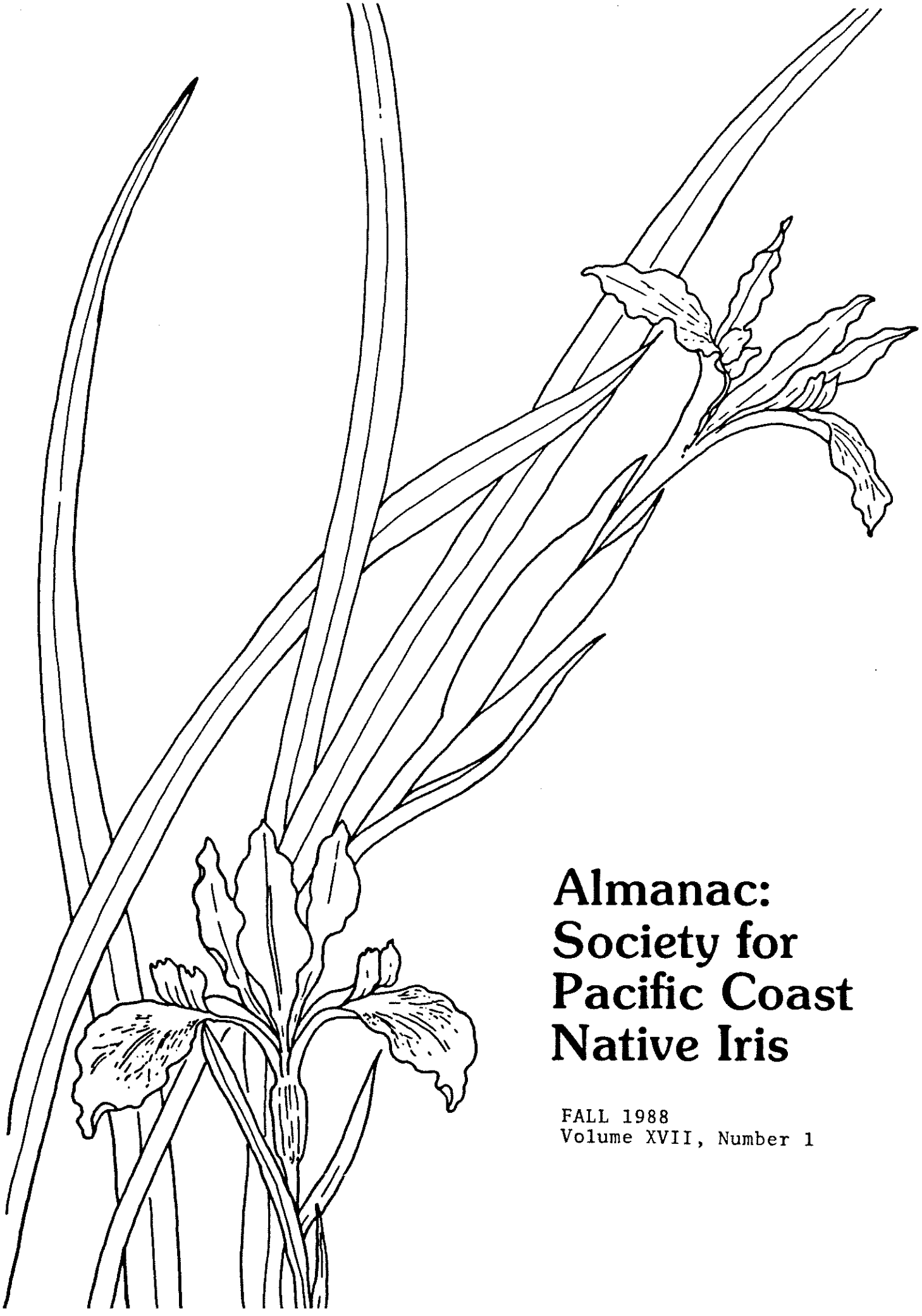

Almanac: Society for Pacific Coast Native Iris

FALL 1988
Volume XVII, Number 1

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EXECUTIVE COMMITTEE

PUBLICATIONS AVAILABLE

Diseases of Pacific Coast Iris
Monograph Issue, Lewis and Adele Lawyer Almanac, Fall 1986 issue. Available from the Editor for $3.50, postage paid.

Third Cumulative Check List
Pacific Coast Native Iris and their hybrids, 1985 edition. Copies areavailable from the Editor for $4.00 each, postage paid.

A Guide to Pacific Coast Irises
Victor A. Cohen: forward by E. B. Anderson. London: The British Iris Society, 1967. This 40 page booklet contains both colored and black-and-white photographs of selected species, line drawings and thumbnail descriptions of all species and major sub-species. There is general material on distribution and botanical affinities among the species, plus a map of western states showing distribution of the species in general. Copies are available from the Treasurer for $3.50 each, postage paid.

MEMBERSHIP & SUBSCRIPTIONS

The Society for Pacific Coast Native Iris is a section of the American Iris Society; *membership* in the latter organization is a prerequisite for membership in the SPCNI. If you wish only to receive the *Almanac* (two issues per year), the annual subscription rate is $4.00.

Membership Rate	Individual	Family
Annual	$4.00	$5.00
Triennial	$10.00	$12.00
Supporting Annual	$6.00	
Life	$50.00	$65.00
Honorary Life	No dues	

Please send membership-subscription monies to the SPCNI Treasurer.

The *Almanac* is published in the spring and fall; copy deadlines are February 1 and August 1, respectively. For information about availability of back issues, please address the Editor.

PRESIDENT'S MESSAGE

With the year nearly over, (and a long, dry one it was), use some extra precaution when replanting. Because the weather was dry, and still is in most areas, be absolutely sure that the new, white roots have started. If not, with the advent of cooler weather I try to give them a"good" soaking about 2-3 weeks prior to replanting, and longer if the roots aren't ready. It's better to be somewhat late than to lose a greater proportion of your "goodies".

I hear the interest in a "Spring Trek" is building. If you are the least bit interested, contact the Lawyers for the latest details.

It probably won't do any good, it never seems to, but here goes! How about getting a SPCNI Robin going or a Letters to the Editor section in the ALMANAC? Let us know. It would possibly keep us in closer contact.

Susane

FROM THE EDITOR

We grow hundreds of different plants in our gardens, most of which originated in gallon cans, six-packs, or seed packets. Seldom do we think about the fact that somewhere in this world, the same or a similar plant is growing wild and free in its native habitat, unaltered by human intervention. Thus, it often comes as quite a shock to us when, for the first time. we see some familiar flower growing wild on a remote hillside.

I remember when a friend of mine, after seeing godetias for the first time in his life in a flower market in Spain, spent a whole day of his vacation tracking down seed of this "beautiful Spanish flower". The very day he arrived back home in San Francisco he called me to tell me of his find. Admittedly, godetia flower colors are very Spanish, but he was quite taken aback when I told him that these gaudy godetias originated as wildflowers right here in California or a neighboring western state.

We have all read Dr. Lenz' account of how excited Jean Stevens of New Zealand was when she saw, for the first time in her life, a field of wild iris, a patch of *I.munzii*, in the Sierra foothills, how she couldn't even wait for the car to stop before she jumped out just to be closer to them! And although more than 60 years have now passed, I still vividly remember when I first saw a wild iris growing. I was driving a lumber truck from San Bernardino up the winding mountain road to Big Bear Lake. I remember having to park the truck on a wide spot a hundred yards or so above the place where I had spotted the bright purple flowers, running back down the road, and the excitement of finding that they were real wild iris plants, *(I.hartwegii australis)*, in full flower among the chaparral and grasses.

And the excitement was still there years later on seeing, and now sharing with Adele, *I.missouriensis* in the lower Yakima Valley, *I.douglasiana* on the hills of San Francisco or along the coast in Mendocino County, *I.munzii* in the poison oak above Coffee Camp,*I.tenax* bordering the road southwest of Lorena Reid's nursery in Oregon, and *I.chrysophylla* under some scrub oaks in the Oregon hills. Perhaps even more exciting was our trip to *I.hartwegii* country in Tuolumne County this August when we found widely scattered plants as high as 6900 feet elevation. They were pretty scrawny, and at that elevation you had to hike a hundred feet or so between plants, but they were there, in soil so dry it was dusty, yet getting ready to brave another icy winter.

Exploring for wild plants is certainly one of the finer pleasures in life, meeting friends with mutual interests is another, and we are looking forward to doing both on the SPCNI tour of southern Oregon next May.

Lois

SPRING FIELD TRIP PLANNED

Because of the enthusiastic response to the idea of field trips to see native iris broached in the Spring ALMANAC, the first one has been scheduled for May 13 and 14, 1989. With the help of George Gessert and Roy Davidson, a route touring the Siskiyous of southern Oregon with a dip into northern California and the Oregon coast has been planned.

A bus trip is feasible since 34 individuals have already expressed an interest in the trip. The cost would be between $25 and $35 per person, including driver and gasoline, depending on the number interested.

Plans are not yet finalized, but George Gessert suggests that we start and return to Grants Pass and spend the night of the 14th at Gold Beach. We will have a chance to see *I.bracteata, chrysophylla, douglasiana, innominata, tenax, thompsonii* and all combinations of these in natural hybrids. Really exciting!

Please let Adele Lawyer, Secretary of SPCNI, know if you are interested in this trip so that firm plans can be made.

A large bus with toilet facilities can accomodate 46 passengers, a smaller bus carries 39 people. One individual asked whether he could use his recreational vehicle. We said, "Yes".

When you write to express interest in the trip, in addition to your name and address, please express your preference for transportation and also whether you can take an extra passenger or passengers in your car en route to Grants Pass, which has no commercial airport.

We will send motel lists for Grants Pass and Gold Beach and other pertinent time tables and information to all those responding early in 1989.

WILD IRIS IN WESTERN SONOMA COUNTY

Colin Rigby

In mid-April, 1988, thirteen members of the Santa Rosa Iris Society met at the parking lot of the Healdsburg shopping center for what proved to be a very special day. About 9 in the morning we set out in trucks and vans to see *Iris purdyi* blooming. We drove about 20 miles northwest of Healdsburg on the Warm Springs Dam Road. We turned off onto a dirt road on private property and drove another four miles. The road was not in the best condition and it was a good thing we were in trucks and vans, as it was a rough drive. It is doubtful that you could drive this road in wet weather in a passenger car. We arrived shortly before noon, looked around a little, ate a picnic lunch, and then looked to our heart's content.

It had been a dry spring but there were still lots of iris in bloom to see. There were two distinct species, *I.douglasiana* and *I.purdyi*. The douglasianas were unusual small plants with shorter leaves and most interesting flowers. All of the plants seemed small to me in comparison to the garden plants of douglasiana in my garden. The shape of the flowers was very interesting.

I.purdyi was blooming with many variations of color, although it did not seem that the two species had intermixed to a great degree. You could see the interbreeding in some plants, but considering the number of plants in bloom, it is interesting that they had not interbred more. Each species seemed to keep its identity. Only a color variation in *I.purdyi* told of the *I.douglasiana* influence. We took measurements of the iris flowers, and some were as large as five inches across.

I.purdyi seemed to grow best under a canopy of oak trees where the ground under them was thick with fallen leaves, whereas douglasiana grew in the more open areas.

In spite of our dry spring, there

were lots of spring wild flowers to see: poppies, lupin, native warrior (*Pedicularis densiflora*), and patches of brilliant red *Delphinium cardinale*. We also saw a small colony of wild orchid which has an attractive corkscrew petal, possibly *Cypripedium mentanum*. Florence Brown says there are wild pigs in the area. They do not bother the irises and they had not yet found this orchid patch. Sometimes, while searching for food, they root out the orchids, according to Florence.

I.douglasiana

I.purdyi

It is Florence Brown's family who own the property we were fortunate to explore and I hope that sometime this fall I can persuade Florence to take me there again to collect plants. She has tried and failed to transplant *I.purdyi* into her Healdsburg garden. I am sure that purdyi will grow outside its natural habitat if we are able to collect the plants. I look forward to trying.

TO TRIM OR NOT TO TRIM?

Lewis Lawyer

When we visited Ron Lutsko's garden last spring we were surprised to find out that he cut off the tops of his PCNs during the summer and let them start over in the winter. His plants certainly looked good, were flowering well, and by that time you wouldn't know that they had been cut. He did it because he thought the spring plants looked better without the old, sometimes discolored leaves.

This year we had so much rust in our seedling bed that I thought I would give it a try. We cut out some of the brown leaves to the ground and all the rest were topped at about 6 inches.

The first advantage we found was that these little short plants require a lot less spray material and time than the uncut plants. So far they all look fine and are sending up new growth the same as their unclipped peers.

If any of our readers have had experience with clipped plants, please send us some information.

CITY HALL, A CONGLOMERATE

Lewis Lawyer

When we decided to use Joe Ghio's CITY HALL as our color print of the month, (see next page), I started searching for information relating to this pretty little Pacifica. Joe introduced CITY HALL in 1978, the year when the AIS Convention was held in the Bay area. It was growing in our garden for the tour as a 2-year-old clump under its pedigree, PV177F. The picture was taken on a rainy day in January that year, and the plant was all finished blooming three months before the tour. But don't sell CITY HALL short! Just before the convention it sent up two more bloomstalks, and on April 29, two beautiful blooms opened just in time for the 773 irisarians who toured our garden.

On each of the two years we had grown it, we graded it as the best PCN flower in our garden, just a trace better than Ghio's PV153C, which he introduced as LAS FLORES a year later. CITY HALL was awarded an HM in 1980 and the Mitchell Award in 1984.

Frank Sinatra may well be able to say, "I Did It My Way"; but none of us can say, " I Did It All By Myself".

In the Spring 1985 ALMANAC, Joe wrote an article on how he started on the Pacificas and how much he owed to others. As I re-read the article I decided to see who contributed to the ancestory of CITY HALL.

CITY HALL is a cross of Corralitos x Restless Native, both Joe Ghio's introductions. So CITY HALL is primarily the product of Joe's own intuitive ability; but in one way or another, all the following cultivars and hybridizers are involved:

CORRALITOS (Ghio 1975) is a cross of Native Born x Native Music.

RESTLESS NATIVE (Ghio 1976)is a Mitchell Award winner (1981), selected by Joe from a cross of California Native x Verdugo.

NATIVE BORN (Ghio 1972) is a random selection from Sydney B.Mitchell - Jack Craig lines which were given to Joe by Jack Craig.

NATIVE MUSIC (Ferguson 1968) is a cross between two different Stambach seedlings and is the only introduction of Walker Ferguson of Escondido.

CALIFORNIA NATIVE (Ghio 1973) is Lompico x Violet Elf.

VERDUGO (Phillips 1971) is from a cross of Amiguita x Claremont Indian, selected by August Phillips in his Inglewood garden.

The two seedlings from which Native Music arose were the product of George Stambach of Pasadena and are probably of Doug-Inom parentage.

LOMPICO (Ghio 1971) is from several generations of Ghio selections stemming from Mitchell-Craig *I.douglasiana x I.innominata* lines.

VIOLET ELF (Walker 1960) is a cross of Amiguita x Arioso made by Marion Walker of Ventura.

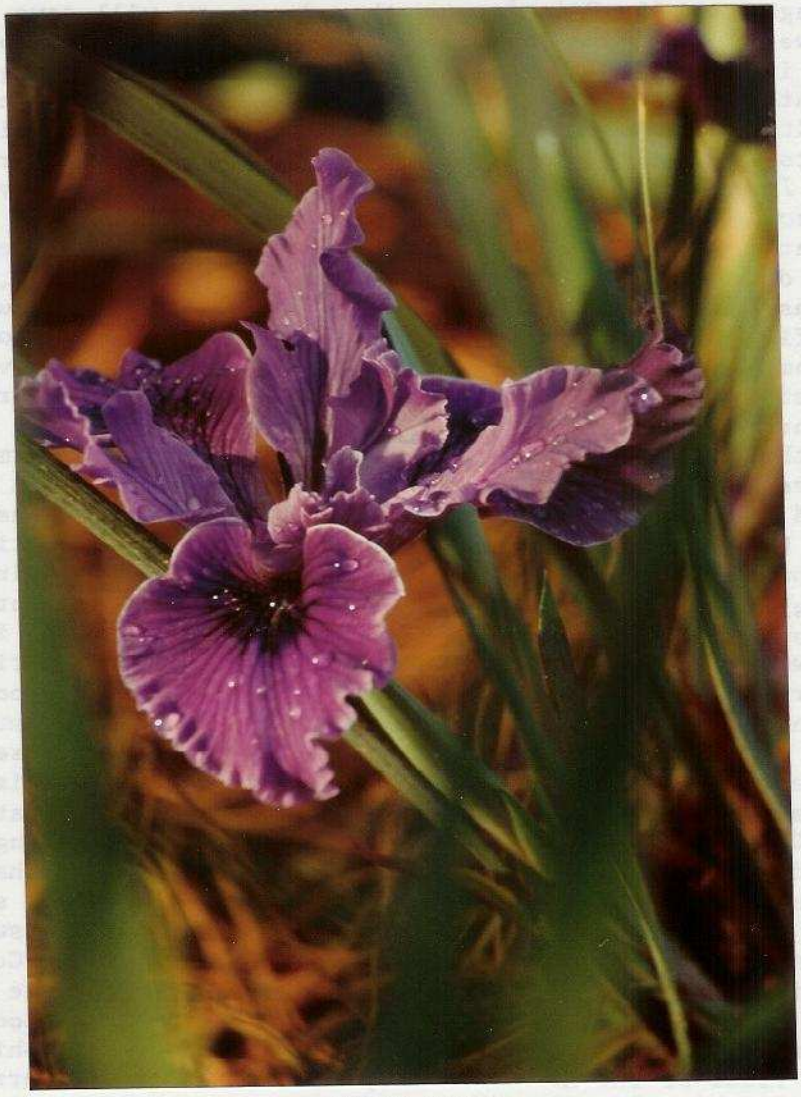
AMIGUITA (Nies 1948) is a Mitchell Award winner (1974) selected from *I. douglasiana* crosses by Eric Nies of Hollywood.

CLAREMONT INDIAN (Lenz 1956) is from a cross between two seedlings by Lee Lenz in the Rancho Santa Ana Botanic Garden in Claremont.

ARISO (Nies 1948) is a cross of Orchid Sprite x Agnes James. And since ORCHID SPRITE is also a Nies selection involving Agnes James x Unknown, we are left with:

AGNES JAMES (Starker 1935) is a native white *I.douglasiana* selection by Carl Starker of Jennings Lodge, Oregon.

So by my count, CITY HALL traces back to 15 identifiable and thousands of unidentifiable,(mostly douglasiana), ancestors which were created or selected by 10 or more different humans and countless millions of bees before them. But Joe selected CITY HALL which we think is very pretty, and that is why we took its picture.



CITY HALL

SPECIES SEED COLLECTING OVER COHEN, LENZ TRAILS

Lewis Fry

The virtues of the species and natural hybrids of the *Californicae* have been mentioned frequently in many publications. Our interest was first piqued over twenty years ago by Molly Price's iris book. Since we lived in Houston, Texas at the time, it was not until our recent move to Novato, California that we had an opportunity to see and grow these coveted plants. Seeing *I. purdyi* and a Lewis Lawyer *I. munzii* hybrid in the Summer, 1986 *Pacific Horticulture*, made us certain that we had much learning and hunting to do.

This article was suggested by the Lawyers after our first meeting in their garden and some hours of our lusting for his *I. munzii* and VALLEY BANNER hybrids. Having purchased a full set of back issues of the SPCNI ALMANAC earlier, we expressed a wish for follow-up data on the wild populations, particularly ones having been mentioned as threatened. Mentioning that we had located seeds by using Cohen's *A Guide To the Pacific Coast Irises*, which is now well over twenty years old, we were made volunteers in a small follow-up project. Our information is limited by our having only recently started to collect irises. We are now beginning to draw on the information contributed by many to the ALMANAC over the years.

An effort to add species or wild hybrids to a garden will encounter an obstacle quickly: there are few commercial sources. As is the case with other sections of iris, most of the money and interest is in the latest hybrids. A few sources exist as listed in the Spring 1988 issue of the ALMANAC. The SIGNA seed exchange is also a recommended source of iris species although our experience in obtaining species commercially has been through Laurie's Garden, which has our unqualified recommendation. Seeds of *I. innominata* and *douglasiana* of unknown provenance are commercially available. And sales operated by California Native Plant Societies and by botanical gardens, as well as commercial native plant nurseries are other sources. But here few species are offered.

We concluded that a readily obtainable collection would cover less than half the species, none of the subspecific varieties, and very few of the wild hybrids. Iris scroungers of longer standing probably can contradict this; should they do so, we will save a lot of gasoline. Two possible approaches come to mind. The first, digging wild plants, is illegal, threatens the natural populations, and may result in loss of both the plant and its seed production. Unless done under permit by qualified collectors, this should not be considered. The second is the approach taken by most conscientious collectors, the collection of seed for propagation under garden conditions. Often overlooked, among its many advantages is improved acclimatization of species from afar.

Inevitably, "where" must be pondered. The answer may depend on the reference materials available to each collector. Among our first acquisitions upon moving to the heart of iris country were several good native plant guide books. These can be of help in identification, but they typically describe plant population locations in broad terms, either of associated plant communities or of vast geographical expanses.

Moving up to recognized flora has helped somewhat; publications with more limited geographical range tend to offer more location details than the state or multi-state ones. Even so, we have learned of some hybrid swarms a few miles from our home in Marin County, California, which we would like to see but have not attempted to locate because of the size of the geographical areas specified. We have deferred searches of this sort in favor of those for which we have more precise location information, although we expect to go on a few wild goose chases in the future. We are aware that such searches must be conducted on foot!

The first source of the level of detail we wanted was *A Guide to the Pacific Coast Irises* by Victor A. Cohen, published by the British Iris Society in 1967, and available from SPCNI. Derived in large part from THE indispensible source: Dr. Lee Lenz's *A Revision of*

the Pacific Coast Irises, first published in ALISO in 1958 and largely reprinted in the ALMANAC since, the Cohen guide is the best compact single source we have found.

In early June of 1987, we armed ourselves with no more than the Cohen guide, a Rand McNally "Road Atlas", and a few state and county maps, and, over a week, made a series of one-day trips on which we were almost totally successful in locating the populations.

The first trip, inspired by the *Pacific Horticulture* photograph, had to be in search of *I. purdyi*. The guide gave as locations the road north of Ukiah and the approaches to Richardson's Grove; but suggested that these were hybrid populations. When we went, seeing any irises in bloom was unlikely. With that caveat, we saw no irises until, south of Richardson's Grove on Highway 101, we were attracted to an informal rest area on the east side of the highway. Large redwoods surrounded a small clearing which was home to a number of *I. purdyi* growing among the wild strawberries. At that time of the year, seed capsules that far north were reasonably mature, but far from dehiscing. Our daughter, on an unrelated trip this spring, saw the irises at this location in bloom. They were the white form with red-purple veining, some tending toward lavender. The road through the park at Richardson Grove holds similar plants.

We returned south on 101 to Leggett, then followed Highway 1 home. Lenz noted *I. purdyi* and *I. douglasiana* x *I. purdyi* on the road to the coast, but at that season and under dense shade, we saw only the leaves.

An unexpected find not cited by Cohen was the form once known as *I. douglasiana* var. *mendocinensis*, found accidentally on the road to the lighthouse at Pt. Arena. Lenz did not accord this varietal status, but we found the visable differences from the typical coastal form of interest. It looked like a local adaptation to the cold, windy climate.

The typical coastal form of *I. douglasiana* may be seen from Highway 1 in Mendocino, Sonoma, and Marin Counties. We have seen these in bloom in mid-February and in early summer.

Buoyed by the success of this trip, we decided to head south on the next day and pick a few pods of *I. munzii*. Cohen cited only Coffee Camp as a specific location. The approach from Highway 99 proved to be more scenic through Visalia, more comforable through Porterville. We found the temperature over 100 degrees F, the sun blazing, and no irises. After over an hour of tramping around the lower Coffee Camp area, we had located some wildflowers, lots of weeds with painful seeds, and much poison oak.

Good sense might have dictated that we give up, but a bottle of TECNU skin treatment for poison oak and a freshly waterproofed new pair of hiking boots, and perhaps heat frustration, instilled some false confidence, so it was off to the other side of the Coffee Camp stream. Amazingly invisable from the opposite side, there were a large number of clumps of impressively large *I. munzii* between the water and a fence uphill. The terrain is rougher than on the opposite side. The irises seemed to have the usual affinity for poison oak, as almost all were growing in or under large specimens of this noxious shrub. After the weather, poison oak seemed a minor hazard. Pods were beginning to dehisce.

Distances covered in the first two days were sufficient to make us choose closer destinations for the next day. *Iris fernaldii* grows in our general area, but for some reason we had not seen it in bloom. Cohen cited the vicinity of the Petrified Forest in Sonoma County, which we had visited previously during the dormant season without identifying the species we saw growing there. A few were still in bloom for the later visit, although most were in the later stages of seed ripening. At other spots along the road in that general area, we were able to locate plants with mature seed capsules. These populations were more limited than the ones in the Petrified Forest itself. For bloom viewing, the Petrified Forest would be the best choice. The proprietors have kept the typical tourist attraction detritus to a commendable minimum.

A return visit to a daylily supplier on Calistoga Road failed to stretch this trip enough to suit us, so we returned to our home area for a look at the local irises. The role of Marin's *I. douglasiana* var. *major*, in the

development of today's hybrids was familiar from ALMANAC articles. We took the Bolinas-Fairfax road from the town of Fairfax to Mount Tamalpais. During iris season there are blooms in a wide range of pastels, mostly cream, near-pink, mauve, and lavender. Some on the western part of the road had impressed us especially, but they are abundant along the road and on Mount Tam generally. Cataract Trail, for one, offers good irises and superb scenery.

Resting the fourth day, on the next we were off again, now seeking *I. tenuissima* ssp. *purdyiformis*. Cohen was imprecise here, citing the area of the Feather River Canyon. The iris search was an undeclared side to a pleasure trip, so our failure to see a single iris was not a great disappointment. Our 1987 seed collecting ended. We turned south on Highway 87, driving through alpine meadows to Lake Tahoe. Sugar Pine Point Park's lupines, buckwheats, and snow plants were in peak form.

Over the winter, we added reference materials and better maps. The DeLorme Northern California Atlas and the ALMANAC reprints, especially those containing the Lenz reprints, have been the best additions. Lewis Lawyer's Spring 1982 article on *I. munzii*, had we read it beforehand, might have prevented our trip, but low water at the season we went, as opposed to the time the Lawyers went, made the difference. Contrarily, we have not yet seen wild *I. munzii* in bloom. A Spring, 1979 piece by Gigi Hall, based on a visit with noted hybridizer, Duane Meek, inspired us to request follow-up old articles. It mentioned that planned bridge construction on the Melones Reservoir might flood the only habitat of *I. hartwegii* ssp. *columbiana*, endemic to an area of about one square mile near Columbia, California.

This article contained detailed directions for finding these and other irises. Returning this year from Lake Tahoe the long way, we took Highway 49 south from Placerville to check on their status. For some reason, every little town along the road seemed to be having some sort of tourist-pillaging fair, and the only branch of our bank we saw was inaccessible due to crowds. Being more short of cash than usual thanks to a casino, we lost patience long before reaching Columbia. The spot where the irises were reported was quite easy to find. The area had not been flooded after all, and the population may be intact. We could not make positive identification as we were there prior to bloom season.

Less extensive trips have been generally successful. The *I. purdyi* noted as being about .5 mile south of the Mendocino-Sonoma County line on Highway 128 (28 in the reprint) are still there: we found two good patches at about that point, and a number of more isolated plants above the road cuts for a good distance south. These were the creamy yellow form with maroon veining.

A Fall, 1978 reprint of an article by the late Elwood Molseed, mentioned a population of *I. longipetala* near the fork in Highway 128 leading to Hopland. It failed to prepare us for the grand scale of the population, which was in full bloom. Regardless of its classification, this iris occurs naturally in our area of California, and we grow and enjoy it.

I. longipetala

This trip had begun by exiting Highway 101 and driving past Mark West Springs to the Petrified Forest area, seeing *I. fernaldii* in bloom at each of the five Sonoma County sites noted by

Lenz. Returning to Mark West Springs and turning toward Kellogg, we saw *I. fernaldii* x *I. macrosiphon* hybrids. Reaching 128, we went north to Cloverdale, west on the other part of 128, then turned toward Hopland. On this one short trip, fortunately at the peak bloom season, we were able to locate *Ii fernaldii, purdyi, longipetala,* the *fernaldii-macrosiphon* hybrids, a more erect form of *I. macrosiphon* than the one growing wild in our yard, and some *macrosiphon-purdyi* hybrids just west of Cloverdale.

So far, we have managed to find almost every population without much difficulty. We failed again in mid-May to find *I. tenuissima* ssp. *purdyiformis*, but were not trying that hard. At least with the Lenz reprints we know where to look; the campground near the type locality was closed at this visit. We did spot a nice population of typical *I. hartwegii* heading east on Highway 70 some 20 plus miles west of Belden (immediately past Four Trees Road, almost to the Pulga Maintenance Station). The Feather River Canyon seems to distract us!

Weather limited our trips this year as our seedlings seemed to need us at home. In the future, we expect to complete our collection on trips north to northernmost California and Oregon, and south to the haunts of *I. hartwegii* ssp. *australis*. Seed propagation has been exceedingly successful, with high germination and low mortality. Luck with weather at transplant times has probably played as much a part as the knowledge we have managed to accumulate in only four years in California.

Our success in locating seeds has been due largely to good data and continued existance of old populations. While we are more collectors than horticulturists, which is a euphemistic way of saying we have a lot of plants but the garden looks like hell, we hope to hand-pollinate for pure seed strains as well as hybrids. Should the expected geometric increase in our supply materialize, we hope to help in some way to make the species more readily available. Like many SPCNI members, we grow a number of other genera, other species of irises, and a number of the newer PCN hybrids from Joe Ghio and others. Still, there will always be a spot for the wild ones.

As a closing suggestion, we would like to see the entire Lenz series on *Californicae* from the 1958-1959 "Aliso" reprinted in a single volume. Not having seen the originals, it still seems that there must have been an article on *I. hartwegii* in the "Revision..", and the entire "Hybridization and Speciation..." from 1959 seems to have been omitted.

Editor's Note: We are planning to issue a reprint of Dr. Lenz's publication, "A Revision of the Pacific Coast Iris", and of the follow-up article, "Hybridization and Speciation of the Pacific Coast Iris." We have permission to do so from Dr. Lenz and have obtained copies of the original publications in *Aliso* for photocopying.

Estimates of costs for the project indicate that SPCNI can distribute the reprints for about $5.00 each.

Munzii-derived seedlings in the Lawyer garden

NATIVE IRIS IN GARDEN DESIGN

Adele Lawyer

In the spring of 1988 we visited five gardens in which Pacific Coast Native Iris were used as important elements of garden design. Three were private gardens, two of which, the Peggy and Bill Grier and the Joanne and Warren Wilson gardens, were designed by Ron Lutsco of Lafayette. Jenny Flemming's garden in Berkeley was primarily self-designed. The two remaining locations were public gardens, both in Berkeley: The University of California Botanic Garden, and the East Bay Regional Park's Botanic Garden.

Because of space restrictions, we will cover only the three private gardens in this issue and reserve review of the others for a future issue. We visited these particular gardens because of their merits, and also because we live on the east shore of San Francisco Bay where these gardens are easily accessible to us. We hope, however, to cover plantings farther afield as time goes on.

Peggy and Bill Grier Garden

Most of the gardens visited this year represent a like, temperate environment except for the Grier's garden in Lafayette where the hot summers and colder winters set it apart from the others. It is described here first, although the designer, himself, wrote a very excellent article previously in the Summer 1988 issue of *Pacific Horticulture*. This was illustrated with stunning color photographs which convey a vision of the garden better than any means short of a personal visit.

The house itself is a sweep of dark cedar with spare, clean lines providing a strong background for the plants which cling close, as well as for the trees and shrubs through which it is viewed from other garden perspectives. And the view of the softly rounded hills molded with oaks, which constitute the eastern garden horizon, seem to be an integral part of the garden design.

All plants in this garden are California natives, the dominant shrubs being manzanita, ceanothus, and baccharis. There are numerous species of the first two, varying in color, height, and structure, whereas the dwarf baccharis provides an attractive, dense, rounded ground cover. These, the theme plants, are threaded throughout the many environmental niches with an astonishing diversity of native plants,-flowers, bulbs, shrubs, and trees. The native iris are but one element in the pattern of form and color which constitute a kalidoscope of change thoughout the year. In the early spring, blocks of blooming iris light the recessed entry to the front door and extend from here along a narrow bed edging the path to a stone bench shaded by a maple tree. Each block of iris is a distinct variety so that a strong color impact is projected. From the bench in the midst of the iris, the house and garden can be viewed by looking in one direction, and by looking to the east, the soft, natural California hills can be seen and welcomed as part of the Grier's lovely garden.

The Iris, the Bench, and the Hills

Joanne Casey and Warren Wilson Garden

A perfect harmony of house, garden, art, and the personality of Joanne and Warren Wilson has been integrated in their home in the Hiller Highland district of Oakland.

The architects, Ron Lutsko for the landscape and Lewis Di Sibio, for the residence, really achieved a melding of form and liveability for the Wilsons and their daughter, Casey.

Ron Lutsko photographing iris in the Lawyer garden

Each angle of view, from inside or out, is a balanced, pleasing art form with all the elements complementing each other.

No dramatic views or massive boulders enhance the site, which is distinguished only for its climatic orientation at an altitude where the invert layer maintains a frost-free environment, for its well-drained soil, and for its central location in the Bay Area, important to a busy professional couple with a 6-year old daughter.

The house itself is cedar, with planned simplicity, receptive to adornment, both inside and out. Walls alternate with floor to ceiling glass. The Wilson's wonderful art collection can be viewed from one direction, and the world outside, encompassing plants and art sculpture, from another. The interior is filled with light provided both by the sun and the garden outside, and by the color and interior design of the residence, itself,-everything in harmony.

It is no accident that this all-encompassing design has occured. Ron Lutsko and Lewis Di Sibio worked together to achieve this result; and, in the garden, Pacific Coast Iris are a major ingredient in the springtime display. Ron used white or very light-colored iris close to the house so that they would stand out against this darker frame when seen from the garden. He used CANYON SNOW and COUNCILMAN in several areas for this purpose. From the perspective of house-to-garden, native iris of a darker tint were used. These were principally varicolored seedlings of lavender, yellow, and blue-violet. Joe Ghio's MAYOR was among the hybrids included. Joanne and Warren also bring the outside in quite literally by placing flowers in vases, where they lend sparkle to the house. A bouquet of native iris graced the dining table when we visited.

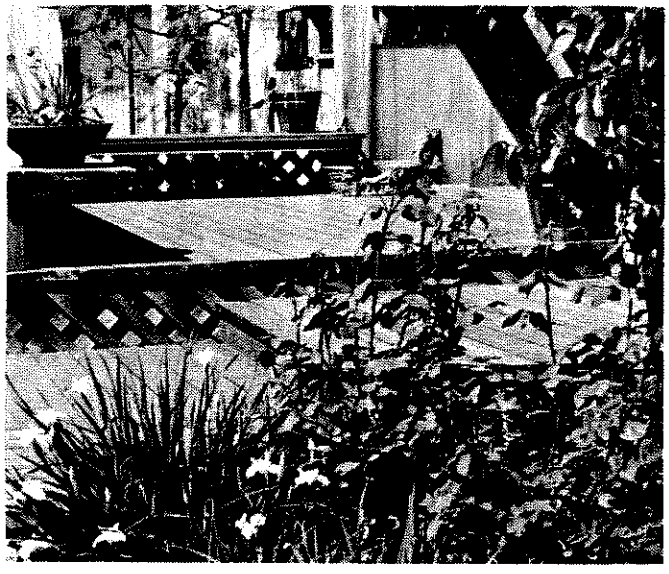
The garden is framed by a curve of rocky slope extending along the north and east borders of the property. We were impressed by the rock roses, *Cistus skanbergii*, which covered these slopes with peach-pink when we were there. They were backed with stands of ceanothus "Concha", *Fremontodendron California* "California Glory", and toyon, *Heteromiles arbutifolia*, not then in bloom, but structurally an asset to the landscape.

The south border is defined by a hedge of *Manzanita bakeri* "Louis Edmunds". To the west, in the area bor-

dered by the street, (the only section open to public view), Pacific Coast Native seedlings are the major planting. They are set off by stream stones bordering the sidewalk, and enhanced by a cluster of *Dodonea viscosa*, (Hop seed bush) on one side and native oaks elsewhere.

Streetside planting

In the level, private area enclosed by the slope, no attempt was made to limit plant subjects to natives of California. Although many were present, the Wilsons welcomed roses, evergreen azaleas, daphne, tulips, spraxis, clematis, cynoglossum, marguerites, and many other garden plants from afar which mingled harmoniously with the natives.



South porch entry, roses, and iris

Among the shorter garden plants, the Pacific Coast Natives are represented prominently, both in sunshine and shade. In an inner courtyard, CANYON SNOW, accompanies redwood sorrell, Japanese maple, and ferns, enhanced by two garden sculptures, one handsome, strong, black plaque mounted on the house, and a sinuous sculpture with the smooth texture and spirit of madrone.

The inner courtyard

This is an altogether lovely home and garden.

Jenny Flemming Garden

"Dramatic" would be a one-word description of the Jenny Flemming garden!

Situated on the up-side of a steep hill in Berkeley, you climb to the sunny mid-level where the house is situated, passing lush, shade-loving plants along the route. And when you arrive to view the garden from the level house-patio situation, the ground is slanted abruptly so that the entire private area of the garden is tipped toward visitors, and it is indeed a dramatic experience.

Huge boulders decorate the steep slope from top to bottom. A recirculating waterfall on a grand scale is part of the design, and California native shrubs and plants soften the bold rock outlines with varied color tones and textures. The effect is totally smashing! And native iris are among the primary components of the design here. There are clumps of species of *Californicae* iris throughout the

garden, almost drifts of iris in some areas. Whites, yellows, creams, lavender, and purple are represented, and the linear leaves enhance the garden design regardless of the season. Ceanothus were in bloom, blending beautifully with the iris. Few gardens celebrate the attributes of native iris like this one.

Selected douglasiana, "Cape Sebastian"

Prostrate lavender ceanothus with purple *I. douglasiana*

It is of interest to know that both Peggy Grier and Jenny Flemming are volunteer specialists in native plants, Peggy at Merit College in Oakland, and Jenny at the East Bay Regional Parks Botanic Garden in Berkeley.

AN UPDATE ON RUST DISEASE

Lewis Lawyer

Because of certain objectives in my PCN breeding program, I have been forced to use many parents which are extremely susceptible to rust (*Puccinia iridis*). Last winter the line-out beds where these crosses were planted became so infested with rust that Adele chose them as an ideal location to evaluate some chemical spray materials for its control.

In cooperation with Dr. Robert Raabe Department of Plant Pathology, University of California, Berkeley, five promising fungicides were chosen for these tests:
Bayleton, Benadonil, Funginex, Plantvax, and Sisthane. Materials not available to Adele were furnished by the University. A sixth variable consisted of unsprayed check plots scattered through the plots. All variables were randomly replicated. Spray applications were made on four dates: January 7, January 25, February 20, and March 9, 1988.

Because of the extreme genetic variability of the F1 plants in the beds where the tests were to be conducted, Adele decided to grade each of the 384 plants individually for their susceptibility or resistance to the rust disease. This was done just prior to the treatments and again 10 days after the conclusion of the tests. Grades ranged from "0" to "4", "0" meaning no discernable rust pustules on any of the leaves, and "4" meaning that all or most of the leaves on the plant were plastered with pustules. It is interesting to note that of the 29 plants which graded "4", nine eventually died after their leaves were killed to the ground.

The location of each plant was mapped so that the "before" and "after" grades could be compared. Rust severity should be reduced on plants growing in plots where the fungicide application was effective, whereas rust should be more severe and the grades higher where the treatment was ineffective.

As expected, grades in the unsprayed checks which averaged 1.34 before the treatment started, increased to 2.26 by the time the tests were concluded, an increase of +.92.

The best spray material was Bayleton which decreased the rust grades -1.07. The only other effective material was Plantvax which decreased the rust grades -0.33. In plots where Benadonil, Sisthane, and Funginex were used the rust grades increased +0.43, +0.45, and +0.79 respectively, not much better than the untreated checks.

To Adele and I, who devoted a large part of our professional careers to breeding vegetables for resistance to diseases, the most interesting aspect of the tests was the superiority of genetic over chemical control. Genetic resistance kept some of the plants completely free of the disease whereas other plants in the plot were being killed to the ground. Gradewise, this is a difference of 5 points; in contrast, the best spray material made a difference of only 1.07 points!

One reason for the superiority of genetic resistance is the fact that it is available to the plant continuously, whereas spray-induced resistance is available primarily at intervals chosen by the gardener. The greatest benefit from genetic resistance, however, is the fact that it eliminates or reduces the need to spray, a chore which must be at the very bottom of every gardener's "What I enjoy most about gardening" list.

Introducing genetic resistance into highly susceptible material, however, has not proved to be easy! Resistance appears to be both recessive and multigened, requiring time and patience, something Mother Nature apparently has in more abundance than we breeders. In our struggles, however,we have made a couple of interesting observations about our adversary. First, there is considerable evidence that the race attacking the PCNs is a different race from the rust on TBs, and thus may respond differently to specific fungicides. Secondly, the disease occurs in nature more than we originally assumed.This year, for example, we found rust to be quite severe on about half the plamts of *I.hartwegii* in Tuolumne National Park, above Sonora; and this, in one of the dryest years on record in that area. Neighboring plants were sometimes free of rust, indicating that genetic resistance could be obtained by selection in the wild without further breeding. We have found the same to be true for different clones of wild *I. munzii*.

Rust pustules on wild *Iris hartwegii*

In the two local botanic gardens where summer irrigation on the native vegetation is kept at a minimum, we found severe rust on one accession each of *I.fernaldii* from Napa County, *I.hartwegii* subsp. *Columbiana*, *I.longipetala*, and *I. tenuissima* subsp. *purdyiformis* from Butte County. All other accessions of these species observed in the two parks were free of the disease.

One accession of *I.macrosiphon* collected near Nicasio Reservoir dam in Marin County, was decimated by rust in the University of California (U.C.) Botanic Garden, as was an accession from the same general location in the Regional Park Botanic Garden. All but two of the other 12 accessions of *I. macrosiphon* observed in the two gardens were free of the disease. Each of these two susceptible accessions, one in the U.C. garden from Trinity County, and one in the Regional Park Garden from Santa Cruz County, had a few plants with rust pustules scattered among the

mostly disease-free plants.

One accession of *I.crysophylla* from Humboldt County was uniformly, but only lightly peppered with pustules.

As might be expected, *I.douglasiana* accessions were mostly free of the disease, but of the 33 accessions observed in the two gardens, five were lightly infested. These were from Land's End in San Francisco, Olena in Marin County, Mt.Vision in Marin County, Elk in Mendocino County, and Bodega Head in Sonoma County.

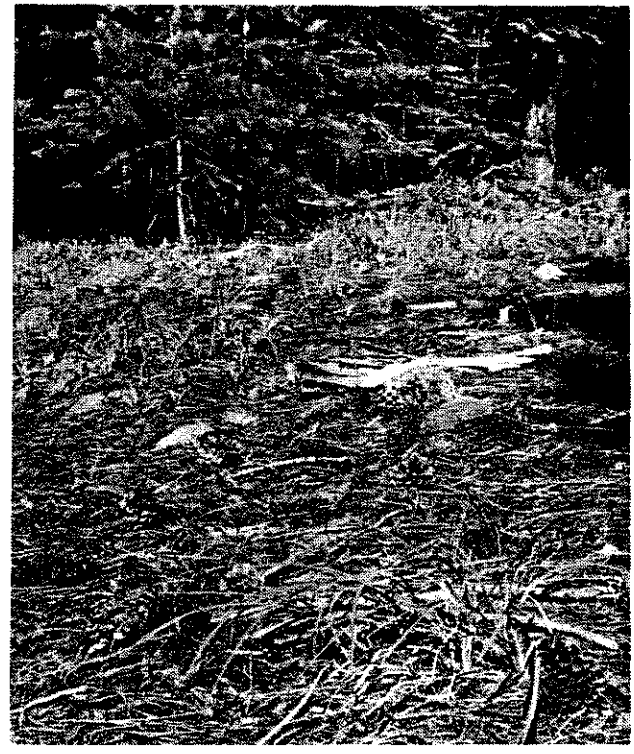
From this we can postulate that iris rust is widely distributed throughout the native habitats of the Pacific Coast iris and that both resistant and susceptible clones occur in most, if not all of the species. It is interesting to me, therefore, that so few of the named varieties released to date are susceptible. This may well tie in with the fact that, as yet, we have found no rust on *I.innominata* and have found it only rarely on *I.douglasiana*, the two species most frequently involved in the background of the named selections.

THE SPCNI BREEDING PROJECT

We have gathered more than 80 packets of seed to be distributed to anyone who would like them, either as part of a breeding program of their own, or just to see how well they would be adapted to their specific growing conditions. This project was proposed in the last issue of the ALMANAC and both the U.C. and the Regional Parks botanic gardens gave us permission to gather any seed we wanted.

Jean Witt and Lorena Reid sent seed from plants which have proved to be cold tolerant in their gardens. Conversely, John Weiler and Ben Hager sent seed from their plants which are heat tolerant. Elaine Hulbert and Dorothy Hujsak sent seed from their gardens in Virginia and Oklahoma which should be tolerant to heat, cold, and summer rainfall. Louis and Caroline Fry and Colin Rigby contributed species seed from their collections.

I.hartwegii plants along Herring Creek Road

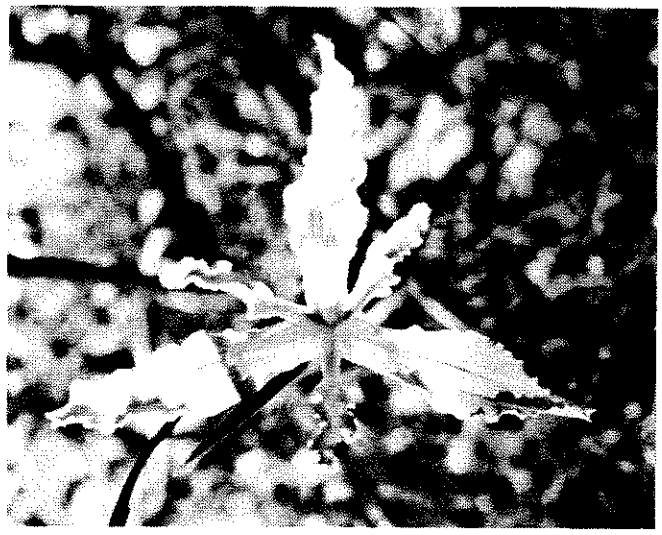


I.hartwegii near Cow Creek. The patch in the rear was the largest concentration of plants we found.

Adele and I contributed open-pollinated seed from the most vigorous of our

named varieties which could be influenced by the predominance of munzii in the vacinity. We also gathered seed of *I.hartwegii* in the Stanislaus Forest above Sonora. We found the iris growing on either side of Highway 108 from Mi Wuk Village to just below the 7000 foot level. The highest elevation where plants were found was at 6900 feet on the Herring Creek Road. The accompanying pictures were taken in areas where we gathered seed.

Seed of all accessions on the list which follows is available on a first come, first serve basis. Anyone wanting seed should send a request to Lewis Lawyer, 4333 Oak Hill Road, Oakland, CA, 94605. Include the accession number of the desired seed lots and $1.00 to help cover the cost of packaging and mailing.



A Sonora Pass *I.hartwegii* (bright yellow form) blooming in our garden

I.douglasiana in the "Sea Bluff" area of the Regional Park Botanic Garden.

SOURCES OF SEED FOR SPCNI BREEDING PROJECT

UNIVERSITY OF CALIFORNIA BOTANICAL GARDEN

NO.	SPECIES	ORIGINAL SOURCE: COUNTY AND AREA
1.	*I. douglasiana*	Alameda, Oakland hills, Skyline Blvd.
2.	"	Humboldt, near Arcata
3.	"	Marin, Carson Ridge
4.	"	" Lucas Valley Road
5.	"	" Near Olema
6.	"	" Mt. Tamalpais
7.	"	San Francisco, Lands End
8.	"	San Mateo, Half Moon Bay
9.	"	Sonoma, Salt Point
10.	"	" Gualala River

UNIVERSITY OF CALIFORNIA BOTANICAL GARDEN (CONT.)

NO.	SPECIES	ORIGINAL SOURCE: COUNTY AND AREA
11.	Doug-Inom?	Mendocino. VALLEY BANNER-type flower.
12.	*I. fernaldii*	Napa, Wooden Valley Road
13.	"	Sonoma, Petrified Forest
14.	*I. hartwegii ssp columbiana*	Tuolumne, Italian Bar Road, Columbia
15.	*I. macrosiphon*	Marin, Marin City
16.	"	Sonoma, Camp Meeker
17.	*I. purdyi*	?
18.	*I. tenax ssp. klamathensis*	? Accession # 860147

REGIONAL PARKS BOTANIC GARDEN

19.	*I. bractiata*	Del Norte
20.	*I. douglasiana*	Humboldt, Near Thorn
21.	"	Mendocino, Gualala River
22.	"	San Francisco, Mt. Davidson
23.	"	" Visitation Valley
24.	"	Sonoma, Bodega Head
25.	"	" Skags Springs Road
26.	*I. innominata*	Del Norte
27.	*I. munzii*	Tulare

LEWIS AND ADELE LAWYER

28.	*I. douglasiana*	Sonoma, Coleman Valley Road	
29.	*I. hartwegii*	Tuolumne, Woods in back of Mi Wuk Lodge	
30.	"	" South shore of Pinecrest Lake.	5650'
31.	"	" Road 5N40Y N.W. of Punch Bowl	6200'
32.	"	" " " "	6500'
33.	"	" Forest S.E. of Cow Creek Loop	5900'
34.	"	" Herring Creek Road	6200'
35.	"	" "	6500'
36.	"	" "	6900'

JEAN WITT

37.	*I. douglasiana O.P.*	Growing in her garden
38.	*doug-inom-tenax*	"
39.	½ *I. munzii X I. douglasiana*	"
40.	½ *I. munzii X I. douglasiana*	"
41.	*I. tenax*	"

LORENA REID

42.	*I. tenax*	Coburg Ridge, Oregon
43.	*I. tenax*	Welte Valley, Oregon

LOUIS AND CAROLINE FRY

44.	*I. fernaldii*	Sonoma, Petrified Forest
45.	*I. fernaldii X I. macrosiphon*	" Franz Valley Road
46.	*I. purdyi*	" Highway 128, ½ mile from Mendocino County

COLIN RIGBY

47.	*I. tenax*	Purple form

SOURCES OF SEED FOR SPCNI BREEDING PROJECT (CONT.)

NO.	VARIETY	NOTES
LEWIS AND ADELE LAWYER		Open pollinated seed from the Lawyer garden.
48.	BANBURY PRINCESS	Small plant
49.	CALIFIA	Small plant, bright yellow flower
50.	ENDLESS	1985 Ghio
51.	GARDEN DELIGHT	Old Stambach golden yellow
52.	HALF TIME	1979 Ghio
53.	LEMONADE SPRINGS	Small plant. R. Davidson innominata X AGNES JAMES
54.	NATIVE MUSIC	Small plant. 1968 Ferguson
55.	SIERRA SAPPHIRE	Lenz selected seedling of *I. munzii*. Seed from 8 different pods.
56.	SIERRA SAPPHIRE THIRD	Lenz SIERRA SAPPHIRE Seedling. Seed from 5 pods.
57.	SMALL TOWN	1987 Ghio. Small plant.
58.	SOLID CITIZEN	1987 Ghio
59.	SOMETHING WILD	1988 Ghio
60.	SUGAR CANDY	Small plant.
61.	TUNITAS	1986 Ghio
62.	UVAS	1986 Ghio
63.	VIOLET ELF	1960 Walker. Could be heat tolerant.
64.	WESTERN QUEEN	1972 Stambach.
65.	Luihn 10	Thornton Abell munz-doug seed grown by Walt Luihn. 5 different pods. Good source of blue color.
66.	XP59C	Lawyer seedling. Good source of blue.
67.	XP64G	Lawyer seedling. VALLEY BANNER type flower.
BEN HAGER		
68.	Seed mix	Seeds selected from heat tolerant plants.
DOROTHY HUJSAK		
69.	SUSIE KNAPP	This cultivar has performed well in her Tulsa garden.
70.	Ex. Ghio seed	From plants from Ghio seed.
71.	Tenax crosses	From SIGNA seed exchange
ELAINE HULBERT		
72.	Seed mix	From best plants in her Virginia garden.
JOHN WEILER		Open pollinated seed from heat-tolerant plants in his Fresno garden.
73.	BIG MONEY	1984 Ghio.
74.	CANYON SNOW	Selected white doug.
75.	ENCIRCLE	1983 Ghio.
76.	JOEY	1980 Gatty selection from Stockton.
77.	NATIVE JEWELL	1972 Weaver
78.	PALO ALTO	1985 Meek.
79.	PESCADERO	1984 Ghio.
80.	SUSIE KNAPP	1970 Phillips
81.	WESTERN QUEEN	1972 Stambach.
JEAN WITT		Open pollinated seed from her Seattle garden. Cold tolerant.
82.	GOLDEN NYMPH	Selected *I douglasiana*. Edith English, N.R.
83.	AGNES JAMES	1939 Starker. Collected in SW Oregon