

ALMANAC:
SOCIETY FOR
PACIFIC COAST
NATIVE IRIS

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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 Iris and named hybrids through 2001. ~70 pages. Hardcopy or CD: \$9.00 for USA, \$9.50 for Canada, and 16.00 for Europe. For both a CD and a hard copy, the cost would be \$4.50 less for the CD.

Diseases of the Pacific Coast Iris

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

A Guide to the Pacific Coast Irises

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

A Revision of the Pacific Coast Irises

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

Hybridization and Speciation in the Pacific Coast Iris

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

MEMBERSHIP & 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	\$ 6.00	\$ 8.00
Triennial	15.00	18.00
Life	75.00	100.00

Please send membership monies to the SPCNI Treasurer. Foreign postage: please add \$1.00 for annual, \$3.00 for triennial, and \$10.00 for life membership.

ALMANAC

DEADLINES: March 1 and September 1.

Back issues are available for \$3.50 each, postpaid. Please address the person listed under **Almanac Back Issues**.

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

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.

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PRESIDENT'S MESSAGE

The enjoyment of Pacific Coast Irises is limited greatly by their ability to grow in a given climate, and those limitations are in many cases severe. Although growing and hybridizing PCIs in the Midwest and in the East involve great challenges, we have members who are doing just that. It seems to me that the more climates there are in which PCIs will grow, the more enjoyment people will derive from them.

The above comments, of course, border on platitude. The fact is that outside of the native growing range of PCIs, their successful growth and propagation is a gardening challenge. Even here in southern California, successful propagation is a matter of knowledge, experience, and some luck.

Here we find that the species *I. douglasiana*, and hybrids derived from that species, are the PCIs most likely to survive and even flourish. A number of hybrids have survived decades in this climate, and we occasionally discover newer hybrids that will succeed, though the number of failures compared with the number of successes is not impressive.

It seems to me that we have PCI Mecca in the areas in which the species grow wild, and all other areas are problematic. Hybridizers in Mecca are producing incredibly beautiful varieties. Whether these will grow successfully for very long outside of Mecca is another question.

This offers a unique challenge to hybridizers outside of Mecca. Hybrids that grow easily and propagate well need to be produced by crossing the toughest, most gardenable hybrids in a given region with the exotic hybrids from Mecca. This job is best carried on by hybridizers in those climates in which growing PCIs is a challenge. The exotics can often be induced to linger a season or two, which is long enough to use their pollen.

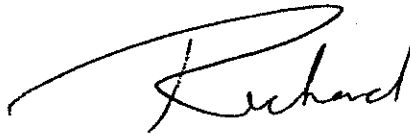
In southern California I am discovering the hardiness of *I. douglasiana* and its hybrids virtually every year. A visit last spring to a garden in which some of Bob Hubley's mostly *I. douglasiana* hybrids revealed that the clones had been in place for nearly a decade under some citrus trees in Yucaipa, which is close to desert. Moreover, these irises had been getting fertilizing by Miracle-gro on a regular basis as well as weekly watering. This is much more fertilization than I thought would be good for them, but they were growing vigorously. Perhaps the areas in which PCIs will grow can be extended into those areas classified as desert or near desert, with the proper care for soil preparation and protection from the hot desert sun.

Another challenge awaiting hybridizers with vision and patience is the production of reblooming PCIs. Joe Ghio has had rebloom in his lines for decades. Surprisingly, some of the *I. douglasiana* hybrids of Bob Hubley have rebloomed in Yucaipa as well as in coastal areas of southern California. I would expect to see rebloom in the coastal climates where the temperature range is not so extreme. But rebloom in Fresno, and in Yucaipa, both interior climates with very hot summers, has occurred, and could be exploited by local hybridizers to extend the temporal range as well as the spatial range of PCIs.

On a different topic, the officers of the SPCNI are revising the By-laws to bring them more into conformity with the Articles of Incorporation, and to make them more clear. This is unspectacular but necessary work. You will hear more on this in the future.

Plans are going forward for the SPCNI Trek to be held at the end of the AIS Spring conference in Fresno in 2004. No Trek has successfully seen *I. munzii* in bloom before, though we have tried, and with a little luck that will change in 2004. Adele

Lawyer, whose knowledge of *I. munzii* is extensive, is leading the Trek. We will have visitors from New Zealand with us to see these beautiful irises, so we are hoping our plans for the visit coincide with the *I. munzii*'s plans for blooming. If they do, it will be a spectacular trek. I hope to see you all there.



Richard

FROM THE EDITOR

I have some announcements to make before you start digging into this issue. The first is that David Pettenski is our new Almanac Representative for Washington. The second is that we only have two sets of SPCNI slides. Please read the article on the SPCNI slide sets. The last announcement is "Yes,

there is an index available for the *Almanac*." I'm not sure what I did, but the little blurb on the inside cover about indexes being available disappeared for several issues, but it's back now.

READ ME

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

Please send membership renewals or inquiries to the Membership Secretary. Do not send them to the President or Editor. Also, if you have a change of address, please remember to send the information to the Membership Secretary. Thank you.

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.

SPCNI Membership List

The SPCNI will be offering its membership list to 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. If members have e-mail and would like to be on an e-mail list, please contact Terri (irishud@mcn.org).

SPCNI SLIDE SETS

Two slide sets are available through SPCNI. Our Slide Chairman, Damon Hill, has produced it and it can be obtained by requesting it from him at 4613 Maddock Road, Sebastopol, CA 95472.

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, SPCNI Secretary-Treasurer. See the address on page 2. The person requesting the slides is financially responsible for return of the slides.

IRIS DOUGLASIANA T-SHIRTS STILL AVAILABLE

Terry Hudson's artist contact, Delo, sketched a group of wild flowers growing on a bank along the beach near Santa Cruz. *Iris douglasiana* is queen of the scene, with beach strawberry, *Fragaria chiloensis*, and blue eyed grass, *Sisyrinchium bellum*, as attendants at her feet.

A picture of the artwork was shown in the Spring 1999 Almanac. SPCNI is offering this lovely shirt for \$18.00, which includes shipping. Please send your order to Terry Hudson. [See address on Page 2 of the Almanac.] Monies will go towards the slide sets, so that more AIS members and societies will be able to appreciate the beauty of Pacific Coast native irises.

CHECK LIST AVAILABLE

A new revision of the *Check List of Pacific Coast Native Iris* is available from the Secretary-Treasurer. The new version covers cultivars and species registered and introduced through 2001.

Pricing is as follows: \$9.00 for USA, \$9.50 for Canada, and 16.00 for Europe.

A CD is being offered as well as the hard copy for the same price as the hard copy. If you would like to order **both** a CD and a hard copy, the cost would be \$4.50 less for the CD.

Please contact Terri Hudson if you want to order a copy.

WANTED

From Brian Harris, New Zealand:

I am getting together a party of iris folk in this country and we are planning to attend the convention in 2004 as well as the median convention. Both before, during, and afterwards we will do some touring & sightseeing. (approximate dates: 16-19 April 2004)

What we require is a driver who can operate a 10-12-seater van or bus for 3 or 4 days, starting in San Francisco, then 2 nights in Salinas and then over to Fresno. None of our proposed party is a willing driver in your cities and on the other side of the road.

If any such person would be interested in helping us in our venture, would you please contact Brian Harris at <BarBri@xtra.co.nz>

IRIS MUNZII TRIP

Richard Richards, La Mesa, CA

Negotiations with the National Park Service are presently underway to allow a limited number of SPCNI members into closed areas of Sequoia National Park to view the best known remaining stand of *I. munzii* on the day after the AIS National Convention, Sunday, April 25, 2004.

If negotiations are successful, two transporter vans containing a total of thirty people will be allowed onto a dirt road past locked gates to view flowers of what is arguably the most beautiful of the *Californicae*. If rains make the dirt road impassible, or if the stand is not in bloom, the trek will stay on the main highway to explore stands of

the Giant Sequoia, *Sequoiadendron giganteum*, higher in the mountains of the Park. The closed dirt road, which would be opened for the two vans only, will allow access to within a quarter mile of the stand of *I. munzii*, consisting of at most fifty clumps, with good color variation. SPCNI has never successfully visited any stands of *I. munzii* in the past.

The Fall Almanac will contain more information. Please check the SPCNI website, (www.pacificcoastiris.org) for developing news.

APHIDS

Adele Lawyer, Walnut Creek, CA

[This article originally appeared in The Bulletin of Region 14 of The American Iris Society, volume XXXIX, Number 1, March 1995. It is reprinted with permission from the author and AIS Region 14.]

Quoting from *Fundamentals of Insect Life*, Metcalf and Flint, "The aphids, also called plant lice, are among the smallest, most defenseless, and most preyed upon of all insects; yet because of their immense vitality and extraordinary fecundity, due to the shortness of their life cycle and their ability to reproduce parthenogenically, they cover the earth with an enormous assemblage of species and tons of individuals affecting almost every kind of green plant." Some of the green plants are iris.

Aphids have been observed on all of the more than 20 iris species we grow in our yard in addition to the bearded, arilbreds and arils, Pacific Coast natives, Siberians, and Japanese. Iris are ideally suited for harboring aphids. One type, usually gray, conceal themselves in the sheaths sheltering the flowers and seed pods, and between the leaves which are pressed closely together at the lower part of the plant. In Pacific Coast native iris, aphids feeding while packed into the flower sheaths severely reduce seed production. Another type of aphid, usually green, feeds in the open on iris leaves.

Aphids do little serious damage

Although aphids, and the ants which are usually seen in their company, detract from the clean look of leaves and sometimes flowers in the garden, they do little serious damage to the performance of the iris. Their principle effect is cosmetic. Their presence on show stalks detracts from the appearance in exhibition situations and in the garden. Snails and other biting insects which bite off or deface petals and/or leaves are more destructive to the plants and annoying to exhibitors since this finite damage cannot be removed by a brush.

Because aphids feed by piercing and sucking the sap from plants, they reduce the vitality of their food source, and in large numbers, these tiny creatures can weaken both plants and trees. Iris, however, are affected only minimally in comparison with more sensitive plants. Although aphids are capable of transferring virus from one plant to another as they feed, the mosaic diseases of iris are already universally present in all iris varieties bearded and beardless, rhizomatous and bulbous. [See *World of Irises*, Virus Diseases, pp 343-344].

Mosaic Virus

Mosaic virus symptoms are characterized by the mottling of the leaves and/or the flowers of iris. In some cases only the leaves have this variegated effect. The leaves become marbled in various shades of green. Infected flowers sometimes show haphazardly distributed spots and splotches on the petals or they are distorted or puckered. Differences in susceptibility of iris varieties to "bearded iris mosaic virus" (BIMV) exist. Some varieties are symptomless, others are moderate in their reaction, and others are very susceptible. Symptoms of BIMV fluctuate in severity from year to year. For the sake of your garden's beauty, it would be wise to eliminate those varieties exhibiting severe symptoms; but doing so would not reduce the incidence of the disease since it is endemic in iris. It is hoped that breeders will avoid introducing the more susceptible varieties. Meristem culture, in which a minute portion of the growing tip is propagated by tissue culture and/or other means, usually in combination with heat treatment, is used to eliminate virus disease from tree fruit varieties and other plants for wholesale commercial use. It would be a vain effort in the case of iris, since any "cured" variety would soon become reinfected unless it could be planted where aphids or iris do not occur.

Mind-boggling reproductive potential

The life cycle of the aphids is one of the extremes of nature's adaptation. Compared to the 1 to 12 children characterized by the families of man or their domestic animals or fowls, the hundreds of the aphid family are mind-boggling. Also, instead of reaching child-bearing maturity in up to 30 years in some animals, and a few months for other animals and birds, aphids can produce young in as short a time as 8 to 10 days after they are born! The corn aphid, for example, bears an average of 12 to 16 young. Each of these can reproduce within 8 days, and a generation can be completed in 16 days. Theoretically, if all survive, in one year a single female could produce a chain of aphids that would circle the earth.

Aphids go through a simple metamorphosis: eggs, nymphs, and adults. The eggs originate within the female without fertilization. The nymphs are duplicates of the adult as soon as they emerge

from her body. They start to feed and move about immediately. Initially they are smaller than the adult and cast off their outer body covering a few times before reaching mature size.

Winged aphids

Aphids are mostly societies of females which are of distinct types. A few among each species are winged. These can travel more readily than the wingless majority to more distant feeding areas to initiate new colonies. Most of the year aphids are parthenogenic, which means they have the ability to reproduce without fertilization by males. Their many generations migrate from one type of plant to one or more others for most of the year. In some species, males appear only in the fall. In cold climates a dormant period is necessary for some species to survive the winter. The males fertilize winged females and their eggs then overwinter on a particular crop and emerge as female when the weather is suitable in the spring. If the winter is extremely severe and there is little snow cover, survival will be poor, whereas adequate snow cover affords them protection from the cold. In some species of aphids, males never appear at all. In warm areas such as large sections of California males seldom occur.

Ants are generally present whenever an aphid infestation occurs. In many cases, the ants simply feed on the honeydew which these aphids defecate as excess sugar. Other species of ants place aphids on suitable plants and they even fondle them, which causes increased production of honeydew. Extreme examples of this symbiotic behavior are the corn-root and strawberry-root aphids. In the autumn, the ants carry the aphids underground and nurse them during the winter. In the spring, they transport them to some succulent weed host where the young can obtain nourishment. Later the ants carry the aphids around and pasture them on corn or strawberry roots. These aphids have become so dependent on ants that they have lost the means of locomotion.

Control of aphids

Control of aphids is usually one of a gardener's responsibilities if you wish to see healthy, clean iris leaves and flowers. If a person doesn't want to use pesticides, the University of California leaflet 21032 recommends using a water spray to physically wash the aphids off the plant if the stem is strong enough to prevent physical damage. Most aphids will not be able to get back onto a plant. Using soap along with the spray helps remove the aphids. The "Safer Company" markets a ready-to-use insecticidal soap. This would be rather

expensive for hundreds of clumps but might be acceptable for a small iris garden.

Chemical controls

If you choose to use pesticides, it is good to know that most insecticides are compatible with fungicides. The rule of thumb is that if a smooth texture results when you combine samples of two materials with a small amount of water, they are compatible. If aphids are present, an insecticide can be applied along with the fungicide used to minimize leaf spot or rust symptoms. Both aphids and ants can be controlled by Diazinon and Sevin (carbaryl). Aphids can also be controlled with Malathion 50 and Orthene (acephate), a systemic. For ants only, Dursban (chloropyrifos) is recommended. Agents derived from plants, for example pyrethrin and rotenone, are also available. These materials are often combined as aerosols or sprays formulated for use on vegetable and other edible crops since they can be applied up to a day before harvest, are non-toxic to mammals, and insects do not develop a tolerance to them.

Integrated Pest Management

In addition to chemical controls, IPM (Integrated Pest Management) is a popular alternative. This term is applied to exploring means to control or minimize damage from pests and diseases by examining the conditions of the environment in which the problems occur and devising strategies which could reduce or eliminate the use of pesticides. Garden owners should study the conditions in their gardens to see whether they can avoid the use of pesticides except for extreme conditions. In our garden, we find it necessary to control leaf spot and rust with fungicides, but experience over the years has shown us that pesticides are not necessary for insect control. As an example of a commercial application of IPM, when I was involved in commercial production of peas, aphids were a serious problem. The pea aphid population is favored by the same cool, temperate climate which also favors pea growth. In high populations, aphids severely distort pea vines and pods so that large acreages have to be abandoned. Management would prefer not to use pesticides at all, and if they use them, the labels restrict use to the early season up to a few weeks before harvest. The field men monitor aphid populations and weather prediction (which are more accurate in the Midwest than they are on the Pacific Coast). If the weather is expected to turn hot, they will hold off on pesticide applications because they have learned that with hot weather, a fungus disease favored by

heat runs rampant and effectively controls the pea aphid.

Insect predators

In addition to fungus disease, insect predators can act as control agents. A tiny parasitic wasp, *Aphidius testaceipes*, is responsible for the brown mummies seen in aphid populations. These are the dried cases of the aphids. The larva of the wasp develops in the aphid's body. When the adult develops, it cuts a hole in the back of the aphid to emerge. The wasp reproduces during the warm months of the year, materially reducing aphid populations. This wasp has been introduced into California.

Ladybird beetles prey mostly on aphids, but also eat scales, mealy bugs, and mites. The ones we recognize are red with black spots, but some are gray, black, and orange. The ladybug eggs are orange and cigar shaped. They stand upright on leaves in clusters of 12 or more. Their larva have

no wings, are flat, orange or gray, alligator-shaped insects with legs on the front half of their bodies. The larva can eat about 25 aphids a day and the adults 50 or more daily. Although you can purchase lady beetles, they very seldom remain in your garden, even when there is plenty of their favorite food available. Hover flies feed on plant eating insects such as aphids. They grasp and puncture them with tiny hooks in their mouths and suck out the body fluids. They are very effective aphid killers. Praying mantises are another commercially available predator. These eat aphids, but they also eat other kinds of insects, many of which, like the ladybird beetles and bees are beneficial. They are not heavy feeders, and are therefore of limited benefit.

[Editor's note: Dursban (chlorpyrifos) is no longer available due to health concerns.]

ONE THRIPS, TWO THRIPS

Steve Taniguchi, Santa Clara, CA

I'm a bug guy. I like insects. There are, however, insects that I do not like. Mosquitoes and other insects that bite and suck blood are one group that I do not like. Another group of insects that I do not like are those that attack my PCIs. Among the insects that attack PCIs are the thrips.

Thrips ("thrips" is both singular and plural) are small, thin insects belonging to order Thysanoptera ("fringed wing"). There are approximately 600 species of thrips in North America, and most of them are between 1/32 and 1/16 of an inch in length. Some species of thrips have two pairs of hair-fringed wings, but others are wingless. A few species of thrips are predacious, while others are herbivorous. The herbivorous species eat by rasping the plant surface and sucking the plant fluids. The herbivorous species aren't very smart and may bite people in their search for food. If you ever experience a sharp pinpoint pain and don't see any obvious cause of the pain, take a closer look and you will often find a thrips.

Thrips hatch from eggs; a fertilized egg produces a female and an unfertilized egg produces a male. They go through a few nymphal stages, then enter a dormant prepupa stage. The next stage, the pupa, is usually covered by a cocoon from which the adult will emerge. Thrips feed during the nymphal and adult stages of life.

I have seen two types of thrips on my PCI. One type, orange-yellow in color, inhabits the flower and doesn't seem to do any noticeable damage. I do not attempt any control measures on those thrips. The other type is black and lives among the foliage and damages the leaves. Their feeding habits (rasping and sucking) produce silvery white patches and streaks on the leaves. To make matters worse, their fecal material builds up as small black spots on the leaves. When I first saw thrips damage on my PCI, I thought it was some sort of fungal infection or disease. I found the thrips only after taking a very close look at the foliage.

Since I can not distinguish predatory thrips from herbivorous thrips, I implement control measures only if I see damage to my PCIs. In the past I've used insecticidal soap to control the thrips, but in retrospect, too much insecticidal soap could alter the pH of the soil. I now use a systemic insecticide, Orthene, to kill the thrips and it does a great job (but it has a horrible odor). As always, follow directions and take appropriate safety measures when using insecticides. If you do not want to use insecticides or other chemicals, the author of the book *Bugs, Slugs & Other Thugs* suggests using blasts of cold water to dislodge the thrips. I personally have not tried this method so I cannot comment on its effectiveness.

The information for this thrips article was extracted from the following sources.

Insects Spiders and Other Terrestrial Arthropods, George C. McGavin, Dorling Kindersley Inc. 2000

The Audubon Society Field Guide to North American Insects & Spiders, Alfred A. Knopf, Inc. 1980

California Insects, Jerry A. Powell and Charles L. Hogue, University of California Press 1979

Bugs, Slugs & Other Thugs, Rhonda Massingham Hart, Storey Communications, Inc. 1995

Insects and Gardens, Eric Grissell, Timber Press, Inc. 2001

Insects in Perspective, Michael D. Atkins, Macmillan Publishing Co., Inc. 1978

PCI PESTS

[Editor's note: I contacted several SPCNI members and asked them to provide information about PCI pests they've encountered. The most common pests listed are slugs and snails, and whiteflies. In general, animal pests seem to be a minor problem with PCIs.]

Steve Taniguchi, Santa Clara, CA

Of all the animal pests, slugs and snails inflict the most damage to my PCIs. They can destroy seedlings over night. I've been using various brands of snail "food", but the snails and slugs are just too prolific - it's a never-ending battle. Whiteflies leave ugly white patches on the leaves. If they are on my seedlings, I smash the adults and scrape the youngsters off with my fingernail or a stick. I've also had thrips damage some of my PCI. Thrips are described in the preceding article. Earwigs will eat holes in the flowers. Other than smashing the ones I find in the flowers, I haven't done anything special to control earwigs. Aphids will sometimes hide between the seed pods and the spathes. I discourage this by pulling the spathes away from the seed pods. Every once in awhile, some sort of (moth?) larvae will eat holes into the seed pods and eat the seeds. I think a systemic insecticide would prevent this, but I don't bother since the larvae are not abundant enough to create a serious problem. Just this year I have seen some sort of moth larvae eating the flower buds and leaves of my PCI. I haven't been able to identify them because, for some reason, they end up smashed or cut up. I've also had problems with squirrels digging up seedlings and digging in pots of PCI. I have not found a successful method of discouraging this activity.

Debby Cole, Mercer Island, WA

I haven't encountered any pest that causes enough damage to be worth pursuing, except of course slugs and snails, for which I bait. I think it's thrips that get to them in late summer and wound the leaves, encouraging rust, but I just cut off all the old leaves every February, which removes most problems.

George Gessert, Eugene, OR

By pests I assume you mean bigger critters (not rust, for example.) Here's my list:

Slugs and snails - a serious problem with pacifica seedlings. I garden organically, and do not use snail/slug bait. When seedlings are in flats, the best control is to elevate the flats a foot or two above the ground. Use large pots, or anything to get the flats off the ground. Slugs and snails may still crawl up, but prefer not to. Handpicking the few that get up helps.

Sowbugs - also a pest with very small seedlings. Elevating flats also helps with sowbugs.

Squirrels - in the late fall they dig holes to bury nuts. Sometimes seeds and labels get scattered. Fortunately this has been a minor problem. I haven't tried to do anything about it.

Wild turkeys - A flock of about 20 lives in the vicinity of our house. In the summer they like to take dustbaths, and given a chance will turn iris beds into disaster zones. To prevent this I have fenced my pacificas. The turkeys could fly over the fences, but so far haven't.

I lose an occasional seed pod to the larva of a small moth. The problem hasn't been serious enough for me to try to do anything about it.

Lois Belardi, Santa Cruz, CA

The only pests we have are slugs and snails which have an appetite for the blooms. I just use regular granular snail poison which helps if I remember to put it out before bloom time.

Terri and Jay Hudson, Fort Bragg, CA

We at The Iris Gallery find the topic of pests to PCI's an interesting topic, however we have not had a problem with pests to our PCI's either above or below the soil. Perhaps, this is one more reason that we are so fond of these lovely plants. We have the choice of cutting back the dying growth or leaving it. We have the choice of having PCI's in our deer gardens, as opposed to the fenced yard for roses and other delectables that our deer love. We have the choice of dividing at the appropriate time or leaving the plants to grow and naturalize. We are able to have vibrant colors, shapes and sizes often beginning the 3rd week of January bringing early color to the garden.

Now if we only knew how to guarantee that every new, transplanted or established PCI would thrive, wouldn't that be the perfect PCI condition!

Damon Hill, Sebastopol, CA

A few years ago we had an infestation of the native PCI iris borer and controlled it through physical and chemical means. We look for yellowing leaves and chewed leaf edges on affected plants. We carefully dig around the clump to locate the affected rhizome and cut into the rhizome with Corona shears until we find the larva. Then we pull the little buggie out and squish it! Then we drench all the plants in the area with Cygon 2E solution. Cygon specifically lists the iris borer as a controlled pest and seems to work well for us. We haven't had a recurrence of this pest for some years now but we always keep watch for the symptoms of an infestation so we can jump on it ASAP. Sorry, I don't know the scientific name of the borer. Fungal problems are another whole can of worms! When we have a bit of rust on certain varieties we control it with a mixture of Rally & Benlate. This is the same mixture we spray on the Tall bearded varieties for leaf spot. It really seems to nuke the leaf spot! Neither chemical by itself did the trick very well, but together they really knock the leaf spot down to almost nothing. We mix the Rally at the rate of 1.2oz in 12Gals of water. Then add the Benlate at the rate of 2oz in 12Gals of water (we have a 12 Gallon sprayer). Then add the Latron AG-98 spreader-sticker (a professional product) at the rate of 2oz in 12gals of water. Stir thoroughly and spray until leaves are completely wetted and the spray runs off. It controls the rust well. I hope this information helps.

Mike Monninger, Riverside, CA

I have been troubled by the grubs of the metallic green fruit beetle. They eat the roots of the PCI's (spurias also suffer) killing most of them. The beetles lay their eggs in the soil with organic matter (they prefer manure piles). Moist soils with compost and mulch is attractive to them. Heavy soils that dry out, clays, cause them problems. Probably sharp granular soil, decomposed granite, would also discourage them.

Joe Ghio, Santa Cruz, CA

Depends what you mean by "pests". If animal, the biggest problem is white fly especially in protected locations. I have really never found a good effective spray for them. In the fall the leaves can be coated with egg cysts which are easily removed with your fingernail. The other scale encountered is San Jose scale which migrated from the roses. This is bigger than white fly cysts and usually just at the base of the foliage. Again use your nails to get them out. Never found aphids to be a problem on Pacificas.

Garry Knipe, Cupertino, CA

Thought I'd pass on my 2 cents on PCI pests.

name of pest: **snails & slugs**

type and extent of damage: nibbled leaves and flowers, slime trails

preventive measures: pick and squish

control measures: beer in jar lids, assorted snail baits.

name of pest: **earwigs**

type and extent of damage: chewed up flowers.

preventive measures: newspaper roll in garden.

control measures: chemical controls

name of pest: **whiteflies**

type and extent of damage: ugly white patches & dots on leaves

preventive measures:

control measures: water and soap sprays, chemicals

name of pest: **squirrels**

type and extent of damage: dig up small seedlings, always planting walnuts in with my potted PCI.

preventive measures: chase them

control measures:

name of pest: **moth larvae** (possibly mentioned in an Almanac article about 10 years ago)

type and extent of damage: Hole bored through seed pod with most seeds eaten. Has affected maybe 1% of my crosses.

preventive measures: ? So far not worth worrying about.

control measures: ?

name of pest: **Bees & wasps**

type and extent of damage: Harvest pollen before I get a chance to use it. Pollinate flower before I make a planned cross.

preventive measures: Make crosses onto fresh blooms early in the morning before the bees come out. Keep potted plants on screened porch. Remove falls.

control measures:

Bob Kraus, Palo Alto, CA

I had not given much thought to your topic until your letter arrived. Compared to some flowers (roses for example) PCIs are not nearly so much of a problem for me regarding pests. I do, however, have slug and snail damage. This usually shows up on blooms as they open indicating that the attack occurred on the unopen bud. I use the usual bait like Corry's (metaldehyde on bran) placing some in the center of the clump. This is not 100% effective but a great improvement over no treatment. Keeping adjacent beds containing susceptible plants as free of snails and slugs as possible is also good practice by eliminating the source.

My most serious PCI problem is the loss of entire plants due either to crown rot (likely) or some other disease. Lewis Lawyer gave a great discussion on this in the Fall 1986 Almanac. I still haven't found a source for Subdue which appears to be the best preventive.

Vernon Wood, Pinole, CA

Slugs - I don't get too many of these. They chew on the foliage and can be controlled with a Diazinon drench or slug pellets.

Aphids - Not a big problem on PCIs. They prefer TBs. Cygon will control them. Be sure to get the Cygon spray on the base of the plant as Cygon goes up only through the plant fluids.

Whitefly - Not a big problem here. Usually caused by planting too close together - air circulation is one control. They can be washed off with a water spray. I've even used Raid ant spray over two years with no apparent damage to the foliage.

Weevils - None so far this year. [refer to Fall 1992 article Vern wrote about weevils]

Wingless Grasshoppers - These are the worst! They are about 1/2 inch long and do heavy damage to the flowers. The flowers will open one day and the next morning they will be chewed full of holes. You will find the grasshoppers deep in the flower. I've avoided sprays so far, but would use Cygon. You can still pollinate or use the pollen so I've been picking them off with tweezers. [Editor's note: I've never seen nor heard about these until I visited Vern's garden.]

Cats - They consider the soft soil their own and they have dug up one raised bed so often the plants have died. Don't know of any control.

Vernon Wood reminded me that several articles on PCI pests have appeared in the *Almanac*:

Issue	Topic	Title	Author
Fall, 1991	Insect, PCI Borer	THE PCI BORER, A NEW PROBLEM	Lawyer, Adele
Fall, 1992	Insect, PCI Borer	A SEED-EATING BORER EXPANDS ITS DIET	Lawyer, Adele
Spr, 1994	Insect, PCI Borer	BORER UPDATE	Lawyer, Adele
Fall, 1994	Insect, PCI Borer	BORER UPDATE	Lawyer, Adele
Fall, 1997	Insect, PCI Borer	MORE BORER PROBLEMS	Hill, Elyse
Fall, 1992	Insect, Weevils	BUGS! (Specifically, Root Weevils)	Wood, Vernon

PACIFIC COAST IRIS SOURCES

The following are mail order sources of Pacific Coast Iris.

Aitken's Salmon Creek Garden, 608 NW 119th St., Vancouver, WA 98685.

Catalog is \$3.00. Phone: (360) 573-4472, fax: (360) 576-7012, website: www.flowerfantasy.net, e-mail: aitken@flowerfantasy.net. Twenty-four named cultivars, including varieties from Terry Aitken and Duane Meek.

Bay View Gardens, 1201 Bay Street, Santa Cruz, CA 95060.

Catalog is \$3.00. Phone: (831) 423-3656, fax: (831) 423-7610, e-mail: ghiobayview@surfnetUSA.com. Joe Ghio's latest introductions, many other named cultivars including Lois Belardi creations, sampler set of 4 named varieties, reselect seedlings, and seed of random varieties.

The Iris Gallery, 33450 Little Valley Road, Fort Bragg, CA 95437.

Catalog is \$3.00. Phone: (707) 964-3907 or 1-800-757-IRIS, fax: (707) 964-3907, website: www.allthingsiris.com, e-mail: irishud@earthlink.net. Many named cultivars, including varieties from the Lawyers, Elyse Hill, Joe Ghio, Colin Rigby, and Vernon Wood. Older varieties are also available. Unnamed hybrids available for landscaping.

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

Wildwood Gardens, 33326 S. Dickey Prarie Rd., P.O. Box 250, Molalla, OR 97038-0250.

Catalog is \$3.00. Phone: (503) 829-3102, e-mail: gardens@molalla.net. Two PCI introductions, one by Duane Meek, the other by Will Plotner, and 19 other named cultivars. Sample collection of PCIs available.

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

Beautiful View Iris Garden, 2048 Hickok Road, El Dorado Hills, CA 95762. Phone: (916) 933-2218, e-mail: harold@directcon.net, website: www.beautiful-view-iris.com. Catalog \$2.00.

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

D. and J. Gardens, 7872 Howell Prarie Road, N. E., Silverton, OR 97381. Catalog \$1.00.

Otepopo Garden Nursery, Rural Delivery 120, Oamaru, North Otago, New Zealand (New Zealand sales only).

Nature's Garden, 40611 Hwy 226, Scio, Oregon 97374. Catalog \$1.00.

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.

SPCNI TREASURER'S REPORT

1/1/02 Through 12/31/01

INCOME

02 Trek Income:		
Reg. Fees	833.00	
Total 02 Trek Income		833.00
Book Sales		
Checklist	13.50	
Cohn	4.00	
Diseases	3.50	
Lenz-Hybrid	8.00	
Lenz-PCI	4.00	
Book Sales - Other	13.78	
Total Book Sales		19.78
Donations		131.50
Dues		1116.00
Interest Earned		60.71
Seed Exchange		351.00
Slide Rentals		7.50
TOTAL INCOME		2519.49

EXPENSES

02 Trek Expense		
Expenses	954.11	
Refunds	140.00	
Total 02 Trek Expense		1094.11
Almanac	1038.12	
Books:		
Checklist	6.00	
Cohen	6.00	
Lenz-PCI	6.00	
Books - Other	22.40	
Total Books		40.40
Checklist		9.00
Cost of Goods		20.00
Misc Expense		38.95
Mitchell Medal		18.85
Research Donation		300.00
Secretary/Treasurer		
Office Supplies	10.30	
Postage	116.88	
Total Secretary/Treasurer		127.18
Slide Program		6.45
TOTAL EXPENSES		2612.26
TOTAL INCOME/EXPENSES		-92.77

BALANCE SHEET (as of 12/31/02)

Assets

Cash and Bank Accounts

CD Account	4547.42	
Checking	1121.02	
Total Cash and Bank Accounts	5668.44	
Total Assets		5668.44

Liabilities & Equity

Liabilities		0.00
Equity		5668.44
Total Liabilities & Equity		5668.44

SEEDS OF (EX)CHANGE

Debby Cole, SPCNI Seed Exchange Chairman

This year's SPCNI Seed Exchange was again generously supported by the membership. There were a total of 33 orders filled with 613 seed packets and a total of \$400 (even!) received. There were 5 obvious donations (thank you), and 7 apparent arithmetic errors, three in our favor and four against for a loss of \$0.50. There were 24 domestic orders for 44.6 ounces of seed (postage total \$15.97) and 9 foreign ones for 14.8 ounces of seed (postage total \$12.45; 3 were Canadian). We spent \$27.17 on bubble mailers and seed envelopes, so that makes the total expenditure \$55.69 and gives SPCNI \$344.31 to put toward our stated goals and projects.

This year's most popular offerings were the following. Of the seed of modern hybrids offered, the most sought-after were 2005, CARROT TOP; 2006, CLARICE RICHARDS; 2008, DISTANT NEBULA; 2009, ENCHANTING LADY; 2016, MAGIC SEA; 2017, MANTRA; 2022, PRETTY BOY; and 2029, WILD PARTY. We ran out of several of these, even with severe rationing. If you were affected, how do you feel about our decisions? Let us know, as we try to do it your way. Item 2202, the Lawyer *I. munzii* seedling crosses to hybrids, were popular, as were items 2402 (*I. macrosiphon*) and 2403 (*I. purdyi*). Of our stock left from previous years, the most popular selections were C0052 (Lawyer *munzii* seedling XP235B), C0061 (ditto XP320C), 1303 (Hagg Lake yellow *tenax*), and 1405 (*I. purdyi*).

For next year's Seed Exchange we'd especially appreciate your contributions of seed from species plants you've raised from SPCNI seed, most

notably *I. munzii*. Check your labels; these were seed lots 96115, 98125 and 98126, and C0144 and C0145. As you have probably noticed, we no longer have any *I. munzii* seed, and need to replenish the supply.

Seed of choice modern hybrids (open-pollinated) is always popular, and so is seed of crosses deliberately made with them. Seed of crosses made for cold-hardiness (and hot-hardiness!) is also much in demand. Lots of at least 100 seeds would be wonderful.

If you chance to view iris species in the wild, note the location and try to determine what species you see (note color, perianth tube, ovary details, # blooms/stalk, etc. and maybe even get a picture). If you can come back two months later for seed, be sure to get permission if on private land or a permit if necessary (consult your state's Agriculture Dept.) otherwise. Seed collection should be limited to not more than 10% of a colony's pods, broadly sampled, for a minimum of at least 200 seeds.

Whatever you're donating, please send it to arrive by October 1, or send us a letter or email to the effect that it's still drying but coming eventually, so we can make up the Exchange list in time for the fall *Almanac*. And we promise to process the '03-'04 seed orders REALLY on January 15, 2004, regardless of when the *Almanac* comes out.

Any comments are welcome!

NEW MEMBERS (SPRING 2002 - PRESENT)

This list is for SPCNI member use only - not for commercial purposes.

Name	Address	e-mail
Alonzo, Thomas	507 N. Thompson, Kansas City, KS 66101	teauteau@swbell.net
Alverson, Ed	501 Irving Road Eugene, OR 97404	eralverson@yahoo.com
Bell, Richard	34 Easton Avenue, West Moona, Tasmania, Australia 7009	
Bonino, Jill	3110 Kirkham Dr., Glendale, CA 91206	jpbonino@aol.com
Chaney, Arnold	30544 Terrace View Ln., Valley Center, CA 92082	a2chaney@aol.com
Chaney, Bill	575 Heatherwood Estates Drive, Hollister, CA 95023	Bill@blackarabs.com
DeFazio, Samuel	2723 116th Avenue, Allegan, MI 49010	praxis@allegan.net

Name	Address	e-mail
Grisso, Ryan	609 El Centro Road, El Sobrante, CA 94803	ryangrisso@msn.com
Hertz, Deborah	P.O. Box 277, Duncan Mills, CA 95430	wahertz@monitor.net
Jacobs, Karen	1504 10 Ave. SE, Puyallup, WA 98372	
Jernberg, Elaine	P.O. Box 327, Brinnon, WA 98320	JJernberg@waypoint.com
Ramsdell, Ken	2254 Williams Road, Oak Harbor, WA 98277	ramsdelk@pioneer.net
Scheid, Ann	500 S. Arroyo Blvd., Pasadena, CA 91105	scheid@usc.edu
Wright, Wendy	20 Horan Court, Albury, 2640 NSW, Australia	
Zook, Debby	24755 Taka Lane NE, Kingston, WA 98346-9302	debzook@americtech.net

LETTERS

Claude Derr, Estacada, OR

Years ago my interest in *Iris tenax* had me touring all over Oregon. When I found plants on the coast I was lost for their identification. News of a meeting of native iris lovers sounded interesting. So we went to the meeting. This meeting started a wonderful friendship with Lewis and Adele that has lasted over the years.

Lewis always had time to explain the different iris plants on the west coast. What I learned from him in a short time would have taken years otherwise. His explanations of his crosses in his garden got me involved with PCNs. We played phone tag back and forth over places of interest for bus tours. I remember when we discussed if we could find enough people to pay for the first bus tour. The question also arose if it was possible to raise the dues enough to print the Almanac in color. There was a debate at one time if any of the native iris were in their pure form. I don't think we looked at these flowers if we cared. We were just enjoying the beauty of these plants as we found them. I am happy I could play a small part in his life! We both loved the outdoors and the bus tours of wild iris. It

would be hard for me to walk through my PCI garden and not remember his smiling face. As I look back over the years, I wonder how many thanks have gone to the people who have worked so hard to get the information about PCNs to the public. My heartfelt thanks goes out to them.

I have probably 150-160 PCN hybrid plants. Most of them are eight or nine years old. When I planted them I used liquid fish fertilizer when I watered. This year [2002] I had new plants bloom from Joe Ghio seed.

A week after bloom the plants looked like they were dying. I potted the plants in order to save as many as possible. After six months of racking my brain, I came to one conclusion. I tilled the soil and planted the seedlings. After one year of growing big enough to bloom, it took all of the nourishment out of the soil. I had not fertilized the plants when I planted. There is no way to get nourishment back into the ground because we keep the soil around the plants in the garden tilled. I remember Lewis saying he put a handful of bone meal under each plant.

THE LAST WORD

From the Editor

The Registrations and Introductions for 2002 are included at the end of the *Almanac*. We need someone to take over responsibility of updating the SPCNI Check List. Responsibilities include providing the yearly PCI introductions and registrations list to the Editor, and revising the entire Check List every five years or so. The current Checklist was created using Microsoft Word 98 (for Macintosh). The person taking over should have access to Microsoft Word or some other word processing software that can convert the existing checklist file. Contact the Editor if you are interested.

COLOR PAGE

Top Left: ENCHANTING LADY
(Vernon Wood, 2002)
reproduced from a slide
provided by Vernon Wood

Top Right: PICHINA
(Elena Laborde, 2002)
photo: Laborde

Bottom: BIG SMILE
(Joseph Ghio, 1997)
photo: Taniguchi

