



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

**Fall 1979**

**Volume VII Number 1**

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

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**FROM THE EDITOR**

A congenial and enthusiastic group of SPCNI members turned out on December 1 to honor Dara Emery, the occasion being the awarding of the Sydney Mitchell Medal for his introduction, CANYON SNOW.

Santa Barbara Botanic Gardens' library was the meeting place. There was discussion of future directions the Society's activities may take. These include dissemination of seed packets; update of the checklist, with Bob Hubley volunteering for the job; carrying of bloom-stalks to the Tulsa convention for display or show entry; and possible dates for tours to see West Coast native iris in gardens. Adele Lawyer acted as secretary pro tem, and our Spring issue should carry her notes.

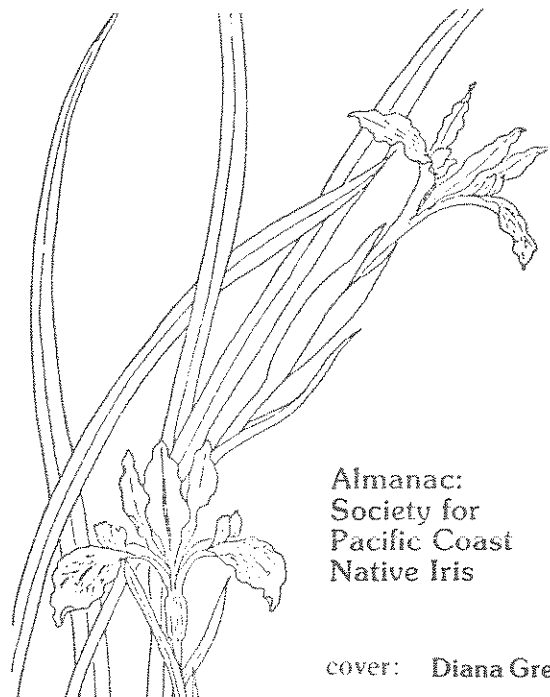
Olive

At the 1980 American Iris Society in Tulsa, OK, two high honors will come to a member of our society. For his native iris LOS GATOS, Joe Ghio will be awarded the Sydney B. Mitchell medal; and word from the Fall AIS Board meeting says that Joe will also receive the Hybridizers' medal. More on this in the Spring issue.

*THE ALMANAC* has the following items FOR SALE. Please write to the editor.

Cohen, Victor A.,  
*A Guide to the Pacific Coast Irises*  
London: The British Iris Society, 1967. \$2.50 each.

*An Alphabetical Table and Cultivation Guide to the Species of the Genus Iris*, compiled and edited by Angela Marchant and Brian Mathew.  
The British Iris Society, 1974. \$2.50 each.



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cover: Diana Gregory

## From the President

A great deal has happened since I reported to you in the Spring edition of our *Almanac*. An area of primary interest deals with the new Sydney B. Mitchell Award. As you may recall, the SPCNI accepted the challenge of providing the American Iris Society with a new medal for presentation to the winner of the award. This entailed funding, design and striking of the medal.

The fund drive was launched with a generous gift from LaVerne Conrad given in memory of George Stambach. Contributions from Dolores M. Kassly and Elsiemae Nicholson soon followed. Solid support was also received from the Clara B. Rees Iris Society, the Mt. Diablo Iris Society, the Santa Rosa Iris Society, the Sydney B. Mitchell Iris Society and the Westbay Iris Society. Contributions to the fund totaled \$1,227.50. This will comfortably cover the cost of the necessary dies, and initial supply of medals and a balance to present to the AIS as a designated fund to cover annual engraving and future additional medals. A complete financial statement will be published in the Spring 1980 *Almanac*.

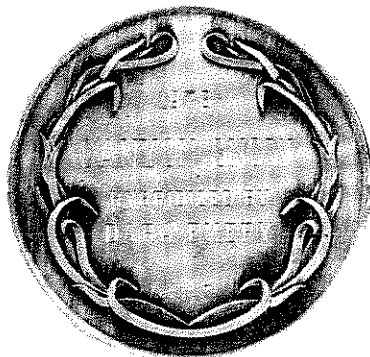
The design on the face of the new medal was created in 1957 by Jack Craig as the logo for the *Region 14 Bulletin's* first issue. The logo still adorns the cover of the *Bulletin* and has been widely used on other publications, as well as on numerous programs and show schedules. Jack, now residing in the Philippines, graciously granted us permission for the use of the design.

I had the privilege of representing the American Iris Society when the first of the new medals was presented to Dara Emery at the SPCNI meeting in Santa Barbara. This first medal recognized the 1978 award winner, CANYON SNOW.

Officers in the SPCNI serve a two year term. Present terms of office expire on June 30, 1980. In accordance with our bylaws, I have asked our Immediate Past President, Francesca Thoolen, to chair the Nominating Committee. Francesca and her committee composed of Olive Rice, Ellene Rockwell, Richard Sloan and Louise Truelson are already working; they welcome your suggestions. A list of the nominees will appear in the Spring *Almanac*.

Best wishes to each of you for the New Year and Happy Irising—Native Irising, that is!

Glenn F. Corlew



## The Sydney B. Mitchell Award – Our Newly-Struck Medal



Glenn Corlew, SPCNI president, presents the first Sydney B. Mitchell medal on behalf of the American Iris Society, to a beaming Dara Emery, right, at the Santa Barbara Botanic Garden Library.

# Shortcomings and Long Shots

ROY DAVIDSON

Considerable discussion is heard on establishing in the garden, hybrids of the lovely Californicae irises, and no doubt about it, those of us who hanker to grow those most glorious named things that are coming out of famous breeding patches and winning the awards . . . well, we order them and are often disappointed when they don't grow. This is nothing new, and it isn't the fault of either the breeder or the nurseryman, nor is it our own. It is an inherent failing of the irises, one genetically fixed. They make few roots and unless we as the gardeners take special precaution to protect those roots, we must continue to accept the disappointments when they don't become established for us.

But must we continue losing perhaps half of the plants we bring from far away with high hopes? Well, if they have to be shipped to us, probably we must. If we can pick them up growing in soil, or have delivery that way, then there should be no problems, simply because almost without exception these are tough plants, able to withstand both drought and freezing within reason. The single exception apparently is *Iris munzii* and its begotten; more on those later.

The earliest writings on these charming plants extolled their attractions and warned about their fixed growth pattern, which led to the one real shortcoming—the difficulty of transplanting. Those of us who have found pleasure in investigating the wild populations and selecting divisions to bring back home have great success moving them in flower. This is when the root growth is most active on new fans, but a time no commercial grower wants to handle the soft top growth.

A study of these plants will show thin, small

rhizomes—most of them incapable of a great deal of reserve storage—a fan of a few leaves, and a few deeply penetrating roots. The roots are fleshy, white and vulnerable to decay and physical damage when new, but become tough and fibrous after the growth is completed. (We then speak of the plants as “aestivating,” a word to describe summer dormancy.) During the rest period a certain number of the outermost leaves of the fan gradually lose color and plumpness, turn yellowish or reddish, finally wither and are non-functional, though not deciduous. At the same time the roots are undergoing a similar transformation. Insofar as is known this summer dormancy is necessary in all irises, but notably so in the Pacific Coast irises, and for the most part they are damaged when watered very much at this time of year. In fact, watering may induce attacks by organisms that kill them outright. It is not the water that does the harm directly, although it gets the blame.

The early advice on growing these Pacific Coast irises was written for British conditions, and later for persons gardening in California. The advice to attempt division only in the fall after the rains had commenced is still sound. We were told to put a finger down into the loose soil and do our transplanting only if there were little projections that indicated new roots were poking forth. These are only on the uppermost part of the rhizome, actually at the bases of the leaves that have withered in the recent summer, and of course they are near the soil surface. Shading of the soil by these defunct leaves is conducive to the cool conditions that allow the root to penetrate to a good safe depth quite quickly. But if there is damage or drying at this critical time then the division



*Iris innominata*. Drawing by Mary Benbow, from *The Iris Year Book* 1958, published by the British Iris Society.

is doomed as no more roots will be formed; its leaves will be desiccated during winter; it will probably be heaved out of the ground by frost because of the lack of anchoring roots and will be dead by spring. However, plants may not look dead as leaves may still be green.

All this is very well of course if one is making divisions in one's own garden, handing plants across the back fence or taking them that afternoon to a plant exchange or sale. But if the division is to be out of the ground any time at all even the most loving and watchful care can hardly guarantee success. Those of us who cannot rely on a long, warm fall growth period during which the transplant can become firmly established before winter, have learned that earliest spring transplanting is just as well. The roots of the prior year will act as anchors and new feeding roots will soon form; we may even have flowers. This still does not provide a safe means of establishing plants from warmer climates, and there is no way that plants sent off in California's early spring can be assured a safe arrival; more than likely they will come in the midst of a cold snap, in a flush of growth that can only suffer damage; even if coldhouse conditions are available, the setback is often fatal.

Those of us who want to establish the beauties coming from California still have all the risks, unless plants in soil can be obtained. Still, there have been exceptions. One autumn a shipment arrived very late, obviously too late for safety in the cold wet winters that are the rule in Puget Sound country. The parcel was unwrapped except for the inner polythene and left in sawdust on the concrete deck under a north roof overhang. It was not an unusually cold winter, but the whole consignment was frequently frozen to the deck. When warm spring weather came, it was obvious when planting time was nigh; those white bumps on the rhizomes told that roots were emerging, and later success was 100%. But that was a lucky chance, and the procedure is not one to be recommended. Lee Lenz once wrote of a similar fortunate circumstance resulting when plants he had sent off one autumn were mislaid at their destination and spent winter in sphagnum and newspaper wraps in "storage conditions," and when discovered in spring were full of new roots.\*

What is to be done about this shortcoming? Since it seems that there is not much real hope of altering the growth habit that has evolved on summer-dry Pacific slopes, we must accept the paucity of roots and their vulnerability to soil organisms as normal. What are the alternatives? For one, horticulture has shown that of all the natural species, *Iris douglasiana* has a larger storage rhizome, and further, that its roots seem resistant to water-induced damage in summer. This species has become firmly entrenched in gardens, and so have its hybrids, particularly those with *Iris innominata*. These two species form the basis of the Pacific Coast irises in cultivation here and elsewhere.

But there is a further ideal. If we would take note in the registrations of the breeding record of certain of the cultivars (where such records exist) we could take very special care to establish some of the proven parents and then make our own crosses to duplicate or even perhaps better the prize winners. It is well known that the lovely

AMIGUITA gives superior children, most often bitones. It is also one of the easiest douglasianas to grow. We might cross it to any innominata we have and expect seedlings with good flowers to result.

Further along this line of thinking, it is entirely probable that seed strains for particular colors, bronze for example, are not far off. The late George Stambach had made great strides in developing a strain working from CLAREMONT INDIAN. As that notable iris is all but extinct today, and more than one clone of it bears the name, we must be content to accept its progeny—the red Stambach strain—as having bettered it as far as garden worthiness goes. And, let's face it, no matter how glamorous some of the new things may be, when they've been around as long a time as had AMIGUITA before winning top honors by vote of the iris judges, then hybridizers will have bettered Nature; at least horticulturally speaking, they'll have done so. These strains can be expected to give descendants of good color and form on plants that will endure all garden conditions suited to Pacific Coast irises. And even what may be considered suitable garden conditions is being broadened; who knows but that these hardy strains may be developed from Pacific Coast irises now succeeding in Connecticut, Oklahoma, Colorado and other places once thought totally outside their range. In due time we may have Pacific Coast irises for everywhere and anywhere and in all colors. The one exception seems to be the illusive azure and turquoise being bred in southern California from *Iris munzii*; these refuse to grow well anywhere else. Even hybrids of *I. munzii* and *I. tenax* are intolerant of cold conditions, perhaps because *I. munzii*, being a southerly species, does not take to any early winter dormancy and is cut by freezing. Meanwhile, we seem to have lost sight of another bit of the earliest advice on succeeding with Pacific Coast irises. That is to plant the seeds where we want the plants to flower and then leave them alone. Could anything be simpler?

A further note from Roy Davidson, this time on native irises non-Pacific Coast: I stayed over a few days following the Alabama Iris Convention, and did a little bit of exploration in three different areas easterly from Huntsville. Out of Pisgah, there is a most beautiful limestone gorge with waterfalls, rhododendrons, azaleas, kalmias; plus *Iris verna* and *Iris cristata*; in other areas of sinks and streams (that are first on top and then underneath the surface) there were innumerable other things and *Iris cristata* again. I'd never seen either of these species as wild plants. But I marveled at how much better both looked in cultivation.

A bit of historical musing

The late H. S. (John) Fothergill had Brummitt-like success with his PCI before Mrs. B. got into it. He lost all his stock when he moved house and wanted to begin again—at the beginning—with species! Readers take note!

\*Editor's note: Sphagnum moss has a reputation for stimulating growth in other plants.

# What's New in Cal-Sibes

JEAN WITT

Last year's beautiful yellow Cal-Sibe seedling outdid itself as a clump this year. It was even better than I had remembered, and has now been registered as GOLDEN WAVES. The clear light yellow flowers, two to a twenty-four inch stem, are large and ruffled, their falls enhanced by a darker yellow signal outlined with a few black freckles. The pod parent is an advance-generation yellow 40 chromosome Siberian. (I can't be more specific—most of my plants are so far from the originals that I've given up trying to guess whether they are *Iris wilsonii* or *I. forrestii*.) Pollen parent was a pale lemon-yellow flowered seedling, mostly *I. innominata*, which had been selected for width of petal and slight ruffling. Californian parents of better-than-average form but only moderate size have so far given me better Cal-Sibe flowers than have larger and more ruffled types.

GOLDEN WAVES brings up the very end of the Siberian season, as does its Siberian parent. So far it appears to grow and increase well. It is far and away the best seedling I have had since I started hybridizing.

The year's most unusual guest was also a Cal-Sibe—a seedling raised by Pat Farmer of Tacoma, Washington. It came from SIGNA seedlot #74J088 donated by Lorena Reid and the parentage is BIS [British Iris Society] MC-R1-2 x VALLEY BANNER—that is, a Mirza Citronella seedling, Reid #R1-2. The large ruffled plicata-like flower, white with blue-violet lines and dots, is best

described as like the cultivar 'Engraved,' done up as a Cal-Sibe. Regretably it is a bit weak in the neck for its size, a flaw I had hoped was the result of late planting the previous fall. Pat writes: "... the flower is quite large, and the stem fails to hold it well. This has been the case since its first bloom. I have registered a sibling [of the above] plant this year. It has the same coloring and form, but a smaller flower. I have named it 'Carrie Dawn,' after my daughter. Verna Cook is going to introduce it for me." Watch for this one—its coloring is remarkable.

Brian Mulligan of Kirkland, Washington, has given us yet another combination of Californian and Siberian irises—*Iris forrestii* x *I. bracteata*, seedlings from which bloomed for him this past June and we were asked out to see them and take pictures. Bracteata form and color all but swamped the forrestii traits—the entire group of seedlings had large spidery golden yellow flowers on tall stems, and slightly yellowish foliage. They are quite distinct in appearance from all previous Cal-Sibe combinations.

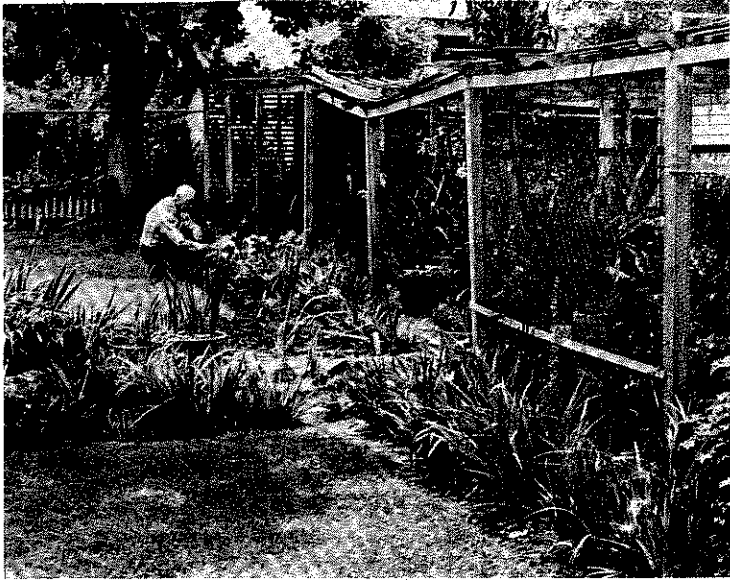
In addition to these interesting seedlings it seems worth reporting that the 1979 season brought requests from three more breeders who are planning to embark on Cal-Sibe programs. There is also a rumor that tetraploid Cal-Sibes are already in reality in Germany. This is definitely a group to keep your eye on!



Cal-Sibe iris hybrid 'Golden Waves', newly registered by Jean Witt; drawing by Jean Witt.

# Native Iris Culture For Southern California

AUGUST PHILLIPS



August Phillips in his garden in Inglewood, California.

Pacific Coast Native Iris are used for borders around most of my lawn and garden patches. During the bloom season I watch the seedlings bloom and check the flowers for substance and color. If I find some that I like, they are staked and labeled to be kept. These are reset in another location in the fall. In May, when most of the plants have bloomed, the inferior plants are dug and destroyed. The soil is spaded, steer manure added and the ground is watered to bring up the new weeds. These beds are raked every three weeks to kill the new weeds.

Dormancy in nature is a safety mechanism for a plant or seed, to insure the survival of the species. A dormant seed waits to germinate until conditions are right for it to establish a plant. I like to plant my seeds in September. The ground is watered lightly each week. The seeds wait till January to sprout and come up.

October is the time I check the plants I want to reset in another place. As soon as the new roots begin to grow the plant is dug and placed into a pail of water, and carried to the new location and planted. I keep these plants moist until new growth appears.

## A New Member Writes from San Francisco Peninsula

TEDDI McDONALD

Our new house came complete with a plant of *Iris douglasiana* in the back yard. What a thrill to find one of my favorite irises in its home ground.

My interest in native irises began when I was growing up in coastal northern California. My mother, a great believer in fresh air and exercise, often took us hiking on the hills near the ocean, where I grew to love the delicate beauty of these irises. Unable to resist, one spring I dug a clump of them to bring home to plant in our yard. That iris did grow, but it never bloomed.

Somewhat later when living in Los Altos, I again attempted to transplant a native iris—this time a specimen of *Iris fernaldii* from the Santa Cruz mountains. Of three plants, one survived the later summer transplanting and grew into a large floriferous clump. It was fertilized annually with steer manure from the nursery, and received light summer watering in its semi-shady location. The soil was sandy so there was never a problem with rot.

The only real problem encountered in growing this iris was the inordinate love affair between its flowers and my nemesis, the snails. Every spring the snails attacked with vigor but generally my efforts to control them prevailed and the flowers were saved. Surprisingly, the snails never touched the iris foliage.

Now at our new location we no longer have snails, but I'm not sure that I wouldn't take them back to be rid of the moles, gophers, deer, raccoons, chipmunks and such

that have now attacked my garden. I'm hopeful that the Californicae are gopher resistant because it would be most difficult for me to enclose all their roots in chicken wire. Since my interest is now in hybridizing, I believe that I will be inundated with plants so these irises will have to take their chances with the critters.

Many of the native irises that I am growing came from the Strybing Arboretum Society's plant sales. This is also where I learned of the Society for Pacific Coast Native Iris. The irises from the plant sales have been planted at the top of a hillside in relatively poor soil, some leaf mold added; some summer water; semi-shade. They are all thriving, including the *Iris douglasiana* that I found in the yard. I moved it in early spring after dividing it into four pieces and all four are growing nicely. These irises seem to be adaptable in their requirements as long as they have good drainage and some shade. Of the irises that grow wild in my area, the best clumps seem to be growing in light to medium shade.

My interest in the Californicae includes the hybrids and I am interested in trying all the ones that will grow here. It appears that an interest in native irises can only expand with the progress that the breeders have made in form and adaptability. This year I am planting a number of the named hybrids to use in developing my breeding program, which I hope will produce new irises of beauty and improved adaptability to varying cultural conditions.

# Hybridization and Speciation in The Pacific Coast Irises

## Flower Biology and Seed Dispersal

LEE W. LENZ

From *Aliso*, Vol. 4, No. 2

The presence of a distinct, though sometimes short, perianth tube above the ovary is the character which separates the genus *Iris* from the closely related African genus *Moraea* in which the perianth segments are free. In the case of *Iris*, the perianth tube is surmounted by a perianth consisting of an inner and an outer whorl, each with three segments. In the members of the series Californicae, the sepals or falls which form the lower whorl, are usually marked with conspicuous veins or lines which tend to coalesce on the narrow basal portion of the sepal and form guide lines leading into the flower. In addition to this veining, many of the flowers possess

white or brilliant yellow "signal patches" on the sepals which may help to attract insects to the flowers.

The two whorls of perianth segments surround a central style column which branches into three petaloid style branches opposite the three sepals. Each style branch bears on its under surface and near its outer extremity, a triangular (or truncate in one species) stigmatic lip. Beyond the stigmatic lip the style branch splits into two style crests which, in the Californicae, vary in form from broadly rounded overlapping structures to long and narrow rabbit ear-like projections. The style branches are slightly arched and somewhat concave on their inner surface and are located over the

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## The Wild Garden Catalog — Its Exceptional Prose

Our native western iris and their natural hybrids have grassy leaves and ingenuer flowers, poised on slender stems. The man-made hybrids sacrifice a little of the freshness of the species, posing more opulent flowers on the springy foliage (like Gaboris in a meadow). Of the species, *Iris douglasiana* is the outstanding landscape plant, one of the world's best. Grow it in sun or half shade, marshy, moist or dryish loam. *I. purdyi* is second in landscape value and just as adaptable. These two evergreen species and their natural hybrids grow 18 to 30" tall depending on the available moisture and the richness of the soil; form broad-bladed, yard-wide clumps in 6 or 8 years. Evergreen *I. innominata*, and deciduous *I. tenax* are foot tall plants with narrow leaves and slender, ruffled flowers. In cultivation they produce crowds of flowers, most of which should be nipped off as they fade to prevent exhaustive seed formation. Both these small species have excellent landscape value as single plants in small gardens, or massed in borders and along sunny paths in open woodland. They go well with primroses. *I. missouriensis* is more upright than the others, an 18-24" deciduous species, lilac-violet in flower and not unlike *I. siberica* in character. Found wild in sagebrush canyons in the dry northwest interior and on the rolling Great Plains, this plant counteracts dry air by keeping to cool, moist creek banks and spring hollows. In the garden it settles for less water, adapts well to primula conditions in sun. *I. bracteata* has sparse sickle leaves and light yellow flowers veined with rose. *I. chrysophylla* from dryish open conifer forests in Oregon, has pale yellow flowers nestled in grassy clumps.

Drainage is essential. *I. tenax* grows in the dense, moist woods on the Clackamas headwaters in western Oregon, running its wiry rootstalk among stones and putting up tufts of short, dirk-blade leaves and small white flowers veined and mottled with yellow and purple. It is as easy as polyanthus in the garden. These last four species are collectors' plants. Western iris are best shipped and planted in October and early November, as their dormant season ends and new root growth begins in response to autumn rains; or in early spring (March and early April in Western Washington) before the leaves expand. Keep newly planted divisions moist. Mulch to protect against drying wind. Western iris thrive on the west coast from Los Angeles to Seattle. They should do as well (but they have not been tested) in the Southeast, north to Virginia. 0° is the approximate boundary temperature for most of the species. *I. chrysophylla* takes -0° temperatures in its native Siskiyou Mountains. *I. missouriensis* is hardy throughout North America.

Another year . . . Western Irises are buoyant plants. Above curved, grass-blade or sumurai-blade evergreen leaves poise flowers so light and spring colored they appear lepidopterous, but not like those passive butterflies of embroidery; in real life they are full of passions. Like flashing battle silks they buffet in aerial combat when their territories are challenged. These winged flowers too seem ready to fly up and duel with the Sulfars, Whites, Coppers and Azures their iridian colors rival.



haft portion of the sepal segments. The stamen is composed of a rather short filament and a relatively long anther which is held against the inner face of the style branch with the outer tip of the anther usually not reaching the stigmatic flap. In *I. hartwegii* the anthers may at times be exerted beyond the stigmatic flap but this is a rather rare occurrence in the Californicae. The long slender anthers dehisce on the lower side through two linear slits. The pollen is powdery and in our species varies in color from cream to yellow.

The flowers of the Californicae are ideally suited for insect pollination. At the time that the flower opens, the anther slits have started to separate but no pollen has fallen onto the sepal and the stigmatic flap is still held firmly against the underside of the style branches, its surface well protected from chance contact with an insect visitor. An insect lands on the recurved portion of the sepal and crawls into the flower through a tunnel-like opening between the sepal and the style branch. Nectar is produced in quantity at the base of the perianth segments. On entering a freshly opened flower, the insect brushes its back against the mature anther and through the two movements, that of entering the flower and backing out again, it removes much of the pollen on its back. About twenty-four hours after opening of the flower, the stigmatic flap recurves and forms a short triangular curtain which partially closes the opening across the tunnel-like corridor. An insect visiting such a flower brushes against the papillose stigmatic flap which removes pollen from the visitor's back. Such a flower arrangement should assure cross pollination. However, this may not always be the case. Many of the Californicae produce large numbers of flowers on a single plant and by vegetative reproduction a single clone may cover several square feet of space. Such a colony will have numerous flowers open at one time with new ones opening daily. If an insect visited a fresh flower and then flew directly to another plant and visited a receptive flower, cross pollination would be assured. Very often, however, an insect has been observed to enter a number of flowers on the same plant before moving to another. Some of the flowers visited were fresh and contained pollen, whereas others were receptive. In this case there would appear to be at least some selfing unless the plant possessed an incompatibility system which would prevent this happening.

Controlled pollination experiments on caged plants have shown that all the Californicae can be selfed and the resulting seed germinates readily. In some instances there may be a somewhat lowered seed set on selfed flowers, but normally the capsules are plump and well filled. In these irises, pollen is produced in abundance and after an insect visited a number of flowers on different plants its pollen load might well be composed of a mixture of types. If foreign pollen had any selective advantage over self pollen, the flower might be effectively out-crossed even though pollinated with a mixture containing some of its own pollen. Tests are now being conducted to determine if any such selective action can be shown.

Dykes (1913) was of the opinion that large numbers of the Apogon irises were self-fertilized without the intervention of insects. In *Iris sibirica* L., which has tongue-shaped stigmatic flaps similar to those found in the Californicae, he reported that the plants were quite independent of insects for fertilization. According to

him, the anthers sometimes actually reached the reflexed tongue of the stigma whereas in other instances the tongue was able to gather the pollen which had fallen onto the haft portion of the sepal. In the work carried on at this Garden, no seed was ever produced on plants of either the Californicae or the Sibiricae which were protected by insect-proof cages unless the flowers had been hand pollinated. Only a limited number of plants of the Sibiricae were available for study and further work needs to be done with them before it can be stated with certainty that autogamy does not occur in that group.

## Seed Dispersal

A number of species of iris native to moist stream sides or boggy areas possess seeds which are adapted for distribution by water. In some instances the seeds have a thick and spongy or corky seed coat which allows them to float for long periods of time. This is true of the members of the Hexagonae: *Iris fulva* Ker-Gawl and *I. hexagona* Walt. Members of the Spuriae on the other hand usually have seeds with a loose papery outer coat which allows them to float in water. In this case, air is trapped between the papery outer coat and the hard inner seed coat. *I. laevigata* Fisch. also has seeds of this type. *I. foetidissima* L., a woodland species, is unique in the genus in having seeds which remain firmly attached after the capsule has dehisced. The seeds of this species are fleshy and brilliant orange-scarlet in color. According to Ridley (1930) they are distributed by birds. In the case of *I. ruthenica* Ker-Gawl, it has been reported (Ridley, 1930) that ants carry the seeds away after they are on the ground.

A number of years ago a large amount of seed of *Iris douglasiana* was broadcast in the Botanic Garden at Claremont in an attempt to establish plants in a new area. Within a few days, large quantities of the seed were found to have been carried by ants to the vicinity of the entrance to their underground tunnels and there the seeds were neatly piled in circles around the entrances themselves. As much as a handful of seed was sometimes found at a single tunnel opening. According to Semander, quoted by Ridley (1930), ant-distributed seeds usually possess an oil, or oily substance, the Elaisome, which the ants find attractive. Presumably not all the seeds are carried to the areas of storage, but some of them are dropped along the way, probably after the ants have removed the oily Elaisome. Another character which is often correlated with the presence of the Elaisome is that the seed capsules tend to hang toward the ground and the seeds are dropped together in a pile. This characteristic has been noted a number of times in the members of the woodland forms of the Californicae. Very often when the capsules are nearly mature they will be found to be hanging toward the ground and later small clusters of seeds will be found on the ground directly under the opened capsule.

Birds have never been seen to feed on the seeds and there is no evidence that they are responsible for their dispersal. Rain may be responsible for transporting some seeds, especially hard summer showers which would find the seeds lying on, or near, the surface of the soil. However, the principal method of seed dispersal for this group may well be ants.

# The Three Challenges of Hybridizing

HOWARD GOODRICK

from the Newsletter of AIS Region 8, Spring 1977

Hybridizing is fun, and is the supreme challenge in gardening.

After all the challenges in gardening are solved, or you admit you have only a hard bargained truce with soil and seed and fertilizer and rhizomes. What next?

Hybridizing, of course. The simple act of pollination is easy to learn, once a seed pod is set you just leave it alone—you might stop and admire it, once in a while—until it ripens. That is only a minor challenge.

Once the pod has ripened, the seeds may be removed and kept in an airy place until it is time to put them in the ground. And that's not a real challenge.

After they have been in the ground over the winter and have germinated in late May, they can be set out in the garden. Since you have set out tomato plants, and cabbages, that is not a challenge, either.

The following year, or perhaps the second year, most of the seedlings will bloom. Now, that is one of two genuine hair-curling challenges. What do you do next?

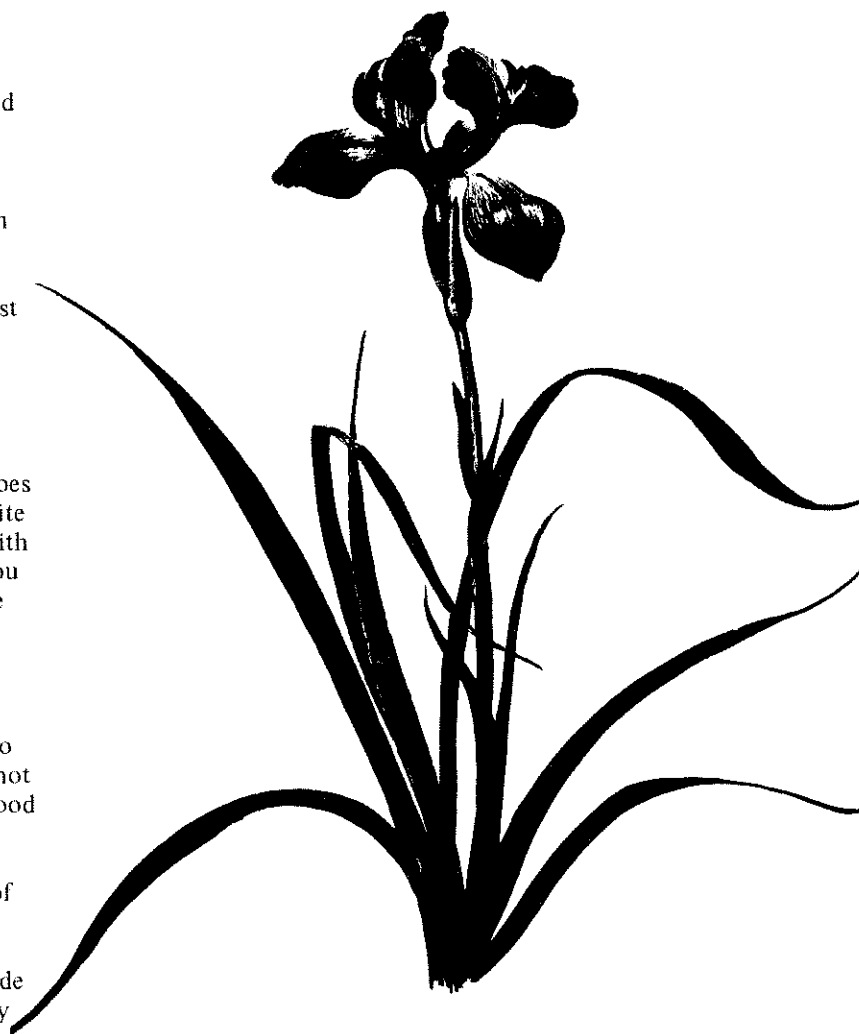
I was not quite honest with you. The first real challenge is in the very beginning. What did you use to make the first cross?

That decision is crucial, it determines all else that goes on. Suppose you liked that little pink from your favorite hybridizer but decided that you would like it better with a little ruffling, since it is, in a way, pretty plain. So you crossed it with a pink with ruffling; the cross took; the seeds germinated, were set out and now the plants are blooming. Chances are that none of them are quite what you want, although some are pretty close. There are three things you can and should do. From this hypothetical cross, you select the seedlings you wish to work with on the basis of flower form and color, but not forgetting the stalk and vigor as integral parts of the good iris. You now make crosses between the selected seedlings and with both their parents.

At this stage of the game do not worry about loss of breeding by inbreeding, and do not worry you know nothing of genetics.

There are three challenges in hybridizing, and outside of a few guidelines the answers are personal and totally yours.

They are: 1. The selection of parents. Some writers like to define this as setting a goal. If you like white, breed a better one. 2. The choice among many options in making the second generation crosses. 3. Finding space to grow all the seedlings you are going to have.



*Iris tenax* var. *gormanii*. Drawing by Mary Benbow, from *The Iris Year Book* 1958, published by the British Iris Society.

# Treasurer's Report

October 21, 1979

Cash on hand March 19, 1979 \$674.12

Receipts--

Dues	\$345.00	
Sale, Back Issues	44.00	
Checklists	24.50	
Cohen books	18.00	
	<u>\$431.50</u>	\$1105.62

Disbursements--

Almanac	\$364.66	
Books, B.I.S.	36.65	
Postage/Mailing	55.63	
	<u>\$456.94</u>	\$648.68

Balance on hand October 21, 1979 \$648.68

Charles R. Hopson, Treasurer



Hon. Treasurer, one of the best in the business, works at his records: Russ Hopson at the Santa Barbara meeting.

## Circulation Update

### Additions

Jenny Fleming  
2750 Shasta Road  
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Kathleen Frey  
6275 Hawarden  
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Hattie Hubbard  
16328 - 25th Avenue SE  
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Mrs. M. G. Mygrant  
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Richmond, CA 94804

Santa Barbara Botanic Garden  
1212 Mission Cyn Road  
Santa Barbara, CA 93108

George Schenk  
*Wild Garden Catalogue*  
Box 487  
Bothe11 WA 98011

Mary Schroter  
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Orinda, CA 94563

Please also add Joan Cooper's name to the list of Commercial Sources of Pacific Coast Iris published in our Spring 1979 issue.

### Address Changes

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The *Almanac* of the  
 Society for Pacific Coast Native Iris  
 Olive Rice, Editor  
 1914 Napa Avenue  
 Berkeley, CA 94707 USA



## Oklahoma 80

Region 22 extends an invitation to members of the Society for Pacific Coast Native Iris to the 1980 American Iris Society Convention, Tulsa, OK.

Dates: April 29 - May 3

Headquarters: Camelot Inn, I-44/South Peoria,  
 Tulsa, OK 74105.

Room Rates: Single, \$32; Double, \$38.

Registration Fee: Before March 15, \$62.50

March 16 - April 15, \$67.50

After April 15, \$75.00

*Prizes for early registrants!*

Checks payable to: 1980 AIS Convention.

Mail to: Mrs. L. D. Stayer, 7414 E-60th Street,  
 Tulsa, OK 74145.

Further information: January AIS Bulletin.

One Day Only Iris Show, Wednesday, April 30.

Entries: 9 A.M. - 12 noon.

Open to Public: 3 - 6 P.M.

Fifteen Horticultural entries per exhibitor.

Five seedling entries per exhibitor.

No flower arrangement entries.

Containers furnished.

Further show information: Mrs. Wayne Drumm,  
 924 North Hester, Stillwater, OK 74074.

Nine gardens will be on tour for the convention. Please join us so we can show you the beautiful country that is Oklahoma, and meet the friendly people of Region 22.

Burdella M. Rhodes, Publicity chairman for the Region 22 hosts of the 1980 AIS Convention. Burdella's address is P.O. Box 78, Osage, OK 74054, and her phone, (918) 354-2218.

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