# **ALMANAC:**Society for Pacific Coast Native Iris



Fall, 2007 Volume XXXVI, Number 1

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# PUBLICATIONS AVAILABLE FROM THE SPCNI TREASURER

Prices listed are for SPCNI members

#### **Check List of Named PCI Cultivars**

Lists and describes Pacific Coast Native Iris and named hybrids through 2005. ~70 pages. Hardcopy or CD: \$9.00 for USA, \$11.00 for Canada, and \$13.00 overseas. For both a CD and a hard copy, the cost would be \$4.50 less for the CD.

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#### A Revision of the Pacific Coast Irises

Lee W. Lenz: Photocopy of Aliso original. Booklet 5.5x8.5, 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. \$8.00 postpaid, \$10.00 out of U.S.

# **Hybridization and Speciation in the Pacific Coast Irises**

Lee W. Lenz: Photocopy of Aliso original. Companion booklet to the above, 5.5x8.5, 72 pages, 30 figures, graphs, drawings, and photographs. Definitive work on naturally occurring inter-specific crosses of PCI, including detailed account of distribution. \$8.00 postage paid; \$10.00 out of U.S. If ordered together, both Lenz booklets may be obtained for \$14.00, postpaid, \$16.00 out of US.

#### **Diseases of the Pacific Coast Iris**

Lewis & Adele Lawyer: ALMANAC, Fall 1986. 22 pages, 9 b/w photographs. \$4.50 postage paid, \$6.50 out of US.

#### SPCNI SLIDE SETS

Two slide sets are available through SPCNI. They can be obtained by requesting them from: Terri Hudson,

33450 Little Valley Road, Ft. Bragg, CA 95437

(707) 964-3907. The charge is \$7.50 for either of the two sets. The first set deals with species: the second set is concerned with hybrids. **The combination set is no longer available.** The slides in each set will be contained in a Kodak carousel. The carousel will be convenient to use and less likely to be damaged in shipment. Payment (payable to SPCNI) should be sent to Terri Hudson. The person requesting the slides is financially responsible for return of the slides.

#### **ALMANAC**

DEADLINES: March 15 and September 15. **Back issues** are available for \$4.00 each, postpaid. **Index** by Subject, Species, Hybrids or by Author, \$4.00 each postpaid. (This is also on the web site to download)

Contact Terri Hudson at the address above.

1

#### MEMBERSHIP AND SUBSCRIPTIONS

The Society for Pacific Coast Native Iris is a section of the American Iris Society. Membership in AIS is **not** a requirement for membership in the SPCNI, but is suggested and may be of considerable benefit.

Membership	Individual	Family
Annual	\$8.00	10.00
Triennial	20.00	23.00
10 year	60.00	75.00
20 year	110.00	125.00

Please send membership monies to the SPCNI Treasurer. For foreign: annual or triennial please add \$4.00 per membership per year; 10/20 year membership, please add \$20/\$40 per membership.

# IMPORTANT INFORMATION FROM THE SECRETARY/TREASURER

#### **DUES NOTICES**

First dues renewal notices will no longer be sent. Please note the expiration date of your membership on the address label. This date indicates the month and year that your SPCNI dues are due. We will continue to send a final reminder notice if we have not heard from you in 90 days.

#### **AMERICAN IRIS SOCIETY**

Membership in the American Iris Society is not required for SPCNI membership. However, AIS membership is suggested and may be of considerable benefit.

Send Membership renewals or inquires to the Membership Secretary:

Tom Gormley

10606 Timber Ridge St., Dubuque IA 52001-8268 e-mail: aismemsec@earthlink.net

Annual,	Single:	\$25.00	
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امتيما	Cinalo:	420.00	

Annual, Single: \$30.00
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Dual: \$80.00

Calendar year memberships. May be paid by check, VISA or MasterCard. Overseas memberships include first class postage, and are payable in U.S. currency.

#### TABLE OF CONTENTS

PRESIDENT'S MESSAGE3
SAVE OUR HISTORY4
WELCOME NEW MEMBERS4
ADELE LAWYER 4-5
UPDATED INDEX5
'PACIFIC MISS' - MITCHELL MEDAL5
PHOTOGRAPHY CONTEST6
'CANYON SNOW' -SPCNI HISTORY 6-7
CULTURAL INFORMATION 8-17
SEED EXCHANGE17-21
PHOTOS, KNOWN AS 'MUG SHOTS' 22-23

#### **SPCNI MEMBERSHIP LIST**

SPCNI is offering its membership list of individuals for a slight fee to cover the cost of mailing and printing (approximately \$3.00 for the US, \$4.00 for out of U.S.). This list can be used only for contact purposes and cannot be used or sold as a business mailing list. If anybody wants to be excluded from the list, please contact Terri Hudson.

Visit the award winning SPCNI Website For great photos and articles <a href="http://www.pacificcoastiris.org">http://www.pacificcoastiris.org</a>

#### PLEASE ADVISE SPCNI AND AIS OF A CHANGE OF ADDRESS

# FROM THE HOT SEAT: The President's Message

The world has not slowed down in the slightest.

When Almanac Editor Jody Nolin advised your SPCNI Executive Board that the Spring issue was in the mail, she also tendered her resignation. Jody was elected RVP of her AIS region last fall, and gradually found she was no longer able to do justice to SPCNI. We understand how that goes! -- and we thank her for the excellent job she did for us while she could. Terri Hudson was brave enough to volunteer to pull together this fall issue of the Almanac. The very good news is that Gareth Winter of Masterton, New Zealand has agreed to be our new Editor. This works because Jody is willing to continue coordinating the printing and mailing processes. We are very pleased as Gareth will bring a new viewpoint to SPCNI.

Last spring the iris world lost Lois Belardi. Late this summer the 'Mother' of SPCNI, Adele Lawyer, passed away; a memorial article appears elsewhere in this issue. I think those of you who were privileged to know her, even only slightly, will agree that we are the poorer—and that she is at last reunited with her beloved Lewis.

Several other things of import occurred this summer as well.

- 1. The editor-pro-tem of the AIS Bulletin asked this spring if we, an AIS section, would like to submit an article somehow illuminating SPCNI. You may have seen the result in the July Bulletin, and we reprint it.
- 2. One day a website browser emailed the webmaster, "Why isn't there any PCI cultural information on the website?" which was indeed the case. We reviewed inputs from members in a half-dozen widely-differing areas, and came up with a composite of PCI-growing advice which is now up on the website. It is based largely on the cultural information originally written by a past president of SPCNI, Gigi Hall, who we felt did an excellent job.
- 3. Terri Hudson finished indexing all the Almanacs to date, and put the resulting .pdf file up on the SPCNI website for us to reference when needed, or download to our computers for more frequent use. Adobe Acrobat Reader is necessary for this, but it is available free from the Adobe website. A paper copy of the index can be yours for \$4.00 (postage cost) by writing to Terri Hudson. Try looking back over SPCNI history, or reading some of the articles from Adele Lawyer, for starters!
- 4. Somewhat in line with this last item, I have created the office of SPCNI Historian/Archivist and appointed Richard Richards to the post, at his own request. Richard has been in on SPCNI since its inception, so who better to archive its history? One of his first tasks will be to process some notes on the organization's beginnings donated this summer by Robert Parker, founding Secretary/Treasurer of SPCNI.

For next year, I regret that at this time, there are no plans for a Trek in 2008. No one has had time to put one together. If you have some suggestions or would like to volunteer, or know someone else who would, please contact me or any other SPCNI officer. Treks create a wonderful opportunity for many members to come together and visit the reason for this organization---Pacific Coast Native Iris!

Last, but not least, thank you David Schmieder for becoming our Eastern U.S. representative. It is always interesting to find out how well PCIs are faring in the Eastern states.

It's been a long, eventful month, and we're sorry this Almanac is so late. Happy Holidays to you all!

Debby

#### **INTERNET ALMANAC???**

More changes may be in the works. Would you like to be able to download your Almanac from the website, and have a link to it emailed to you when it's ready, instead of receiving it through the postal service? Remember, you wouldn't get color unless you use a color printer. Email comments to Terri Hudson at irishud@earthlink.net.

#### **SAVE OUR HISTORY**

The newly created appointive position of Archivist/Historian is being filled by Immediate Past President Richard C. Richards. Please consider sending him material that is relevant not only to the history of the SPCNI, but also to Pacific Coast Irises in general. Biographical information on early members of the Society is also desired Richards invites members to send him any material they may have and no longer use, or reproductions of any relevant material members desire to keep. For questions, email Richards at <a href="mailto:mongo2u@cox.net">mongo2u@cox.net</a> or write to him at: 5885 Cowles Mt. Blvd., La Mesa, CA 91942

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# SAD NEWS: THE LOSS OF ADELE LAWYER

Resident of Rossmoor, California June 18, 1918 - August 27, 2007

Adele Lawyer, 89, passed away at her Rossmoor residence on Monday, August 27, surrounded by beloved family members. She died from complications related to a four-year battle with cancer. Adele grew up in San Francisco, where she loved piano, drama, and riding horses on the beach. She graduated from Lowell High School and U.C. Berkeley, where she went to work for a handsome graduate student and the love of her life, Lewis Lawyer. Lewis and Adele were married on Friday, August 13, 1937.

Both Adele and Lewis worked as plant pathologists for Del Monte Corporation for over forty years. Throughout her Del Monte career, Adele was the only woman scientist in a group of men. Her work included increasing yields and optimizing size of vegetable and fruit crops through plant hybridization, developing seed treatments, and selecting for disease and frost resistance. The Lawyers divided their time between the Agricultural Research Center in San Leandro and summers spent testing varieties in Rochelle, Illinois, where the family enjoyed the small-town life in the Midwest. Adele received numerous academic and industrial awards for her hybridizing work.

For over 50 years, Adele and Lewis lived in a beautiful home in the Oakland hills with a one acre yard and a view of the bay. The yard was their pride and joy, and they were the hosts of many garden tours. After retirement, Lewis and Adele turned their plant breeding profession into a hobby. They bred clivias, deciduous azaleas, Tall Bearded iris, and Pacific Coast Native iris. They were also very active in the American Iris Society and various affiliates of Region 14, the Rock Garden Society, the UC Botanical Garden, and the California Horticultural Society. Adele was the Scientific Editor of the AIS Bulletin. Adele and Lewis received the Distinguished Medal of Honor from AIS. She was, with Lewis, Editor and an active officer of the Society for Pacific Coast Native Iris as well as a frequent contributor to the SPCNI Almanac.

Lewis and Adele would have celebrated their 70th wedding anniversary on August 13. Their love and marriage was an inspiration to all who knew them, and it is comforting to think that they are finally back together again. When Lewis died of cancer in 2001, Adele left her beloved home and moved to another beautiful home in Rossmoor. She always said that she traded her view of the bay for a view of Mt. Diablo. Adele is survived by her two children, Melanie (Jim Davis) and Artie (Francie). A third child, Lori, preceded her in death. She also has four grandchildren (Lluvia (Scott Aby), Lewis (Laurie), Laura, and Emily) and three great-grandchildren. Adele is also survived by a brother, Abbott Charles (Joyce), a devoted extended family and her caregiver, Del Antonio.

No services are planned. Memorials can be made to the American Cancer Society, the Sydney B. Mitchell Iris Society, SPCNI or the American Iris Society.

\*\*\*\*\*\*Thanks to Marjorie Murray and Mt. Diablo Iris Society for your kind donations to SPCNI in memory of Adele.

#### UPDATED INDEX TO ALL PAST ALMANACS

This winter Terri Hudson finished putting together a complete Index to the SPCNI Almanac covering the years 1973 through 2006. This Index is by Subject, Hybrids, Species and Author. Steve Taniguchi had completed the Subject Index through 2001, and Terri has done all the remaining work. The file is in .pdf format, and requires Adobe Acrobat to open (available free online). Those wanting frequent reference might print out a paper copy to keep on hand. See Inside cover to order a paper copy.

#### 'PACIFIC MISS' TAKES 2007 MITCHELL MEDAL FOR PCI

American Iris Society judges are charged with the responsibility of advising the American public which iris cultivars grow and bloom best and most beautifully. Their obligation is to vote for the iris that have not just the prettiest flowers, but also the healthiest and most attractive plants, not just during bloom season but also the rest of the year. This year's votes are in, and here are the results for the Pacificas.

Winners of the Honorable Mention awards, introduced at least 3 years ago, are Lois Belardi's 'Steamer Lane', Vernon Wood's 'Admiral's Pride', and Joseph Ghio's 'Bar Code', 'Bubble Gum' and 'Ocean Blue'. Runners-up were Ghio's 'Lines That Rhyme' and 'Star of Evening.'

Irises that won an HM at least two years ago and have been further grown and watched are eligible for Awards of Merit. This year's winners were Ghio's 'Star of Wonder' and Alphild Lind's 'Mocha Melody,' with runners-up 'Drip Drop' (Ghio) and 'Magic Sea' (Belardi).

The best of the best is chosen from those irises that have won both an HM and an AM and have been viewed for at least another two years. In 2007 that was Lois Belardi's 'Pacific Miss,' an incredible delphinium blue with darker veining and signal. The iris and its Mitchell Medal are a fitting memorial to the lovely lady we lost this year.

#### SOMETHING NEW—AN ONLINE PHTOGRAPHY CONTEST!

We've seen some beautiful entries in the American Iris Society's photo contest, and thought surely people must also have taken some gorgeous pictures of Pacific Coast iris that they'd like to show off. Here's your opportunity! But in keeping with the times, this contest is going to be strictly online, open to members and nonmembers alike.

Entries may be in either of two categories, 1) Landscape View or 2) Individual Flower, and must be of Pacific Coast iris, either hybrid or species. A person may enter up to 5 (five) different digital photographs of his own taking. Photo size of at least 3 megapixels, that is, 2048 X 1536 pixels or larger is recommended. Extra consideration will be given to entries whose subject PCI are correctly identified.

Entries will be judged by experienced photographers whose identities will be kept secret, to avoid subjecting them to undue pressure. There will be 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners, as well as Honorable Mention, in each category. After the deadline for submission, the public will also be invited to vote for their choice in each category, and a People's Choice winner in each category will be declared.

All entries will be displayed on the SPCNI website, <u>www.pacificcoastiris.org</u> and the winners indicated prominently after judging is completed. Winning photos will also be published in the Spring 2008 Almanac and in the American Iris Society Bulletin.

The deadline for submitting entries is January 31, 2008, and People's Choice voting will be by email to Terri Hudson from February 8 to March 8. Winners will be announced on the website as soon after that date as possible.

The contest opens when the notice and the entry form appear on the SPCNI website. So take some time over the holidays to comb through your collection of digital photos, and prepare to share the best of your PCI shots with the rest of the world online!

## SPCNI'S HISTORY - FROM SIGNA, VIA 'CANYON SNOW'

Debby Cole, Richard Richards and Terri Hudson, written for the July 2007 AIS Bulletin

Pacific Coast Irises have been a subject of considerable interest for over 150 years. The 1829 British Botanical Registry recorded an illustration of *I. tenax* whose seed had been sent to England by botanist David Douglas, most likely from Fort Vancouver on the Lower Columbia River. *I. innominata* and *I. hartwegii* plants have been grown in gardens in England since the beginning of the 20<sup>th</sup> century. Curiously, it was reported in 1913 that *I. douglasiana*, widely regarded on the U.S. West Coast as the toughest PC species, was doing poorly in the British climate's hot, humid summers.

Interest in iris species became apparent in the American Iris Society in the 1950s, and its growth to eight round-robins in the 1960s led to AIS' recognition of a species section, titled SIGNA, in 1966. Interest within SIGNA in Pacific Coast irises was evidenced by the number of participants in a field trip (led by species round-robin chair Roy Davidson) from the 1969 AIS Berkeley (CA) convention to see the wild irises. This eventually led to recognition of a Pacific Coast Iris section, known as SPCNI, by the AIS Board in the spring of 1973. George Stambach and his endless enthusiasm for the PCI had brought popular interest to the boil, and in September of 1973 Ray Chesnik brought the organizational details together for the birth of SPCNI. There were 48 charter members from California, Oregon and Washington, and today there are hundreds of members from around the world.

The specific purposes of the Society are to promote interest in the growing and development of Pacific Coast native iris; to identify varieties and to eliminate duplication in nomenclature; to maintain a complete list of registered varieties and species; to publish information and data; to support research of a scientific and horticultural nature; and to encourage the development and maintenance of display gardens for Pacific Coast Native Iris.

Several of these goals are served in the Society's twice-yearly publication, the Almanac. The title is very apt, as an almanac is defined as a miscellany of useful information, though some of dubious merit, including entertaining remarks, pithy and scientific observations, and remedies for sundry ailments, both grave and trivial. Another feature of the Almanac is the fall issue's fundraising Seed List, offering for sale to members the seed of both PCN species and named PCI cultivars, donated by other members. Seed provides an alternate way of growing Pacific Coast iris for people who cannot obtain or cannot grow live plants from another area. It is also a good way to become familiar with the PCN species for those who can't readily visit the type locales, although the Society does hold Treks every several years to do that.

SPCNI maintains and regularly updates a complete Checklist of registered varieties and species, readily available to members. And in the interest of better identifying varieties, the Society's Recorder has put together a CD of quality photographs of many of them, which will likewise be periodically updated and available to members.

There is probably no Pacific Coast Iris as well known and as widely grown as 'Canyon Snow.' It appears in gardens up and down the Pacific Coast, from Washington State to Southern California. It appears in the ancestry of many recent introductions. It has won the Mitchell Award, the highest award that can be given a PCI by the American Iris Society. It is continually at or near the top in PCI popularity polls, and has been there since shortly after its introduction in the 1970s.

One reason for this wide acclaim is that it is one of the easiest PCIs to grow in a wide range of climates. From the coast to hot inland valleys, from the cold winters of Washington to the hot summers of southern California, this iris not only endures, but also usually thrives. It has survived record cold spells in Oregon. It is presently growing in Phoenix, and has been for five years. It has taken over a whole flowerbed in inland Southern California, where it was planted from a one-gallon pot more than twenty-five years ago. (It has successfully resisted the efforts of the family dog to remove it from the shady bed on hot summer afternoons.) It has been established for long periods of time in Little Rock, Arkansas, and Tulsa, Oklahoma, refuting the belief that PCIs will only grow in mild areas of the West Coast. It is also being grown in Great Britain, Australia, New Zealand and elsewhere.

Some of this wide range of distribution occurs because it has been circulated by several native plant nurseries up and down the coast, whose concern is not that it has won awards, but that it is easy to propagate and dependable when planted at the right time, and sometimes even at the wrong time. Its lush foliage remains bright green and mostly unblemished throughout the year, making it an attractive addition to the garden in seasons other than summer. In its home garden, the Santa Barbara Botanic Garden, it covers the ground like drifts of snow in spring, hence its name. It repeats this performance in most other locations.

As prominent as this iris is today, its origins are wrapped in mystery. According to people at the Santa Barbara Botanic Gardens, a can of it appeared in the propagation area one spring. The origin of this seedling and of the seed which produced it are subject to debate.

What is clear is that 'Canyon Snow' is mostly, if not completely, derived from *I. douglasiana* parents. When it first appeared in the Garden, it was a distinct improvement on the available whites, and still has an aesthetically appealing form, though not as broad of flower parts as many contemporary PCI hybrids. Today it represents an intermediate ground between the slender, graceful flowers of the species, appreciated by the purists, and the very broad form preferred by many contemporary hybridizers.

In vigor and hardiness it surpasses most if not all of the contemporary hybrids. This is a valuable trait both to the home gardener and to the hybridizer concerned with hardiness, vigor, and gardenability, which it passes along to many of its progeny in generous quantities.

All these considerations make 'Canyon Snow' a supreme ambassador for Pacific Coast Native Irises, and a joy to gardeners not only on the West Coast, but also throughout the country, and in those other countries in which it flourishes.

In developing the cultural information just posted to the website, we reviewed materials both old and new. Here is an overview of Pacific Coast Iris, written maybe 15 years ago by Gigi Hall. It is followed by 2007 input from members in difficult growing areas, in order from polar-most to equator-most.

#### THE PACIFIC COAST NATIVE IRIS

The Pacific Coast Native Iris are members of the Series Californicae, and are commonly known as the Pacific Coast Natives (PCNs), Pacific Coast Iris (PCIs), or the Pacificas. They are native to the western coast of North America, extending northward from the San Bernardino Mountains near Los Angeles to the central coast of Washington, and from the shores of the Pacific Ocean to the western slopes of the Sierra Nevada in California and the Cascades in Oregon and Washington. They are generally small and compact plants with slender, wiry rhizomes, and narrow grasslike leaves. Height ranges mostly from 6 to 24 inches with some I. munzii-derived plants reaching to 36 inches. Most are evergreen. Some grow in full sun along the coast, but most grow naturally in lightly wooded areas and on sloping ground that is gritty, well-drained, neutral to slightly acidic, and with considerable humus. Most of the moisture these irises receive comes during the winter months either as rain or as snow, depending on the elevation. They thrive where summers are normally long and dry, but may receive significant amounts of moisture during this period in the form of drip from dew.

The most important factor in their cultivation is drainage. They do not tolerate soils in which water stagnates. Stagnation leads to root damage and various diseases from which the plants cannot recover. Even though the species grow in a wide range of soils, the garden hybrids which we grow tend to do best in soil to which considerable peat or humus has been added and which is slightly to moderately acid (pH 5.5 to 6.5). Along the coast, PCIs tolerate full sun, but inland it is best to plant them in a part of the garden where they receive moderate shade during the hottest part of the day. In most areas, some summer watering is required to keep the plant alive. DO NOT WATER IN THE HEAT OF THE DAY!

Transplanting is most successful when the roots are plump, white, and actively growing. This is best done in the late fall. To tell if your plants are ready for lifting, scratch away some soil from around the base of the plants and search for new white roots. After lifting and dividing, it is vital to keep the roots moist at all times until they are put back into the ground. Once in the ground they should be watered immediately and kept moist until they are well established. In colder climates it is best to keep fall transplants in pots over winter, moving them into your garden only after all danger of frozen soil is over. Once established in your garden, they can withstand considerable freezing, but mulching is desirable under severe conditions. Unlike bearded irises, the Pacificas resent being divided yearly and it is best to let them grow undisturbed for a few years. Feeding may be done in the spring with a camellia/azalea food, balanced slow release or a sprayed liquid.

## Most polar 2007 input, From Gwenda Harris in North Otago, New Zealand (South Island):

Generally PCIs do well in NZ and are very popular. Iris tenax, innominata, douglasiana, and chrysophylla do well, but I have lost so many. However, I have quite a big collection of hybrids and cultivars in a pretty shady woodland situation, with oak, spruce and eucalyptus trees and Cistus, Camellia, Viburnum etc. shrubs. I have given it lots of pine needle mulch and Camellia (acidic) fertilizer. They flower really well, year after year and some have formed quite massive clumps.

When I still ran a nursery, I used to find germination easy, but potting difficult. Some years I lost about 80%. But, I think I was hung up on the idea that PCIs do not like too much watering. That may be true for the mature plants, but as seedlings they do need to be kept moist. I think I remember reading somewhere that if seedlings have not yet produced white roots they should be just put into water until they do. This seems to work for me.

My collection has to compete with lots of tree roots, but I mulch them once a year and feed them, usually with Camellia fertilizer, but also sometimes Nitrophoska Blue (12-5-14). I water them from time to time (because it

does get very dry here), but try to avoid the middle of the day when the sun is on them. We are slightly south of 45 degrees latitude here, or about equivalent to Portland, OR in the Northern Hemisphere.

After my last trip to America, when I saw all those wonderful clumps of Iris douglasiana on the coast of Monterey, I planted some out on the clay cliffs here. (I am about 100m from the sea.) I had carefully taken a note of companion plants and added those too, or as many as I could locate. Unfortunately, I have weeds here that I never saw in Monterey and they are inclined to take over. But I am amazed that, with absolutely no attention except admiration, they have done so well and flower every year. They obviously like a hard patch.

My favourite iris is whatever happens to be in bloom, but when the PCIs do their thing, I am in thrall. I actually have one flowering at the moment (nearly winter) and it is right down in the leaves, but so good to see it. I have some stunning ones, mostly from Ghio seed, but I do really like the slenderness of the species. I have one clump that may be an *I. munzii* hybrid, as it has the elegant wavy standards, but is more lax in growth. After I had seen the munzii in the wild I added rocks, but have not yet found a source of poison oak or rattlesnakes. !!

Although I have tried hard to study their needs and to give them the situation and treatment I think they would prefer, I am constantly surprised at how well they do in the most unlikely situations. I have been growing PCIs for about 15 years and am not about to stop anytime soon.

#### From John White, in Minot, Maine:

Here in Maine (44 degrees north latitude) the summers are fairly dry and mild, mostly 70-75 degrees with only a few days in the 90s. Average winter snowfall is about 60 inches and rain is the same, but it can vary considerably from year to year. Winter temperatures are the killer, with many days below freezing and more than a few below zero. When we can keep the snow cover all winter I have had very good luck with the PCI.

For about 15 years I have grown my PCI in a gravelly loam. They have grown very well in that soil without ever being mulched, until the very severe frost heaving in the winter of '05 – '06. I had over 200 PCI and lost all but one. Last fall I mulched the eight new ones I have, but it is too soon to tell how they have done this winter. My plants are growing on a five to eight degree slope so they have good drainage. I fertilize them with 5-10-10 and spray them with all the other irises to prevent thrips etc.

I have had the best luck growing plants from seed made by crossing with I. tenax, and it seems to work best by having tenax on both sides. I have had a few plants survive as long as 10-12 years.

Some seed was sent to me last May but I did not plant it then. I stored it at room temperature. The first of February I gave the seeds the water treatment in the \*flush for 10 days and then planted them in a flat and stored them in the cold room for 30 days. I have had them in a warm room for over 30 days but nothing has come as yet. After the first of May I will put the flat out in full sun and hope for the best. Years ago I tried scattering seed out in the power line on a good slope in the spring but none of it ever germinated. (\*Seeds are in a mesh bag hanging in the toilet tank. Ed.)

#### From David Schmieder, near Boston, MA:

Glad that some culture info for PCIs in difficult growing areas is being put together. We love those plants, and my favorite project is to try to get some interspecies crosses with LAs, hoping to take advantage of the LAs' ability to endure quite a bit of heat and humidity, which I am guessing is the biggest obstacle to PCIs thriving here. No luck yet. We also make crosses amongst the many clones that we try to grow (and also save seed from so many in which insects have beat us to the prize). From these we have had success as variable as our weather. We have had almost no success trying to grow named varieties from plants, so we have raised hundreds of seedlings over the years, many that for a few years appear to thrive and bloom well, but then peter out for one reason or another. Tunneling by rodents can take quite a toll which some have recovered from. But we suspect some disease that

starts during a long hot and humid spell is what usually does them in. I am sorry not to be able to give information on what species we grow, but we have tried so many different sources of seed, and have never learned to identify the various species. We think I. tenax and I. innominata have been most prevalent in our surviving clones, but don't really know so except for some involving I. tenax and a hybrid we received as germinated seed from John White. No clone has been outstanding enough or persisted long enough to name.

We are at latitude 42.45 degrees north, (approximately, since the references I have found all differ slightly). We usually consider ourselves in USDA zone 5b even though we don't expect a minimum temperature below -10F. It has gone lower but not usually. However, Boston is the country's windiest city, believe it or not, and the highest land wind speed ever recorded anywhere was on top of Mt. Washington, not far north of here. So, when we get, as we often do, temperatures around 0F combined with high winds for long periods, and sometimes strong sunshine as well, our rhododendrons end up with a lot of winter kill, and any unmulched iris from more gentle climes can easily suffer damage or worse. Yet, something like our Magnolia macrophylla that was rated for zone 6 has done well for many years at the spot it is in (if you don't count where the deer have tried to eat its bark). Our maximum temperatures can easily hit 100F, with a few periods of days in the 90's combined with high humidity. It seems that usually comes with drought. Our expected annual rainfall is about 42 inches I believe, but again, that can easily come when you want it the least. Last year set a record for May/June of 30 inches, so I felt lucky to collect any seed at all from that season.

I was hoping that the natural selection from many plants grown from seed would result in some clones laughing at our climate, but so far that hasn't been the case either. I keep trying various areas, since we do have noticeable microclimates even on our 2-acre property, and variations in sunlight also (no really full sun areas though).

Currently, the PCIs growing the best are at the crest of a wooded hillside that faces north. They are quite shaded from 75 ft trees and from some shrubs. Those that I grew in the sunniest part of our garden, and with richer soil, managed to bloom, but did not live as many years as those having more shade in the hottest part of the day. Our soil is sandy, but it is too fine or something, because it tends to pack very hard over time. I am continuously amending it with organic soil conditioners and fertilizers when I start a new bed or redo an old one, and don't tend to use much commercial fertilizer.

I spray as little as possible, mainly for iris borer that never has seemed to attack the PCIs. I usually use shredded pine needles as a mulch year round, and either allow the trees to mulch them for the winter or use some salt marsh hay. I usually don't get around to trimming off old leaves, but will do so if a clump is performing really well and I want it to look better.

When things seem to do well, I usually don't feel I can understand why. Two examples are Spec-Xs -- 1) 'Half Magic' that puts up several bloomstalks every year from its location in a bed that is not very well drained at present and is shaded by a row of white pines whose roots invade the bed, and -- 2) 'Crimson Accent' that has done well in our sunniest garden spot mulched with cedar bark (just because I heard Lorena Reid uses it). In the future, I will continue growing from seed, and attempting interspecies crosses with prismatica, tridentata, LAs etc. And I will spend some time at SPCNI's very nice internet site and see if I can learn to identify the various species that are behind all these seedlings that I am having so much fun with.

#### From Gareth Winter in Masterton, New Zealand (North Island):

New Zealand has a wide range of climatic variation. In some western areas, exposed to water-laden westerly winds off the Tasman Sea, precipitation is measured in yards, not inches. In some inland areas, especially in the South Island, severe and late frosts can be an impediment to successfully growing Pacific Coast irises.

I garden on the east coast of the North Island at about 41 degrees south latitude, in an area that expects about 35 inches of rain each year, although the actual amount is very variable. As a rule we have about 90 rainfall days per year, mostly in winter and spring. At the 2-month-long peak of summer, temperatures exceed 85 degrees Fahrenheit on many days. Summer and autumn are characterized by droughts lasting months at a time. (The region

is well-known for its production of quality pinot noir.) Winters are cold but not extreme; snow is a rare phenomenon, and scarcely ever settles. We experience about 25 frosts per annum. Some years, late frosts damage the stems of the early Pacific Coast irises but they are never killed.

I was familiar with PCI from my grandparents' garden where a few small yellow innominata type flowers grew in a border. When I came to grow a number of varieties, and embarked on breeding my own varieties, I thought they would do best in semi-shade, thinking they would need protection from our summer sun. That turned out to be incorrect and the plants do far better in full sun, even coping with very warm situations. I find that the best success has been with plants grown in a deep mulch of very coarse Pinus radiata bark, but other pines' bark should do well also. The bark provides the good drainage that is essential to growing them if you don't have sloping ground. Well-established plants make their way through the six inches or so of mulch and send roots into the ground. Plants grown in this situation are watered about once a week over the hottest period of summer, but otherwise only receive natural water.

The plants make good strong white roots through the bark mulch and are easily moved, either in early autumn or in spring after flowering – or during flowering. I find they establish best in good potting mix in planter bags. These bags are kept in a more sheltered area, with shade for the first summer. They receive more watering in the nursery than in the garden. Once in pots they seem to move at any time, provided care is taken with watering until they are reestablished in the new spot.

Seed is sown in autumn and young plants are pricked out into individual pots in spring, when the leaves are 2-3 inches high. I grow the seedlings on under benches in the glasshouse over summer, with protection from slugs and snails. They are hardened off in late summer and planted out in autumn. Seedlings planted out in autumn flower in 18 months, sometimes with an autumn flowering after 12 months.

#### To the most nearly equatorial (and most alkaline) extreme, From Richard Richards, in La Mesa, CA (east of Los Angeles):

I garden in a Zone 9 inland valley location at 600 feet elevation, protected from most coastal influence by the 6,000 foot Santa Ana mountains. Summer heat starts seriously in late June, and goes into mid-October. Temperatures are over 100 F. occasionally in summer, but daytime highs are usually in 90s. A 90-degree reading is possible on any day, summer or winter, and one might see 30 degrees in winter a few times in a decade. Most plants which get more than a quarter of a day of full sun will dependably die.

In Southern California we have mostly adobe and other clay soil. It must be lightened, not only with considerable organic matter, such as peat, but also lots of gypsum. The soil is alkaline, and gets more so from our alkaline water over time. Therefore, for PCI soil is best acidified to make it at least neutral, and soil sulfur is usually used.

In coastal SoCal you can get away with a lot, but in inland areas I am finding that most clones require shade for most of the day. Transplanting must occur between mid-November and January 1 in order to have any chance of survival inland. We never worry about cold weather here, so any advice about planting inside is wasted. We do have to protect all plants, from seedlings on, from too much drying heat at any time of the year. I water PCIs in the garden once a week in the summer. Potted material gets watered more often. I water the plants in the ground about once a week in winter as well, unless we have rain. We had under 3 inches total rainfall this year, and I watered all winter. There is mounting evidence that fertilization is beneficial. Some growers are fertilizing pretty heavily, and it seems to work. At present I do not fertilize, expecting the organic matter I incorporate into the soil to be sufficient.

Planting out potted material after the middle of April usually results in plant death. Most nursery personnel in SoCal are unaware of this and will suggest you can plant any old time. If their goal is to sell replacement plants, they succeed admirably.

It seems very appropriate to include articles written by Adele and Lewis Lawyer in this Almanac. These articles were written for the Fall 1987 Almanac but are very pertinent as many of you will be ordering and receiving seeds this winter. Ed.

## PACIFICAS FROM SEED, A SUMMARY

Adele Lawyer

Since the second issue of the Almanac, Spring 1974, 26 references in this publication have covered growing Pacificas from seed. This article concentrates the information to date in a single issue to simplify reference on this subject.

In a way, it seems unnecessary to issue instructions on a function which most PCNs perform very well without any outside assistance. Roy Davidson remarks "Local conditions (in the Seattle area) are ideal so that seedlings come up like grass if left alone and cause a weeding problem." In another Almanac entry, Phil Edinger echoes Roy's remarks: "Here (in Northern California) they come up like grass whether I've planted them carefully in pots of sterile soil or whether capsules have opened and shed their crops on decidedly unsterile earth!"

Nevertheless, planting seeds of PCNs is the most dependable method of establishing these sometimes tempermenta1 *Californicae* in both hostile and friendly environments.

Growers who wish to preserve the identity of a collection of named varieties must cut off flower stalks on these cultivars before they set seed. On the other hand, seeds are carefully collected when crosses have been made, when a quantity of seed is needed for distribution to fanciers, or when plants are selected which exhibit favorable characteristics that could thus be perpetuated.

#### **SUMMARY**

A general summary of the most frequently recommended methods in the compilation to follow is: Plant the seeds in the fall in pots or flats and cover with about a seed's thickness of planting medium. The medium should be fast draining with a pH of 6.5 to 7.0. Plant as many seeds as you can physically separate at transplanting time. Keep the planting medium moist until the seeds germinate in about two months. Transplant when the seedlings are 3 to 4 inches tall in March to May. They can be transplanted into the ground or into containers maintaining the proper pH. They prefer filtered shade or morning sun, especially when summers are hot. Details and variations from many contributors are compiled below.

The outline which follows is divided into five sections: Storage, Pre-conditioning, Time of Planting, Planting Methods and Media, and Transplanting Seedlings.

#### SEED STORAGE

Three individuals plant their seeds as soon as they are harvested. Most store their currently harvested seed until all the season's seeds are collected and plant in the fall. Most collect into envelopes.

Residual seed can be stored as long as 10 years without losing viability. Roy Davidson recommends covered jars for long-term storage to avoid desiccation.

#### PRE-CONDITIONING

Dora Sparrow of New Zealand seals seeds in a plastic container and puts it in the freezer for a few weeks before planting. To avoid the possibility of seed-borne disease, Francesca Thoolen suggests soaking the seed in a fungicide before planting, and Dorothy Hujsak of Oklahoma has soaked seed in tap water for one or more days before planting. She also tried putting seeds in moist peat for a one-month period 1) refrigerated, 2) frozen, or 3) at room temperature before planting in African violet mix. The best and fastest of the three methods was room temperature. If seed is dry and shriveled, Roy Davidson says to try re-hydrating it by starting germination in a saucer in frequently changed water.

#### TIME OF PLANTING

Although this subject is included in the section to follow, it was mentioned often enough so that some generalizations are possible: Seventy six percent of those who mention time of planting specify late July through fall. (Phil Edinger noted that planting outdoors in fall provides a cool, moist environment and, with the prevalent rains, also provides leaching of germination-inhibiting substances.) One person from Indiana specified spring planting. Three people said they got good germination anytime. Two of these retained their planted pots for two years and pinched out seedlings as they emerged during that period. The third person could control temperature after germination in plastic bags so that transplanting time could be regulated.

#### PLANTING METHODS AND MEDIA

Many contributors plant their seed in a potting mix of some kind. The formula used and the methodology employed vary greatly. Phil Edinger specifies that potting mixes should be one third sand for fast drainage and have a pH ranging from 6.5 to 7.0. Seed can be planted close together in pots or flats and must be kept constantly moist until they germinate. Roy Oliphant, like Phil, from Northern California, also uses a good commercial potting mix but plants in plastic pots that have been soaked in potassium permanganate solution before planting. He also screens the potting mix which is placed immediately above and below the seed through quarter-inch-mesh screening to remove hunks of bark. The pots are filled and firmed, watered, planted, covered and firmed again. They are then covered with plastic until germination. Trevor Nottle of the Adelaide area, South Australia, plants seed, whenever he gets it, in a potting mix of peat, coarse sand, pine bark, and slow-release fertilizer. Robert D. Fabel-Ward of Little Rock, Arkansas, also plants in pots filled with a sand-peat moss mixture, as does Dara Emery of the Santa Barbara Botanic Garden. To two parts each of washed sand and Canadian peat moss, Dara adds 1 part medium-grade Sponge Rok and a complete organic fertilizer: blood, bone, cottonseed meal, kelp meal, rock phosphate, decomposed granite, and oyster shell. After planting and covering, he waters with a solution of non-pathogenic micro-organisms to compete and overwhelm any pathogens which might be present.

Dorothy Hujsak reported in 1981 that she was using a mix of three parts of milled sphagnum, two parts vermiculite, and one part Perlite. She planted in 6-pack plastic containers (1 by 1/2 inch) with the bottoms cut out and a number of seeds planted in each section. The 6-packs were grouped together and sunk into the ground outdoors where they were covered with chopped oak leaves and hardware cloth to discourage invaders.

Caroline Spiller of the Strybing Arboretum in San Francisco, Dora Sparrow of New Zealand, and Lee Lenz of Southern California have all planted seed in potting mix and put the containers in a freezer for a 1 to 3 month period before taking them out and experiencing good germination. Lee tried putting potting mix in the containers and over this spread a thin layer of finely screened sphagnum. Seed was sowed between layers of this screened material. After thoroughly moistening the surface, the container was put in a refrigerator for 3 to 4 months, keeping the surface moist. When removed to the greenhouse, the seeds "popped up like a flat of grass".

Caroline Spiller notes that Strybing at present is planting the seed in a moist medium in zip-lock plastic bags. This is also a procedure recommended by Roy Davidson and Dorothy Hujsak. Caroline and Dorothy use moist peat in the plastic bags whereas Roy reported using a sterilized mixture of chopped sphagnum with ground peat, sterile compost, vermiculite, etc. The medium should be wet, but not soggy, and the seeds should be surface sterilized before planting. Seal the bag tightly, leaving plenty of air inside. Both Roy and Caroline say the bags can then be loaded into a box or carton, stacked one on the other, and put in a cool place, - under the bench in a potting shed, in an attic, a basement, a protected area outdoors. Examine the bags as temperatures rise and move those showing some growth to a slightly warmer but still shady location. Germination time can be manipulated. When you wish them to sprout they can be put in the light. They can germinate within weeks of planting and produce flowers the following spring. The advantage to this method is that moisture retention is automatic and that germination can be controlled. The disadvantage is the possibility of loss when the sensitive, somewhat sterile plants are moved into the much less sterile outside garden bed.

Bonnie Bowers of Volcano, California does not specify the planting medium she uses to fill the 2-gallon black plastic pots in which she plants her seed. She sprinkles a preparation called "Aqua-Stor" on top of the seed before she covers and waters them and notes that the pots need less water during the summer months when this material is used. Aqua-Stor is a polymer-based powder capable of absorbing many times its own weight of water. Dorothy Howard reported that Jim Keithley of Oklahoma plants PCNs in pots outdoors and moves them into his garage when particularly cold weather hits. His planting medium is not recorded, but he has had excellent results.

Some of our Almanac contributors used field soil, sometimes amended, rather than potting mix, and many planted directly into the garden.

We can start out with Roy Davidson who also contributed the plastic bag method, suggested to him originally by Hattie Hubbard. In Volume 8, Number 1 of the Almanac he tells of planting seed in a sandy-humus soil in large pots or gallon cans in the fall. The moisture should be watched carefully so that the seeds, once wet, should never dry out. Some early-germinating seeds can be pricked out and transplanted into 3-inch plastic pots, but most are left in for one year.

Francesca Thoolen, in answer to a question from France, advised planting in a soil with sharp drainage, humus added, and of neutral pH. Both the soil and the seed should be soaked separately in a fungicide before planting in 6-inch pots, - about 30 seeds per pot.

John Adan, Johannesburg, South Africa uses ordinary moist garden soil in flats. He scatters the seed over the surface, covers with river sand firmed with a block of wood. Richard Richards of Corona also likes to plant in soil but tries to obtain a soil similar to that in which the species is native. To this he adds soil sulphur, since he finds that seeds germinate better under acid conditions. The late George Stambach, Richard's neighbor, also liked to use acid-amended soil, but added compost and some earthworms to his pots. George advised against the use of peat in pots because it dries out if neglected and is difficult to wet, once dry.

Peg Edwards plants her seeds outside in Massapequa Park, New York, in a cold frame in full sun. She leaves them in the frame for a full year before setting them out. Some even bloom while still in the frame.

Elaine Hulbert, Kathryn Wright, and Robert Fabel-Ward plant directly into the garden. Elaine Hulbert, who now lives in Virginia, was referring to her former home in Connecticut when she reported successfully establishing PCNs in her garden in 1977 by planting seeds in various areas of her property until she found the most favorable conditions. Kathryn Wright used much the same technique in Terra Haute, Indiana. She planted seed in sandy loam soil on a slope in the spring. Those that have emerged are doing well without coddling. Robert Fabel-Ward grows his plants in raised beds in his Little Rock, Arkansas garden. He allows seed from his PCNs to drop to the ground unaided. They sprout freely and produce strong, healthy plants in his heavy clay soil, modified with leaf mold, pine needles, and sand.

The late Dr. Matthew Riddle, of Oregon, wrote in a 1950 American Iris Society Bulletin that seed should be sown in the open, one quarter inch deep and in rows 6 inches apart. He planted in the fall. Lewis Lawyer also plants his seedlings in the open in Oakland, California. Seeds are sown in the fall in a semi-shaded area enriched each year with peat moss. He plants seed one half-inch deep, ten plants per foot, with rows four inches apart. If space permits, a 6-inch spacing makes digging at transplant time even easier. Winter rains take care of the bulk of the watering but hand watering to prevent drying out may occasionally be necessary. Seedlings emerge in two months and average germination is 54 percent. The seeds planted by Lewis are new crosses and seed lots range in germination from 90 to zero percent. He finds that interspecific crosses often have poorer germination than homozygous crosses.

#### TRANSPLANTING SEEDLINGS

John Adan, South Africa, transplants when his seedlings are 3 inches tall. He uses peat pots containing a mixture of soil, peat moss, and sulphur, and he also recommends pine-needle compost. He sets them out from the pots into the garden in the summer, by which time they have strong, fleshy roots. A half day of sun is provided and peat and a light application of sulphur is added to the beds before planting. He has also incorporated well-matured mushroom compost on occasion with good results. He mulches with pine needles.

Peg Edwards, New York, moves her seedlings from the cold frame even when they are in bloom because "they have become acclimated." She loses about half the seedlings in the first year, but the survivors are "nice, healthy, vigorous plants". She can't move them successfully from the cold frame after the beginning of July.

Joan Cooper of Minnesota transplants to a moderately acid, moderately shaded north-sloped wildflower garden. All those that survived seemed reasonably healthy and happy.

Dan Hargreave, who worked on *Californicae* in Australia for over 30 years, planted them in autumn, transplanted seedlings in the spring, and had bloom the next spring. Trevor Nottle, also of Australia, plants in autumn when the rains come. He moves his established clumps then, too. He finds this time best because it is damp and cool.

Dara Emery transfers his seedlings to 3-inch pots when they are 2 to 3 inches tall in January and February. He prefers small pots rather than flats or trays because less root damage will occur when the plants are cut apart or otherwise removed for their next transplanting. Dara applies fish emulsion to water-in the seedlings to give them a good start and he fertilizes these pots every two to three weeks thereafter with the fish emulsion. During this period the small pots must be protected from birds and baited for snails and slugs. In late June or July the "liners" are transplanted into gallon cans and finally, in the fall, they are planted out or sold. In the case of breeding work, the liners are sometime planted directly into the field provided they can be watered, weeded, and degophered as needed.

Robert Fabel-Ward transplants his hybrid seedlings into styrofoam cups where they grow from December until March. Some are planted out in the garden at the end of March and others are reserved for fall planting. They are set out in the styrofoam cups with the bottoms cut out. When they are established, the sides are also cut out and removed.

When Roy Davidson moves his PCN seedlings from their plastic bag nest in the peat, he opens the bag a day or two before moving and adds some dilute Hyponex or Rapid Gro fertilizer. They are then moved into pots and set into a cold frame or cool greenhouse.

Phil Edinger and Francesca Thoolen recommended that seedlings be set out when they are 3 to 4 inches tall, either into pots or the ground. If in the garden they should be situated in an area receiving morning sun or in

filtered shade. They can be set out in March or April in Northern California.

Lewis Lawyer moves his seedlings from one peat-enriched area in his garden to another lining-out location in May when they average 6 inches tall. They are planted in the native decomposed rhyolite soil to which compost has been added a month or more before planting. Peat is incorporated at time of planting and acidity ranges from 5.5 to just under 7.0. Where the pH is 7 or above a small amount of sulphur is added. Seedlings are dug and the soil washed from the roots. The crown and roots are then immersed for 10 minutes or longer in a solution of Subdue (metalaxyl') at one quarter teaspoon-full per four gallons of water. \*(See footnote below) After drenching, the seedlings are lined out for selection in rows 12 inches apart with 6 inches between plants in the row. A portion of these plants will bloom the following spring.

\*A dropper bottle is a simpler method of application when less than 4 gallons of soak solution is needed. It is necessary, however, to calibrate the dropper bottle used in order to achieve the recommended dosage of 0.3 ml per gallon. Count the drops necessary to fill a one-quarter teaspoon measuring spoon and divide this number by 4 to arrive at the number of drops per gallon. John Weiler in the Spring 1987 issue of the Almanac, uses from 6 to 8 drops per gallon whereas Lewis has used 8 to 12, depending on the characteristics of the dropper bottle. A drop or two more is neither phytotoxic nor of extra benefit, only unnecessary. Also, no phytotoxicity occurs if the plants remain in the solution longer than 10 minutes, (even up to overnight), or if some or all portions of the leaves in addition to the roots and crown, are immersed in solution. Subdue is a systemic fungicide which will move into the leaves from the roots without direct contact.

## POLLINATION TECHNIQUES FOR PCNs

Lewis Lawyer, with a section on storage of pollen by Dr. L. Lenz

The simplest way to pollinate most flowers is to let a bee or other insect do it for you; furthermore, if this method is used, you can name your new seedling something cute like "BY A BEE" as was done by Roy Davidson for a Starker Cal-Sibe. On the other hand, although you may know the mother, the father will always remain anonymous, and if you want to know or choose both parents, then you will have to do the pollinating yourself.

In the case of Pacific Coast iris, the simplest way for you to do this is to pluck a pollen-laden anther from the desired male flower with a pair of tweezers and carry it to the stigmatic lip of the desired pod parent. Carefully rub the pollen side of the anther across each of the three stigmata. The AIS publication, World of Iris, states (p. 327) that "... a full set of seeds may often be obtained if only one stigma is pollinated," but I have no personal experience to back up that statement. I have, however, often found the reverse to be true, that is: a poor set of seeds, even though all three stigmata were pollinated. I have found this to be true more often when I do the pollinating rather than when the bees do it. Perhaps you could lay this on the centuries of experience the bees have had in this sort of thing, but I have a feeling that at least some of it is due to injury to the stigmatic lip when I rub the anther across its surface. It is possible that applying the pollen with a small camel's hair brush or other similar soft-bristled paintbrush would alleviate this problem, but for the past two years I have been using both methods with no discernable difference between them. I now believe that most of my problem is the result of incompatibility. Most of the crosses I am trying to make have genetic backgrounds involving at least four different species, and this often leads to various expressions of incompatibility: no seed set, poor seed that fail to germinate or germinate poorly, etc. For example, one of the crosses from which I was particularly anxious to obtain seed was made two years ago between my seedling now registered as SIERRA DELL and pollen from a Lee Lenz blue seedling. I made brush crosses to eleven perfect flowers using ample pollen, and not a single seedpod set. Other pollen brought to the same plant produced seed, as did the Lenz pollen brought to other plants.

The next problem occurs when two desirable parents bloom at different times and the bloom dates don't overlap. The same sort of problem occurs when you want to ship pollen to someone in another area. It can even occur when two desired parents, especially two young seedlings, are in bloom at the same time but the flowers seem to alternate between the two plants and are never at the right stage on the same day. All the above circumstances require pollen storage. This can cause problems since the freshly-plucked anthers are damp and will mold if not handled properly, especially if you are storing more than one or two anthers in a container.

We knew that Dr. Lee Lenz would have had as much experience with storing pollen from PCNs as anyone, since he had done so much work on interspecific crosses and there was no way he was going to convince all of them to bloom at the same time. Furthermore, he had previously shipped us pollen in little, clear plastic boxes, and we had used it successfully. So during our recent trip to Southern California we questioned him about his experiences. The following is from a taped recording made in his office at the Santa Ana Botanic Garden in Claremont.

"Several years ago I carried on an experiment using different storage conditions in humidity-controlled storage chambers. I don't have the exact data here now, but the conclusion reached at the time was that drying or low humidity (around 35 percent was optional) was the most important factor in the preservation of pollen. Since that time, I have used nothing but dried pollen and have even kept pollen, dried and refrigerated, from one year to the next.

"To keep the pollen dry, I use a material called, 'Drierite'. This is a commercial desiccant obtainable from Van Waters and Rogers or other laboratory supply dealers. There are other similar materials that are probably more readily available by someone not working in a laboratory. Two such desiccants that come to mind are calcium chloride and silica gel. Silica gel is used for drying flowers and is obtainable in florist supply or hobby shops. It looks and feels like fine sand. All these materials can be redried in an oven and used over and over.

"The desiccant is put in the bottom of a suitable air-tight container. I use a small glass laboratory desiccator but any available air-tight canister such as are used for food storage should do equally well. I cut a piece of hardware cloth to fit inside the desiccator and form a false bottom over the top of the drying agent so there is no contact with it and the pollen. Then you place your open pollen containers on the mesh bottom and close the lid. After the pollen is sufficiently dried, the little containers can be sealed and placed in the refrigerator; or if you have space, the whole desiccator can be kept refrigerated.

"I have not tried freezing pollen so I have no direct experience to say if it would be better or worse than refrigeration. If it was desirable, however, the freezing would have to be done much quicker than would be possible with a home freezer in order to prevent the formation of ice crystals which rupture the cells. A quick freeze with a coolant such as liquid nitrogen might work; but, as I say, I have only used refrigeration and certainly quick-freezing is beyond the equipment capabilities of most gardeners."

The AIS' <u>The World of Irises</u> recommends storing the dry pollen in small paper envelopes, gelatin capsules, or the small transparent plastic cases used for selling small fishing lures. The containers used by Dr. Lenz for shipping pollen were similar to the small, clear transparent plastic cases described above. They were about 2 inches by 2 inches, and a half-inch deep, with a fairly tight fitting lid. In shipping, the jolting had loosened the pollen from the anthers and it was clinging to the sides and bottom of the little boxes. It was a simple matter to pick it up on the tip of a small camel's hair brush and carry it to a receptive flower.

Last year I got the idea of using the little black plastic containers in which 35 mm color film is packaged for deliver. They have tight-fitting lids, are easy to carry around and are more than large enough to hold any number of anthers. In order to eliminate any identification mix-ups, I labeled each container AND ITS LID on self-adhesive paper labels before I placed the anthers inside. Since the film boxes are quite small, I used small pieces of Avery self-adhesive typewriter correction tape, which is available at most stationary stores, for this purpose.

The instructions for the use of a brush in <u>The World of Irises</u> recommends sterilizing the brush between each cross by dipping it in 50 percent alcohol. If you only have a small quantity of pollen from a very desirable plant, however this can be quite wasteful. I figured that it would be less wasteful of pollen and more convenient to have a separate brush for each pollen source. Little red-sable watercolor brushes purchased at an art supply store can be unbelievably expensive, but I found that I could get reasonably priced substitutes by the dozen in a school supply store. (Look in the yellow pages under 'School Supplies'). I cut off the long wooden handles down to the metal ferrule. This makes the brushes short enough to store inside each individual film container. The brushes get covered with pollen and are always ready to use.

Last year I did not use a desiccant for drying and in two cases where I evidently closed the case too soon after gathering the anthers, I ran into mold and had to discard the mess. This year I will use a drying agent, probably silica gel that Adele already has a supply for drying flowers.

I haven't done this before, so I am only guessing, but it seems to me that an ideal substitute for a laboratory desiccator would be one of those rectangular plastic food storage containers with its air-tight plastic lid such as you can find in most supermarkets. A piece of hardware cloth with its edges bent down to keep it above the drying agent would be quite simple to construct and you would be in business. To hold the film containers,

which are 2 inches in height, the large container would have to be at least 3 inches deep. A can such as a coffee can with a plastic lid, or a jar, might also work for drying small amounts of pollen.

For readers who are new at hybridizing and who do not have access to <u>The World of Irises</u>, the best time to make a cross or gather anthers is immediately after the flower has opened. Some prefer to do it even before the flower opens, but tearing the flower apart to do this is in conflict with my aesthetic nature and I prefer to wait for the flowers to unfurl on their own so that I can enjoy their beauty as well as exploit their procreative attributes.

One final word of caution: You should always remove the anthers from the selected pod flower before pollinating the flower. This is especially true when using a brush because the pollen from the anthers of the pod flower is usually in a position where it will contaminate the brush.

(The World of Irises can be purchased from the American Iris Society Store Front. www.irises.org Ed.)

# 2007-2008 SPCNI SEED EXCHANGE - Bob Sussman, Seed Exchange Chair

This year's Exchange has a few changes for both new seeds and a simplified pricing structure. Yeah, "simplified" pricing is code for slightly higher prices but more consistent with the realities of domestic and international postage.

#### Here's how it works:

All seed packets are now \$1.00 Postage and handling \$1.00 International postage and handling \$3.00

#### What I need:

- 1. Item#, name, and number of packets per item #
- 2. Shipping address
- 3. Check made out to SPCNI. For orders over \$15 you can use a Master Card, Visa, or Amex with the card number, the name on it and the expiration date
- 4. Email address just in case
- 5. List of substitute seed items also, just in case

Get me your orders buy January 15<sup>th</sup>. They will be filled by the order in which I receive them. If we're out of a seed item and you haven't given us a substitute I'll make that big decision. It should take me about a month to fill and get out all your orders. Each seed packet will have a minimum of 10 seeds but generally around 15 to 20.

### Where to send the seed order:

Bob Sussman - SPCNI 12142 Alison Dr.

Camarillo, California 93012

Email works too but hard to send a check: <a href="matilija@gte.net">matilija@gte.net</a>

The hybrid seed should all be considered current year unless shown otherwise at the end of the description. Among the species, current year is stated like for *I. munzii*. All items should be considered open pollinated unless otherwise specified. Species collected wild are stated as such, as are garden collected. All this should be in the description. The hybrids that are capitalized are registered with the American Iris Society. Ones in lower case have not been registered at this time. There are slightly fewer items this year due to combining old items. That is, the

Cape Sebastian from 2005 and 2006 were combined thus reducing the number of items. The good thing is that this year we actually have a lot more seed than last year so your chances of getting what you want are higher.

The descriptions are taken from the SPCNI Checklist. Also, you'll note the second column has a L, M, or S, as in Large, Medium, or Small. An L would indicate large seed quantity and a good chance of getting your order filled. Sometimes the L, M, or S may be highlighted like L. Highlighting indicates new for 2007.

What else, what else... Unless we can work out something practical with the MAF in New Zealand we cannot ship. If our friends in New Zealand figure out a way for us to get them seeds, please let us know.

Who to thank. Well besides me! The Hudsons, Richard Richards, Garry Knipe, Steve Taniguchi all sent seeds. Debby Cole sent lot of really nice "stuff". Without her stuff we'd be sunk.

(Older seed is very viable, You will read this in the article "Pacificas from Seed," above. Ed.)

Item	Quant.	Description
100	L	ADMIRAL'S PRIDE Lightly ruffled violet self, faint lighter rim; rounded form.
110	L	<b>Ami Royale</b> S. lavender (Vatican purple) with ice blue margin; F. plum purple, edged lavender, large gold signal, ruffled, velvety and flaring.
120	M	<b>AMIGUITA</b> Blue bitone, dark purple signal on wide flaring falls, edges ruffled. Volunteer <i>I. douglasiana</i> seedling. HC 1948, HM 1951, AM BIS 1970, Mitchell Award 1974.
130	M	<b>BAT BOY</b> S. brassy gold; F. brassy gold, mahogany signal and red watermark area.
140	L	BIG MONEY Mid to dark yellow self. HM 1986, Mitchell Award 1990.
150	S	BIG SMILE Medium gold self, signal slightly lighter. HM 2001.
160	L	BLACKLIGHT S. smoky lilac purple; F. ruby red.
170	L	BLUE MOMENT Mid to dark blue with hint of violet. HM 1997.
180	L	BLUE SAGE Moderate purple blue self.
190	M	<b>BOOM TOWN</b> S. off white ground, heavily lined and flushed red, 1/4" off white edge; yellow styles; F. yellow, heavily lined red, 1/8" to 1/4" off white edge, 1/2" red inner band.
200	L	I. bracteata-species-Josephine County-Oregon
210	L	I. bracteata-species-yellow/heat tolerant-vigorous grower
220	L	BROWNIE POINTS Mocha, F. with deeper edge, maroon brown signal.
240	L	I. chrysophylla x I. douglasiana- 2004 seed.
250	L	CAMPAIGNER Greenish apricot tan, muted violet signal.
260	L	Cape Sebastian Lilac self with dark eye blaze on fall. I. douglasiana.
270	M	Cape Sebastian x Garden Delight- Sussman '06 seed
280	M	Canyon Bliss- Emery and SBBG 2006 seed
290	L	CANYON SNOW White self, yellow signal. Mitchell Award 1978.
300	M	Canyon Snow x With this Ring- Sussman '07 seed (See photo page)
310	M	CARMEL GEM S. light purple; light purple style arms; F. purple, elongated yellow center
320	M	CIAO Pure yellow self.
330	M	<b>COZUMEL</b> Bright ochre gold; F. with maroon signal, veins extended outward. HM 1999.

340	L	<b>DEEPENING SHADOWS</b> S. dark purple; F. purple, black sheen. 2007 seed
350	M	<b>DEEPENING SHADOWS</b> (Ghio, R. 1984). Same as above. 2006 seed
360	L	I. douglasiana-wild-Fort Bragg, CA
370	L	I. douglasiana-wild-Russian Gulch, CA- 04 seed
380	M	I. douglasiana-wild-Sandy Oregon-Light blue.
390	L	I. douglasiana-wild-Leggett Rd. x Hwy 1, CA-Hudson '06 seed
400	L	I. douglasiana-wild-Mendocino Coast, CA-Hudson '06 seed
410	L	I. douglasiana-garden-U.C. Berkeley, CA
420	L	I. douglasiana-garden-Boring, Oregon
430	L	I. douglasiana-garden-Knipe, CA
440	L	I. douglasiana-garden-dwarf plant-Whitehead, BC Canada
450	L	I. douglasiana-garden-Sandy, Oregon, light blue violet.
460	L	I. douglasiana-garden-Richards garden, CA-White std, falls, purple styles. '07
470	L	I. douglasiana x I. innominata-garden-Gold Beach, Oregon-yellow flowers.
480	L	I. douglasiana x I. purdyi-Hwy 1 and Leggett Rd. CA Hudson '06
490	M	<b>DOT THE EYES</b> Tawny gold self, F. with deep blue signal.
		<b>DRACULARITY</b> S. red, hairline pinkish white rim; style arms light gold, light red crests,
500	L	pinkish white wire edge; F. dark red with darker veining, near black signal, irregular 1/8" pinkish white rim; heavily ruffled. '06 seed.
300	L	<b>EGOCENTRIC</b> S. rose; style arms and crests yellow cream; F. rose, small yellow-cream
510	L	signal with red halo; sometimes branched.
520	L	<b>ENCIRCLE</b> White ground with light blue plicata markings; light yellow signal.
530	L	<b>ESCALONA</b> S. light crimson; F. crimson, gold-wire edge, black signal with fingers over F.
540	L	EXTRA CREDIT S. brown, F. bright gold, wide brown plicata edging.
550	S	FACE VALUE Smoky orchid, overall deeper veining; F. with deep violet signal.
560	M	FATHER FIGURE S. gold, veined tan; F. gold, heavily lined and banded henna.
570	M	FAULT ZONE S. light blue; F. blue violet, edged light blue. HM 1994.
		<b>FOOTHILL BANNER</b> S. white, narrow dark violet rib, faintly lined violet at tip; solid dark campanula violet style arms; F. white with cream overlay, heavily veined dark campanula
580	S	violet, solid violet at tip, faint yellow signal. HM 1992, AM 1995.
590	L	GARDEN DELIGHT Light yellow self with large medium brown blaze on the falls.
5.95	M	GOLD DUSTED Purple ground speckled gold.
600	M	GRAVITAS S. light lilac; F. lilac, maroon halo.
610	L	I. hartwegii-wild-Fiddletown, CA
620	L	I. hartwegii-wild-Sonora , CARocha 04
630	M	HERALD Pink, wine, and orchid blend; wine purple signal.
640	L	IDYLWILD White ground washed blue, edged white. Mitchell Medal 1996.
650	M	IGNACIO Rusty red, edged gold.
660	L	I. innominata x I. tenax - '04
	_	JEAN ERICKSON S. light blue-violet, red-violet midrib; F. light blue-violet, dark red-
670	L	violet signal and few veins, light blue wash below signal area. Mitchell Medal 2001
680	S	JOLON S. mauve apricot blend; F. apricot, mauve hairline edge, signal blended gold.
690	L	<b>LASH</b> S. white; F. white, purple lash pattern around small yellow signal.

<b>-</b> 40		
710	L	ex Lawyer-selected I. munzii seedling- Short branched blue. '04 seed
720	L	ex Lawyer-selected I. munzii seedling -Blue violet falls with blue signal. '04 seed
730	L	ex Lawyer-selected I. munzii seedling -Tall medium blue. '04 seed
740	S	<b>LETTER PERFECT</b> S. white, midrib flushed purple; style arms purple; F. white, veined and washed purple overall, deepening at base, white wire edge, purple signal; ruffled.
750	L	LOS CALIFORNIO Purple, gold sunburst signal. HM 1993.
760	L	I. munzii- garden- plant from Rancho Santa Ana- OP '07 seed
770	L	MASCARA BRUSH Creamy white ground completely overlaid royal purple leaving 1/16" white edge, F. lightly ruffled.
780	L	<b>MENDOCINO BLUE</b> . S. hyacinth blue with darker veining; F. slightly darker wisteria blue with darker halo and veining, turquoise midrib wash.
790	L	MISSION SANTA CRUZ Glowing rosy-red-magenta self. EC 1982, HM 1985.
		MOCHA MELODY S. cream with berry midrib 2/3rds way down; F. cream with medium
800	L	berry spot, feathering out to cream rib.
810	S	MONTEREY SNOW Ruffled white with small yellow flash.
820	M	<b>NATIVE WARRIOR</b> S. light red; F. same with a yellow flash. HM 1972, JC 1973, Mitchell Award 1975, ST Wisley 1976, HC Wisley 1978.
830	M	Night Editor x I. tenax- '04 seed
840	$\mathbf{S}$	NOW SHOWING Ruffled black crimson self, slight gold hairline rim on all petals.
		OCEAN BLUE White ground, heavily washed and lined overall with medium blue, F. with
850	L	yellow dot signalKnipe '07, late blooming.
		<b>OCEAN BLUE</b> White ground, heavily washed and lined overall with medium blue, F. with
860	L	yellow dot signal. Hudson '07 seed
870	S	ORCHID SPRITE Clear orchid purple. HM 1946, AM 1948.
880	L	Orchid Resprite x I. hartwegii australis late blooming . Richards '07 seed
890	L	<b>OXYMORON</b> S. deep henna; style arms yellow; F. deep henna, neon violet signal; ruffled.
900	L	<b>PEACOCK GAP</b> S. ruffled pale mauve, darker midrib; F. lightly ruffled w/ turquoise hints.
910	L	PACIFIC FROST S. white, black line down midrib; F. white, bright blue flash. DC '07 seed
920	M	<b>PACIFIC FROST</b> S. white, black line down midrib; F. white, bright blue flash. '05,'06 seed
930	S	<b>PEEPS</b> S. light yellow, lavender blue lines and dots; style arms yellow; F. light yellow, lavender brushing and lines.
940	L	<b>PERIOD PIECE</b> S. violet purple; F. violet purple, turquoise center flush, with deep neon veins radiating outward.
950	L	<b>PERIWINKLE PERSIAN</b> . Ruffled lavender blue self, signal white w/ yellow center stripe; blue flash appears on F. as flower ages.
960	L	Plum Luck x Gold Dusted seedling- Purple w/ lighter edge, gold signal. Harry Hill '03 seed
970	L	RODEO GULCH Mango orange self, neon violet F. signal.
980	L	<b>ROVING EYE</b> S. light lavender blue; F. lavender blue with white ray pattern in center.
990	S	<b>SEA ADMIRAL</b> S. white, lined violet, veining lighter in center; style arms white, slightly veined violet; F. nearly solid heavy violet veins, 1/4" near-white edge; ruffled.
1000	S	<b>SIERRA SAPPHIRE THIRD</b> Light violet blue self; white yellow signal surrounded by a touch of turquoise.
1010	L	SHORT ORDER S. ochre yellow; F. yellow with brown overlay.
1020	L	SHORT ORDER S. ochre yellow; F. yellow with brown overlay. '04 seed

1030	M	SILVER CIRCLE S. ivory, midrib veined purple; F. purple, yellow blaze, edged ivory.
1040	S	<b>SKYLASH</b> Very ruffled pure white with 3/8" med. blue eyelash around small yellow signal
1050	L	<b>SPRING DAZE</b> S. lavender; F. lavender, veined white; white signal.
1060	M	STAR OF WONDER Bronze apricot, F. with mahogany shading on shoulders and edge.
1070	S	<b>STEAMER LANE</b> S. white, faint blue veining at base; style arms white; F. white, small yellow signal bordered bright blue which extends outward 3/8" as veining; ruffled.
1080	L	SUSIE KNAPP Blue gray self.
1090	L	I. tenax-wild-Dark purple-Yachats, OR.
1100	L	I. tenax- wild-Boring, Or. Pink to rose. Don Clark, '97 seed
1110	L	I. tenax-wild- blue/lavender.
1120	L	I. tenax-wild-Silver Star Mt., Washington, '03 seed
1130	L	I. tenax-wild-"Tarbell Summit," near Silver Star Mt., Clark Co., Washington, '03 seed
1140	M	I. tenax - wild- lavender
1150	S	I. tenax x Canyon Snow- Knipe, '05 seed
1160	S	I. thompsoni - wild - Del Norte County, CA
1170	$\mathbf{M}$	TIDY WHITE Pure white with small yellow signal. '05 seed
1180	M	<b>UNTITLED</b> S. cream flushed pale purple, slight purple venation; style arms dark purple; F. pale gold veined purple, denser around edge; hairline cream rim, signal gold dusted purple.
1190	S	<b>VALLEY BANNER</b> S. white with narrow purple midrib; F. white veined purple, styles red purple. <i>I. tenax-chrysophylla</i> hybrid collected. Siskiyou 1968. HM 1970, JC 1970, JC 1971.
1200	L	<b>VIOLET BLUSH</b> S. violet purple; F. red violet purple, deeper red violet and blue signal, halo, and veining. Whitehead '04 seed
1210	S	WESTERN QUEEN White self with a few dark veins at the haft, Mitchell Award 1976.
1220	L	WESTERN QUEEN White self with a few dark veins at the haft HC 1967, HM 1973,
1230	L	WILD TIME Maize gold self, maroon signal.
1240	L	<b>WISHING</b> S. white ground with strong blue-violet plicata markings; F. white ground, widely edged with blue-violet lining and dotting, yellow signal. HM 1998.

# THE YEAR OF THE BLUES....



'PACIFIC MISS' Mitchell Medal Award - 2007



'MENDOCINO BLUE' Runner up for Mitchell Medal 2007



R. Grisso Seedling



G. Knipe Seedling

'Mendocino Blue' came from seed that Bob and Janet Canning purchased at the Mendocino Coast Botanical Gardens.

Now is the time for you to dream of your seedlings as you select seed to purchase.

Some of the seedlings seen here may not be selected for introduction but we hope that they have given you ideas of what you can do!

Send us your photos!



'Clarification' J. Ghio - 2008



G. Knipe Seedling

# PHOTOS FROM OUR MEMBERS



'Canyon Bliss' Not R. One of the last of Dara Emery's.



'Deep Magic' Seedling G. Winter.



'Air Show' x 'Marine Mag-

ic' Seedling G. Winter

'Mandalay Bay' J. Ghio-2008



'Pretty Boy' Sdlg. G. Winter



J. Ghio Seedling



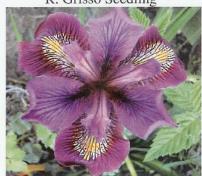
R. Grisso Seedling



R. Grisso Seedling



'Air Show' x 'Marine Magic' x self. G. Winter Seedling



'Mission Santa Cruz' Seedling. B. Sussman

Now is the time for you to go through your photos. Send, send, send them! We all enjoy seeing the possibilities.



R. Grisso Seedliing