



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

**Fall, 2006
Volume XXXV, Number 1**

EXECUTIVE COMMITTEE

President, Debby Cole

7417 92nd Place SE, Mercer Island, WA. 98040
(206) 232-7745 e-mail: dcthree@juno.com

First Vice President, Appointment Pending

Second Vice President, Michael Monninger

4861 Brookhill Terrace, Riverside, CA 92509
(909) 361-3177 e-mail: michael.monninger@sce.com

Secretary-Treasurer, Terri Hudson

33450 Little Valley Road, Ft. Bragg, CA 95437
(707) 964-3907 e-mail: irishud@earthlink.net

Immediate Past President, Richard C. Richards

5885 Cowles Mt. Blvd., La Mesa, CA 91942

Recorder: Kenneth Walker

1391 Santa Clara Ave., Concord, CA 94518
(925) 825-2350 e-mail: kenww001@astound.net

Editor, Jody Nolin

5184 Cty. Rd. 20, Rushsylvania, OH 43347
(614) 507-0332 email: jnolin@hardinnet.com

COMMITTEE CHAIRMEN

Seed Distribution, Bob Sussman

12142 Alison Drive, Camarillo, CA 93012
(805)523-8604 e-mail: matilija@verizon.net

Slide Programs, Terri Hudson

33450 Little Valley Road, Ft. Bragg, CA 95437
(707) 964-3907 e-mail: irishud@earthlink.net

ALMANAC REPRESENTATIVES

Canada, Harry Hill

RR22, 1533 Park Ave, Roberts Creek,
BC V0N 2W2, Canada
email: harryh@dccnet.com

Washington, David A. Pettenski

3408 218th St. SE, Bothell, WA 98021
(425) 486-7705 e-mail: pettenski@hotmail.com

Oregon, George Gessert

86070 Cougar Lane, Eugene, OR 97402
e-mail: ggessert@igc.org

Northern California, Garry Knipe

7598 Kirwin Lane, Cupertino, CA 95014
(408) 253-6148 e-mail: knipe@worldnet.att.net

Southern California, Michael Monninger

4861 Brookhill Terrace, Riverside, CA 92509
(909) 361-3177 e-mail: michael.monninger@sce.com

Central U.S., Vacant

Eastern U.S., John W. White

193 Jackson Hill Road, Minot, ME 04258

The opinions expressed in articles and letters appearing in this publication are those of the authors and do not necessarily represent the views or beliefs of the SPCNI. Remarks about specific irises, companies, products and services shall not be considered endorsements by the SPCNI.

PUBLICATIONS AVAILABLE FROM THE SPCNI TREASURER

Prices listed are for SPCNI members

Check List of Named PCI Cultivars

Lists and describes Pacific Coast Iris and named hybrids through 2005. ~70 pages. Hardcopy or CD: \$9.00 for USA, \$11 for Canada, and \$13 for Europe. For both a CD and a hard copy, the cost is \$13.50, \$15.50 for Canada, \$17.50 overseas.

SPCNI Photo CD

A CD of 280+ PCIs compiled by Ken Walker. A great resource. \$9.00

A Guide to the Pacific Coast Irises

Victor A. Cohen: The British Iris Society 1967 Booklet, 5.5x 8.5, 40 pages, 16 line drawings, 8 color and 6 black-and-white photographs. Brief descriptions of species and sub-species including their distribution. \$8.00 postpaid, \$10.00 out of US.

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 postage paid, \$10.00 out of US.

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 US. If ordered together, both Lenz booklets may be obtained for \$14.00, postage paid, \$16.00 out of US.

Diseases of the Pacific Coast Iris

Lewis & Adele Lawyer: ALMANAC, Fall 1986. 22 pages, 9 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 irishud@earthlink.net

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 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, SPCNI Secretary/Treasurer. 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 \$3.50 each, postpaid. Please request from Secretary/Treasurer.

Chronological index \$2.00 postpaid, Index by subject matter, or by author, \$4.00 each. Contact:

Steve Taniguchi ST1732@aol.com

3306 Forbes Avenue
Santa Clara, CA 95051

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
 PO Box 38
 Cedar Hills, MO 63016-0028
 e-mail: aismemsec@earthlink.net

Annual,	Single:	\$25.00
	Dual:	\$30.00
Triennial,	Single:	\$60.00
	Dual:	\$75.00
Life,	Single:	\$450.00
	Dual:	\$545.00

Overseas Rates:

Annual,	Single:	\$30.00
	Dual:	\$35.00
Triennial,	Single:	\$65.00
	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 Message.....3

On Iris Books4

Convention 2006 Sequel: SPCNI Trek to Hagg Lake, OR.....5

Welcome New Members!.....5

PACIFIC COAST IRIS SOURCES.....6

2006-2007 SPCNI Seed Exchange6

Diseases of the Pacific Coast Iris 12

PCI Show Winners!..... 19

SPCNI Website Award Winner..... 19

Iris hartwegii australis as Parent20

Finding species while traveling!22

AIS 2006 Award Winners.....23

Mug Shots24

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 overseas). 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.

PLEASE ADVISE SPCNI AND AIS OF A CHANGE OF ADDRESS

President's Message

Debby Cole

Somehow, when I joined SPCNI nearly twenty years ago, it never occurred to me that I might one day be writing this letter. Richard Richards has left some monumental footprints to follow, as did all his predecessors. Your Executive Board has entrusted me with this office, and with their ongoing support---and yours! ----this Society will continue to be for all of us the interesting and exciting group that we joined.

For us the members, the Society's focal point is the Almanac. Editor Jody Nolin is new to PCI but doing a magnificent job on our publication, and is very appreciative of all your contributions. I hope you will continue to be generous in writing and sending her articles of interest, whether scientific or from a lay perspective. Especially with pictures! But she'd also like your comments on what articles you would LIKE to read. Please remember to advise Secretary Terri Hudson if your address (or email) is about to change, as she supplies the mailing list for the Almanac and it is expensive to remail returned issues.

Another special feature of SPCNI is its Seed Exchange, equally available to all members but perhaps less used. All the seed offered is contributed by members, and is sold (to benefit the Society) to any member interested in growing PCI. This year's Seed Exchange listing, compiled by new Seed Chair Bob Sussman, appears elsewhere in this issue. In the last several years, seeds and even some plants have also been sold to other AIS members at national AIS conventions, as both a fundraiser and a teaser—who knows what will bring in the next new member?!

A third feature for member benefit is our Treks to see the PCNs in glorious bloom in their native habitats. We get to educate ourselves, visit what may be an unfamiliar part of the country, and share it all with both old and new friends. Usually attendance has been good, and we've more than broken even, to the benefit of the SPCNI treasury. This year's Trek to see *I. gormanii* at Hagg Lake, west of Portland, had the side benefit of increasing interest among several local residents. Tentative future plans include a California Trek in 2008 (do you have suggestions?) and a 2010 Trek, jointly with SIGNA, in southern Oregon. If you've encountered some excellent PCN locales and would like to share them with the Society, please contact me.

Our Section meetings at the national AIS conventions, which are open to all attendees, satisfy both legal and educational facets of our non-profit status. They also provide another way for members to meet each other, and for potential members to discover more about us and our favorite flower. This year SPCNI charter member Glenn Corlew presented an overview of PCI development at the convention in Portland, Oregon. Next year the AIS convention is in Oklahoma City, and we are working on putting together an appropriate program for that occasion. If you have suggestions, and/or if you will be attending, please let me hear from you!

The SPCNI website, www.pacificcoastiris.org, is a wonderful tool for education and outreach, and Webmaster Steve Ayala has created a magnificent, multifaceted display of the PCI world. He also updates it often and well, and this year received word that it was given an Award of Excellence by StudySphere, an educational resource site. If you haven't looked at the website lately (or at all), by all means check it out. You'll find it hard to leave.

Most recently, we have added another facet to SPCNI to increase our educational efforts and indeed, our service to the iris community. Ken Walker, our new Registrar / Recorder, has taken on the responsibility of maintaining a record of each PCI registration filed with the AIS Registrar, with the goal of creating a photographic record as well, to aid with identification. So if you intend to register a new PCI hybrid, or a superior wild-collected clone, be sure to take both close-up and clump photos of it, and send both photos and form to Ken Walker (address on masthead) as well as to the AIS Registrar. Ken is also working on a photographic file of all PCI previously registered and/or introduced, and would like your good photos (or at least mid-grade .jpegs) of PCI for which you have identification. Sorting through your personal photo collection would be a wonderful mid-winter project! Already there is a first version of this file available for your use, the SPCNI Photo CD of 280+ PCI, available from the Treasurer, Terri Hudson (see masthead again).

What's next? Do you have strong thoughts on the future of SPCNI, ideas for trying new things or changing old ones? Would you like to contribute to SPCNI but don't know just how, or do you see a particular way you'd like to serve? Think about it. Let us hear from you; contact any of the officers.

I was glad to have the chance to meet so many of you this year, on the Trek and at the AIS National Convention, and look forward to your input.

Debby



On Iris Books

By Steve Ayala

What do you do if the weather prevents you from working in the garden? Well, one thing you can do is read more about your favorite iris.

If you are interested in the various Pacific Coast Iris species, you definitely want to obtain the Cohen and Lenz booklets available from the SPCNI. Descriptions of these booklets can be found on the inside front cover of your SPCNI Almanac. SPCNI also offers a "Diseases of the Pacific Coast Iris" issue which I recommend highly.

Some other books I recommend are listed below:

"The Iris Book", by Molly Price, Dover Publications, Inc., 1973.

This book has a chapter about "Native American Beardless Irises" that contains three full pages of information about Pacific Coast Irises and briefly discusses several of the species. This is an older book as the hybridizers mentioned are Brummit, Fothergill, Lenz, and Luhrsen; the two photos of Pacific Coast Irises are in black and white. I checked the internet and this book is out of print. You might be able to find a copy in a public library.

"Irises", A Gardener's Encyclopedia, by Claire Austin, Timber Press, 2005.

This general iris book is first and foremost a picture book. It is dominated by photos of irises. Each photograph has a paragraph of additional information about the iris variety. An entire chapter is devoted to the Pacific Coast Irises, and contains one page of general and cultural information, one page of photos and descriptions of the Pacific Coast Iris species, and five pages of photos and descriptions of Pacific Coast Iris hybrids. The hybrids featured are worldwide (not just North American) and include varieties from Scopes and Blyth. If you like books with photos of iris, this is the book to get.

"The World of Irises", Edited by Bee Warburton, Melba Hamblen, Assistant Editor, The American Iris Society, 1986.

The definitive book on irises. Although the American Iris Society tends to concentrate on the bearded irises, this book contains a chapter just about the Pacific Coast Irises. The chapter starts with one page of introduction and general information, followed by a five page discussion of the species, and one and a half pages of culture information. This book also contains some black and white figures (drawings and photographs) and a color plate of "older" Pacific Coast Iris hybrids.

"Iris", by Fritz Kohlein, Timber Press, 1995.

"Iris" contains a section about the "Subsection Apogon, Series Californicae" consisting of two pages of general information, seven pages of species information, and one page of information about hybrids. I like this book, and my only criticism is that the color plate of Pacific Coast Iris is about a hundred pages distant from the text.

Convention 2006 Sequel: SPCNI Trek to Hagg Lake, OR

By Debby Cole, Mercer Island, WA

On the beautiful sunny morning of Sunday, May 21, forty-one irisarians boarded a tour bus at the Red Lion on the River Hotel and headed west. Their goal: view the *I. tenax* around Hagg Lake (near Forest Grove, OR), before the dam there is raised to increase the area's water supply to meet future demand. This is the only known locale for *I. gormanii*, as the yellow form of tenax was designated in 1924.

Forty-five minutes later, the group entered this Washington County park. SPCNI Trek leaders Jean Witt and Debby Cole welcomed naturalist and local resident Martha Sleeper, Jean's daughter, who met the bus at the entry booth. The tour stopped at several different sites, seeing first red-purple tenax, then a hilltop meadow of orchid-pink ones (including one clump of white!). A local homeowner welcomed trekkers to view the yellow tenax on his front yard's roadside and chatted enthusiastically. The group picnicked in a lakeside pavilion on box lunches, then visited a neighboring grove of orchid and rose tenax before busing up to a high logged-over meadow. There they saw iris ranging from pink to white to light blue, then walked back to the bus for refreshments and conversation offered by a neighboring family who had become excited about the treasure up the road.

Lastly, the bus stopped at the Sleeper home, which had many clumps of pink- and blue-orchid tenax along its roadside and in its front meadow, as well as dogs, cats, geese and llamas! As the sky began to frown and grumble, the irisarians reluctantly bade Martha farewell and boarded the bus to return, just ahead of the rain that the convention was to enjoy for the rest of the week.



Mult Falls

Photo: Cole

Welcome New Members!

Suzanne and Tim Ferrell-Waddell
145 W. Avenida de las Floras
Thousand Oaks, CA 91360
ps.ferrell@verizon.net

Lynn Williams
24515 Salmon Place
Willits, CA 94590
irislynn@sbcglobal.net

Yarda and Eric Hansen
P.O. Box 1845
Loomis CA 95650
ylhansen@gmail.com

Bud Bowen
19130 Lot Whitcomb Drive
Oregon City OR 97045

Linda and John Stremel
368 Dawson Drive
Santa Clara CA 95051
lindastremel@yahoo.com

Gordon Harris
#33 - 2520 Quinsam Road
Campbell River BC
Canada V9W 4N4
gordonf@e-mail.com

Doris R. Moran
3144 Broadway Suite 4-210
Eureka CA 95501

Jim and Irene Cummins
165 Canham Road
Scotts Valley CA 95066
JCummins@pacbell.net

Molly Finnila
1430 Sawmill Road
Gray Court SC 29645-6750
mollyf@backroads.net

PACIFIC COAST IRIS SOURCES

Aitken'S Salmon Creek Garden, 608 NW 119th St., Vancouver, WA 98685. (360) 572-4472, fax: (360) 576-7012, website www.flowerfantasy.net, e-mail: aitken@flowerfantasy.net. Catalog is \$3.

Bay View Gardens, 1201 Bay Street, Santa Cruz, CA 95060. (831) 423-3656 (call after dark Pacific Time). Fax: (831) 423-7610, e-mail: ghiobayview@surfnetusa.com. Catalog is \$3.

Boonebrier Farm, Jim and Ann Mossman, 11067 NE Arness Rd., Kingston, WA. 98346. See website for details and on-line catalog at: www.boonebrierfarm.com or call (360)297-7431. Visitors welcome in display gardens during Open Farm dates or by appointment.

The Iris Gallery, 33450 Little Valley Road, Fort Bragg, CA 95437. (707) 964-7971 or 1-800-757-IRIS, fax: (707) 964-4890, website: www.allthingsiris.com, e-mail: theirisgallery@earthlink.net. Listing available, text only.

Wildwood Gardens, 33326 S. Dickey Prairie Rd. PO Box 250, Molalla, OR 97038-0250. (503) 829-3102, e-mail: gardens@molalla.net. Catalog is \$3 (has color pictures of PCI).

The following have offered PCI in the past. You will need to contact the proprietors for more information.

Broadleigh Gardens, Bishops Hull, Taunton, Somerset TA4 1AE, England. Website: www.broadleighbulbs.co.uk. (EC sales only)

Native Plant Nursery, Paige and Pat Woodard, 44305 Old Orchard Road, Chilliwack, BC V2R 1A9, Canada. (604) 792-9279, fax: (604) 792-1891, website: www.hillkeep.ca, e-mail: plants@hillkeep.ca. PCI species. Mail order worldwide. No printed catalog. Garden and nursery visits by appointment.

Siskiyou Rare Plant Nursery, 2825 Cummings Road, Medford, OR 97501, website: www.srpn.net.

Westonbirt Plants, 9 Westonbirt Close, Worcester, WR5 3RX, England. Phone/fax: 00 44 (0) 1905 350429.

2006-2007 SPCNI Seed Exchange Chair

Bob Sussman,-Seed Exchange

All seeds on the following list of this year's seed donations are priced at \$1.50 for the first packet and \$.50 for each additional packet ordered. Orders over 12 packets please add another \$1.00, and orders over 24 packets please add a second additional \$1. To help cover foreign postage, Canadian orders please add \$.50, and other foreign orders please add \$1.

Make check payable (in U.S. currency) to SPCNI, and send check or US currency with order to:

Bob Sussman
SPCNI Seed Exchange
12142 Alison Drive
Camarillo, California 93012

An Example: An order for 27 seed packets from a member in Spain, should include a check or money order in US funds payable to SPCNI in the amount of \$17.50. Or US currency for that matter in the same amount

First packet	\$ 1.50
26 additional packets	\$13.00
Additional for 24 packets	\$ 2.00
Additional for overseas order	\$ 1.00
Total order amount	\$17.50

If sending currency please round up or send in \$18.in the case of this example.

If your order is \$15 or more you may pay with MasterCard, Visa, or Amex. We will need your credit card number and expiration date.

Please order by lot #, listing info. also helps avoid errors. All order will be held until January 15th. At that time, all seed orders will be processed and sent out so buyers will have sufficient time to plants their seed for this spring's germination. Requests will be filled in the order received. Please specify a list of substitute seeds. We reserve the right to limit the number of packets and seeds of an item if the item is in short supply. If your order can't be filled and you haven't given us any substitutes we will keep the \$ amount of the unfilled order as a donation. THANKS! All orders must be in my hot little hand by **January 15th or else!**

Oh yes, you need to give us your name and mailing address. An email would be nice too.

The seed list includes seeds from the previous years. Germination of old seed might be more difficult. I've always gotten fairly good germination with old seeds without treatment. So, if you see something on the list from previous years, go for it. There are seed treatments like abrading the seed with a file or sandpaper or cutting the seed coat with a knife, then soaking for a day or so before planting. You can also try suspending old seed in a fine mesh bag under the water inside a toilet tank for a week or so and yes you can flush. Then, plant out to flats or pots of gritty mix, covered 1/4" to 1/2". Temps should be about 45 to 50 degrees for about a month or so then heating up as the year progresses and the seeds germinate.

Now what's new from last year? You'll note the quantity column with the letters L,M,S. L indicates large quantity of seed and a high likelihood of getting your order filled with lots of seeds. M indicates medium amount of seed and S is for small (have substitutes ready). Also at the end of some of the descriptions you will see "Hot". These seeds will not burn and will go through the postal system. But, these represent new seeds being offered over the last two years or so.

All seeds were open-pollinated except for specific crosses as noted.

Who to thank? This was a particularly difficult year from a weather perspective. It was damp when it should have been warm and warm when it should have been damp. Never the less, thanks to: Richard Richards R, Steve Taniguchi T, the Hudson's H, Garry Knipe K, Bob Sussman (that would be me) S, and Debby Cole C., who really **bailed out** the Seed Exchange this year with her seeds from her collection.

Other thanks to Debby again who has been helping me along and not making fun of my dumb questions. Richard also answered a good share of my silly questions and provided lots of internet humor which I have excluded from the Seed Exchange. Thanks to Terri for her proof reading, any remaining mistakes are mine.

Now go buy seeds!

2006 from named garden hybrid

Lot #	Donor	Variety	Quantity	Description
6000	h	Admiral's Pride	L	Lightly ruffled violet self, faint lighter rim; rounded form.
6005	s	Ami Royale	L-S	S. Vatican purple, F. plum purple, large gold signal.
6010	c,h	Big Money	L	Mid/dark yellow self-Mitchell Award 1990
6015	c	Blacklight	L-S	S. smoky lilac-purple, F. ruby red.
6020	r	Blue Moment	M	Mid/dark blue with violet; HM 1997
6025	s,r	Blue Sage	L	Mid blue-purple self (1947); Round-up and gopher resistant
6030	c	Brownie Points	S	18" Mocha,F. deeper edge,maroon signal.
6035	t	Bubble Wrap	M	Root beer self; mahogany signal.
6040	r	California Mystique	S	S. light blue veined deeper; F. deep blue-purple HM 1984
6045	c	Campaigner	L	Greenish apricot-buff- muted violet signal HM '87
6050	c	Canyon Snow	L	Broad white self with yellow signal; Mitchell '78
6055	c,s	Cape Sebastian	L	Lilac self with dark eye blaze on falls.
6060	c	Coastal Glow	L	Butter yellow self.
6065	h	Deep Blue Sea	S	Deep royal blue, small white signal.
6070	c	Deep Blue Sea	M	Deep royal blue, small white signal.
6075	c	Deepening Shadows	L	S. Dark purple; F. purple/black sheen
6080	c	Dot the Eyes	S	Gold self, deep blue signal.
6085	c	Dracularity	L	S. Red, styles gold; F. dark red, veined darker from center. Narrow pinkish-white rim HOT
6090	h	Earthquake	L	S. Russet; gold styles; F. red, light gold rim.
6095	h	Egocentric	L	S. rose; style arms/crests cream; F. rose yellow/cream signalHOT
6100	c	Face Value	S	Smoky orchid, overall deeper veining; deep violet signal.
6105	h,s	Garden Delight	L	Light yellow; large medium brown blaze on falls.
6115	c	Gold Dusted	L	Purple, speckled with gold.
6120	r	Gravitas	M	S. Light lilac; F. lilac, maroon halo. HOT
6125	c	Idylwild	L	White ground washed blue, edged white. Mitchell '96
6130	c	Jolon	S	Mauve-apricot blend
6135	c	Lash	L	S. & F. white, purple lash pattern; small yellow signal.-HOT
6140	c	Mascara Brush	L	Creamy white ground, overlaid royal purple with white edge.
6145	r	Mayor	M	Light blue self; deep blue spot on falls. HM '78 HOT
6150	c	Mendocino Blue	L	Hyacinth blue-darker veining; darker halo/turquoise midrib wash on falls.
6155	s,c	Mission Santa Cruz	L	Glowing rosy-red magenta self.
6160	t	Mixed OP	L	Do you feel lucky? Take a chance on Steve T's GARDEN Iris.
6165	r	Munras	S	Lemon yellow self, deep gold signal. HOT
6170	k,h,c	Ocean Blue	L	White ground heavily washed and lined medium blue.
6175	c	Oxymoron	L	Finely ruffled henna, with violet signal and yellow styles.
6180	c	Pacific Frost	L	Cream with bright blue fall spot.
6185	c	Pacific Miss	S	Ruffled medium blue, F. deep blue. HOT
6190	c	Peacock Gap	L	Ruffled tall mauve with turquoise flash on falls.
6195	s	'Pegasus'	L	Collected white <i>I. douglasiana</i>
6200	s	Period Piece	M	Deep violet, with turquoise fall spot and deep neon veins.

6205	h	Pinole Princess	S	F. lavender purple veined overall deeper purple, gold signal; style arms lavender.
6210	c	Pretty Boy	L	Ruffled peach self with small maroon signal.
6215	c	Rancho Corralitos	M	S. solid red brown; F. gold with wide/deep brown band-small gold signal. HOT
6220	h	Rose in Prose	M	Pink & cerise; rounded form
6225	t	Sea Admiral	L	S. white, lined violet, veining lighter center; F. heavy violet veins, white edge.
6230	c	Sea Gal	L	S. true blue, falls white with true blue wash; tall/ruffled; Mitchell '02
6235	h	Seabright Cove	S	Deep blue, purple shading; small yellow signal.
6240	h	Silver Circle	S	Ivory, with huge purple fall spot and small yellow signal
6245	c	Silver Circle	L	Ivory, with huge purple fall spot and small yellow signal.
6250	h,t,c	Star of Wonder	L	Bronze/apricot, F. with mahogany shading.
6255	c	Sunol Grade	M	Brassy orange self, maroon signal.
6260	h,r	Susie Knapp	L	Blue-grey self.
6265	c	Wild Time	L	Maize-gold self, maroon signal.
6270	c	Wilder Than Ever	S	S. white ground with red-purple ray pattern; F. same; yellow signal. HOT

2006 from Hand-Pollinated crosses

Lot #	Donor		Quantity	Description
6300	h		M	Rose in Prose x Vernon Wood seedling
6305	t		M	Sea Admiral x Blue Plate Special
6310	s		L	Gard. Del. X Cape Sebast.
6315	s		L	CanyonSnow x Mission Santa Clara.
6320	s		L	CanyonSnow x Sunol Grade
6325	s		L	Cape Sebastian X Garden Delight
6330	r		L	Orchid Resprite x <i>I. hartwegii australis</i> .
6335	s		1	Purple Yellow White(see pic. in article) x Stroke of Midnight

2006 Species Garden Grown

Lot #	Donor	Species	Quantity	Description
6400	c	<i>I. douglasiana</i>	L	Ex. From Boring, OR.
6405	c	<i>I. innominata</i> . 'Roy's Orange'	L	Orange flowers does better in the sun-HOT
6410	s	Purple Yellow White	L	Magenta self, yellow blaze, white border 16", op. doug. Form

Wild Collected Seed

Lot #	Donor	Species	Quantity	Description
6500	h	natural hybrid	L	Leggett Rd. , HWY 1, Mendocino County, Leggett, CA. <i>I. purdyi</i> x <i>I. macrosph.</i> x <i>I. douglasiana</i>
6505	h	natural hybrid	L	Leggett Rd. , HWY 1, Mendocino County, Leggett, CA. <i>I. purdyi</i> x <i>I. macrosph.</i> x <i>I. douglasiana</i>

Old Seed - Named Garden Hybrids

Lot#	Variety	Quantity	Description
4001	Age of Chivalry	L	Glowing mid-dark blue-purple with deep blue signal
4002	Air Show	M	White with blue standard flush and purple fall veining-Op-Knipe
1101	Alice May	M	sky blue/deeper sky blue, Op-Gwenda Harris N.Z. 2001
1004	Big Money	M	Mid to dark yellow self; Mitchell '90
4007	Blue Sage	L	Mid blue-purple self (1947)
1009	Campaigner	S	Greenish apricot-buff
3009	Canyon Snow	M	Strong white with yellow signal
5605	Chimes	M	cream with dark gold veining and blaze; ruffled, velvety.
5015	Deepening Shadows	L	Purple-black bitone, branched.
5017	Drive You Wild	L	Red Violet self with big gold ray signal, OP, Knipe '05
5018	Enchanting Tempress	M	Yellow bitone with heavy mauve veining and rim; purple styles
3016	Endless	M	Rose bitone
4019	Extra Credit	M	Bright gold with wide brown plicata fall rim
5023	Foothill Banner	L	White, veined and ribbed purple; solid purple stylearms
3104	Galiano' (unregistered)	M	Beige stds, dark pink falls, primrose signal, dark veins; Op
1028	Gold Dusted	L	Purple speckled with gold
5610	Idylwild	M	White ground washed blue, edged white. Mitchell '96
5029	Laureles	M	Medium yellow with white signal and white wire rims
5615	Laureles	L	Medium yellow with white signal and white wire rim.
4031	Los Californio	L	Purple with gold sunburst signal
5036	Mendocino Blue	L	Hyacinth blue-darker veining;darker halo & turquoise-midrib wash on falls
4038	Native Blush	M	Light apricot, with yellow signal blushed rose
1048	Native Warrior	M	Small round light red; Mitchell '75
5041	Ocean Blue	S	White grown heavily washed and lined medium blue
5044	Orchid Respite	L	Light purple with darker halo around pale yellow signal.SF grown
5042	Orchid Respite	L	Light purple with darker halo around pale yellow signal.L.A. grown
5044	Pacific Frost	L	S. white,black line down midrib; F. white, bright blue flash.
5045	Pacific Moon	S	Cream, with lavender veining.
3037	Pacific Rim	S	S. blue, F. White veined gold with deep blue plicata rim
5047	Peacock Gap	L	Ruffled tall mauve with turquoise flash on falls
3039	'Pegasus'	W	Collected white <i>I. douglasiana</i>
4043	Pretty Boy	R	Ruffled peach self with small maroon signal
5620	Rose in Prose	M	Ruffled light rose pink cerise blend; rounded form.
4047	Ruby Eyes	M	Rose, veined darker, with blackish wine signal
4050	Short Order	L	Ochre-yellow with brown overlay on falls
3049	Spring Daze	L	Lavender, with white signal and fall veining
5059	Suzie Knapp	L	Blue grey self.-Richards
5060	Tidy White	L	White with small yellow signal
4057	Town Belle	L	Ruffled mauve veined rose; cream signal haloed rose
4058	Umunhum	S	Bright sienna with precise violet signal
4059	Violet Blush	L	Violet purple std. lined magenta; bright magenta falls
4060	Western Queen	L	White, with a few dark veins at hafts; Mitchell '76
5063	Wild Time	L	Maize gold self, maroon signal.

Old seed of garden-grown PCI species

Lot#	Species	Quantity	Description
5620	<i>I. douglasiana</i>	L	Knipe Op 2005
4302	<i>I. doug. X innominata</i>	L	Hoffman , yellow flowers, Gold Beach, OR.
4600	<i>I. hartwegii</i>	L	Rocha, from Sonoma, CA. 2004
C0125	<i>I. douglasiana</i>	M	Late <i>I. doug.</i> (Lawyer)
C0124	<i>I. douglasiana</i>	L	U.C. Botanical Garden, CA
4300	<i>I. douglasiana</i>	L	Tall, dark blue Russian Gulch, Mendocino, CA (Somer)
1307	<i>I. tenax</i>	M	Medium blue/lavender
4304	<i>I. tenax</i>	M	Dark purple

Old wild-collected seed of PCI species

Lot#	Species	Quantity	Description
C0130	<i>I. bracteata</i>	L	Waldo-Sanger Peak Rd, 2800', Josephine Co.,OR.1993
1409	<i>I. douglasiana</i>	L	Mendocino Coast,CA-2001-dark blue-Hudson
C0134	<i>I. douglasiana</i>	S	Sandy, OR.,1996 -light blue
3400	<i>I. douglasiana</i>	M	Bodega Bay, CA., mostly lavender/blue, some white
C0136	<i>I. hartwegii</i>	L	Fiddletown, Amador Co., CA.
C0138	<i>I. hartwegii</i>	S	Hale rd., Amador Co., CA 1996
4610	<i>I. fernaldii</i>	L	Santa Cruz Mtns.CA 2004, Knipe
C0081	<i>I. douglasiana</i>	L	Collected Mendocino, Ft. Bragg, CA
1405	<i>I. purdyi</i>	L	collected Yorkville,CA. elev. 2200'
C0152	<i>I. thompsoni</i>	L	High Divide Rd, Del Norte Co, CA. 1993
3402	<i>I. tenax</i>	L	Skamania County, WA, NW shoulder of Silver Star Mountain, 2500', pale orchid
3403	<i>I. tenax</i>	L	Skamania County, WA, Road-end, NW shoulder Silver Star Mtn. elev 3500, pale orchid
C0148	<i>I. tenax</i>	L	Hwy 26, Boring OR, 1997 (light to medium red-violet)
3401	<i>I. tenax</i>	L	Tarbell Summit, Silver Star Mtn., Clark Co, WA., pale orchid

Old seed from unnamed garden hybrids.

Lot#	Sdlg#	Quantity	Description
4103	dp3	L	Ex SPCNI 99050 (<i>I. chrysophylla</i> x <i>I. douglasiana</i>)
4104	dp4	L	Ex SPCNI 99051 (<i>I. innominata</i> x <i>I. tenax</i>)
4108	dp8	L	Ex SPCNI 99084 Night Editor x <i>I. tenax</i>
3105	hs02-1	M	F. purple with Gold Dusted signa Gold Dust. seedling
4102	dp2	S	Branched; ex SPCNI 98063 (Lawyer XP64E, Valley Banner, Sib.)
5204		L	<i>tenax</i> x 'Gold Dusted'
5202		L	<i>tenax</i> x 'Canyon Snow'
4101	dp1	L	<i>tenax</i> Ex SPCNI 93089, Blue-violet to purple
3107	RR88y	L	Vigorous yellow seedling, hardy in hot, wet climates; from <i>I. bracteata</i> .
4105	dp5	L	ex SPCNI 99055(lawyer XP209A, tall medium blue)
4107	dp7	L	ex SPCNI 99073 (Lawyer XP360A, short branched blue)
4106	dp6	L	ex SPCNI 99056 (lawyer XP210F, blue-violet with blue signal)
3109		L	assorted fragrant sdlgs from ('Deep Magic' and 'Pacific Miss') x <i>I. macrosiphon</i>
4109	EJJ1	L	Pale lavender styles:light lavender stds veined darker; lavender falls have purple halo around large peach signal.

Diseases of the Pacific Coast Iris

Part 1, In The Garden

Lewis Lawyer

Reprinted from the Fall 1986 issue of the SPCNI Almanac

There are three diseases of the Pacific Coast Iris which occur in our garden. The first is caused by *Sclerotium rolfsii* which is of relatively little importance here, having been sighted only once, but that could be a major problem under the right conditions. The second, we are calling "PCN Crown Rot", which is more or less important wherever PCNs are grown. The third, iris rust, is important or not, depending largely on the climatic conditions where they are grown and the degree of resistance or susceptibility of the particular cultivars in which the grower is interested.

Few people who have grown Pacific Coast Irises for a period of years have escaped PCN Crown Rot and the sad experience of watching a well-established clump of some prized cultivar suddenly start to die. Then, as you watch helplessly, the disease spreads across the clump, fan by fan, until the entire plant has departed to some iris heaven in the sky.

Our first planting of natives was made on October 18, 1975 and, largely through the generous help of Joe Ghio, our garden contained over 200 established flowering plants by the time of the National Convention in 1978. True, we lost a few plants at planting time but, once established, they grew like mad.

Despite the fact that from that time on, we grew between 150 and 200 established plants each year, we didn't experience any trouble or loss of an established clump until the spring of 1983 when a large plant of 'Native Music', planted in 1975, started to die. The disease spread rapidly through the main clump and by June it was too far gone to bloom. A division of the original clump that had been transplanted to another location a year later also died.

The sudden death of established plants of the PCNs has been fairly well accepted as a natural phenomenon of the species. I remember discussing the problem with Lee Lenz during a telephone conversation a couple of years ago. He confirmed that they had lost a few plants in the Botanic Garden at Claremont from time to time, but had not made any attempt to identify the cause since the occurrence was so sporadic. Then he went on to say that the Pacific Coast Iris are such prodigious seed producers in their natural habitat that the loss of some of the older plants would be of minor consequence to their survival as a species. I remember thinking that this was an astute observation and suddenly realizing that it was only man's involvement with the plants that gave any importance to the disease. It is only after man has developed and selected a specific clone which he wants to perpetuate, that death becomes a serious problem. We will discuss two diseases which are involved: "Mustard Seed Disease" caused by the fungus *Sclerotium rolfsii*, and a more serious problem which, because of its nature, we are calling "PCN Crown Rot Disease", caused by a pathogen or pathogens not yet fully identified.

In the 12 years that the SPCNI Almanac has been published, there have been 3 references to this disease problem, two by Richard Richards of Southern California, and one by John Weiler of the San Joaquin Valley. In Volume 1, number 1, September 1973, Richards says, "Some clones of the *Californicae* appear prone to mysterious ailments not yet understood. They occasionally suffer from some sort of fungus . . ." Then, in the fall issue, 1981, in an article titled "Hot and Wet", Richards expands on the theory that "the problem" is intensified when you have to irrigate in hot climates such as in Corona, where he lives in Southern California. John Weiler, in the Spring issue, 1984, in an article titled "*Californicae* in the Central Valley", writes: "Still, a third factor which may be the most important in success or failure, is water in the garden. (sic)" He goes on to say that despite the fact that these irises grow without apparent water in their native habitats, they will not survive without some water in his area.

Nor will they stand excess water. He continues: “Such specific requirements for water during the summer months is known for many other plants . . . In some cases, intolerance to summer water may be traced to one or more water molds which multiply rapidly in moist soil during warm weather. Particularly devastating is the mold *Phytophthora* . . . He then points out that the fungicide Subdue is recommended for the control of such organisms.

Now to get on with our own experiences in our relatively cool-weather climate in the Oakland hills of the San Francisco Bay area. In the fall of 1976 the cultivar ‘Ficus’, which had been purchased from Cordon Bleu a few months earlier, suddenly turned brown. There were no visual symptoms except for a brown rot where the leaves joined the crown, but when we placed the plant in a moist chamber for a week, *Sclerotium rolfsii*, (Mustard Seed fungus) developed. This is the only PCN plant in our garden which to my knowledge has ever developed *Sclerotium rolfsii*, but Joe Ghio and others have experienced some trouble with this fungus.

It is important to note that when we dug the diseased ‘Ficus’ plant, there were no visible symptoms of *Sclerotium rolfsii*. The typical symptoms of “mustard-seed” – like sclerotia which are so prominent on a diseased tall bearded iris plant – were absent, and it was not until we had placed the plant in a moist chamber for several days that sclerotia developed. This was also true of a diseased plant which we received from Joe Ghio for diagnosis some years later. Adele was able to identify the fungus microscopically, but there were no sclerotia on the plant, even after several days in the moist chamber. We took the plant, moist chamber and all, to Dr. Raabe at the University at Berkeley for confirmation of Adele’s microscopic diagnosis. Two days later Dr. Raabe called us to say that sclerotia were forming on the damp paper towel which we had placed under the plant as the moisture source in the chamber. We have been told by others that they have seen sclerotia forming on diseased PCN plants, but we can testify that they are not always apparent. This brings up the danger of treating for a disease before a reasonably positive identification has been made. The chemicals used in the treatment of *Sclerotium* and *Rhizoctonia* can be quite different from those used for the control of water molds, and if used incorrectly, may even intensify the problem.

I think that before we go any farther, we should acquaint you with the various locations in our garden where the PCNs are grown. All the beds in our garden have been given alphabet designations: ‘A’, ‘B’, ‘C’, etc. Our discussion of PCN Crown Rot will start with its occurrence in bed Q, a relatively small bed in the west central area of our garden primarily devoted to bulb plants. There are, however, spaces for about 90 lined-out PCN seedlings at the west end of the bed.

We will continue the discussion with its appearance in bed P about 20 feet down the hill from bed Q. Bed P is the location of our main planting of named varieties, and it was in this bed that the plant of ‘Ficus’, previously mentioned, died of *Sclerotium rolfsii*. Plants in bed P are spaced 18 inches by 18 inches, our normal spacing for ALL plantings other than lined-out seedling beds. Bed P is approximately 27 by 10 feet in size, and there are spaces for 120 plants.

As with bed Q, above, bed P gets afternoon shade from a row of pine trees in the neighbor’s yard to the west. We will be discussing the occurrence of the disease in bed P, how the plants were moved from this bed to a ‘standby bed’ while bed P is being fumigated, and how they have now been moved back.

Just east of bed P, and across a narrow path, is bed V. Bed V is one of the two beds where we plant our selected hybrids, and there are spaces for 58 such plants. Following our discussion of bed P, we will discuss the introduction and spread of Crown Rot disease in this bed. The other bed in which selected hybrids are planted is bed S, immediately north of bed V. It is approximately 10 by 27 feet, and the area devoted to PCNs will accommodate 66 plants. We have had no problems in this area.

Lined-out seedlings are rotated to various garden beds. We will be discussing such plantings in beds C and D. Both of those beds are located about 70 feet up the hill from beds P and V.

Bed C is about 24 feet long and varies in width from 8 to 16 feet. Our lined-out seedlings are always spaced 6 inches apart in rows 12 inches apart, and at this spacing there is room for 342 plants in bed C. Bed D is just east of bed C, and at the time the disease was introduced into this bed there were 205 seedlings lined-out in the west half of the bed.

Our studies relating to the cause, dissemination, and control of PCN Crown Rot disease began in October, 1981 when 3 seedlings in bed Q, which had been lined-out in May of that year, began to decline. The leaves turned progressively gray-green, and dark areas developed at the base of the leaves and on the upper crown. Adele, who was at the time Plant Pathologist in the Agricultural Research Department of the Del Monte Corporation and has access to their laboratory facilities at San Leandro, isolated a *Pythium* sp. from 2 of the 3 plants. The fungus, *Pythium*, is a common water mold, similar to the *Phytophthora* mentioned by John Weiler in his 1984 article cited above. *Pythiums* cause a sloughing-off of roots of many plants, and are generally responsible for the 'damping-off' disease of very small seedlings. Such an organism could easily be the culprit in the problem. She also isolated *Rhizoctonia*, a fungus which causes a type of dry rot and death to many varieties of plants and which also could be involved.

The area was left untreated, and by the end of the following year 8 more plants had died. In the meantime, 3 of the non-diseased seedlings were selected for bloom type. That fall, having still developed no disease symptoms, the 3 plants were transplanted to another area. Despite the fact that no chemical dips were used when transplanting, no problems ever developed with these plants. All the remaining plants were dug and discarded.

Without any intervening treatment, the area was replanted the following May, just to see what would happen. Of the 36 seedlings planted, 9 died the first year, all with the same symptoms as those in the original planting. Since this test, we have repeatedly shown that, once the disease has become established, you will experience nothing but trouble if you replant without treatment to reduce the population of the causal organism(s) in the soil.

I have often pondered about the origin of this particular infestation. As with all my seedling plantings, the plants were rather closely spaced: 6 inches apart, in rows 12 inches apart. Yet, in the original planting, there was no evidence of spread from plant to plant. All the deaths were sporadic, as if each was a primary infection of its own. I have always thought that this infection came from some lily bulbs which had been purchased from a nursery in Oregon and planted in the area two years earlier. Of the 16 bulbs planted in that area, 11 had wilted and died of some mysterious ailment the first year after planting.

Actually, the real question is not the origin of that particular infestation, but why it has caused us so little trouble in view of the broad distribution of water molds. Water mold organisms are so widely spread throughout the world that it is a wonder we can plant anywhere without getting into trouble. Fortunately, most of the time they maintain a balance with other organisms in the soil and don't build up to the numbers required for invasion of our plants. As we shall see, however, once that critical balance has been surpassed, invasion is just a matter of course.

Progress of the disease in bed P, our main planting of named cultivars, was slow but relentless. Here, even though the plants are spaced much farther apart than they are in the seedling beds, the edges of old established clumps can be quite close and this could well be a factor in the spread of the disease to neighboring plants. In 1981, a plant of 'Californian' which had been obtained the previous Fall, died shortly after blooming. I have no other notes on this event and it would have gone unheeded except that the well-established clump of 'Native Music', mentioned earlier, which was planted adjacent to it, started dying a year later and was completely dead by bloom time, 1983. Both plants' remains were then removed, but the 2 spaces were never replanted. There was no further spread from this center throughout 1985 when all plants were moved while the bed was being fumigated.

In April, 1982, a plant of 'Citizen', purchased the year before, started to die. It had not

bloomed, but a picture of it, taken at the time, shows that it has developed 4 fans before it died.

Two adjacent plants died the following year, two more a year later, and 3 more were dead or diseased at the time the bed was dug in 1985.

In 1983, plants of 'Pogonip' and 'Go Wild', which had been purchased 6 months earlier, died shortly after blooming. Spread from these plants was also apparent, with a total of 7 surrounding deaths by the time the entire bed was dug in 1985.

We also have evidence in this bed, and in two other beds, of spread of the disease by washing rain water downhill from an original infestation. In this case 9 additional deaths resulted from this cause.

Thus, there were 4 separate plants in the area on which the disease was primary. From these 4 plants, it had spread to 24 more during the 4-year elapsed time prior to digging the bed. During this 4-year period only 2 of the dead plants were removed, and no chemical treatment was given until the final year when 3 drenches of Subdue were applied at monthly intervals.

By the end of the 1984 bloom season, it had become apparent that we were going to be forced to move the plants out of bed P and fumigate the area. In mid-January, 1985, shortly before we began drenching the area with Subdue, we selected and cut a start from each of the cultivars we wished to retain, a total of 70 plants. All the small, or dwarf types, 15 in all, were placed together in a permanent area in bed S, where PCNs had not been grown before. There were no deaths following this planting.

There was no large space available for a permanent planting of the larger-sized cultivars, so they were placed in a 'standby' bed, where they were lined-out like seedlings, planted 6 inches apart in rows 12 inches apart. Some of the clumps from which the starts were obtained were partially diseased, so every effort was made to select starts which were completely disease free. Each start was thoroughly washed and given a 10 to 20 minute dip in a Subdue solution.

The most diseased clump from which we obtained a plant was that of 'Soquel Cove', in fact we obtained the last live fan on the clump. We carefully washed it, cut away all the diseased roots we could find, trimmed the rhizome, dipped it in a 10 percent chlorox solution for 5 minutes, and then soaked what was left in a Subdue solution for 6 hours. It was planted in an isolated spot in the standby bed, and then drenched again with Subdue. It grew beautifully, never showed a sign of the disease, and eventually furnished us with 3 transplants, all of which are growing normally today.

The clump of 'Councilman' was also almost dead, but we were fairly certain that we had obtained a clean start. We were apparently wrong about this, however, because in late March the plant began to develop symptoms of the disease in the standby bed. It deteriorated rapidly, and on April 3 it was dug and removed. By chance, it had been planted at the end of a row, so we were able to shield the neighboring plants and treat the small area with Vapam. A couple of weeks later, 2 more plants located in the discrete areas in the standby bed, also died, as did the original clumps in bed P from which they had been obtained. Both dead plants were surrounded closely by other plants, precluding the use of Vapam, so following their removal, the 2 areas were drenched with Subdue at 3 monthly intervals.

There were no further deaths in the standby planting, and no further spread from these 3 spots through October 24, 1986, when the entire planting was dug. Successful transplants were obtained from this standby planting in late January, 1986, when the plants were one year old, and again in late October, 1986. No disease has developed in the approximately 200 plants thus obtained.

On March 1, about two weeks after the above plants were taken from bed P, we applied the first of 3 monthly applications of Subdue to the diseased area of the planting. These applications were made solely for the purpose of learning a little more about the effectiveness of Subdue in an old established planting such as this. Applications were made in consultation with Dr. Raabe of the Department of Plant Pathology, U. C., Berkeley, and all the necessary

materials were furnished by him. Concentration of the Subdue drench, as it is wherever mentioned was 0.3 ml. per gallon of water, (1/4 teaspoon per 4 gallons). Application rate was 1 gallon for every 4 square feet of soil, an amount approximately equivalent to 0.4 inches of rainfall. This required some care to avoid excessive runoff even in our gravelly soil.

We have conflicting evidence regarding the effectiveness of the Subdue drench. On the positive side, there was no visible spread of the disease following the first of the 3 applications and up to the time when the bed was dug 5 months later. Furthermore, the large clump of 'Councilman', mentioned earlier, from which we had obtained the start, which later died in the standby bed, showed a marked improvement during the course of the 3 applications. The large clump, which was 90 percent dead when the drenches began, showed an increase from 5 fans to double that number after the second drench one month later. Following the third drench, the 10 living fans appeared to be growing normally, and by the time the bed was dug on August 13, five of the fans appeared to be completely free of the disease. These 5 fans were thoroughly washed, given a 1-hour Subdue dip, and planted in 4-inch pots. Four of the 5 have survived a full year, and one, planted out in the garden last January, is growing vigorously today. These successful transplants, made 7 months after the entire clump should have been dead, are certainly a big plus for Subdue.

On the negative side, soil from this area was placed in 4-inch pots into which young seedlings were transplanted. All the seedlings were dead within a short period of time, whereas seedlings transplanted into non-infested soil grew normally. This aspect will be covered in more detail later.

It is interesting to note that the 4 plants listed above as primary sources of the disease multiplied and grew for a half year or so before the disease was detected. This 'incubation period' ties in with a fairly well established principle of plant pathology, that the severity of many soil-borne diseases is directly proportional to the concentration of the causal organism in the surrounding soil. In this case, two explanations are possible: either there was a small amount of the disease present in the soil where the 4 plants were planted, or there was a small amount of the disease on the plants themselves when they were planted. In either case the disease builds up on the growing plant until enough inoculum is present to kill.

You are also reminded that this was before our use of Subdue. A 10-minute dip in a Subdue solution would have eliminated any disease clinging to the roots or crown. We also have substantial experimental evidence that the Subdue dip greatly reduces the chance of its contracting the disease even if it is present in fairly large amounts in the soil before planting. Now to conclude our experiences with bed P, and to bring you up to date. In late summer all the remaining plants were dug and the area cultivated. On August 22, the entire bed was drenched with Vapam, sprinkled for 10 minutes, and then immediately covered with a plastic tarp. The tarp was removed after 4 days and the area left untouched for a month. The surface was then raked to aid in the escape of the Vapam fumes. On November 22, that part of the bed where we intended to plant was drenched with Subdue. Because of a combination of weather conditions and our commitment to the Region 14 Bulletin, however, we were unable to start replanting until January 12, 1986. On that date, 40 new starts were taken from the standby bed and planted in bed P. To date there has been no recurrence of the disease in this planting.

This fall, 16 more cultivars were added to the planting, and all are growing well. 'Eradication' is a BIG word, however, and it is near-impossible that we can escape some future problems in bed P. For the present we will just have to wait and see.

We will now examine the next occurrence of the disease which started in bed V, across a path from the diseased area in bed P. This is the bed in which we plant selected hybrid material, and this occurrence was the first indication that, unless proper care is taken, the disease is likely to strike, preferentially, your best selections. In this particular case, the second plant to succumb was the plant we had selected the previous year as the 'bluest flower we had ever seen'. The

first to die was the plant immediately in front of it where I had stood while gathering pollen from or placing pollen on the beautiful flower of this prize selection. I think this was a simple case of carrying the inoculum across the path on my shoes from the neighboring disease area in bed P.

A third adjoining plant also died, and that fall (1983) the 3 dead plants and 3 adjoining healthy plants were dug and removed. Without any treatment, the 6 plants were replaced with 6 expendable seedlings to see what would happen. By the spring of 1984, all 3 plants that had been planted in the spots from which the dead plants had been removed were dead, and by fall the other 3 replants also died. On October 22, 1984 the 6-plant area was treated with Vapam and drenched with Subdue. There has been no further occurrence of the disease in this bed, and pot tests using soil from the treated area have thus far failed to detect any residual disease. There are four other areas in our yard where the disease was quite obviously spread by shoes to an area where a special seedling was being heavily used in crossing. All four were in closely-spaced seedling beds, one in bed C and 3 in bed D. Spread in these closely-spaced plantings went at a frightening rate, averaging about the same rate per month as the wider spacing rate in bed P per year!

In bed C, we allowed the disease to spread at will for 4 months without any attempt to stop it by treatment. In this area, left untouched and with no removal of dead plants for the 4-month period, new deaths averaged 2.5 per month. After the 4-month trial, the diseased area plus one row of healthy plants around the area, was drenched with a Subdue solution without removing any of the dead and diseased plants. This treatment continued for 2 months, during which time the death rate was 4 plants per month. This may seem like a step in the wrong direction, and it certainly is no improvement, but you must remember that as the diseased area increases in size, there are many more plants on the periphery to be infected. After these 2 treatments, all dead and diseased plants were removed and the area drenched with a Benlate-Terrachlor-Subdue solution at the standard rate for each of the three fungicides. For the next 3 months following this treatment, and without any further treatment, only 3 new deaths occurred. Then we experienced a heavy rain which washed across the area. Downstream from the 3 dead plants, which had neither been removed nor treated, 12 plants died within a 3-month period.

On May 26, 1986, the entire diseased area was dug, the plants were all removed from the premises, and the area was treated with one and a half times the standard dosage of Vapam. Pot tests were run, using soil taken from the area before and after the Vapam treatment. In the pre-treatment soil, all the plants were dead within a month after planting. In the post-treatment soil, none of the plants have died to date.

The rapid spread of the disease by rain washing lends support to our present belief that one or more water mold fungi are involved as pathogens. The spores of these fungi are produced by the millions and are motile in water. With the PCNs, therefore, we have an ideal condition: a host plant which is highly susceptible, the spores of the causal pathogen being produced in great numbers on a nearby diseased plant, and the water to spread them across the surface of the planting.

We want to emphasize that all the severe problems we have experienced with the disease have occurred when we were purposely doing something wrong in an attempt to obtain information about the problem. The fact that we purposely left dead plants in place as inoculum sources, and deliberately replanted in infested soils without taking any precaution, are not recommended agricultural practices. On the bright side, however, we have not yet experienced any lateral spread of the disease where we have immediately removed the plant and treated the areas with either Vapam or Subdue.

Another factor contributing to the spread of the disease in our garden may be our automatic sprinkler system. Situated as we are, on a hill, there is no possibility of furrow irrigation. Nor has drip irrigation been satisfactory in our gravel: it just goes down and disappears somewhere.

Iris hartwegii australis as Parent.

By Richard C. Richards

Several years ago some wise guy suggested that the use of *I. hartwegii australis* as a parent might add some cold tolerant genes to PCI hybrids. The reasoning behind this suggestion was that, while this species is the southernmost species of PCIs, being confined to Southern California, it is a species occurring in the mountains from 5,000 to 7,000 feet, where it gets considerable cold and snow in the winter. It survives that cold and snow. So it must have some cold hardy genes in its makeup. The wise guy who suggested this was I.



I. hartwegii australis

Photos: Richards

I. hartwegii australis (*I. b. a.*) is not an easy species to use in hybridizing. Because of its location where spring comes late by Southern California standards (PCI bloom peaks in late March or early April in most of So. Cal., while *I. b. a.* blooms in early to mid June), attempts at hybridization with it involve the use of very late-blooming clones if local crosses are attempted. The iris itself is a challenge for even professional botanists to grow outside its native range, so it is not likely to adapt to conditions in the gardens of Southern California or elsewhere. It may live for a year or two, long enough to produce a bit of pollen if the grower is lucky. But what a magnificent challenge for those who like challenges, magnificent or otherwise! Very few accepted the suggestion, and nothing really happened.



I. hartwegii australis

Photo: Richards

It occurred to me that if this was such a magnificent challenge, and I am living in Southern California within forty or so miles of the stands of the iris, I ought to put my tweezers where my mouth is, so to speak, and try the cross myself. Me and my big tweezers.

In June of 2004 I gathered some pollen from the native stands, and brought it back to my

garden. Only very late PCI clones were still providing an occasional flower, specifically 'Blue Sage' and 'Orchid Resprite' (O. R.). I set a pod on the former, and two pods on the latter, despite the lateness of the season. That fall, I planted the seeds and in the spring I lined out the seedlings. The sole seedling of the cross of 'Blue Sage' X *I. b. a.* promptly died. But of the forty or so seedlings I lined out under shade cloth from the 'O. R.' X *I. b. a.* crosses, one bloomed. It looked suspiciously like *I. b. a.*, not surprising at all.

A note on 'Orchid Resprite', the successful pod parent. This iris has a long bloom season in Southern California, starting often in late February and obviously going into late June. I grow a number of clumps of it, so I usually have bloom pretty much throughout this long period. It is mostly if not completely *I. douglasiana*, from selected clones including 'Orchid Sprite', and the form is mostly old-fashioned *I. douglasiana* narrow flower form. But it's a growing fiend.

As for *I. hartwegii australis*, it does not really clump in its native range, but sprawls out with a loose structure involving foliage that at best is half-erect. Not your ideal garden plant, even if you can induce it to hang around in your garden long enough to bloom.

This spring of 2006, most of the seedlings, now nice tidy little clumps, bloomed. They were all clumps, not sprawls. I have no idea if they are cold tolerant, since we don't get cold. It is rarely down to freezing in my formerly citrus producing area. But I did get some interesting unexpected results.

Aside from the fact I got a relatively large number of seedlings that were alive and mostly thriving in the second year, some unanticipated traits showed up. Most of them had good stems that held the flowers up. *I. b. a.* does have pretty good stems in wet years, but tends to sprawl in dry years.

I got a fairly wide range of colors considering that 'Orchid Resprite' is lavender with a pinkish influence, and the *I. b. a.* pollen was from lavender clones. One surprising seedling was a color-enhanced version of 'Orchid Resprite'. Since O.R. was blooming a few feet away, I did not have to depend on my memory to know the colors were definitely O.R. coloration, but so much clearer and sharper. Indeed, most of the seedlings had much more vivid colors than *I. b. a.*, though most were in that color range. Most form was classic *I. b. a.*, narrow and charmingly wild-flower-looking.



Richards seedling



Richards seedling

Another seedling showed up with a strong turquoise flush. I have seen such a flush in *I. munzii* and *I. douglasiana*. I have not seen any such flush on *I. b. a.* in the wild, though I will look for it next spring. Perhaps species crosses bring out latent colors and tendencies in either the species or the other parent. O.R. does have a slight turquoise flush, but not much.

Another surprising feature was late bloom. I should have expected that, but I had not thought about it. Because O.R. can bloom so late, I am not sure what the influence is here, but it would not surprise me if I have some seedlings that bloom in June every year. The next few years will tell. If the trait perseveres, there will be some late blooming clones to extend the PCI season. Put those alongside the very early-blooming clones that are being used in hybridizing by several

other hybridizers, especially Garry Knipe, and we may be looking at six months a year of PCI bloom in some climates. I for one would love to look at that every year.

I am now in the process of attempting to establish whether these seedlings can survive. All my seedlings are subjected to watering once to twice a week, a procedure that causes traditional PCI growers to weep uncontrollably. Too much water, they say. No, I say. The PCI need to be able to stand up to heat and water, which the average gardener will give them in the difficult, interior climates of Southern California and indeed the whole Southwest. Plus the weather cooperated magnificently with 22 straight days of over-100-degree temperatures. That's much more excessive heat than we usually get.

Some of the seedlings are becoming permanently deciduous, but no more so than from other crosses not involving *I.h.a.* I do test seedlings with a certain kind of delicate brutality.

This last June I revisited the stands of *I.hartwegii australis*, which the Society had visited in a trek in 2002. In that visit, few flowers were found since the area had been ravaged by several successive years of drought. But this last June, after several years of good rains, I found a hundred or so flowers in each of the areas where we had found one or two in 2002. The transformation was startling.

I collected some pollen to use back in my garden, where there were two flowers of 'Gravitas', blooming late. It has not done that before for me, but I have had 'Gravitas' for only a couple years. I set one pod, which produced thirty or so seeds. These will be planted in the fall. It will be interesting to see what 'Gravitas', with its much broader form and different range of color, can do with *I.h.a.* pollen as an influence. So far 'Gravitas' has survived, and even thrived, in my difficult interior climate, as long as it gets considerable shade.

I'm not counting seedlings before they hatch, but I am intrigued.

Finding species while traveling!

By Terri Hudson

Jay and I had just started our 9-10 hour drive from Fort Bragg, CA to Portland, OR in anticipation of going on the SPCNI Trek last Spring. We were astounded to see PCI's in bloom on hillsides in the grit along Hwy 1 as well as along the roadside cuts. We found these unknown PCI's north of Hale's Grove, a logging settlement, which is fairly close to where Hwy 1 meets Hwy 101 at Leggett, CA. We continued to see some of the same along Hwy 101 to the north of Leggett.

I picked quite a bouquet and put them in our cooler, hoping that they would last a good 24 hours until we could meet with Debby Cole and Jean Witt to see if they could identify them. Jean studied and studied them, and she and Debby with their heads together at dinner, came to the conclusion that they were a hybrid of *I. purdyi*, *I. douglasiana* and *I. macrosiphon* which we found mentioned in [The Guide To Pacific Coast Iris](#) by Victor Cohen. He states, "Disturbance of the land, mainly by man, is one of the principal factors responsible for this replacement by hybrids. Logging, and the creation of highways has opened the way for other species, such as *I. douglasiana* and *I*



Photo:

macrospilon, to move in and hybridize with *I. purdyi*. In places these hybrids are abundant.” If you would like to read more about the hybridization with *I. purdyi*, turn to p. 31-32 of Cohen's Guide.

The blooms actually lasted long enough for them to be in a small vase for the Conventioneers to enjoy early in the week after the SPCNI Trek.

We were careful to note the mile markers, went back in late June and collected pods carefully. You will see the seeds listed on the Seed Distribution List.

One never knows at any given time when you can be traveling and have a "find" like this!

AIS 2006 Award Winners

Sydney B. Mitchell Medal



‘Cozumel’

Photo: Hudson
Joseph Ghio



Runner-up: ‘Air Show’

Photo: SPCNI CD

Lois Belardi

Award of Merit



‘Wine and Cheese’ Vernon Wood

Photo: Hudson



‘Santa Rosalita’ Joseph Ghio

Photo: SPCNI CD

Runners-up

‘Ciao’ Joseph Ghio
‘Mocha Melody’ Alphild Lind

‘Drip Drop’ Joseph Ghio

Honorable Mention:

‘Wild Survivor’ Will Plotner
‘Stainless Steel’ Joseph Ghio

‘Blue Plate Special’ Joseph Ghio
‘Pretty Boy’ Joseph Ghio

Runners-up

‘Lash’ Joseph Ghio
‘Steamer Lane’ Lois Belardi

‘Star of Evening’ Joseph Ghio

Mug Shots



Ryan Grisso Seedling



Ryan Grisso Seedling



Ryan Grisso Seedling



Ryan Grisso Seedling



Ryan Grisso Seedling



I. tenax seen on Trek



I. tenax seen on Trek
AIS Award of Merit Runners-up:



I. tenax seen on Trek



Tenax Photos: Sussman
More *I. tenax* seen on Trek



Photo: SPCNI CD

'Drip Drop' Ghio



oto: SPCNI CD

'Ciao' Ghio



Photo: Cole

'Mocha Melody' Lind

Your Photo Could Be Here!
Send photos and captions to the editor by mail or email at a minimum of 300 DPI.

We will crop and prepare it for publication.



Photo Collage by Rita Gormley

Depending on the amount of overlap of the large 'rain bird'-type sprinklers, certain areas in the garden get as little as a half inch and others as much as a full inch of 'rain' with each sprinkling. Left to themselves, the sprinklers are activated every 7 days, but unless the weather is extremely hot, we usually delay them manually for up to 10 days.

In no way are we going to give up the convenience of this system which allows us to be away from home for a month at a time, and go back to hand-watering our three-quarter acre property. Nor are we about to give up the other 90 percent of our garden plants which are non-iris and which require the water. In truth, I think the PCNs like the water, too. I don't think I have seen a planting anywhere that grows any better than ours.

Actually, we don't really know how much the sprinkling is affecting the disease; we can only surmise. Except for that one heavy rainfall, over which we had no control, we have seen no evidence of spread by water. We have good evidence that the disease spreads from plant to plant through root contact, however, and the presence of water around the roots should contribute to this type of spread. It is something like cigarette smoking: we haven't absolute proof, but it is reasonable to think that drying out the plants more during the summer would be beneficial.

Now, to be fair, we will give equal time to the other side of the question. Plants growing wild along the coast and on the coastal side of the inland hills get unbelievable amounts of 'drip irrigation' during the foggy summer mornings. I'm not sure how much dew forms on the plants in the Sierra foothills, but there you seldom, if ever, find them growing in the full sun. They are unknown, and evidently can't even survive in nature in the really dry interior valleys and hills. In my case, we are blessed with a second sprinkler irrigation system which covers the periphery of our yard where the azaleas and rhododendrons grow, and this system is set to deliver about a quarter inch of 'rain' every single night. One sprinkler inadvertently covers a small area of the large planting of named varieties in bed P, which we previously discussed. Just by chance, this small area of about 10 cultivars that had received about a quarter inch of 'rain' every night for the past 10 years, was the only area in the planting where no disease occurred. Iris rust is the only other disease occurring on PCNs in our garden. Rust is a problem on several Iridaceae, and is caused by a fungus, *Puccinia*, usually *Puccinia iridis*. It is an important disease in many locations where PCNs are grown, especially along the coast and of no importance in most other areas. Degree of susceptibility is genetically controlled; therefore selection for resistance is the most sensible method of control. Natural resistance in PCN species and cultivars varies from plant to plant, ranging from highly susceptible to near-immune. Most plants of the coastal species, which have had centuries of natural selection pressure in an environment favorable to rust, are highly resistant. We have found most *Iris munzii* clones from the dry Sierras, where there is no natural selection pressure, to be highly susceptible. We have evidence, however, that this is not always the case.

Our garden is an ideal environment for rust. We live in a relatively cool and moist area, and we overhead sprinkle. When we brought *munzii* pollen home from the Sierras and crossed it to some of our relatively resistant *munzii*-derived material, certain of the resulting lines were so infected with rust that every plant died back to the ground. Other lines, depending on the *munzii* pollen used, were relatively resistant, and the population included individual plants with no trace of rust. Dr. Lenz says he has never seen rust in his dry Rancho Santa Ana plantings, but some of his selections are quite susceptible, while others are resistant. Strangely enough, his 'Sierra Sapphire', a pure *munzii* selection, is quite resistant here. We saw rust in Thornton Abell's garden in coastal Santa Monica, yet, despite this selection pressure, some of his part-*munzii* clones that are growing in our garden are as susceptible as anything we have seen. Other Abell selections, however, are near-immune. Joe Ghio says that rust didn't occur in his PCNs the first several years he grew them, but then gradually increased. I have the feeling that this timing coincides too well with his introduction of *munzii* pollen into his breeding program to be

ignored. Most of his introductions, however, involve primarily coastal species and are highly resistant in our garden.

We are in a quandary! Well over half the PCNs in our garden are *munzii*-derived. Last year rust was responsible for the weakening and eventual death of one of the Thornton Abell clones in our garden. Other clones, desirable for our breeding, are highly susceptible and become weakened by the disease. Despite all this, we have been reluctant to spray, when one of the primary objectives in our breeding program is selecting for resistance.

This year, for the first time, we are selectively spraying with Plantvax. Spraying has not eliminated the rust on highly susceptible plants, but none have died back to the ground the way they did last year. By this selective spraying, we enable the highly susceptible seedling to grow normally until they flower. At that time we can discard them; but on the other hand we may discover some intensely blue, beautifully formed flower that exists within the susceptible population. Subsequent crossing can reduce or eliminate the rust and, hopefully, retain the positive features of the plant.

PCI Show Winners!

Congratulations to these exhibitors on their show wins:

Clara B. Rees Iris Society: Best Specimen of Show: 'Lash' , exhibited by Sheryl McEwan

Monterey Bay Iris Society: Best Seedling: DBSX28B5-3, by Garry Knipe

Mount Diablo Iris Society: Best Seedling: 2673-05, by Ryan Grisso

Sydney B. Mitchell Iris Society: Best Specimen of Show: 'Bar Code' Exhibited by Ryan Grisso

Westbay iris Society: Best Seedling: GRS 135B14-2 by Garry Knipe

SPCNI Website Award Winner

Congratulations to Steve Ayala, webmaster. The SPCNI website, www.pacificcoastiris.org, has been selected as one of the best educational resources on the Web by StudySphere. StudySphere is one of the Internet's fastest growing sites of educational resources for students, teachers and parents. StudySphere has scoured the Internet to select only the finest sites to be included within its listing of educational links. The StudySphere award logo is now shown on the home page of our website. If you haven't checked out the website yet, do it now. It's a great source of information and loaded with terrific pictures.



Kudos, Steve, you're doing a wonderful job!