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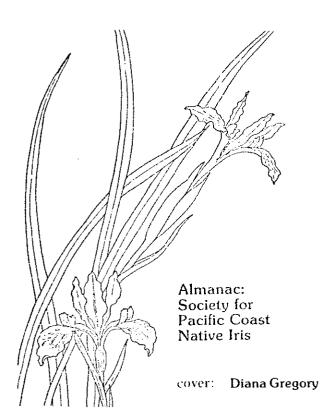
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Jean Erickson 2181 Blucher Valley Rd. Sebastopol, Ca. 95472 (707) 823-9545



Letter From the Editor

Dear Friends,

New postal policy has necessitated folding this issue of your Almanac to keep it to the size limitation for third class mail.

With this issue we are pleased to begin reprinting "A Revision of the Pacific Coast Irises" as it appeared in Aliso Vol. 4, No. 1, dated April 25, 1958. This paper was the culmination of nearly ten years work by Dr. Lee W. Lenz, Director of The Rancho Santa Ana Botanic Garden at Claremont, California, and is the definitive work on the species Californicae. Space and weight limit allowing, we will include portions in each Almanac eventually covering each species in depth.

The fall, 1980, Almanac contained an article by Phil Edinger who reported a few attractive seedlings from a cross of CANYON SNOW X RIPPLE ROCK. One such issue registered last year has been named POPPY.

Let us continue to hear your suggestions for material to be included in the Almanac; our thanks to all who have contributed so willingly.

May all your Californicae bring you joy. Jean Erickson

PUBLICATION STAFF

Editor Associate Editor Consultant Jean Erickson Philip Edinger Jean Witt

Additions to Membership

Mrs. Robyn Gully 3 Louis Avenue Hawthorndene, So. Australia Australia 5051

Jacqueline Norton P.O. Box B Windsor, Ca. 95492

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Mr. Arthur Manly, Jr. 7396 S. Willow Avenue Fresno, Ca. 93725

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Kathy Patterson 813 Link Lane Santa Rosa, Ca. 95401

New Zealand Iris Society Hawkes Bay Group c/o Mrs. Marion Ball Mangateretere Rd. 2 Hastings, New Zealand

Mrs. George Hood 7032 Damoch Way Canoga Park, Ca. 91307

Mr. Charles B. Jenkins 334 Lorimore Street Salinas, Ca. 93901

Gene S. Opton 2213 Shadduck Avenue Berkeley, Ca. 94707

Sandra J. Heinemann 4180 Dolores Avenue Atascadero, Ca. 93422

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February 28, 1981

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DOROTHY E. FOSTER, Treasurer

The Society for Pacific Coast Native Iris is a section of The American Iris Society, membership in the latter is a prerequisite for membership in the SPCNI.

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Dues:	Individual	Family		
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From The President



Spring surely is arriving. Here the crocuses are lovely splashes of color; the forsythias and flowering plums are froths of yellow, pink, and white all over town. But it is too early for any kind of iris bloom, except for an evansia that I wintered in the garage.

The society is doing well and has had a good increase in membership since the last issue of the Almanac.

And speaking of the Almanac, Jean tells me the increase in cost of postage will undoubtedly have an early effect on the society. Due to unforseen delays, this issue will probably not be ready before the new rates go into effect.

In February I gave a program on Irises for a community group, and although it was primarily on tall bearded, I included some slides that Glenn Corlew loaned to me. They were beautiful slides of some truly lovely PCNs and were well received. As this is a great rock garden area, I hope some of those present were moved to try their hand at growing these lovely flowers. Some of you might also think about introducing PCNs to those who think of irises as synonymous with the tall beardeds. Slide programs are great for this.

May your spring and summer be wonderful and rewarding and may all of your gardens be rainbows of color.

Virginia Del Judge

The Strybing Arboretun Society of Golden Gate Park, San Francisco, California, announces their fourteenth annual plant sale. Open to the public, there will be many choice and unusual plants offered including their finely grown PCNs. The place: The Hall of Flowers. The time: April 4, 1981, from 10:00 AM to 2:00 PM.

A Connecticut Experiment

Elaine Hulbert Floyd, Virginia

Around 1965 when I started gardening in Connecticut, I bought a bargain assortment of bearded iris advertised in the *New York Times*. I still have most of that "Baker's Dozen Rainbow," but I remember the source, Walter Marx of Boring, Oregon, mainly because he sent me a little mailer asserting that *Iris tenax*, a Pacific coast wildflower, was pretty, and easy to grow. I had never heard that there were native irises in the far West entirely different from either the Eastern flags or the Louisiana irises.

My three plants of *I. tenax*, planted one fall, limped along for a few years, becoming one, and eventually a very small one indeed. Meanwhile I had acquired a copy of Molly Price's *Iris Book*, and began to understand irises for the first time, their origins and relationships; and I found her culture notes trustworthy and sensible. The Pacific Coast species sounded like an irresistible challenge — very difficult in the Northeast — and yet, why should they be? Was there really such a chasm (putting aside mere distance) between Puget Sound and Long Island Sound, or the Columbia River Valley and the Hudson River Valley? Molly Price recommended hybrids, so I sent for three clumps by color, a red, a yellow, and a white.

Only the white survived, but it was ever so different from the self-effacing (in more than one sense) *I. tenax*. Its foliage was vividly green and shining, arching rather than sprawling, and it put up more and still more bloomstalks every spring with lovely ruffled flowers. (You'll notice I didn't say "survived the winter." I think that expression has served to mislead West Coast growers and East Coast buyers, because the fact is that a plant whose roots can take hold before winter will usually survive until spring. But plants which arrive with their new white roots just budding and have to be put into very cold or frozen ground are doomed, and do not even "survive the fall.")

This one clump was my favorite garden subject for years. It occupied, in fact, a choice walled corner, along with a small bedding rose and several clumps of Juliana primroses, and had nothing going wrong for it. I never noticed a pod on it, but when I self-fertilized it as Molly Price taught me, I got several pods, and I set out to raise a Connecticut-adapted race of Pacific Coast Natives.

Two years was enough to mature the second generation, all of them much like the parent but without quite the flair. Because these were hybrids and did not die down in winter but grew sporadically all year round, and bloomed their second year, I thought they were better adapted than the *I. tenax*. But they were not much prettier, and the next crop of seedlings seemed even uglier, off-white, without ruffling, on long, weak stems. Of course they were not getting the pampering of the "Old White," but they were supposed to be adapted,

and not to need it. It is too bad I didn't backcross, but the old plant died before this occurred to me.

I might have admired my Connecticut off-whites more if I had not in the meanwhile been raising on the other side of the house near the old I. tenax plantings a whole little garden of PCN seedlings from SIGNA seed, beginning with the 1972 crop. The various charms of these newcomers made each successive spring a time of agreeable surprises. There was a gormanii*-bracteata hybrid in cream with coffee brown lines or cream with deep gold veining that was most elegant in a quiet way. One or two straight, hard spruce green leaves were all that would be visible when the bloomstalk pushed up, and a large flower, or multiple flowers, would have been too much. Still, there was nothing fragile or sickly about it, and I think it was one of the most impressive wild-flowers I have ever seen.

A "ruffled lavender" (the words are totally inadequate, but that's what it was) innominata-tenax hybrid was the loveliest, most finished PCN I have ever raised, and I got seed from it at least two seasons, but for some reason never saw that seed germinate.

A very small *I. innominata* of red and gold with thin, grassy foliage I called a "variegata," and I have never worked so hard to keep a plant alive.

Several seedlots had *I. munzii* in the background. I never raised an *I. munzii* hybrid with the blue coloring, but the whites and violets would often have an intriguing electric-blue flash on the falls that never appeared unless there was an *I. munzii* ancestor.

An intensely golden self with almost no markings from CLAREMONT INDIAN seed managed to live and bloom for at least eight years under a forsythia bush, overshadowed in front by chrysanthemums, and if it survives here in Virginia it will be the oldest clone I have.

What happened to all the others? The off-whites were composted. The "braggers" suffered a lot from my inexperience. Usually I was too eager to make more of a good thing and divided small clumps at the wrong season. (As far as I know there is only one *right* season in Connecticut: when the clump is in strong, active growth, which will probably be just before bloom time, and not again for a full year. Fall is a chancy time. We have a long, up-and-down autumn in Connecticut lasting from early September until Christmas; but it is a little too bumpy for PCNs with its sudden freezes and its hot spells, so that they usually fail to settle down and "put on weight" during those months as other irises will do).

Among these others, mostly memories, were seedling of JILL (I. innominata hybrid, unregistered) coming up in a lucky spot among trilliums and ladyslippers where they could increase undisturbed, and about 1974 I realized that I had a self-selected "Connecticut strain" right there, because volunteer seedlings were doing very

well right there under the fringes of the parent clumps.

This small bed of PCNs came closest to fulfilling my hopes, since for years it was completely care free, so that I scarcely noticed when one orangey type went missing, because a new canary yellow had taken over its space. Like the off-white complex the JILL population remained quite uniform for the first few years with the same plant habit and size, and always orangey, peachy, golden yellow colors. But of course the available space eventually filled up, and I had to take a hand, transplanting small seedlings during the summer to a new bed I made under the trees of the back woodlot. Here these randomly pollinated PCNs began to show more variation, only some of it really nice.

Gypsy moths arrived, and were especially bad in 1978 and 1979 at this one spot which was not sprayed; anything growing under these trees was subject to a rain of gypsy moth larvae and suffered considerable damage at blooming and fruiting time. But I did find in this bed another beautiful little "variegata," very dwarf and very flashy, and also a medium sized plant with an oversized blood red blossom. The latter I have been able to move to Virginia this past year. But all pods on both plants were damaged, and they rotted.

This is the short, factual history of my experiences with PCNs in Connecticut; but something happened in 1976 which changed my outlook completely. I visited England in the spring and saw — for the first time — PCNs growing in someone else's garden. What a revelation! At Kew, Wisely, Edinburgh, in Kent, the PCN species and hybrids were tall, strong and flourishing in March and April, with that reddish purple flush at the bases, and with clean, green leaf tips, no browned or broken ones. It was obvious to me that I had never had a PCN plant living up to its potential.

Since then I have pulled back my hopes and expectations. The first transplants I brought to Virginia from my own garden in 1979 and 1980 seemed to do very well — almost to "take off" — but they are still dwarfish and dismal compared to those I saw abroad. And the clumps I sent for this year from the Bay Area and put into the ground at the end of October have not taken root at all, I guess the Blue Ridge isn't going to be any better suited to PCNs than Fairfield County was.

But, shucks, you never expect to see your own trilliums or wood lilies approach the ideal for those wildflowers, either. There has to be a middle way between growing only what is suited to your conditions and growing only what you fancy. I won't give up. But I still want to know why. Why, when Coos Bay, Greenwich, and Edinburgh share so much in the way of climate and soils do they have three entirely different wildflower populations? (With the wildflowers of Connecticut, for example, resembling those around Tokyo maybe more than the other two places). How is it, too, that Cypripedium calceolus and C. parviflorum increase under British cultivation while their native yellow ladyslipper goes extinct? And Cypripedium californicums is found in many British rock gardens but not at all in the eastern U.S.? How come Epipactis helleborine (from England) has become a weed in the New York area, and Epipactis gigantea (from our Northwest) isn't known here at all?

Because no matter how many cultural tips we Easterners put into use —

- 1. Grow PCN hybrids rather than species;
- 2. Grow them from seed;
- Transplant clumps only in the high spring season small seedlings up until midsummer;
- 4. Shelter the plants from extremes; give them perfect drainage; don't try to force them with fertilizer and overwatering; treat them like fragile wildflowers;
- Always, in handling them, keep in mind their long, fragile roots which are so easily injured and so slowly and uncertainly replaced;

we still don't really know why they aren't happy here. Let me say I am not going entirely by my own experience. Twice I have hunted up advertised plantings of PCNs, at the Bartlett Arboretun and Presby Gardens, and found only bare ground dotted with markers.

Every year I come up with a new theory. Right now I think it's the dormancy problem. Summer dormancy is impossible in the humid, capriciously rainy, sometimes chilly East, and lack of rest may account for the PCNs failure to take advantage of good growing weather in the fall. Winter is seldom severe enough early enough to damp down their growth, and established clumps will send up new shoots just at the most unpropitious times. Louisiana irises and polyantha primroses behave in precisely the same way — all will green up the same week in January, say, and then all turn black together on St. Patrick's Day.

Nearly all serious losses with PCNs in this area take place in early spring at what should be the most hopeful season. At one time I was inclined to the fungus theory — that some organism spread through the irises in patchy fashion during cool, rainy periods. Most years in April I can go through the beds and pull up three-quarters of the tufts of leaves, which, after maintaining a mixture of green and reddish brown through the winter have now turned dark brown and black. There will be no attachment to root or rhizome at all. Only once or twice did a clump which had lost all its top growth this way put up a new green shoot later from the rhizome. This is not true of *I. tenax* which sheds its leaves each fall.

If the dormancy theory is the one, then it ought to happen in some year that everything will go right: summer will be dry, without chilly stretches; autumn mild and rainy; the first frost will be followed by snow which will stay in place until March; and spring will come on gradually, without relapses. If ever such a year should fulfill itself in Connecticut (consult Mark Twain whether this is likely) I believe one would have a marvelous display of PCNs on the twentieth of May.

Now, January 1981, is hardly the time to make predictions about how PCNs will do in western Virginia. Already I have seen the last of my little "variegata" and a piece of LEMONADE SPRINGS that I brought from Connecticut. But I still seem to have "Big Red" and another favorite seedling "Deep Purple," as well as pieces of WESTERN QUEEN and CHIMES. Some seeds I planted here in the spring of 1980 (79K059 from SIGNA's seed exchange) did so well that I risked transplanting them in the fall to beds around the house. If I ever do uncover something useful and not just more mysteries, I'll let you know.

^{*} I. tenax var. gormanii

Seeking the Elusive Munzii

Alleah Haley Vallejo, California



Our trek in search of *Iris munzii* (it's probably not elusive but that sounded like an intriguing title) began with a conversation with Duane Meek at the Mt. Diablo Iris show this spring. Duane pointed out that *I. munzii* is native to the Sierra foothills east of Porterville, California, and therefore on our proposed way down the Central Valley of California from the Fresno Spring Regional. I am familiar with this general area from my research on cotton diseases in Tulare County; Duane's comments whetted my appetite to get to know the area better.

After consulting Cohen's monograph on the Pacific Coast Irises, I the first stop was at the Map Room of the Main Library at the University of California, Berkeley, where none of the map guides listed the Coffee Creek Camp in Tulare County. Cohen gives this as the site where the species was originally collected by Foster in 1937 and where he saw it in 1965. The Map Room assistant suggested a visit to the Jepson Herbarium at the University, where a card file of California place names is located.

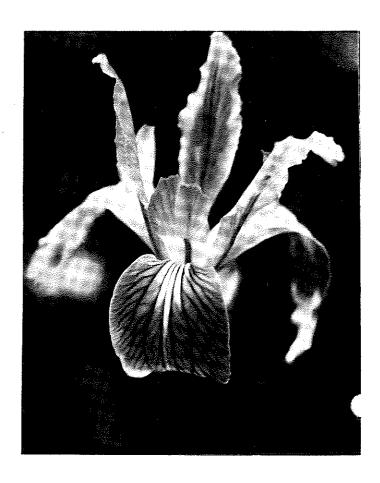
The file was prepared in part, during WPA days from collection sites of California wildflowers listed on their herbarium sheets. No Coffee Creek Camp was given, but the entry Coffee Camp gave a location which seemed to fit the east-of-Springville area in Cohen's work. I copied down the directions and located the approximate area on a borrowed Tulare County map.

At the conclusion of the Fresno Meeting on April 20 we headed south to Gibson's Iris Gardens in Porterville. Jim Gibson gave additional directions to the site but warned us that *I. munzii* generally blooms the first week in May; and, furthermore, he had never been successful in transplanting it.

Our drive headed east from Porterville on State Highway 190, past Lake Success with its Sunday afternoon picnicers and water skiers, through Springville (pop. 750) where gaily-colored banners and bumper-to-bumper traffic heralded the Springville Sierra Rodeo being held that day. Apparently the town's entire population and seemingly half the County had turned out for the event. Continuing on State 190 through town, past Fred's Feed & Mercantile, which advertised "fresh eggs — guaranteed boneless" on a chalk-lettered blackboard out in front,

the road narrowed and began to climb more steeply. Along the way spring wildflowers were in abundance, most notably the orange California poppies and tall dark lavender blue lupines. Snow still lay on the Sierra peaks above.

The terrain showed many exposed rocks and tall oaks as we entered Sequoia National Forest. Just past the entrance to a picnic area labelled Coffee Camp, six miles east of Springville, we spotted what looked like white iris in bloom along a creek on the left-hand side, but the road was too narrow to stop. We pulled into a second area marked Coffee Camp about 0.2 mile further on,



thereby avoiding the payment of the \$2.00 day-use fee; we loaded ourselves up with cameras, collecting gear, dog with a makeshift leash of tattered rope, Keren in her umbrella stroller, and walked back down the road.

We found *I. munzii* blooming in a draw alongside a small creek immediately north of State 190, just above the creek's confluence with the Tule River. The first plants we saw were in a bog, growing beneath tall oaks



I. munzii photographs by the author-

in oak litter in filtered sunlight, so naturally we thought this was the habitat most suited to the iris. While Bob tied the dog to a nearby tree and started collecting (collecting in a National Forest is generally prohibited: we had a University research permit), I abandoned the stroller in the bog and carried 15-month old Keren up the slope away from the creek, where we found several more small clumps of plants in bloom to photograph. Some appeared to be growing in dense shade, others in the open. The flower color varied from near white to light blue, and some specimens had a pale turquoiseblue flush in the falls. Width of the falls also varied, but none were broader than approximately 3/4 inch. On some plants the falls were distinctly reflexed, but most were not. Most of the stalks were unbranched and had only three buds in terminal, but one bloomstalk had a side branch and four terminal buds. Bloomstalks averaged 18 inches tall; flower width was about 2 1/2 inches as viewed from the face. Other characters fitted Cohen's description.

Companion wildflowers which were in bloom were collected and identified by the University herbarium staff. They included:

- 1. Cryptantha sp. (or Plagiobotrys sp., pop-corn flower) a short (6") plant with finely divided gray green leaves and heads of several white popcorn-like flowers.
 - 2. Lupinus sp. a short purple-flowered lupine.
- 3. Calochortus sp. (mariposa lily), probably C. amoenus Greene a lovely magenta colored wildflower with nodding blossoms.
- 4. Brodiaea lutea (Lindl.) Mort. a 6-petaled, pale yellow, star-shaped flower with deep purple stripes down the center of the petals.

Since no seed could be found, Bob dug several plants with our crude digging instrument (a screwdriver!), retaining as many roots as he could. We wrapped the plant bases in a disposable diaper moistened in the creek and brought them home in a plastic bag. The next day Bob planted one specimen in garden soil, disturbing the roots and associated litter and grass as little as possible, watered it in, and set the glazed pot on our kitchen drainboard. I took the remaining three plants to the greenhouse where I work and planted them in gallon cans in a mixture of equal parts, by volume, of sterilized leaf mold and chloropicrin-fumigated clay-loam potting soil. The pots were placed in a lathhouse and drenched with a mixture of 1/4 tsp. Dexon® and 1/2 tsp. Benlate® per gallon of water.

Iris munzii was named for Philip A. Munz, deceased, the California botanist and plant taxonomist who authored at least two major works on California flora.2,3 Munz was Director of the Rancho Santa Ana Botanic Garden in southern California until his retirement in 1960.4

- 1. Cohen, Victor A. 1967. A Guide to the Pacific Coast Irises. Published by the British Iris Society. 40 p.
- 2. Munz, Philip A. in collaboration with David D. Keck. 1959. A California Flora. Berkeley and Los Angeles: University of California Press. 1681 p.
- 3. Munz, P. A. 1974. A Flora of Southern California. Berkeley and elsewhere: University of California Press. 1086 p.
- 4. Moran, Reid. 1974. Review of: Flora of Southern California by Philip A. Munz. Madrono: West American Journal of Botany 22: 408-409.

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Dr. Haley, editor of the AIS Region 14 Bulletin, is presently working on Dutch Elm Disease control at Sonoma State College after returning from work with the Mediterranean Fruit Fly eradication program in San Jose, California.

It's In The Bag

Roy Davidson Seattle Washington

It was Hattie Hubbard back in the early days of the Native Robins — maybe 1960 or thereabouts — who first experimented with and recommended the plastic bag method of germinating iris seed. It has proven to be the most satisfactory method I have used, and it is nearly foolproof. Nevertheless, it cannot prevent the losses at transplanting time. If these are so formidable as to be downright discouraging then it is probably best in your situation to plant seed where the plants are to stay permanently. You can prepare small special seedbeds almost anyplace in the garden, simply removing the boxes, concrete blocks, or other material when the plants are safely on their own.

At planting time, by the Baggie Method, you simply put the seedlot into a plastic bag with a handful of a sterile rooting medium; I used chopped sphagnum for its known influence on encouraging germination and mixed it with ground peat, sterile compost, vermiculite, or whatever else was on hand. This should be wet but not soggy, and the seed should have a disinfecting bath to destroy pathogens and the spores of moulds. The bags are then sealed very tightly, leaving plenty of air inside; in this pouch of moist air the roots and leaves will grow without further attention. You may then stack the whole lot into a box, store them and forget them for a while. When the days get milder it is then time to go through the box occasionally to see what is going on. This is the very real advantage to this method; you can see what is happening and act accordingly. Any lot that seems to be sprouting needs to be brought to a warmer and lighter place, say 40°F., but in no case should they ever be left in the sun as tender new plants will boil in no time inside such a steamy bag. You can remove bags as soon as you want to have germination, and if a greenhouse is available it is possible, with lights, to have germination within weeks of planting and flowers the following spring. This is an advantage especially to the serious plant breeder; if a cross gives promise you can remake it if you want, but the shortened interval from fertilization to flower is an exciting prospect to us

Although germination may be 100%, it is not yet assured that all will survive. At transplanting time, open the bag and add a dilute Hyponex or Rapid-Gro or other solution; plants may stand in this a day or so to their advantage. I have moved plants at various stages and

found that the earlier the better if they go into individual pots to be carried along in the protection of a frame or greenhouse. And none should be put into open ground until the soil is a little warmed by the spring sun. Protect new transplants from drying wind and sun until there is evidence of renewed growth. You cannot be too watchful at this, the most critical period of all. I have mulched lightly with grass clippings to advantage. Rows can also be shaded by a board or other means for a few days.

One spring I did not get everything transplanted and had to hold some lots over until fall. They stayed against the north foundation with plenty of sky light but no sun. In summer they went dormant, lost leaves in a soggy mess and the roots shriveled; I thought all were dead but with the cooler days new roots began to emerge and soon there were new leaves. These did not flower the following season, of course, but they did survive.

The Baggie Method has several advantages over any other; you can plant at any time and have germination at any time later by controlling light and temperature, and it is as easy as opening a box or moving the box to another place. Moisture control is all but automatic, but the amount must be fairly precise from the outset — wet but not soggy — when you seal the bag. Bags can be piled compactly into a box for storage in a cold place during the pre-germination period; Hattie used her attic.

Seeds to Save

The Species Iris Group Seed Exchange could use more seed of Pacific Coast native iris species. If you have PCI species and can save seed of them, please write to Mary Duvall, Route 1 Box 142, Dassel, MN 55325. To perpetuate pure species is in the best interests of our society, and especially of those members who are actively engaged in interspecies crosses.

Some Thoughts on Chrysophylla

Jean Witt Seattle, Washington

Iris chrysophylla isn't really the easiest of PCN species to grow in the Seattle area, at least under my increasingly shady conditions, but it seems to me that it has possibilities for the development of a race of dwarf PCNs – in the sense of nearly stemless types. Its rather spidery flowers litter the ground like white stars somewhat ahead of the taller species. For a long time I've had a couple of collected clones from the mountains of central Oregon. They are both creamy white with yellow signals under "black" veins like pen tracings. In the last couple of years, the form known as 'Noti' from the vicinity of a little town of that name, west of Eugene, Oregon, has begun to produce quite a show in the garden. Thought to be the result of some ancient hybridizing between I. chrysophylla and I. tenax, 'Noti' is best described as having flower color of the latter on the plant of the former. Its large pink floral bracts are very attractive, especially in the bud stage.

Other color forms have come to my attention. Some plants from Lorena Reid's seed had rosey falls with their creamy white standards. She says there are some areas

around Roseburg where this form is quite common.

Among the slides that SIGNA inherited from Ruth Hardy who lived at Eugene, Oregon, and collected a great many PCNs in the 1960s, are some from southwestern Oregon, labeled as being hybrids between I. chrysophylla and I. bracteata, and others which are I. innominata hybrids, possibly involving I. douglasiana. These plants are quite short in stature, with spidery flowers of pale lavender or orchid, both falls and standards veined in violet - a tone-on-tone effect. Others appear nearly white, but still with the prominent violet veining, which becomes a pale violet wash in the center of the flower. Other varients are pale vellow with red violet veins. Whether she was successful in growing these hybrids in her garden, I don't know - perhaps we would need to re-collect seeds from that area. After twenty years what would we find in the way of plants in those burned or logged-off slopes? Would they have grown up to trees and brush so much that the irises would be barely hanging on? Perhaps some of our members who live nearer to that area can answer this question.

Reminiscences

Roy Davidson Seattle, Washington

The first issue of the Almanac carried a reminiscence of the Mitchells, showing a group of irisarians away back in 1939. It was at about this time that *Iris innominata* was becoming known; it was about the time that Professor Mitchell commenced growing the seedlings from Fred DeForest's selected *I. douglasiana*, and it was about the time that Bob Nourse, then of Ukiah, became friends of the Mitchell's and enamored of the PCNs. In letters twenty years later, Bob recalled some of his iris ramblings and the fine things he found, brought back, and shared. Perhaps some of these habitats have not been destroyed, even forty years later.

East of Hopland on the Old Stage Coach Trail there were startling color variations of *I. macrosiphon* hybrids, even to some that were a beautiful golden brown. Near Cummings was a very extensive colony of what was assumed to be good *I. douglasiana*, many of them a fine pink with cream styles that were standouts. At Pt. Reyes the colors seemed to be in a "different" shade of blue, while at several places further north were colonies of a smaller, neater *I. douglasiana*, probably what was later referred to as var. *mendocenesis*, possibly resulting from

introgression of I. macrosiphon.

Bob also wrote of some of the things he had raised from seed, including GREENBRIAR CONTRAST. He grew three seedlings from what he called an *I. douglasiana* habitat (perhaps one of the *mendocinensis* occurrences? He didn't say). One was a strange smokey gray blue, not unusual, but the other two were odd for the contrast of the styles, one being white, the other a rich creamy buff, both with amethyst colored styles of fine contrast, and this last is, of course, the named one he shared.

Prof. Mitchell later wrote in the AIS Bulletin No. 108 (1948) of having visited Fred DeForest and Matthew Riddle in Oregon and of continuing his "Pacific Coasting" on up into Washington and British Columbia where he visited many gardens growing PCNs, including an extensive showing of *I. bracteata*. It was inevitable that all these persons shared with the genial Mitchell, as he shared in return, and thus the Mitchell Patch was to have many influences, many of them unrecorded except through such reminiscences.



IRIS TENAX, dried pods

These little pods are most attractive in dried arrangements as the outer surface turns a rich rusty color, while the satiny inner surfaces are a pale ivory. They always seem to ruffle in drying so that they look more like flowers than pods. Drawing by Jean Witt.

A Revision of Pacific Coast Irises

Lee W. Lenz

Director, Rancho Santa Ana Botanic Garden Claremont, California

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Distribution

Members of the Californicae are not restricted, as the name might imply, to the State of California, but, rather, they are found in all three of the western states, California, Oregon and Washington. Within the borders of these states there exist two series of mountain ranges running in a more or less north and south direction, the easternmost being composed of the Sierra Nevada of California, and the Cascades of northern California, Oregon and Washington. To the west of the Sierra Nevada-Cascade axis, and more coastal, are the Pacific Coast Ranges composed of the Olympic Mountains of northern Washington, the Oregon Coast Range, the Klamath Mts. of northern California and adjacent southwestern Oregon, and the Coast Ranges of California. Between the Sierra Nevada and the Coast Ranges of California is the Great Valley of California, while to the north, the Puget Sound Lowland-Williamette Valley occupies the area between the Cascades and the Olympic-Coast Range system of Washington and Oregon.

The species of the Californicae are all to be found to the west of the crest of the Sierra Nevada-Cascade axis. From the western slopes of these mountains they extend to the Pacific Ocean, distributed generally throughout the Coast Ranges of Oregon, south to central California (a single subspecies occurs in southern California), and north into Washington. They are not found in the densely forested Olympics or in the broad flat trough of the Great Valley. The species of this series, with one exception, are all essentially plants of mountainous and forested areas - from the oak covered hills of the Williamette-Umpqua Valleys, the Mixed Evergreen forest of northern California, the Valley Woodland of the Sierra Nevada and Coast Range foothills of California to the Yellow Pine forests of the Sierra Nevada. They are not normally found in heavily timbered lands where there is much shade, but rather in the open forest in partial or light shade. Some species are more shade tolerant than others. Iris douglasiana is an exception, being a maritime species common on wind-swept headlands and grassy knolls along the ocean and the bare or sparsely forested hills immediately inland from the beaches. It may also penetrate inland from the coast for a distance up open sunny river valleys or along road banks.

Within an area as great as that occupied by this series, edaphic and climatic factors vary a great deal. Nevertheless, there are a few factors that appear to be relatively constant. The entire area is one characterized by great seasonal variation in precipitation, most of the moisture being received during the winter either as rain, or at higher elevations, by snow. The summers are almost without exception long and dry with very small amounts of moisture being received as occasional showers in the mountains. Summer fogs are frequent along the coast. While edaphic factors may vary a great deal, most of the irises will be found growing in gritty and well drained soil. Usually it will contain considerable humus but at times the plants are found in heavy sticky clays, though even these soils usually contain rocks and gravel and are well drained. Iris douglasiana is again the exception. It is a vigorous and aggressive species and is sometimes found in pasture lands in heavy, poorly drained loams in association with grasses and sedges. The soil reaction wherever tested has been found to be neutral to slightly acid. In no instance has it been found to be strongly acid nor on the alkaline side.

Temperatures throughout the area also vary a great deal but if the isothermal line showing the 50°F. annual mean temperature is drawn on a map of California, Oregon and Washington it will be found to coincide almost exactly with the geographical limits of distribution of the *Californicae*, the only exception being that the 50°F. temperature line extends farther into Washington than do the irises.

Taxonomic History

The species here included in the series Californicae were first separated as a group from the rest of the Apogon, or beardless and rhizatomous iris, by Dykes (1913) in his monograph of the genus. In this work he divided the Apogons into fifteen 'groups,' one of which he called 'The Californian Group.' Earlier, Baker (1892) in his Handbook of Irideae had placed all the Apogons together, separating only the linear-leaved from the ensiform-leaved.

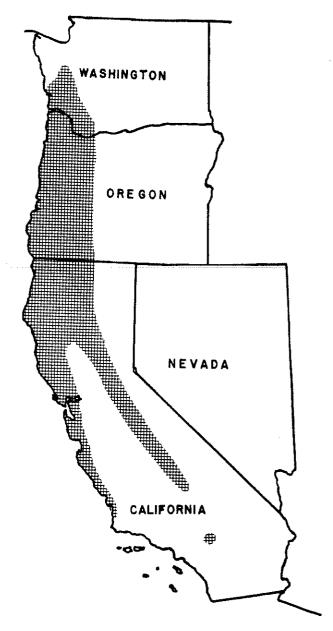
PACIFIC COAST IRISES

Diels (1930) in Engler and Prantl, Die Naturlichen Pflanzenfamilien accepted Dyke's groupings but latinized the epithets and treated them formally as subsections of the genus. R.C. Foster (1937) in his A Cyto-Taxonomis Survey of the North American Species of Iris follows Diels and uses the name Californicae for the subsection. Lawrence (1953) in A Reclassification of the Genus Iris reduces the Apogons to a subsection, rather than a section of the genus, and then divides the subsection Apogon into thirteen 'series,' one of which he calls the 'series, Californicae.' Clarkson (1955) and Smith and Clarkson (1956) do not cite Lawrence's paper and they follow Diels and R.C. Foster and use 'subsection, Californicae.'

While there has been considerable difference of opinion of the nomenclatorial status that this group should have at the infra-generic level, there has been general agreement by all workers since the time of Dykes as to the species which should be included within the group, the only exception being the exclusion of *I. tenuis* from the *Californicae* by Clarkson (1955) and the present author.

The members of this series, as delimited here, form a closely knit group of species well isolated morphologically, cytologically and geographically from their nearest relatives, the *Sibiricae*, which are all native to the Old World. The *Californicae* are also well separated morphologically and cytologically from the only other series which occurs in the western North America, the *Longipetalae*, and from *I. tenuis* whose relationships at the present time are rather obscure.

As will be shown later, natural hybridization is a common occurrence among a number of species of this series, and some of the resulting hybrids are as fertile as the parental species. After excluding I. tenuis from the Californicae, Clarkson (1955), working with the Oregon species, concluded that since there was no apparent cytological barrier between the species there was good reason to suppose that hybrids would be found wherever two of the taxa occur together. On this basis he then reduced all six of the Oregon species to subspecies of I. tenax, that being the oldest valid name within the series. This appears to be an extremist approach to the problem. After ten years of study of the group both in the field and experimental garden, it is my feeling that the taxa recognized in the present work represent a series of closely related species which in the past have been reproductively isolated populations with district morphological characters and occupying distinct ecological niches or geographical areas. The majority of the taxa have been recognized as species by competent taxonomists since the time of Dykes. The occurrence of hybrids within the group has been brought about as the result of a breakdown of the isolating barriers. Such a situation is not unknown in other groups of the Pacific Coast flora and Quercus, Diplacus, Ceanothus, Pinus, and Aquilegia might be listed as examples. A full treatment of speciation and natural hybridization and their bearing on the species concept in Iris will appear in a forthcoming paper.



Distribution of Iris, series Californicae.

This is the first of the reprints from *Aliso*. Further extracts will appear in forthcoming issues.

Indiana Report

Kathryn Wright Terre Haute, Indiana

As far as PCNs go, my experience is limited to only one batch, or I should say order, of SIGNA seeds. They were ordered in the fall of 1977 from the first SIGNA seed exchange list I had seen. The order was late in arriving because that was the year that Jean Witt had been ill. Of PCNs, I received: PCN mix, Iris douglasiana, I. innominata, tenax-forestii, and AGNES JAMES. Jean explained that AGNES JAMES was one of the most reliable growers and would probably have a good chance with me

Wondering what to do with the seeds that arrived, I decided that winter shipment assumed spring planting. So I planted in spring, between rows of tall bearded seeds that had been sown the previous fall. Germination results for that first spring (1978) were varied. Tall bearded, most crosses, came up "like hair on a dog's back," but the species did little or nothing. I made no records of germination that year, but from the size of some seedlings at present, probably a few spurias and Iris biglumis did get started then. The summer was the third and least severe of a series of rather warm and dry ones, and I left the seedling bed to Nature's tender care, weeds and all.

I should explain that my soil is a sandy loam, on land classed by the county soil survey as having a 0-3% slope, and this seedling bed was on the slope. Further, the land is considered to be "wheated out." The last wheat crop was in 1975. The soil is obviously anemic and low in nitrogen, also droughty. Weeds are relatively sparce (thank goodness), mostly fairly low growing, and pale in color, and they seem to make an effective shade for young seedlings.

However, in the summer of 1979, some growth occurred, and not only among the PCNs. Before winter 1979-80 set in, I covered the babies with settled straw – not much, not over 1/2 inch – and have just finished strawing them again, with 1 to 1 1/2 inches of the same type.

Censuses were taken in November 1979 and again in October 1980:

			79	80
List No.	List name	Label name	Ct.	Ct.
76K043	PCN select mix, Reid	PCN mix	1	1
			O	2*
77K071	I. douglasiana	I. douglasiana	8	3
77K072	I. douglasiana AGNES JAMES	AGNES	15	3
		JAMES		
77K081	(douglasiana x innominata) X	. I. innominata	1	0
	I. tenax, violet	tenax-forestii	7	4
		hvbrid, violet		

*Only one was counted in October, but when mulching last evening, I saw a little brownish plant that certainly looked like one.

I have questioned whether the seedlings still alive are the same ones as counted last year, but judging from the size, some of them definitely are. This coming winter is expected to be relatively mild here, with more rain than snow. I'm afraid that the open, early midwinter last year may have been the fatal factor explaining the losses between 1979 and 1980. It was pretty cold, but no snow fell until well along in February.

In none of the years since the seeds were sown has the seedling bed received fertilizer. Mostly the weeds have been allowed to overgrow the beds until fall or early spring, when I would weed them out and allow a new crop to grow. This year, I did supply water along in late summer-early fall when early weeding coincided with unseasonably warm and somewhat dry weather. Next year, I hope to give some liquid fertilizer complete with trace elements to all the SIGNA seedlings from the 1977 crop and perhaps even to encourage them with weeding and water during dry spells.

I haven't ordered any more PCNs since 1977, feeling that my conditions and results warrant "stealing" the usually insufficient number of seeds available from more auspicious futures. But, it looks as if perhaps I have selected a few that are adapted to my conditions without coddling, and after having heard and read more about PCNs, I'm encouraged to sow the seeds received at the section meeting in Tulsa.

P.S. I discovered, in checking my seedling bed charts further, that I did place an order for SIGNA PCNs again last fall and planted them last winter. But the bed hasn't been weeded, so I have no idea of the results. I am just now sending out a new order for some more, which I plan to keep under straw from the beginning, to conserve moisture, and see if that helps. Additional help I do not want to give them, because if they are going to live here, they have to be able to cut the local mustard, and that's that.

THE ALMANAC has the following item FOR SALE. Please write to the treasurer.

Cohen, Victor A.,

A Guide to the Pacific Coast Irises

London: The British Iris Society, 1967. \$3.00

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An Invitation for Guest Irises

The Pierce County and King County Iris Societies of the Seattle area will be hosting the 1984 American Iris Society National Convention there. They will be accepting beardless iris this year (to allow for optimum growth) and are encouraging anyone with Californicae to send one to four plants of each variety they wish to guest. Include the hybridizer's name, address and phone number, name or number of the variety and the type of iris. Send guest irises to: Mrs. George F. Lankow, 725 Twentieth Avenue West, Kirkland, Wa. 98033. A receipt will be mailed to all contributors.

Soquel Cove Wins The Mitchell Award

SOQUEL COVE, introduced in 1977 by Joe Ghio won the Mitchell Award for 1980. (PASATIEMPO x collected Iris munzii) X (OJAI x APTOS). Standards white; falls white, turquoise wash. SOQUEL COVE has broad, blue green foliage with two to three blooms to the stalk and showing *I. munzii* dominance.

Dick Richards, on one of his yearly visits to Bay View Gardens to see Joe Ghio's Pacific Coast Native hybrid plantings brought him a handful of unopened flowers of *I. munzii* gathered from the Coffee Creek area of Tulare County in the Sierra Nevada foothills. The colors ranged from lavender to lavender blue none strongly showing the evidence of turquoise wash sometimes seen.

Joe used that selected pollen on PASATIEMPO. The first year seedlings were "pretty awful" with poor color and spidery form. He had thought to discard them until Lorena Reid, who saw them blooming, suggested that they needed yet another year to develop. These, then, were crossed to a seedling from OJAI x APTOS and produced SOQUEL COVE. Thus: SOQUEL COVE is F2 from the species, and, according to Joe was only saved to fill out a row of re-selects! The role of filling out a row of re-selects to the Mitchell Award is quite an accomplishment.



The Almanac of the Society for Pacific Coast Native Iris Jean Erickson, Editor 2181 Blucher Valley Road Sebastopol, CA 95472 THIRD CLASS
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