variety was blooming at its normal blooming time. It hadn't missed a beat!



This purple *I. douglasiana* was blooming

The accompanying decumbent ceanothus had also completely recovered, although the taller ceanothus and *Cistus skanbergii* on a higher slope were no longer in evidence in this section of the garden. We could see, however, that the cistus, (rock roses), were thriving in the back garden where the wildfire had leapt over their planting location.

LETTERS FROM SUBSCRIBERS

DISEASE CONTROL

Hilmary Catton, New Zealand.

I promised to let you know how I got on using the Ridomil (the name for Subue when used on food crops). The result was fantastic. I was so thrilled to have this bed of beautifully healthy PCI's that I had to keep inviting friends around to see them, and they were all impressed. The bed I used had never had any type of iris in it before. I didn't fumigate it, but drenched it thoroughly with Ridomil. I dipped the seedlings and used the solution to water them in. Since then I have drenched the bed twice at 3 month inter-

vals. I haven't given them anything since and have been careful not to water when it was too hot. I had planted several PCI plants in other parts of the garden and had given them no treatment. They have since all shown signs of dying off. I drenched them well, and it does seem to have stopped the rot spreading.

I find that Ridomil is used by most commercial nurserymen in New Zealand, but it is not available to gardeners in small quantities.

I have also found several clumps of the small spurias, *sintenissii* and *maritima* showing similar browning-off in part of the clump, and by drenching them well, seem to have saved them.

POLLEN STORAGE, ADAPTABILITY,
and "CAL-SIBES"

Susan Lambiris Raleigh, NC

I was very interested to read the article in the Fall '87 issue of the *Almanac* about pollen storage. I am also beginning a program of breeding miniature daffodils and, following the advice of James Wells, obtained large gelatin capsules and the small, silica-gel-containing desiccant cans used to keep prescription medicine containers fresh from my local drug store. Mr. Wells puts the flower anthers in the gelatine capsule and stores that, plus a desiccant container, in a 35 mm film container. I thought you might find this an interesting and convenient way to keep your pollen dry, if in fact you don't already use the drug-store desiccant.

My first PCI's were 6 hybrids ordered from Bay View Gardens, which I planted in October 1990, the day after they arrived. My chosen site was the well-drained, acid, moderately rich, lightly shaded (especially in summer) north edge of an asparagus bed. Because of the asparagus, I did not use Subdue or any other fungicide at planting, but all 6 seemed to settle in well, and each produced new growth during the unusually mild winter. Unfortunately, as the weather became warmer and wetter in the spring, 3 PCI gradually turned brown and died. Two others were unaffected, and the last, SO-QUEL COVE, began to turn brown but maintained a large, healthy fan. Since mid-March these 3 survivors have held their own, and BLACK EYE produced a delicious bloom. I think my losses were due to climatic stress on the newly established plants and I have tried to replace them with more vigorous and resilient cultivars,- all three survivors were described in Ghio's catalog as "vigorous". I also hope to try growing more marginal PCI, (both species and hybrid cultivars), from seed in order to reduce the stress of adapting to North Carolina.

I was thrilled to see the color photo of ALMA ABELL in the *Almanac*. I've seldom seen such a pretty blue. I'm afraid, however, that munzii-blue would be most unhappy here. If McCaskill had trouble with it in Southern California, what chance would I have? But it would be interesting to cross pollen from a "munzii-blue" with a good blue or white form of *Iris lactea*,

which is a good grower in my area and forms "Cal-Sibe"-like crosses well.

I must admit that I suspect that Cal-Sibes will do better than PCI's have, and breeding Cal-Sibes is my ultimate goal. I am also intrigued by the possibility of using tetraploid PCI and tetraploid 40-chromosome Siberians. John White's discussions of colchicine-treated PCI seedlings interested me very much, and I hope at least some of his possible tetraploids survive the Maine winter!

SUCCESS WITH SEED

Mary Fraser England

Exerps from a letter to Seed Chairmen, Louis and Caroline Fry

You will be delighted to hear that all the seed you sent me, except *I. bracteata* and the white form of *I. purdyi* grew. I do, however, have three good plants of the extra purdyi you sent me. I am well on to getting the complete collection of native Pacifica growing vigorously. The *I. tenax* (pink-lavender) from Claude and Joanne Derr, which I did not manage to plant until a year after I received it, was planted two months ago. It germinated immediately, and already I have 10 little plants about 10 cms. high! The nine munzii plants which I am growing in a cold greenhouse are about 30 cms. high and very fat! I hope I am not too late to order the *I. tenuis* collected in Clackamus County, Oregon, as I have quite a number of evansias and hope to send seeds next year to you.

I hope, now I have so many lovely species from you, that there will be plenty of seeds in the coming year to send you in return for the kind interest and help you gave me last year. We were not allowed to use hosepipes this year where I live because of the absence of any rain for over two months, and as a result any seed pods we had are virtually useless.

Finally, I managed this year to send plants from your seeds to various members of the British Iris Society and the Species Group. These included *I. fernaldii*, which grows here like a little fountain, *I. douglasiana* (cream form and coastal form), and *Iris chrysophylla*. They were very enthusiastic in their praise.

How I should like to be able to join the 1992 Expedition! Perhaps I might be able to come in 1993.

CALLING ALL NURSERIES

Our readers often write to ask us where they can obtain Pacificas. We frequently list those we know about, principally those who ship named cultivars. These include Aitken's Salmon Creek Garden, (Terry and Barbara Aitken), 608 NW 119 Street, Vancouver WA 98685, Bay View Gardens, (Joe Ghio), 1201 Bay Street, Santa Cruz, CA 95060, and Portable Acres, (Colin Rigby), 2087 Curtis Drive, Penngrove, CA 94951.

There are many others who grow and sell collected *Californicae* species, potted plants grown from collected species seed, or open-pollinated seed from cultivars. Some even pot plants grown from seed purchased from Joe Ghio. Others, like George Gessert of Eugene, Oregon, distribute seed, in his case from hybrids result-

ing from his collected wild species seed. We would like to know who you are, where you are, what you offer, and whether you have a catalog. Even if you are not in the nursery business, if you know of a source for PCI's, please let us know. Even wholesale nurseries would be of interest, since many of our readers are landscapers.

In Kathy Millar's contribution under "Letters from Members" in this issue, for instance, she mentions the existence of another nursery in Canada which lists PCI's, and we would like to know who that is. It is advantageous for those who want to grow this species, to obtain them from a local source where they are more likely to be adapted to the local environment.

Please send us this information and we will print it in the next bulletin.

SPCNI TREASURER'S REPORT, 1991

	<u>BALANCE Jan 1, 1991</u>	<u>\$2620.79</u>
<u>RECEIPTS</u>		
Dues	956.00	
Dues Through AIS	321.00	
Sales of Cohen Booklets	103.50	
Sales of Lenz Booklets	183.00	
Sales - Back Issues Almanac	92.90	
Sales- Check List	10.00	
Seed Sales	222.47	
SPCNI Expedition	350.00	
Interest on Checking Account	127.28	
Donations	38.00	
Carolly Print	6.00	
<u>Total Annual Receipts</u>		<u>\$2410.15</u>
<u>DEBITS</u>		
ALMANAC Spring, 1991	669.98	
ALMANAC Fall, 1991	798.79	
Secretary - Treasurer	123.15	
SPCNI Expedition	162.94	
Supplies	127.34	
Almanac Reprints	81.17	
50 Cohen Booklets	68.01	
35mm Slide Collection	70.83	
Check List	16.07	
Mitchell Award	17.20	
<u>Total Annual Debits</u>		<u>\$2135.48</u>
<u>BALANCE Dec. 31, 1991</u>		<u>\$2895.46</u>

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