

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

**FALL, 1989
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PUBLICATIONS AVAILABLE FROM THE SPCNI TREASURER

- Diseases of the Pacific Coast Iris**
Lewis & Adele Lawyer: ALMANAC, Fall 1986.
22 pages, 9 photographs. \$3.50 postage paid.
- Third Cumulative Check List**
Francesca Thoolen: 36 pages. Lists and describes Pacific Coast native iris and named hybrids through 1985. \$4.00 postage paid.
- A Guide to the Pacific Coast Irises**
Victor A. Cohen: The British Iris Society 1967. Booklet, 5.5 x 8.5, 40 pages, 16 line drawings, 8 color and 6 black-and-white photographs. Brief description of species and sub-species including their distribution. \$4.00 postpaid
- A Revision of the Pacific Coast Irises**
Lee W. Lenz: Photocopy of *Aliso* original. Booklet 5.5 x 8.5, 72 pages, 9 line drawings, 14 photographs, and 12 maps. Definitive work on the taxonomic status of the *Californicae*, with a key to the species and sub-species. Detailed maps and accounts of distribution. \$6.00 postage paid.
- Hybridization and Speciation in the Pacific Coast Iris**
Lee W. Lenz: Photocopy of *Aliso* original. Companion booklet to the above, 5.5 x 8.5, 72 pages, 30 figures, graphs, drawings, and photographs. Definitive work on naturally occurring interspecific crosses of PCI, including detailed account of distribution. \$6.00 postage paid. If ordered together, both Lenz booklets may be obtained for \$10.00 postage paid.

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MEMBERSHIP & SUBSCRIPTIONS

The Society for Pacific Coast Native Iris is a section of the American Iris Society; membership in AIS 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	Individual	Family
Annual	\$ 4.00	\$ 5.00
Triennial	10.00	12.00
Supporting Annual	6.00	
Life	50.00	65.00

Please send membership-subscription monies to the SPCNI Treasurer.

ALMANAC

ALMANAC deadlines are March 1 and September 1. For Information about availability of back issues, please address the Editor

PRESIDENT'S MESSAGE

It has been an exciting and fun year for the active members of our society in 1989.

There aren't enough superlatives to describe the expedition into the Siskiyou mountains of Oregon earlier this spring. Suffice it to say that the trip combined great weather, excellent companionship and loads of beautiful scenery, iris, and wildflowers. I'm beginning to sound like a broken record, but I fell in love with *I. innominata* all over again during those two days; and I really came to appreciate the delicate *I. chrysophylla* for the first time -- a clump looks like floral lace.

The resolution to seek wider geographical representation among our officers and greater input to the ALMANAC from areas outside Northern California has been followed by deed. Joanne Derr of Oregon is now our first Vice President. We now have district representatives for the ALMANAC for every area of the country. And I'm pleased to state that some articles have already been submitted as a result of the efforts of our new representatives.

But enough looking back -- we look forward to a good year in 1990 as well.

Our second annual spring trek is taking shape. The location is the coast and nearby inland areas north of San Francisco Bay in California (with tentative plans to return to Oregon for our third

annual outing in 1991). Dates are yet to be set, but the consensus seems to be that the later half of April is about the right time. Hopes are that during this trip we will see *I. douglasiana*, *I. purdyi*, and *I. fernaldii* in bloom in their native habitat.

Our seed program continues, now in the capable hands of Chairmen Louis and Caroline Fry of Novato. If you are not already growing the Pacific Coast iris, help us extend their range by ordering some of the seed and trying them out in your garden.

I am especially pleased that Lewis and Adele Lawyer agree to continue in their positions: Lewis as editor of the ALMANAC and Adele as our hard working secretary treasurer.

A slide program is being prepared for rental. It covers this spring's trip.

In short, as I begin my term of office, I consider myself and the society as fortunate. We offer many benefits to our members for an organization of our size -- as many as some societies many times our size. In any organization of this type it takes the hard work of many volunteers to make things happen, and while we are small, we have capable and enthusiastic people. This forms an excellent base on which to grow.



FROM THE EDITOR

Please note that we are again printing a seed list and promoting the SPCNI breeding program. Some of the items are the same as those offered last year, but most are new. Please take advantage of this offer, especially those of you who garden in a hostile climate. The Oregon species might be just the answer to your problems; and there is no better way to start than with seed.

As we went to press with the spring issue, District ALMANAC Representatives for Northern and Southern California had not been assigned. Shortly thereafter, however, Glenn Corlew accepted the responsibility for Northern California and Duncan Eader for Southern California. The complete roster of ALMANAC repre-

sentatives, including addresses where they can be reached is listed on the inside of the front cover, facing this page. With their help, we hope to broaden the base from which we obtain information and articles, and thus give the ALMANAC a more universal appeal. You can help by giving them your ideas and becoming involved. We like to envision each of you as joint editors of the ALMANAC and that together we are expanding our knowledge of the Pacificas and introducing their charm as garden subjects into an ever-increasing number of gardens.



EXPEDITION II

As noted in the President's Message, plans are underway for a second SPCNI spring trek into areas where we can again see the species growing wild. This year the plans are to visit their haunts in northern California where *I. fernaldii*, *macrosiphon*, *purdyi*, and *douglasiana* will replace Oregon's *bracteata*, *chrysophylla*, *innominata*, and *tenax*. Louis and Caroline Fry have offered to organize the event, and those of you who are interested in joining the group should contact them directly.

If you are interested, send your name and address to Louis and Caroline Fry at 4 Renata Court, Novato, CA 94947 as soon as

possible so that they can assess the interest and thereby plan for bus, hotel, and other such reservations. When they have sufficient information they will get back to you.

Don't be impatient for detailed information; we know from personal experience with the 1989 trip to Oregon that it takes a lot of time and effort to get everything together. We can estimate a time frame, however, which seems to fall around mid April. This will not interfere with the AIS joint Spring Regional trek of Regions 14 and 15 to Southern California on April 21-22, or the AIS National Convention in Omaha. Let's go!

THE CONRAD GARDEN

Ralph and LaVerne Conrad have a home and garden in a magnificent setting on an oak-covered canyon slope in the hills of Bonsall in Southern California. Avocados grow in groves surrounding them; but on their property, Pacificas are the planting of choice. They grow here in the open shade under the oaks, beside a flowing stream, and alongside a small pond in scattered profusion.

The Conrads, along with LaVerne's brother, the late Clarke Cosgrove, highly respected past President of the American Iris Society (AIS), selected this property together. Here at Bonsall, 12 miles from the coast, they planned their garden.



Original Planting:
A good example of the survival of the fittest

Originally, the Conrads landscaped the shady areas whereas Clarke designed the open areas, primarily for iris planting. Iris, and PCNs in particular, however, had been of long-standing interest to Ralph, dating back to the days of Eric Nies in the 1940s, and any inroads of PCNs from Clarke to Ralph's "territory" were warmly welcomed.

According to Ralph Conrad, [see "Rattling the Cage" *ALMANAC*, Spring 1983], "In planning for the 1975 AIS annual convention in San Diego, Clarke Cosgrove made a rather extensive planting of PCIs on this blessed piece of real estate. He carefully chose the best planting spot, moved the clumps of some of the 'oldies' from his former home in San Gabriel, and purchased many, if not most of the newest offerings, to bring the planting up to current position for viewing on the trek. Well, the oldie clumps survived, but the new ones, not only didn't bloom, but disappeared or looked 'sick unto death' within a year. In anguish he turned to raising seedlings from seed."

And from this seed the "Bonsall seedlings" which presently glorify the Conrad garden are derived. At first every seedling which bloomed and survived was retained since all were beautiful, and sometimes losing a particularly lovely one was a traumatic experience. Ralph told us "Sometimes we lose one and we remember how lovely it was and we almost cry; and

then some others come along to bloom for the first time, and each one seems more beautiful than the others. We wonder then why we were so depressed."



Clumps of Pacificas share space with other garden plants along the path

Now, after a decade of labor and love, and basic use of seed culture, a Conrad-Cosgrove strain is emerging. In some areas the Conrads have selected and retained the plants which pleased them most and allowed only these to inter-cross, so that each year they come closer to their personal goal of perfection. These seedlings are also increasingly adapted to this area which is warmer than optimum for PCNs.

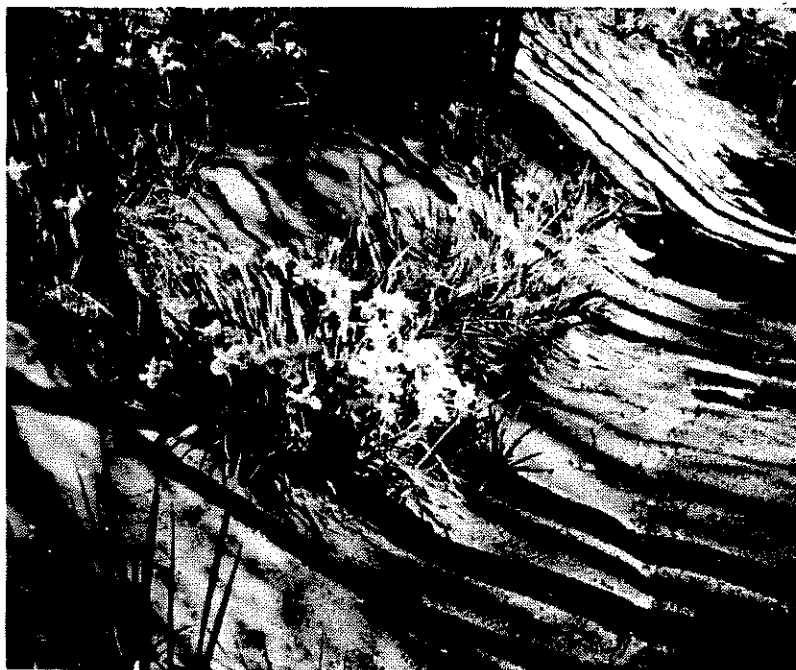
From the level of the Conrad home, their garden path wanders down the stream-carved hillside. On the upper level grow selected cultivars introduced by pioneer hybridizers of Southern California who stimulated the interest in development of this group not so many years ago. Ralph and LaVerne also grow some of the best Bonsall seedlings

here along with some of Ben Hager's new, heat-resistant introductions. Here, too, along the upper path are "somewhat rare Irids for additional interest and length of bloom, color, and structure".

Part way down the hill is a tea house. Ralph and LaVerne write, "The area was planned to be a Japanese garden, but circumstances put it in limbo in favor of the Pacifica seedlings of Clarke Cosgrove, a blessed memorial to his interest, needing more and more shady spots in this semi-arid area. The tea house still remains to be finished."

Everywhere, along the path and clumped in level areas in the lower garden are PCNs. In some areas "homemade compost is generously added in preparing the seedling beds, and spuria seedlings become common. Some are left to grow and the taller vertical lines enhance the appearance of the bed". Other areas are left as natural plantings. "Two areas that receive mulch of pine needles are on their own. The mulch is principally natural due to the fallen needles from pine trees. There is no attempt to disturb the seedlings that were planted

there several years ago. Without attention most appear to be hanging on nicely, with good bloom". In the bog along the stream grow lush "Green Goddess" callas, which we remembered coveting when we first saw them on the AIS tour 15 years ago.



Evening shadows enhance Pacifica seedlings volunteering from seed washed down from above

The overall effect of the Conrad's garden and property on the viewer is one of admiration and awe. The setting is exactly what you would want to achieve if a genie were to grant you whatever you might wish for in a backdrop for Pacificas. Their many years of hard work and vision deserve appreciation, and of equal value to the beautiful end result is the wisdom involved in choosing such a superb location.



Above: "Possibly the best of the Bonsall seedlings." Shown here in closeup and as a garden clump.



Left: "Spurias which do not interfere with the Pacificas are left to grow, as the vertical effect improves the view."

All photos by Ralph and LaVerne Conrad

THE PACIFIC COAST NATIVE IRISES

Edward K. Balls

Reprinted from the American Iris Society Bulletin
Number 152, January 1959

For the past 10 years I have been privileged to make a number of exploratory field trips with Dr. Lee Lenz of the Rancho Santa Ana Botanic Garden, Claremont, California, in connection with his work on the irises of the West Coast of the U.S.A. Although my part in these travels has been secondary, it has been a fruitful experience in observation and record. A diary of these travels would prove both repetitive and tiresome, so I will try to concentrate into one tale the scattered episodes of them all.

The least to be confused irises of California are perhaps *I. longipetala* and *I. missouriensis*. These do not appear to become interbred with the species of the so-called *Californicae*, and they are fairly

distinct in their habitats. Perhaps, dried on herbarium sheets, there is more chance of uncertainty in these species, but as seen growing in the wild, they raise no problem. *Iris missouriensis* has been familiar to me from my earliest travels along the eastern side of the Sierra Nevada where it occupies many miles of the wet, low-lying fields and pastures around Bishop and across to the salt lakes of Modoc County. In May or early June these fields are blue with pools of reflected sky from the abundant flowering of the large massed clumps of the iris. In the sere of seed time I have visited the lingering groups of *I. missouriensis* both by the vanishing Cuyama Lake in San Diego County and on the slopes of Mount Pinos in Ventura County. These two groups are in places much drier than the flourishing colonies of the area east of the Sierras, and consequently are much shorter in stature, and, from the seed cap-

sules produced in the years of my visits, would appear to flower much less freely.

My acquaintance with *I. longipetala* is of somewhat longer standing than with *I. missouriensis* as the former grows in the Santa Lucia foothills just south of Carmel, where I lived awhile before coming to the Rancho Santa Ana Botanic Garden. Here, where water seeps out of the hills in spring and makes a marsh of the lower pasture, the spears of *I. longipetala* leaves appear through the turf as early as January. Where the plants have escaped from the turf through the fence into a roadside ditch, the old leaves linger year by year and the new spears are later in showing through the tangle. This is about the most southerly point in the distribution of *I. longipetala*.

Some years later when traveling with Dr. Lenz, we came as by accident upon what is probably the most northerly stand of this iris on a by-road in Sonoma County. A clear, running brook wandered through green rolling pastures where giant live-oaks were scattered.

The iris was massed in the shade where the wet from the stream made a widened, boggy margin before running under a small bridge to drop noisily over a brief waterfall. Along the wet streamside, the flower stems and leaves were a good two feet tall, and where the plants strayed off in scattered tufts into the drier pastures, the whole plant was much shorter, often no more than a foot tall. The colony was in full, fresh bloom when we came upon it, and the lavender and white blooms took on the appearance of blue sky in that setting of rich spring green.

To cover the territory of *I. macrosiphon* requires considerably more than one trip. It ranges along the foothills of the Sierra Nevada and throughout the Coast Ranges from Santa Clara County to Mendocino and Trinity Counties. It is perhaps more variable than any other of this group of irises, ranging from four to eighteen inches tall and from nearly white (in the form once called *I. Californica*) to deep purple, and from ivory-cream to deep golden yellow. The white *I. Californica*-form we found growing freely on dry slopes where chaparral had been burned off the year previously. It was slender and wiry-stemmed, and very distinct in general appearance from the short, sturdy, deep purple form which we gleaned on Mount Hamilton on the other side of the "Great Valley." Going north-

ward from Madera County and along the Sierra foothills, the forms of *I. macrosiphon* we found were generally pale-colored, from creams through lavenders, occasionally with some bronze or traces of yellow on the tube. They are on the whole, slender-stemmed and taller than many of those found in the Coast Ranges, and without close study might well appear as a separated entity.



Iris macrosiphon

Through the Coast Ranges from Santa Cruz to southern Trinity County, the variation in forms of *I. macrosiphon* is astonishing, from pale yellow-cream to deep royal purple and to the rich, golden-yellow of a quite extensive colony in Lake County. It is an interesting fact that in none of our wanderings did we come across true *I. macrosiphon* on the seaward slopes of the Coast Ranges. As soon as the last crest toward the sea is crossed, the species ceases, and although hybrids occur, often quite generously, the coast is strictly the territory of *I. douglasiana*. The most impressive stand of *I. macrosiphon* which I remember occurs in the woods along the Boonville Road in Mendocino County as you cross the range to the coast. At about a 1400-foot altitude the rather thin woods of deciduous oaks and "buckeye" were carpeted that spring with a purple-flowered form of this species in the most dense and extensive stand that I have ever seen. Plants up to two feet

across the crown, bearing as many as fifty flowers open at one time, made a picture comparable to the cerulean sheets of bluebells in a spring copse in southern England, for the oaks were then only breaking their buds and the dappled sunlight over acres of these lovely blooms made a picture never to be forgotten.

From these lush colonies we traveled to some of the poor, starved forms on the dry slopes of the inner Coast Ranges where, scattered on parched, rocky banks with the heat-loving *Arctostaphylos viscida*, the plants were only a few inches tall with much narrower flowers often in shades of lavender or mauve. In Lake County we found on some of the higher slopes, narrow-segmented, short-stemmed forms, perhaps six inches tall, with sparse, very narrow leaves and pale cream-yellow coloring, looking very much like some of the shorter forms of *I. hartwegii*.

Where the golden-flowered form is found in the low hills of Lake County in the region of Clear Lake, it comes into contact with deep purple-flowered forms, the two even occurring together at some spots. Here occur some of the most interesting of the color variations in the species where gold and purple have crossed, producing colors tending to bronze and mahogany-red in the varicolored flowers. These natural hybrids are not comparable to the hybrids raised from *I. innominata*, but they tend in that direction. The fulness of the fall in the *I. innominata* hybrids and the much more extensive range of coloring make them so much more desirable for garden use than these which could have contributed, nevertheless, to the more renowned product. In its wide range of distribution, *I. macrosiphon* comes into direct contact with nearly all the other species of iris in California, and natural hybrids have been noted between it and many of them. These hybrids are material which has helped much to add to the confusion in the West Coast irises in the past.

Along the byways of the Calistoga area in Lake County is to be found one of the less widely distributed species of this group, *I. fernaldii*. So far as I have seen it, this species never varied greatly in color from a rather rich cream with some brown or mahogany veining. The stems are usually tall, to 18 inches, and the flowers rather fuller than many in these species. A distinct pink flush on the

spathe valves enclosing the flower and bright pink pigment at the base of the stems of both the leaves and flowers are characteristic. In this area the plant is usually found in rather shaded oak woods and on more open slopes where "poison oak", *Rhus diversiloba*, grows in greater profusion than any other place I know!

Not far from our first locations for *I. fernaldii* we eventually found a large group of hybrids between this and *I. macrosiphon*, evidenced clearly by the purple and bronze color creeping into the flowers as well as the well-defined botanical characteristics on which the hybrids could be determined. On the slopes above these hybrids, perhaps 150 feet higher where *Arctostaphylos viscida* grows in a dense thicket under the pines, *I. fernaldii* was growing uncontaminated. A year or so later we made a more careful examination of a large and scattered group of cream-colored irises in the Santa Cruz mountains south of San Francisco and found *I. macrosiphon* and *I. fernaldii* grow in this region, both cream-colored and to the casual glance, much alike. To add to the problem we found, too, perhaps naturally, hybrids between the two species to be quite common in this area.

The Feather River Canyon which cuts westward through the northern Sierra Nevada is the home of perhaps the most restricted of these West Coast irises. This is *I. tenuissima* ssp. *purdyiformis*. I first saw it as a rather poor-looking plant, spilling its seeds into the dead oak leaves among which it was growing. This was in late July. The specimen collected then, showing only a few drying leaves and empty seed capsules, remained under the tentative name of *I. hartwegii* for a long time until it aroused Dr. Lenz's interest by its distinct appearance, tallying with a collection of his own, made from about that same spot. In the course of time we paid a visit to this area in the spring and found sufficient flowering material to identify the plant; but it was not until several years later that we were able to find enough of the plant in flower to satisfy us. It is never abundant, so far as we have seen, but grows pleasantly scattered through open woods of oaks and Douglas fir (mostly oaks) where it flowers in little tufts before the leaves are on the oaks. Our attempts to find the plant at the type locality were not a complete failure, but the plant is very scanty here and may well be disappearing altogether.

Turning off from the Feather River Highway and traveling northward toward Lake Almador brings one into the territory of *I. hartwegii* ssp. *pinetorum*. This was originally described from Forest Lodge near Greenville, but as we traveled along toward Lake Almador, examination of the irises growing all through this region proved that *I. hartwegii* var. *pinetorum* occupies quite a large territory. With the extension of its province a great variation in size and habit was found, though the color remains almost consistent. One fascinating little form no more than four inches tall grew abundantly over the dry forest floor, spreading out from the top of a steeply cut road bank. This whole floor was covered by carpets of *Ceanothus prostratus* through which the little irises poked in all their innocence. Farther north, where the Douglas firs were thicker, *I. hartwegii* ssp. *pinetorum*, growing in a more lush undergrowth, produced stems up to 18 inches tall and flowers somewhat more opulent than the dwarfs of the hot ceanothus carpets.

Perhaps as we are on the west slopes of the Sierras we should speak next of *I. hartwegii*. It is the species in California which I feel I know least, though I have seen it in some of its most profuse areas. Not far from the entrance to the Feather River Canyon is the most extensive stand

of this species which I have seen. Our good fortune, too, brought us to this spot at about the peak of the flowering season so that the open slopes of the freshly cut woods were thickly covered with large and husky plants of the iris full to overflowing with beautiful cream-colored flowers. Until I saw this stand I had no idea that *I. hartwegii* could produce flower stems 18 inches tall and leaves which were longer and much broader than the grass-like leaves I had always associated with the species. Somewhere about its northernmost limit, near Magalia in Butte County, not many miles as the crow flies from the Feather River stand, *I. hartwegii* runs close to the territory of pale yellow forms of *I. macrosiphon* and the two need more than a casual glance to distinguish them in that rather scattered population.

One of the most exciting moments in our travels was when, almost at the end of one year's investigations, we were making our way over the Sonora Pass just the second day after it had been opened to traffic after the winter's snow. As we climbed the road to about 5500 feet, a bright golden-yellow-flowered iris appeared. It could be nothing but *I. hartwegii*, but this deep rich color had never been reported for this species. The plant was quite common through the open



Bright golden-yellow form of *Iris hartwegii* growing in the pine forest of Sonora Pass

pine woods and continued upwards for some miles of road with very little if any variation in flower color. The stems in this form are slender and upright to about 15 inches tall, and the leaves are few and sparse, as is often the case with this species.



Cream-yellow form of *I. hartwegii*,
Herring Creek, Tuolumne Forest, California

Another high point in these investigations was at the outset of a later journey after Dr. Lenz had come across some interesting specimens in the herbarium of the late Dr. W.L. Jepson. This material was enough unlike any other specimens available to make a visit to the given location necessary to the completion of Dr. Lenz's studies. Leaving the once thriving little town of Columbia early in the morning, we set out to see if we could find irises to match these specimens, and at the exact localities given, there were the irises. Pale cream-yellow, they were scattered through the rather open undergrowth of mixed forest in no great abundance but over quite a fair area. This finally becomes *I. hartwegii* ssp. *columbiana*, being clearly distinct from the species and having interesting affinities with *I. munzii* which attracted Dr. Lenz's attention in the first place.

A further subspecies of *I. hartwegii* is isolated in the San Bernardino Mountains, far south of the distribution of all the

other irises in California (except for the remnants of *I. missouriensis* before mentioned). I have only once seen this little iris in flower in its native home and then not in the area where it is most abundant, though I have seen the plants growing freely enough between rocks or in the open areas of scrubby woods of *Quercus kelloggii* at 7,000 to 8,000 feet altitude. This *I. hartwegii* ssp. *australis* has purple flowers with a rather wide range of shade, and the woods (both pine and oak) where it grows must be beautiful in a spring when it is flowering well.

The last remaining iris of the Sierras on this list is *I. munzii* which I visited early in the history of these travels and which later I had the pleasure of introducing, with Dr. Lee Lenz, to Mr. and Mrs. Stevens of New Zealand as the first iris they had ever seen flowering "in the wild". Around Coffee Creek in Tulare County, which is perhaps the most extensive of the known stands of *I. munzii*, the plants grow in moist areas always fairly close to streams though not necessarily on their banks. The growth is rather coarse and the flower stalks stout, up to about 2 1/2 feet tall. Flower color is extremely variable in intensity though usually purple, blue, and lavender, with some white. There is often a striking electric-blue flush on the falls.



Iris hartwegii ssp. *columbiana*
Italian Bar Road, near Columbia, California

Across the northern end of the Sacramento Valley, from Butte County to Humboldt County stretches the territory of *I. tenuissima*. We have traveled some of these roads a number of times and found comparatively little variation in the true species, though intensity of ground color and of the pencillings on the falls covers quite a wide range. The narrow-segmented flowers are cream-colored or white, with reddish purple, sometimes tending to brown markings. Over such a wide range, variability in size, particularly in length of stem, is not surprising, and we found plants out in the sunny open areas in heavy red clay, which seems to be the type of soil *I. tenuissima* always chooses. They were barely six inches tall, but in forested areas with more shade and spring moisture, stems would grow to 18 inches. Around the tiny villages of Peanut and Hayfork there are some extensive stands of this iris where it comes into contact with *I. macrosiphon* and hybrids between the two are frequent. These hybrids can be most confusing as they tend toward one or the other parent, both in form and coloring. Flowers with the narrow parts of *I. tenuissima* and a flush of lavender or greatly intensified markings on the falls are not uncommon. Farther west, we found the iris taking on a much more sumptuous form. In the weeds around Willow Creek the effect of hybridization with *I. purdyi* becomes evident. This is about the western extent of the range of pure *I. tenuissima*.

For a long time I began to wonder if I should ever see true *I. purdyi*. In our travels we encountered throughout the western part of Trinity County and Humboldt County large stands of full-flowered beauties on forest edges and creeping out onto the grazing slopes at moderate altitudes. The color range in these blooms was astonishing - from nearly pure white through creams, lavender, orchids, to almost pink, all delicate colorings. These did not quite fit the original description of the species, though they were certainly closely related to it. One year, however, we ventured off the Old Coast Road which follows the bulge of the coast in Humboldt County, going to Cape Mendocino County. This is a road no longer much in use, and consequently it was in poor condition for motor travel, especially in early spring before the winter's ravages had been repaired. But since I was not driving, I enjoyed that excursion off the beaten track

away into what seemed like backwoods. Here we found large stands of undoubted *I. purdyi* in open pine woods away from the redwoods which are "officially" associated with this species and which are to be included in the overall conception of *I. purdyi*. With this find, all those other irises fell into place. Not only did we find true *I. purdyi* on this trip but we came across a hillside on the edge of pine woods, - between them and the bare downs of the coast - where a most amazing group of hybrids between *I. purdyi* and *I. douglasiana* flourished. This one stand presented every intermediate in form, size, and color between the two species, with the short woodland *purdyi* types in and near the forest and the taller, coarser *douglasiana* types out in the open. The range of colors was bewildering in all those pastel shades of soft purples, lavenders, orchids, cream to almost pink. Such a magnificent demonstration in nature could have pointed the way to the hybridizer if he hadn't already found it for himself!

In the northernmost forest areas of California two or three of southern Oregon's species of iris occur. It was not until Dr. Lenz carried out his thorough studies that these were recognized as growing within California's borders. The first to be found was *I. bracteata*, which we first recorded from about ten miles south of the Oregon border in Del Norte County. We had been carefully following hybrids of *I. innominata* (the form originally known as *I. thompsonii*) along the Smith River and up over the pass which leads to the border, and noticing the occurrence of plants tending very greatly to *I. bracteata*. Our hopes were therefore somewhat justified by finding that from about this ten-mile mark the irises were nearly all pure *I. bracteata*. Later I visited some of the larger stands of this species in southern Oregon where it grows in much more open woodland, often in heavy clay soil.

We also followed *I. bracteata* over doubtful roads on the way to the back country of Sanger Peak in Del Norte County, California. This area cannot be reached from the south except by arduous trekking through tangled, wooded hills with imperfect or no trails; so one goes north into Oregon to return by a road which can at least be traveled by jeep! As we ascended the hills, the forms of *I. bracteata* became larger-flowered and

more opulent, often with exquisite brown veining and taller, more slender stems, and color approaching a real yellow. These forms, some of the finest I have ever seen, were more generally on the open forest slopes, with at least partial and rather high shade.

On this journey I also saw *I. chrysophylla* which looked very dwarf and almost pure white in contrast to the richness of *I. bracteata*. At first *I. chrysophylla* occurred among the brush which covered the open slopes, choosing what open places it could find. The stems here were rarely more than six inches and the flower parts narrow and somewhat angular in feeling, reminiscent of *I. tenuissima*. How high on this trail *I. chrysophylla* goes we were not able to determine as the plants disappeared under deep drifts of snow, still lingering from winter at about 5000 feet, and beyond the drifts, the whole slope was white. Farther east, when crossing from Oregon to California by the road which runs through Ashland and Yreka, we came across another stand of *I. chrysophylla* in more spring-like surroundings. Here the plants had made much larger clumps and the stems reached to 15 inches tall. In color and form the flowers were quite uniform with those of the Sanger Peak area. At that time we had no opportunity to explore the intervening country in a more concentrated examination of *I. chrysophylla*.

Of all the West Coast irises, *I. innominata* has probably made the most impression on horticulture in recent years. It seems that the world over, hybrids from this species are in demand, and in many countries and situations they make a wonderful spring show. Early in the course of these travels I was delighted to visit, with Dr. Lenz, some extensive stands of *I. innominata* in the area of the original collection. There seemed to be three or four distinct groups even here, including the purple-flowered form then known as *I. thompsonii*, which was mainly along the Smith River in California and following up the coast road. About the mouth of the Rogue River in south Oregon, the group growing on the lower slopes nearer the river and in more shade contained white and purple colorings and many intermediates and parti-colored flowers. Yellow and red were practically absent from this group. In general, the stems were much taller, as might be expected, than in the plants from the more open areas of

higher altitudes. The second stand might also be considered woodland, though the woods were thin and the shade high and the irises often were out on the open, grassy slopes. This group was all yellow, from the soft primrose color of some of the taller-growing, shade-haunting plants to the deep gold of those out on the open slopes. The third group grew on the open, rocky ridges and out onto the sheep-cropped pastures of the last range of hills along the coast. Among these were the indications of the kaleidoscope of color which appears among the horticulturally raised hybrids. With *I. douglasiana* growing right beside them, it is probable that some of the color variation may have come into this group via that species. Nevertheless, the purple-flowered form was not far off and was certainly available to the bees for cross-pollination. In this exciting and quite extensive stand of *I. innominata* the colors ranged from orange-yellow to nearly purple, with reds and bronze color so readily produced between these two. There were also many bicolored flowers and a bewildering variety of combinations. Hardly two plants alike in color!

The best purple-flowered forms of *I. innominata* turned up quite late in the story in the rocky fastness of the area of Del Norte County known as High Divide and Low Divide. Few maps show these localities and fewer people try to get to them, for the roads, in spring at any rate, are incredibly rough and risky. No modern passenger car should ever attempt them!

Last of the irises in California, which also runs into southern Oregon, is the well-known *I. douglasiana*. From its most southern locality in Santa Barbara County to its northern, well up along the Oregon coast, we studied all the variations of this species. It has the longest range in latitude of any of the West Coast species; and having seen the variation in size, habit, color, even habitat, one scarcely wonders at the number of synonyms in the species, but rather that there have not been more. In general, the southern part of the range produces deep purple flowers and comparatively narrow branching. The plants on the coastal cliffs are stiff and stubby, generally growing among a brush of *Eriogonum* and *Eriophyllum*, even *ceanothus*, etc. But where they get back into the redwood canyons they are lax and often nearly two feet tall, with somewhat

lighter color but still purple. As one goes northward along the coast the forms become taller and more lax and the dense scrub disappears from around them. The branching of the flower stems becomes more pronounced and the color variation wider, the deep purples gradually dropping out until they are gone before the plant reaches Oregon! From the coast, *I. douglasiana* spreads through the road cuts and along rivers and over logged forest in towards the interior, where it meets up with other species to produce hybrids of immense variety.

tent. The more gentle conditions of the southern Oregon coast produce these great tufts of *I. douglasiana* but much more lush, with wide-branched flower stems and an abundance of bloom in all the pale shades of purple and lavender. Along the Pistol River we went after a colony of cream-colored *I. douglasiana*, spreading triumphantly through newly lumbered forest land. Wherever this species comes in contact with others it seems to produce hybrids. The colony of the mixture with *I. purdyi* has been discussed. Away to the south, in Santa Cruz



Flowers from two *I. douglasiana* clones



showing wide differences in petal shape

One of the most striking stands of *I. douglasiana* we came across along the Mendocino coast in black, boggy pasture sloping towards the sea, was that of plants some four feet across the crown producing well-branched stems to two and a half feet tall. In this colony we found one of the deepest black-purples I have ever seen and also the nearest to true sky-blue for *I. douglasiana*. We approached the owner with some hesitation for permission to dig selected specimens from this field. Not only was permission given but we were told that we ought to dig every plant since they were encroaching on the pasture and were nothing but a nuisance. Farther north the bald turf downs of Humboldt County are blotched with enormous patches of *I. douglasiana*, wind-swept and dwarfed, but vigorously persis-

County, we came across a similar colony between *I. douglasiana* and *I. macrosiphon*. Along a ridge within sight of the sea the woods were filled with a galaxy of colored flowers. The range in form and color was almost as extensive as in the hybrids of Humboldt County, but the colors were rather stronger, with a reddish wine-purple which was quite remarkable, quite frequent.

It was not until quite recently that I finally got to see *I. tenax* flowering in its native places. In the first place we were in search of the endemic *I. tenuis* along the Clackamas River. At the spot where we expected to find *I. tenuis* there was no sign of the plant, but along the river and in the moss among the rocks on the steep, wooded walls above, a few rather straggling plants of *I. tenax* were flowering

cheerfully. The blooms were of a very uniform, almost pink-orchid tone and none too frequent. Half a mile further up the river we did find *I. tenuis* growing happily in copses of willows along the stream, among rocks which must certainly have been under water when the river was full after winter snows. *Iris tenuis* was long past flowering then and not yet in ripe seed but we were able to transplant one plant which eventually produced its delicate white flowers freely in "captivity".

From the Clackamas country we swung north and westward and ran into colonies of *I. tenax* which compete still in my memory for first place in beauty among all the wild flowers I have ever seen. In a naked spring copse the large tufted plants produced great bouquets of bloom, and all the soft pastel shades in iris were there, - cream, pink, lavender, orchid, no true blues; but then blues are rare in wild irises on the west coast



Iris douglasiana x *Iris macrosiphon*
natural hybrid, Santa Cruz Mountains

A SOUTHLAND SUCCESS STORY WITH THE *CALIFORNICAE*

Bob Ward



My success with the *Californicae* in Arkansas can be attributed to an understanding of the history of their growth in their natural habitat and amending the soils to produce good growth here in the humid and hot Southland. Best results have been attained with seed culture, although irises from Jean Witt, Jean Erickson, and Dick Richards, planted four and five years ago, are still growing.

Many others, however, bloomed after the second year and died. For divisions to survive which are shipped from friends on the West Coast, the clones must consist of 2 or 3 rhizomes. With fewer than this they will not survive over-wintering problems, primarily temperatures during

January to March which fluctuate too much.

After testing soil amendments and best positions in the garden, improved growth was noted. In 1989, lots of well-rotted goat dung was dug into several beds, and the growth so far is good. Possibly next spring's results will show more improvement on this test.

Several irises were potted in a 1:1 mixture of goat dung and sand, and these



Two named cultivars
growing in Bob Ward's garden

are better than in any potting soils used in the past. If these do well and produce flowers, they may find their way to Omaha next season.

The first three years of growing the *Californicae* were marked with failures. Seeds of *I. purdyi* were given to me in San Diego on a trip there while collecting bamboos and the forming of a Bamboo Society. Without proper care, these all died. Later, after a visit to San Francisco's Golden Gate Park, several Pacificas were brought home, and improved culture methods helped solve the problems that I was having. Many of these clones are still going fine in the garden.

I. douglasiana, *tenax*, and *innominata* are carefree in their growth and need little help here. During October and April of the year they are fertilized with Rapid-Grow, and if irrigation is needed during any dry period, they are watered at night for 30 minutes.

I. fernaldii, *purdyi*, *macrosiphon*, and *tenax* ss. *klamathensis* are kept in the coolest spots in the garden and receive 4-6 hours of morning sunshine. These four irises are beginning to establish themselves without much difficulty. In order to keep them going, seeds are allowed to drop in and near the different clones.

I. munzii can be grown only when crossed with the other species. At this writing there are four of these mixed

plants growing and seem to have no problems yet. They have gone through one winter here in Arkansas.



A Bob Ward seedling from *I. tenax* breeding

Bloom time with seed culture is usually between 2 1/2 and 3 years, with some plants taking up to 4 years to bloom. Divisions received in the fall usually bloom the following season, even the next season after.

Finally, several cultivars from friends on the West Coast have survived up to 5-6 years. Del Mar, in 1989, put on 4 flower stalks with 5-6 flowers. After crosses were made and seeds collected, this clone died in mid-July. Probably too much stress on producing seed.

Success in growing the *Californicae* can be accomplished, but only if one studies and understands the proper care of these irises

All photographs by Bob Ward

TWO MEMBERS WRITE FROM ENGLAND

Ray Wilson and Dr. Marion Wood

Ray Wilson

My interest in Pacificas derives from the fact that they seem to do very well in this part of the world, (I have even grown *I. munzii* in a cold greenhouse, and then foolishly disposed of it.) Pacificas are evergreen and largely pest free, with blooms which are admired by everyone. I have not noticed any which are scented. [Ed. note: *I. macrosiphon* is reported to have occasional plants with sweet-scented blooms, something we breeders should investigate.] I recently met an irisarian living nearby who won't grow them because they are too vigorous and he has a small garden! I like them; they do better than the bearded iris, and even though many of the bearded iris should rebloom they usually don't.

About 5 years ago I started growing them from seed and despite all the poor publicity about "short life", "won't stand the climate", etc., in general they do well.

A friend of ours living 200 miles further south does very well with them, although at first she experienced difficulty. She imported plants (from Ghio, I think), and all looked well on arrival. They were planted outside and during the winter she lost all but two. Since then she pots up the imported plants and cosssets them until the following spring. The spring-planted potted plants do extremely well.

My plants from seed are all kept as seedlings in pots in a cold greenhouse (40 degrees F.) over winter, then planted out the following spring. Losses are small. So now I propose to grow more from seed and distribute the seedlings to friends and

nurserymen to show that PCI's are a good plant in a damp winter, lovely spring, wet summer, and mixed autumn climate, lowest temperatures rarely below 20 degrees F and rarely over 80 degrees F in the hottest part of the year. Eventually I hope to have a collection of all the species and some of the hybrids in my own and friend's gardens.

*Ray Wilson's address is: Dalehead, 100
Blackburn Road, Chorley Lancs,
England PR6 8TJ*

Dr. Marion M. Wood

Sorry not to have written earlier, but I have moved from Essex and have not yet got all things straight in my new garden which is unkept, on a steep slope, and alkaline and it is taking up all my time.

I have grown the Banbury PCIs for some years in leaf-mouldy soil on top of alkaline, wet, Essex clay. Recently I have had others with better branching from Broadleigh Gardens, but they have been gappy flowers. The strongest grower has been ARNOLD SUNRISE.

I imported a lot of PCIs from Ghio and they were well rooted plants and came through customs quickly. However, even after fungicide dipping and planting in good soil, only NIGHT RIDER survived. In the future I shall only import seed, as other growers have also found plants hard to establish.

My PCIs were lifted for moving at the beginning of July when there were small bumps showing where the next crop of roots would be, and were potted into neat leaf mould. I replanted them in November [1988], and the pots are full of new white roots and there are masses of basal buds all fat and white.

My new soil is full of limestone pebbles as well as red Devon soil and on a 1 in 8 to 1 in 3 slope to the east. I brought leaf mould with me in bags and so have dug holes and replanted in leaf mould. I hope the PCIs and Siberians settle in but I have my doubts. Devon is warm, wet, and muggy in winter and dry in the summer, and a great contrast to Essex. At least my Calsibe seedlings seem to be happy. I started making crosses with them five years ago using Currier McEwen's VARIED BUNTING and the branched yellow PRAIRIE WARBLER as female parents and the red-purple Banbury PCIs as males. I used colchicine and have a couple that have some fertility so will continue on these lines. Another complication is that my daughter's dogs removed and ate a lot of labels while staying with me, so I shall have to wait for flowering to identify some of the crosses.

I think local conditions play a large part in which PCIs do well. I lost two 30 foot rows of seedlings gradually from a black rot a couple of years ago. The deaths started in the middle of the rows and spread sideways in both directions, and no spraying could stop it; so I think it may have been bacterial. Well established clumps of ARNOLD SUNRISE at each end weren't affected.

The bottom of my new half acre runs down into a bluebell wood and the soil is better in that area. I am going to write to Ghio for seed and will let you know how I get on with my new conditions.

PCIs rarely reach the general public in Britain except through Wisley and the BIS members, but people love their beauty when they see them.

*Dr. Wood's address is: Woodlands,
Wembury Road, Wembury, Devon, England
PL9 0DQ*

AN UPDATE ON VAPAM FUMIGATION FOR CROWN ROT

Lewis Lawyer

Five areas in our PCI beds have been fumigated with Vapam following deaths from crown rot. All five have been replanted, and to date there have been no replant deaths.

The first area, treated in June, 1986, was replanted to young seedlings the following year. The second two areas, where 36 plants had died, were treated in

August, 1986, and replanted the same year with named varieties and selected seedlings. In 1987, a single plant died in an otherwise clean bed. The small area was treated with Vapam in November and replanted a month later.

As I have said, to date all the replants are growing well. We hope that this continues to hold true, since Vapam is the only effective treatment we have found to date. Will keep you informed.

SPCNI BREEDING PROJECT

Members who obtained seed for the "SPCNI Breeding Project" last year report good germination. We should start getting more detailed information next spring after the effects of the first full summer's heat and winter's chill are evaluated. From a scientific standpoint, it would be better if more of our members became involved because we need to get information from as many growing areas as possible. So don't be timid. Last year, 27 members requested and received seed. We would like to see many more of you become involved this year. At least plant some seed and enjoy the flowers.

Seed of all accessions on the list which follows is available on a first come, first serve basis. The amount of seed per packet will vary according to the supply. Anyone wanting seed should send their request to: Louis and Caroline Fry, 4 Renata Court, Novato, CA 94957. Please include the accession number of the desired seed lots. The cost of the seed to SPCNI members is \$1.00 for the first packet, .50 for each additional packet to cover the cost of packaging and mailing.

Species seed was collected by Bill and Jeanne Ferrell, Louis and Caroline Fry, Gene and Joanne Loop, and Jon Splane.

SEED LIST, 1989

COLLECTED SPECIES SEED

No.	Description
101	<i>I. bracteata</i> O'Brien, OR Pale gold
102	<i>I. chrysophylla</i> Camas Summit, OR Cream-white
103	<i>I. chrysophylla</i> Cow Creek, OR cream-white
104	<i>I. douglasiana</i> Near Coquille, Highway 42S, OR. White
105	<i>I. douglasiana</i> Near Coquille, Highway 42S, OR. Purple
106	<i>I. douglasiana</i> Josephine County, OR
107	<i>I. douglasiana</i> Mendocino County, CA
108	<i>I. hartwegii</i> Cow Creek, CA 5900 ft. Yellow
109	<i>I. innominata</i> China Flat, OR. Yellow- orange
110	<i>I. innominata</i> Between Agness and the Coquille, Rogue River divide. Pale-yellow.
111	<i>I. innominata</i> Cow Creek, OR, Yellow-orange
112	<i>I. purdyi</i> U.S.101, 1 mile S of Standish Hickey State Park, Mendocino Cty., CA
113	<i>I. tenax</i> Botkin Creek, Benton Cty., OR
114	<i>I. tenax</i> x <i>I. chrys</i> . Cow Creek, OR
115	<i>I. thompsonii</i> Gasquet, CA Varied

O.P. BOTANIC GARDEN SEED

116	<i>I. douglasiana</i> <u>A</u> : Alameda County.
A-F	<u>B</u> : Humboldt Cty., <u>C</u> : Marin County
	<u>D</u> : San Mateo Cty., <u>E</u> : San Francisco County, <u>F</u> : Sonoma Cty.
117	<i>I. douglasiana</i> x ? hybrid. Mendo- cino County. Flower like Valley Banner, habit like douglasiana.

O.P. BOTANIC GARDEN SEED (cont.)

No.	Description
118	<i>I. fernaldii</i> Sonoma County, CA
119	<i>I. innominata</i> Del Norte Cty., CA. Violet shades
120	<i>I. macrosiphon</i> Sonoma County, CA
121	<i>I. tenax</i> Lane County, OR Purple
MISCELLANEOUS O.P. SEED	
122	Doug, x innom. x tenax. Jean Witt, Seattle, WA
123	"Sierra Sapphire", Lenz Munzii selection.
124	LU-10, Blue munzii type from Thornton Abell seed.
125	59C Blue munzii type, Lawyer.
126	Mixed garden and species PCNs
127	Mixed garden hybrids
128	Mixed miniature garden hybrids.
129	Mixed normal height garden hybrids
130	Mixed garden hybrids from Christchurch, New Zealand, Sparrow.
131	Ben Hager seed from heat-tolerant plants. Stockton, CA
132	"Encircle", from J. Weiler possibly heat tolerant. Fresno, CA
133	"Susie Knapp", from J. Weiler. Possibly heat tolerant. Fresno, CA
134	"Western Queen". From J. Weiler. Possibly heat tolerant, Fresno, CA
135	"Golden Nymph". Second generation innom. x doug. Jean Witt, Seattle, WA
136	"Susie Knapp" From D. Hujsak, Tulsa, OK
137	Ghio lines from D. Hujsak, Tulsa, OK
138	Mixed PCN hybrids from E. Hulbert, Floyd, VA

LOVE THEM AND LEAVE THEM

Adele Lawyer

The ALMANAC makes a practice of publishing guidelines delineating general or specific locations of Pacifica species in the wild. Considering that all who receive this journal are enamored of these flowers, your editors came to realize that this information is actually an act of seduction. We did not mean to stimulate our readers to follow the described routes, dig specimens from their native turf and remove them to theirs! Individuals have, over time, removed some of the most choice variants in this fashion, thereby diminishing the gene pool as well as the population.

We urge you not to dig species *Californicae* to bring home.. As you know, they are difficult to transplant and, furthermore, their native environment will

be diminished without them, Collecting seed is a better solution.

Botanic gardens and qualified nurseries have been authorized to collect plants which will be preserved for display and propagation for the benefit of all of us. This helps to balance the inroads made by construction and other destructive forces on native populations.

The seed we collect will also alter the future distribution of the species from which they were collected, but in a minor degree. A seed capsule, or a few seeds taken from each of many plants rather than stripping all the seed from each clump would not materially alter their population or diversity.

Send for seed or collect it carefully. If you covet these beauties, capture them in photographs, paintings, or rememberings, - love them and leave them!!

NEW MEMBERS

June Through September 1989

Leilani Angers
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*Roy Ranseier
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* Pre-June 1989 members

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