

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

FALL 1987
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TABLE OF CONTENTS

President's Message.....3
 From the Editor..... 3
 Help! III..... 3
 August Phillips..... 4
 Early History of the Society for
 Pacific Coast Native Iris.....4
 The McCaskills..... 7
 Two More Early Southern California
 Pacific Coast Iris Hybridizers.....10
 Munzii Blue.....12
 An Endangered Race.....14
 Gone Native.....15
 Pacificas From Seed, A Summary.....16
 Pollination Techniques for PCNs.....20
 New Members, 1987.....23
 Treasurer's Report.....24

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PUBLICATIONS AVAILABLE

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

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

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

MEMBERSHIP & SUBSCRIPTIONS

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

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

Please send membership-subscription monies to the SPCNI Treasurer.

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PRESIDENT'S MESSAGE

Hi!

'Tis the season for thanks, so let me give some belated ones: For the past few years one of the people who helped hold our society together has been our dedicated Secretary-Treasurer, Dorothy Foster. A long line of letters apologizing for our delays, etc. Thank you Dorothy, a tough job, well done.

Behind the scenes are some others who have contributed much to help SPCNI over the rough times. Getting a bulk mailing permit, doing our paste-up, printing, and many other jobs; then having to wait for their money, (until we

had some). Our heartfelt thanks to you, Jean, Teressa, and Colin. You're great!

There are many others, and they know who they are, thank you as well.

With our new editor and his capable wife as Secretary-Treasurer, and others on the board, it certainly makes my job easier. Carry on the good work!

Region 14's Fall Meeting at Las Vegas, gave us an opportunity to give some SPCNI judging time to the regional judges. Hope the exposure helped.

The holidays are upon us, so from all of us to all of you, our very best wishes!

Duane Meek

FROM THE EDITOR

Here we are in chrysanthemum season with a large bouquet of the big beauties on the table, trying to imagine what the next Pacifica season will be like. The beautiful seedling of last year with its six fans and six bloomstalks never sent up a single new sprout! The old, dried-out leaves and cut-off stalks are still where they were last spring, but not one green tip has poked up through the ground. So that one is gone. I have left: Five prints, 2 slides, and 178 seeds. I'll plant the seeds, and next year I can look at the photographs and hope that in a couple of years hence one of the little plants will produce a flower that looks just like its parent.

Lee Raden, President of the American Rock Garden Society, says that this is what keeps us old gardeners alive: "You plant a seed, and then you can't die, or even get sick, until you see what the flower looks like." Until I heard Lee's talk last September, I always thought that it was Adele who kept me feeling young, and now it seems that seeds also may have something to do with it. So let's all plant seeds, just in case, like an old agnostic friend of ours. When the doctor told him he might not survive his illness he started going back to church, "Just in case," he said.

Lewis Lawyer

HELP! III

This is a third appeal for help in compiling information on stalk height, branching, and number of flowers per stalk for named and registered Pacificas. I would like to get comparative data from the Northwest: Washington and Oregon, from Northern California: Bay area, interior valleys, from Southern

California, and from some other states and countries where the *Californicae* are not native. Even if you only have one or two plants, every little bit will help. You have to cut off your old stalks anyway, so just take a little more time and measure a few of them. Send the information to me.

Lewis

AUGUST PHILLIPS

It is with a feeling of personal loss that I report the death of a dedicated irisarian, August Phillips of Inglewood in Southern California, on October 26, 1987. He was a charter and life-member of SPCNI, its second President from 1974 to 1975, and, as you can see by reading the account of the early history of SPCNI elsewhere in this issue, a very influential force in its beginnings.

Although he was a lover of all irises and active in both the Southern California Iris Society and Region 15, AIS, he had a special feeling for the Pacific Coast natives that was very apparent when you visited his home garden. This special feeling was also evident some years ago when a committee was being chosen to set up guide lines for judging the *Californicae*. Roy Davidson tried to appoint August Phillips to "come up with some standards" for this project, but August's reply was that it couldn't be done! There was no way he wanted to be party to placing this beautifully divergent group in little cages.

We first met August at the registration desk at the 1975 AIS National Convention at San Diego. We didn't have the slightest idea who he was, but he was handing out little envelopes of Pacifica seeds which he had gathered in his garden at Inglewood. He gave one to me and one to Adele, and that was how we got started on the natives. There is presently only one seedling of our own



August Phillips

growing in our yard that doesn't in some way trace back to that seed.

From 1970 to 1974, he registered seven cultivars: AUGIE 1974, BRETT 1970, LA BREA 1970, NATIVE WARRIOR 1975, SUSIE KNAPP 1970, VERDUGO 1973, and WILDWOOD 1974. One of the seven, NATIVE WARRIOR, was given the Mitchell Award in 1975.

All who knew him will miss his congenial presence and meaningful commentary whether at iris group meetings, garden tours, or one on one discussions about one of his favorite topics: Pacific Coast Irises.

EARLY HISTORY OF THE SOCIETY FOR PACIFIC COAST NATIVE IRIS

Lewis Lawyer

Almost nothing has ever been written on the origin of our Society. I decided to include something on the subject in an issue of the Almanac, but when I started to search for the "5 Ws": (Who?, What?, Where?, When?, and Why?), which my journalism teacher insisted we include in the first paragraph of every article, I came up with more blanks than answers.

Although no formal announcement appeared in the AIS National Bulletin, our

name suddenly showed up in Volume 212, January 1974 in the listing of "Sections of the AIS":

SOCIETY FOR PACIFIC COAST NATIVE IRISES
Edward J. Pashahou, 6235 Syracuse Lane,
San Diego, Calif. 92122

President: Mr. Raymond J. Chesnik, 418 Buena Creek Road,
San Marcos, Calif. 92069

In the "Flight Lines" section of that same issue, Dodo Denney, one of our charter members, had one line inviting AIS members to join the new society. Richard Basler of Irvine, California, another charter member,

submitted a whole paragraph which read as follows: The new iris group is the Society of Pacific Coast Native Iris (SPCNI), formed in Region 15. At the first general meeting held, about 40 interested members attended. We hope ultimately, to be accepted as one of the AIS affiliates. Right now members are from only Region 15, but we would gladly welcome others. If interested, write to:

Bill Gunther or Bob Brooks
740 Crest Drive Cordon Bleu Farms
Del Mar, CA 418 Buena Creek Rd.
San Marcos, CA

I wrote to Dorothy Foster, who was Secretary-Treasurer at the time to see whether she had any information on how we got started. She sent me everything she could find on the subject: Three items from a box she had received from the former Treasurer, Charles Hopson.
1. Minutes of a meeting held in July 1973
2. Treasurer's Report dated September 1973.
3. An undated announcement of the formation of the new group and an invitation to join.

After that I ran into so many undated letters and lists from persons unsigned that I began to suspect that I was trailing down some secret society and that SPCNI should be pronounced "Sigma Pi Kappa Nu Iota."

The first issue of the Almanac published in September, 1973, lists Ray Chesnik of San Marcos as President. Jack McCaskill of Pasadena is listed as Vice President. And it just happened that in early December last year, Adele

and I were driving down to Pasadena to interview Jack and his father, Vernon McCaskill for the article on the McCaskills which appears in this issue. We took the opportunity to question Jack and he told us what he remembered about SPCNI's beginnings. This year in late October, we were again in Southern California and made an appointment to visit Ray Chesnik, now residing in Vista. We got more information from him, including his file of letters and papers from the time of his presidency. Then, on our way back from our visit with Ray, we saw a sign on the side of the freeway reading, "Bonsall next right!" I said to Adele, "We know somebody who lives in Bonsall," and an hour later we were enjoying the hospitality of Ralph and LaVerne Conrad. Ralph and LaVerne date back to the early days of the Southern California Iris Society from which our society emerged and they were a valuable source of information, as well.

Although Ray Chesnik would not take the credit for originating the idea himself, it is clear that he was the early motivating force behind the formation of the SPCNI. In a letter to Ray dated March 5, 1973, Avis Jasmin, then President of the Southern California Iris Society, writes, "I have talked to the board members and can find no opposition to your great idea." (The underlining is mine.) "I will be having a board meeting Thursday the eighth and I'm sure Luciene can get you two or three lines in our notice." - And three lines it was on a postcard mailed March 9, 1973:

MEETING OF THE SOUTHERN CALIFORNIA IRIS SOCIETY

WHEN: Saturday, March 17, 1973

WHERE: Arboretum, 301 N. Baldwin Ave., Arcadia Calif.
Hot lunch served at 12:00. Program at 1:00.

SPEAKER: Edna C. Schoof, Teacher and Judge

SUBJECT: Flower arranging demonstration

NOTICE: An organizational meeting of the Society for Pacific Coast Iris will be held immediately following the S.C.I.S. meeting. All are invited to attend.

REMINDER: Spring Show - April 21,22, 1973
Region 15 Trek here - April 28, 1973

EARLY HISTORY OF SPCNI (continued)

Jack McCaskill, who was interviewed in his office at the Los Angeles County Arboretum, recalled, "I'm a little rusty after all these years, but as I remember it, it started right here in the Arboretum after a SCIS meeting. The fellows down at Cordon Bleu got the idea; in fact Ray Chesnik was appointed President and I think I was Vice President. Then we had a second organizational meeting about a month later in conjunction with the Region 15 Spring Trek in a room at the Ramada Inn also here in Arcadia."

According to the minutes of the first meeting given to me by Ray Chesnik, eighteen persons were present at that first meeting in the Arboretum, March 17, 1973. They were not named in the minutes, but from other information I have found, probably included, in addition to Ray Chesnik and Bob Brooks of San Marcos and Jack McCaskill: Robert Parker of Costa Mesa, George Stambach of Pasadena, August Phillips of Englewood, Barbara Serdynski of Los Angeles, Thelma Carrington of San Diego, Charles Hopson of San Gabriel, Doris Foster of Vista, and possibly the Abells and Alan and Dodo Denney of Santa Monica. All in attendance were members of SCIS.

Considerable progress was made at the first meeting. In addition to appointing the temporary slate of officers, they tentatively approved a paragraph stating the objectives of the Society, with only a few minor changes from the present wording. A committee consisting of Ray Chesnik, Jack McCaskill, and George Stambach was appointed to formulate suggested By-laws to be mailed to the new membership prior to the next meeting. Actually this was accomplished within 3 days, since they used the By-laws of the Spuria Society as a guide. Except for some minor changes, including those which had to be made when we were accepted as a section by AIS, the original draft was the same as our present By-laws.

The second meeting was held April 28, 1973 at the Ramada Inn, Arcadia, headquarters for the Region 15 Spring Trek. It was decided to extend Charter Membership an additional 6 months, that is through September 17, 1973, so that interested persons other than SCIS members could be involved. In May, an announce-

ment was sent to iris societies, and selected AIS members invited to join the new society. Thus it was that SPCNI enrolled 51 Charter Members, mostly from Southern California, but also 10 from Northern California, 2 from Oregon, and 7 from Washington.

There was some opposition to the new organization by members of the Species Iris Group who thought it might dilute their membership and publication. A suggestion to combine our news letter with that of SIGNA was turned down, however, and a motion to attempt publishing our own news letter was made, seconded, and passed. Ed Pasahow of San Diego accepted the position of Editor, and it was Ed who named it "Almanac" because the word "almanac" was described as a "miscellany of useful information, entertaining remarks, pithy and scientific observations, and remedies for sundry ailments, both grave and trivial," which he thought fit the publication.

Richard Richards was named to head a committee to establish test gardens. While there was not a unanimous feeling in favor of test gardens, it was decided to give it a try. Richards obtained commitments for test gardens to be established in three areas: In Oregon from Lorena Reid, in Northern California from Joe Ghio, and for Southern California from the Santa Barbara Botanic Garden. It is amusing to note that the Arboretum in Arcadia was also considered but was turned down because the peacocks which roamed the garden seemed to consider iris flowers a delicious gastronomical treat.

There was also a committee appointed to formulate judging standards for the Pacific Coast natives. The committee was flooded with letters, suggestions, and warnings from all sides. The biggest fear seemed to be that the cute little flowers, like those of the *innominatas* and such cultivars as FAIRY CHIMES, AMI ROYAL, and VERDUGO would be relegated to an inferior position relative to the spectacularly large flowers being developed by the hybridizers of the day. "Big is NOT better" wrote one member. Another fear expressed was that setting standards at all for such a divergent group of species as the *Californicae* would be nothing but a step in the wrong direction.

One other committee was appointed to compile an up-to-date Check List.

Active in this objective were Roy Davidson, Jack McCaskill, Bob Hubley, Ed Pasahow, and August Phillips. But, even for this committee it wasn't all smooth sailing. One of the committee members wrote, "I didn't realize that when Bill Gunther told me how difficult getting together a checklist was, he meant that the difficulty was in the interpersonal conflicts that he would stir up." Most of the conflicts centered around what should and what should not be included in that list. Should non-AIS registered names be included? Should inter-specific crosses such as Cal-Sibes be listed? Fortunately, everything got straightened out, the Check List was published, and the Society turned its attentions to new goals.

On October 23, 1973, Ray Chesnik sent a letter to Dr. Hugo Wall, President of AIS, which stated in part, "On behalf of the officers and members

of the Society for Pacific Coast Native Iris I would like to acquaint you with us through the inclosed ALMANAC. Also, to take this opportunity to request that the American Iris Society consider and accept the Society for Pacific Coast Native Iris as a section within the AIS."

Then, following the November meeting of the AIS Board of Directors, Ray received a letter from Glenn Hanson, Chairman of Affiliates and Sections, to let him know that the SPCNI was officially an approved group in the "hallowed ranks of our sections".

And so it was that starting as the brainchild of Ray Chesnik, and pulled together with the help of many other enthusiastic Pacific Coasters, we were officially adopted by the AIS at their Board of Director's Meeting at Wichita, Kansas, on November 3, 1973.

THE McCASKILLS

Lewis Lawyer

Vern McCaskill is a well-known nurseman in Pasadena specializing in camellias and azaleas. His nursery has been a primary source of Pacific Coast Irises since the early 50s and has probably distributed more native iris plants than any other nursery in the world. His son, Jack, is in charge of plant records at the Los Angeles County Arboretum at Arcadia. Jack is a charter member of SPCNI and was our first Vice President.

Vern McCaskill is a very special person. You know that the minute you meet him. He is hard-working, but his intense love of plants and flowers shows through his face and in his soft-spoken voice.

The following article is taken from tapes recorded on two successive days in early December, 1986, the first with Vern in his lath house office at the McCaskill Nursery in Pasadena, and the second with Jack in his office at the Arboretum in Arcadia.

When asked how he became interested in native iris, Vern was a little hesitant; in this instance it certainly was not a case of love at first sight. "Well, my wife had one or two of them

growing around the yard. That was a long time ago, but I remember one of them was AGNES JAMES. I think they came from a friend of hers; her friends were always bringing her plants. To me, the natives were pretty, but not very exciting and I really didn't think too much about them until my son, Jack, got involved."

Jack agreed: "You know, my dad has introduced about 100 camellias and he was so involved with his camelia crosses at that time...But it really is strange how we did get into the natives. Back in the early 50s, mom and my older sister, (I have another sister up at the University of California at Davis), but the one who lives down here and my mom, started taking a course in flower arranging. I was working here on weekends plus three days during the week. I happened to have some time to spare on the day they went to their class. I started going with them and continued for about a year. Mom had a few native irises growing in our garden to pick for bouquets and we all liked to use them in our arrangements. Then my sister planted a few of the common ones in her back yard and I got to like to see them growing.

"I gathered plants and seed all along the coast from Mendocino down to below

THE McCASKILLS (continued)

Monterey. Dad and I grew the seed in gallon cans so he could sell the ones we didn't want to keep. Actually, none of these plants were very good, and it wasn't until we got seed from Lee Lenz that we made much progress.

"Peg Dabagh knew that we were interested in getting going on the natives, so she talked to Dr. Lenz at the Santa Ana Botanic Garden. This was before he had incorporated *Iris munzii* into his crosses, but he had things that were far ahead of anyone else's at the time. Apparently, he had introduced a few selections in the early to mid-1950s and, according to Peg, had given some of his things to commercial growers to distribute. But they just sold all the stock he gave them and made no attempt to increase anything on their own. I guess he was kind of fed up, and Peg told me that he wasn't going to release any more. She apparently convinced him, however, that dad and I were used to increasing our own stock, so he very graciously let me go out and pick seed from his stock plants. We planted this seed and eventually had thousands of seedlings, almost any one of which was a jump ahead of everyone else down here.

Vern McCaskill explained: "You know, my son went up and down the coast trying to get seed of all the kinds available and we grew thousands of seedlings. But none of our plants from these crosses were very spectacular. Then Jack went out to the Santa Ana Botanic Gardens and visited Dr. Lenz who was kind enough to give him quite a lot of seed. It was from these seeds that we got all of our best material. We kept crossing back and forth and eventually found any number of good selections. Lenz had used *douglasiana* and *innominata*, and a little bit of *bracteata*, which gave its striping to some of the flowers.

"We grew thousands of seedlings each year and sold most of them to landscape architects by the truckload. The best flowers we would keep for hand pollinations. The best plants remaining went to the iris fanciers and all the rest went to the landscapers. For the last year or two I've not done so much with the natives. Part of this is because of my wife's death last summer. She

had been sick for about six years and I just sort of..."

Vern stopped and changed the subject: "I think that the best PCN that was ever developed was CANYON SNOW. We increased CANYON SNOW for Dara Emery and introduced it in 1975. I crossed it with many of our things to see if I couldn't get the same attributes but with different-colored flowers, but none of these crosses were successful. CANYON SNOW is certainly a wonderful grower and bloomer but, for me, it was never a good parent.



Vern McCaskill

The McCaskill's first-named selections, CASILDA, CHIMES, and FAIRY CHIMES weren't introduced until 1972 and then apparently only after some persuasion by their friend, Doris Foster of Vista. At one time during the interview Adele and I were asked if we had ever grown CHIMES or FAIRY CHIMES. When told that we still grew both of them and that both were doing beautifully, Jack said, "Oh, I'm glad to hear that! CHIMES always grew well for us but we had to give up on FAIRY CHIMES, - well, maybe not 'give up'.

What happened was that we had a big storm followed by some hot weather. The lath house collapsed and we didn't get FAIRY CHIMES shaded in time. Does your CHIMES get covered with white blooms like it did for us down here?" Adele and I both recalled that when an established clump of either CHIMES or FAIRY CHIMES was in bloom in our garden, the expression "covered with white blooms" was a perfect description. Jack continued, "When we first had it where it was planted in the ground we had a sheet of white, - It was spectacular!"

Because of our interest in *Iris munzii* we asked Vern about his experience with this species. "Munzii selections and crosses have never done very well for us here. Jack gathered seed up in the Sequoia area and even though we had about 1000 seedlings to start with, we eventually lost the lot!"

Jack McCaskill elaborated on this experience: "About 1963, one of the other fellows working here at the Arboretum and I took a few days off and drove up to the Sierras where *munzii* grows wild. We had found out from Dr. Lenz when would be the best time to make the trip, and so we came back with a lot of seed. This seed germinated real well but it was all gone after about a year or two. Maybe it was because we were trying to grow it in cans.

"I guess dad told you that we have experienced a lot of trouble with all the *munzii*-related plants. We were supposed to introduce ALMA ABELL for Dr. Lenz back in the early 1970s. We put a bunch of them in the ground figuring that we would increase it for a couple of years until we got enough divisions. We wanted to have enough plants to sell and still have enough left over for further increases. But it just kept decreasing instead of increasing. The plants bloomed beautifully but just wouldn't increase. By the end of three years we had lost them all! Lenz had to increase it all over again and I understand that it was distributed through Bob Hubley about 1982.

"Dr. Lenz grows his *munzii* things in full sun, and they are beautiful! I don't know how he does it. They don't grow in the sun where they are wild. It's hotter in Claremont than it is here and we have never been able to grow them in full sun or otherwise."

Vern McCaskill seemed quite exasperated about his inability to cope with the demands of *munzii*. When he told us about their experience with ALMA ABELL he said, "You know, Dr. Lenz named this beautiful *munzii* flower for Thornton Abell's wife, Alma. She was such a wonderful woman and the flower was so beautiful, and I wanted to grow it as much as I have ever wanted to grow any plant. But it just wouldn't grow for me. SIERRA SAPPHIRE, too, was such a beautiful thing, and it bloomed very well for us. Our customers would see it and would have to have it, but then they would come back with the sad news about its death. The new Claremont introductions behave the same way for us and we have just had to give up on them.

"Of course this is true about a lot of plants. They seem to do best where they are selected and may not do well anywhere else. You have a very good iris grower up your way, Joe Ghio. I used to get all of Ghio's new varieties and bring them down here. Some of them performed quite well and others were nothing but trouble. Climate, I guess. Ghio has a fine climate, right along the coast. Its pretty cool here today, but you should be here during the summer! We might as well admit it, - we're in a desert here and pouring water on it doesn't change it very much.

"I had trouble with Roy Davidson's plants, too, but for quite a different reason, even though it was tied in with the weather. He wasn't able to ship plants in the late fall when I wanted the plants because up in Seattle he was already frozen in. So he would ship to me in the spring and they would invariably arrive here at the beginning of a hot spell. I would keep them in the shade and pour water on them but it was a losing battle."

Every iris plant from the McCaskill Nursery is sold in cans using their standard camelia mix. "We use a mixture of about one third each of peat, sand, and a good loamy soil which we get by the truckload. I don't use any compost although I imagine compost would be good for them, too. I just figure that the peat will take the place of the compost, and you are always sure of peat moss whereas compost can be made from almost anything."

Vern McCaskill was brought up in

THE McCASKILLS (continued)

Missouri where his father owned a general store, selling "everything from needles to plows". His mother, however, was more interested in gardening than she was in housework and it was she who nurtured his interest in plants. To please his father, however, he enrolled at Anapolis and studied there for one year. He resigned after the first year because "I finally figured out that there was no way that I would ever be able to grow plants on a battleship!"

His first home in the west was in Altadena, California. He and his wife worked for the Coolidge Rare Plant Nursery in nearby Pasadena from about 1925 to 1935, during which time his son, Jack was born. Vern remembers the Coolidges with great fondness, saying that he and his wife were treated more like a son and daughter than they were like employees.

Vern recalls a day when Liberty Hyde Bailey came to the nursery to visit the Coolidges. Mr. Coolidge introduced Vern as "a young man he was going to make into a plantsman." Bailey's rejoinder was, "Oh, no you aren't! He is a born plantsman. You can't create a plantsman - either they are or they aren't!" Vern thought about this a great deal and decided for certain that this was the field he should pursue.

Vern built his present home on Michillinda Avenue just south of Colorado Boulevard in 1932. Jack worked in the adjoining nursery with his father from

the time his father went into business for himself until Jack started working at the Arboretum. "Even after I started working here, I worked a lot with dad. You know, I've been living at that house ever since I was a kid, and living there has been so pleasant that I hate to think it might end sometime. Our family was very close. I remember dad always felt that the name given to a plant could make it or break it. So when he was going to introduce a new camelia he would bring a flower into the house after dinner and he and mom and I would sit in the den and try to think of a name for it. Mom was always good at making up names. Of the hundred or so camelias he introduced, mom named almost all. She would sit there in the den, look at the flower dad was holding, and in a little while she would come up with a name and it would always seem to fit the flower.

"Dad promised mom that he would retire when he got to be 65. He will be 85 next month and now he says he doesn't remember ever making such a promise. He's slowing down a bit on the natives and not planting the thousands of cans he used to plant each year; but I guess he might not even be around any more if he didn't have something he loves to do so much."

Which reminds your editor that when Adele and I went into his yard to tape this interview, we found Vern up on a ladder pruning a large shrub alongside his house. He smiled a welcome to us, threw down the limb he had just sawed off, and said, Well, we'd better go in to the office."

TWO MORE EARLY SOUTHERN CALIFORNIA PACIFIC COAST IRIS HYBRIDIZERS

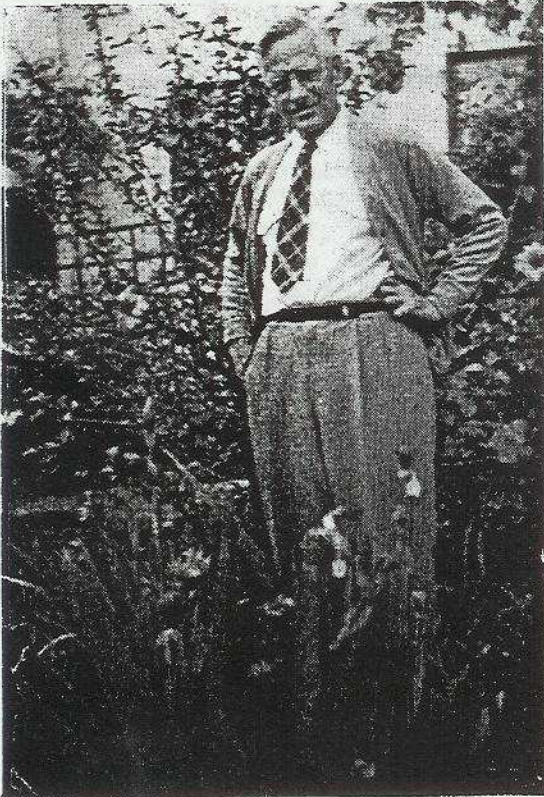
Lewis Lawyer and Ralph Conrad

Eric Nies died some two decades before the founding of the SPCNI. He was best known for his work on spurias, as testified by the "Nies Award", but he also was one of the pioneer hybridizers of the Pacific Coast Irises. He collected from the wild, intercrossed his many primarily *douglasiana* selections with material obtained from the DeForest-

Mitchell collection, and was among the earliest American hybridizers to register and introduce named Pacifica cultivars. Even if AMIGUITA were the only cultivar he ever introduced, its widespread use by other breeders and fanciers would have made his foray into Pacifica territory worthwhile.

Eric Nies taught agriculturally-related subjects in the Los Angeles schools for many years, and during that

time was very active in the Southern California Iris Society (SCIS). In his obituary in the April, 1952 issue of the AIS Bulletin, there are two somewhat conflicting statements. One: "...his penetrating wit and wholesome sense of humor endeared him to his many pupils". The other: "...the future (in Southern California Iris circles) will not be quite the same without his incisive, sometimes acidulous, but always pertinent guidance."



Eric Neis

Ralph Conrad, personal friend of Eric Nies through several years of association in the SCIS, takes some exception to the last of these two statements: "My personal knowledge of Eric Nies involves only the final 8 to 10 years of his life. But I would feel inclined to pick fault with that portion of his memorial containing the words 'incisive and sometimes acidulous'. True, Eric Nies was a very controversial person and it is also true that memory tends to accent the nice things about a person, but I would insist that a more accurate wording would be 'always the teacher, but at times a tease, mischievous, and deft at using humor to achieve a point.'

"Eric was active with the Hollywood Garden Club which sponsored the annual Hollywood Iris Show for the SCIS. At that time LaVerne and I were pretty young and impressionable. We have some very humorous recollections of the infighting that used to occur between Eric and the management of the Garden Club. All Eric had to do was to make some humorous remark or even to look at them in his way and they would go up in smoke!

"LaVerne and I are very sentimental about our friends. We find it very difficult, if not impossible, to throw out an iris produced by an individual whose friendship we have cherished during nearly a half century of iris-ing. When you called and said you wanted some information about Eric Nies I suddenly realized that I was remiss in one of my sentimental iris journeys by not currently having any of the Nies PCNs in the garden. Not even one. There are some being grown, of course, and perhaps their survival after more than 4 decades could be classified as among his greatest tributes. - I'll get right to it, Eric! AMIGUITA at least!

"I should also mention one other very productive early Pacifica hybridizer: Richard Luhrsens who lived about two miles south of August Phillips in Inglewood. The Luhrsens really went into Pacificas! From the early to mid-1950s they introduced 18 named varieties and then suddenly lost interest and disappeared. I understand that they are still around, but their interest in the natives just gave out. For awhile, though, they were doing more on the PCNs than anyone else. Their first introductions in 1953 were released through David Lyon of Lyon Iris Garden in Van Nuys. Their last introduction, AMI ROYALE, which is still one of the finest 'little' cultivars available, was released to commerce only about four years later in 1957, but wasn't even registered.

"This happens to a lot of people: they get a sudden and intense interest in something and then just as suddenly lose interest. For some, it happens when they find out that there was not as much money in the project as they had hoped, but for others it just seems to be their nature. At least the Luhrsens left a considerable legacy to show for their efforts."

MUNZII BLUE

Lewis Lawyer

We all use the expression freely in our conversation and our writing, but what really do we mean by the term "Munzii Blue"? In an article which appeared in the Spring 1978 issue of the Almanac, Dr. Lee Lenz who was at that time Director of the Rancho Santa Ana Botanic Garden, included a one-paragraph summary of the history of *Iris munzii* as it pertained to the Botanic Garden. That paragraph reads as follows: "*Iris munzii* was described by R.C. Foster of Harvard University in 1938 but it had been grown in this botanic garden as early as 1933 having been collected by Carl Wolf at the now famous Coffee Creek campground site. By 1935 the plants had all died and it was not reintroduced until 1947 when bare-root plants were brought to the garden by Philip Munz. These plants did not survive and the first successful introduction of the species into cultivation was from seed which I collected in 1948."

During Dr. Lenz' annual pollen-gathering trips to the sites where the species occurs in the Sierras, there were two incidents which relate to this arti-

cle. The first is the occasion when he took the Stevens with him, and Jean Stevens saw for the first time in her life, an iris growing in its native habitat. The second I will quote directly from the Lenz article. "On one of my annual trips (the year is not recorded), I found a plant with flowers having exceptionally broad segments. I collected pollen and applied it to flowers in my garden. The improved flower form in the Claremont *Iris munzii* and hybrids has thus come down through the generations from a single plant, unheralded in the history of iris breeding, un-numbered and uncollected."

Dr. Lenz crossed his *I. munzii* selection with other Pacific Coast species including *I. douglasiana* and from these crosses, flowers with more blue coloration began to emerge. One of these seedlings of *munzii* x *douglasiana* was selected and given the name, ALMA ABELL which Lenz describes as "superior but somewhat tempermental." I have never seen ALMA ABELL in bloom but reproduced below is a picture of it from a slide taken by Richard Richards in 1973 which he says is excellent for accurate color.



ALMA ABELL

In the early 1970s Lenz crossed ALMA Abell with an un-introduced selection of his which he called, BIG PURPLE. BIG PURPLE has combined genes from *I. douglasiana*, *innominata*, and *bracteata*. From this cross, which combines the genes of four different Pacific Coast species, came all of his beautiful Claremont-Series blues: CLAREMONT BIG SKY, C.BLUE-BIRD, C.BLUE JAY, C.DARK VIOLET, C.ROYAL PURPLE, C.SIERRA BLUE, C.SPRINGTIME, C. TRAILBLAZER, and a host of other un-selected blue beauties which made his Rancho Santa Ana seedling patch a Mecca for iris tourists.

Now I am going to switch to my own experiences with "Munzii Blue". As I have written many times, I got my start in the PCNs from seed given to me by August Phillips at the 1975 AIS Convention. Of the 149 seedlings grown from this seed, 26 had obvious *I. munzii* characteristics with flowers ranging in color from a trace of blue on a violet background to a solid true blue. All of our *munzii*-derived seedlings trace back to that seed.

So my "Munzii Blue" came from August Phillips, but where did he get it? Did he go out in the wilds of the Sierras and bring it into his garden? I asked August about this and found that all his *munzii*-derived plants came from Barbara Serdynski who in turn had obtained them from Thornton Abell. So my "Munzii Blue" comes from Thornton Abell's breeding, not August's.

My first outcrosses were made with Joe Ghio's SOQUEL COVE and with pollen from a SIERRA SAPPHIRE plant grown by Duane Meek. SOQUEL COVE is one-quarter wild *munzii* and has a faint halo of blue on the white falls. SOQUEL COVE gave me better flower shape but there is no evidence that it enhanced my blue color. SIERRA SAPPHIRE actually decreased blue color and gave me mostly violet-colored flowers.

My next outcrosses were made to *munzii*-derived plants obtained from Walt Luihn. Two of these plants had flowers as blue as any flower I have ever measured. I still call these "Luihn" plants, but Walt got his seed from Alma and Thornton Abell! So again, my "Munzii Blue" traced back to Thornton's breeding.

In 1981 we brought *I. munzii* pollen from selected wild plants in the Sierras and crossed it to our best available

blues. From that pollen we got increased susceptibility to rust, but only decreased blue color. We still have three plants from those crosses, but the flowers are quite violet in color and we have saved them only because they look more like wild *munzii* than any other flowers in the garden.

In 1984 we got plants directly from the Thornton Abell garden, and again, one of these had flowers of excellent blue color. So now we need to find out where Thornton got his "Munzii Blue". Did he go out into the wilds of the Sierra and find it? To answer this question I will quote directly from an article by Thornton Abell himself which was published in the Spring 1978 issue of the Almanac, entitled "My Debt to *Iris Munzii*". "For a number of years we had talked to Lee Lenz about *iris munzii* and about the plants he had selected that grew wild. He told us about his breeding program of combining *I. munzii* with other Pacific Coast iris in order to get the turquoise color in flowers with better form and habit.

"He gave us pollen to use at home. I used it with AMIGUITA and the resulting seedlings were the first of our line. Another year he gave us three of his *I. munzii* hybrid seedlings, a wide variety, very vigorous, a medium and a light blue, not so vigorous. I used these with our AMIGUITA x *I. munzii* seedlings. The best flowers that I have to date are from this cross and reverse cross, *I. munzii* x AMIGUITA. There have been many blues, some flashed with deeper blue, some with strong yellow signal, some wide and ruffled, and some narrower and tailored. I enjoy all of them. The less vigorous don't survive but the strong plants grow well and increase well.

"Whatever quality of flower that I have been able to produce is the direct result of Lee Lenz's *I. munzii* hybrids. Without them, good flowers would have been a long time coming."

So now Thornton Abell's "Munzii Blue" and all of my "Munzii Blue" becomes Lee Lenz's "Munzii Blue"! There is still, however, one other source of "Munzii Blue" to be investigated. In the AIS Bulletin 134, July, 1954, Jean Stevens of New Zealand is quoted as saying "Despite its great interest as a new species, an even greater interest, to me, lies in the true blue forms. I

MUNZII BLUE (continued)

know of no rhizomatous rooted iris which shares with it the purity of blue color." As stated earlier in this article, Jean Stevens first saw *I. munzii* in the seedling patch at Rancho Santa Ana Botanic Garden and in the Sierras in the company of Dr. Lenz. Dr. Lenz is quoted in the same article as saying "I have never seen a flower on *munzii* which I could even call blue. But then it may be that I am too much of a purist when it comes to blue." It is my guess that the only place Jean saw "true blue forms" was in the seedling patch at the Botanic Garden.

Jean Stevens also produced blue *munzii* seedlings of her own, but from material furnished her by Dr. Lenz, and there is no reason to assume that she ever got "Munzii Blue" by intercrossing pure *Iris munzii*.

Victor Cohen, in his "Guide to the Pacific Coast Irises", describes the color of *I. munzii* as ranging from "Pale powder blue through lavender to purple." Alleah Haley in "Seeking the Elusive *Munzii*", Almanac, Spring, 1981, describes the color as varying from "near-white to pale blue, and some flowers had a pale turquoise flash in the falls." When Adele and I spent a couple of days roaming through the habitat of *I. munzii* in the Sierras, we found in one area mostly near-white flowers such as those described by Alleah, but although some of the flowers appeared to qualify as the "pale powder blue" described in Cohen, they turned out to be pale "7.5 Purple-Blue 9/1" when measured with the Munsell color fan which we had brought with us. Actually these were the bluest wild *munzii* flowers we found. Flowers with the deepest colors ranged from 2.5 purple to 10 purple-blue, and flowers having colors between the darkest and the pale off-whites ranged from 7.5 purple-blue to 10 purple-blue. We did, however, find flowers similar in color to SIERRA SAPPHIRE, that is with a background of 7.5 purple-blue and a narrow streak or a broader infusion of "turquoise" (which actually measured 2.5 purple-blue) on the falls. Against the violet petals, this color streak appears "turquoise" and makes for an extremely eye-appealing combination.

A couple of years ago George Waters sent me a copy of the preamble he had

written for the symposium on Pacific Coast Iris which he was compiling for the Summer 1986 Issue of *Pacific Horticulture*. One sentence in which he referred to *I. munzii* as having blue flowers caught my eye. I knew I had never seen an *I. munzii* flower which was blue so I called Dr. Lenz on the telephone and asked him if he had ever seen a blue *munzii*. I still remember his exact words: "Never, never, never!" Although it is what everyone likes to believe I still feel that the statement which eventually went into *Pacific Horticulture*, "*I. munzii* with near-blue flowers is a rare native of the Southern Sierra," is a bit misleading. As I see it "Munzii Blue" appeared only after Lee Lenz crossed *I. munzii* with other species of Pacific Coast Iris. The genes for blue color in *munzii* were certainly essential for the outcome, but it was a gene or genes from one or more of the other species which, when combined with the genes for blue in *I. munzii*, actually triggered the real blue expression. I believe in credit where credit is due. The bees had been working on *I. munzii* for centuries and never accomplished what Lee did in a few generations. It is probable that other hybridizers, or even the bees, using similar material would come up with results comparable to those of Lee Lenz, but to the best of my knowledge, no one else has actually done so. Furthermore, with plants as genetically divergent as the Pacific Coast Iris, you could make a hundred such crosses and never come up with the same thing!

So let's continue to call it "Munzii Blue". The term has a nice ring to it and we know exactly what it means. Let's keep in mind, however, that it really didn't originate in the Sierra foothills, but in the seedling patch at Rancho Santa Ana.

AN ENDANGERED RACE

Lewis Lawyer

To me as a geneticist, there are few things in this world more tragic than losing valuable or sometimes irreplaceable genetic material.

Unfortunately, I understand that the rows of beautiful Pacific Coast iris

seedlings we used to walk through at the Rancho Santa Ana Botanic Gardens are no longer in existence, and that about all that is left of the Lenz *munzii* hybrids are those scattered plants growing in private gardens and in one or two nurseries. This is an almost unbelievable tragedy and I think we should do everything in our power to see that any plants still in existence not be relegated to the compost heap. In this regard, I have contacted Bob Hubley in Yucaipa, and he tells me he is doing his best to increase the few plants he is growing in his nursery.

Fortunately for all of us, however, Lee was very generous with pollen, and some of you may have Lenz-derived seedlings in your garden. A year ago he sent me pollen from all his best material including a new blue seedling which he considered "the finest clear, medium-blue I have ever seen". During our recent visit with him he reminisced about the plant. "Of course, I only saw it as a first-year seedling, but I still think

it was the finest seedling I ever produced. It's gone, now, and you are the only one who might get it back."

For the record, I have 53 plants from four different crosses I made using pollen from that new seedling. From the other pollen sources which he sent me at the same time, there are an additional 104 plants. I also have 269 older seedlings which were derived from Lenz introductions during the past five years. Nine of the latter group are now selected clones with flowers approaching, but not yet equalling the Lenz quality.

I plan to sib- and inter-cross all my own selections from this material as the best way to get back to the type of flowers that were the hallmark of the original Lenz *munzii* hybrids. If any of you have any suggestions or additional information, please let me hear from you. It is unthinkable that we sit back and watch the culmination of Lee's 40 years of work with *I. munzii* just slip through our fingers.

GONE NATIVE

Vernon Wood

"Gone Native!" Not me or the iris, but one of my TB beds. The PCN seedlings have been so interesting I couldn't resist adding another 400 seedlings in place of my TBs which formerly occupied the area.

My interest in natives started 4 or 5 years ago as a result of visits to Joe Ghio's garden. Joe's seedlings showed such great improvement in color, form, and vigor in each succeeding year that I could not resist the temptation! The best way to get started seemed to be by growing seedlings from Ghio seed and using the best of these with the best of the latest named varieties for crosses. About 250 seedlings from Ghio seed were planted and of these, four have been introduced. The percentage of excellent seedlings is far higher than the percentage that can be obtained from TB seed.

My seeds are planted about November first in 8 inch pots in top quality planting mix. The seeds germinate readily in January and are planted out in

the garden as soon as possible (early April preferred). From planting to bloom they are pushed with Rapidgro about every two weeks and watered every other day. Most will bloom the next year except *munzii* seedlings which seem to be slower, and most of these will not bloom until the following year.

All plants are planted in 6 or 8-inch raised beds in which the soils vary. The pH of all three different mixes is identical, however, 6.9-7.0.

Mix Number 1 is on the east side of my house where the bed gets morning sun, and is straight planting mix, (fir bark, 15% chicken manure, mushroom compost, vermiculite, cotton seed meal, Canadian peat moss, and gypsum). The growth, bloom, and vigor in this bed is super.

Mix Number 2 is on the north side of the house which gets 2 to 3 hours of sun in the late afternoon. It consists of my Number 3 garden soil one to one with planting mix. Growth, bloom, and vigor are not quite as good as the previously

GONE NATIVE (continued)

déscribed bed, but still excellent.

Mix Number 3 is a one to one mixture of top soil(?) and sewer sludge. This area has been my TB bed and has been enriched with organic compost though the years. The vigor, bloom, and growth here have surprised me. As of this date, (November 4, 1987), of about 400 seedlings, more than 300 are showing increases, are about 12 to 14 inches tall, and look real good. These are on the west side of the house and get lots of sun.

No special care has been taken with the seedlings except to keep them wet and fertilized. Losses will be about 2 to 3 percent. In most cases, the plants just disappear.

The care for named and selected seedlings is slightly different and never the same. The beds for these are on the west side in Mix Number 3 as described previously. I have not decided which method of watering is best for my area, so can only describe my results and hope they make some sense. The Pinole weather is about half way between foggy, cool, San Francisco weather and the hot temperatures of the Walnut Creek area. Winters can and do reach freezing, but usually not for extended periods.

All beds have approximately 5 pounds per 1000 square feet of an 8-8-8 fertilizer spread on top and thoroughly dug in. The beds are wa-

tered to 8 to 10 inches deep, and two days later the plants are set out. They are then soaked with Subdue at a rate of twelve drops per gallon of water. Losses have been low, (3 to 5 percent). I believe most of these losses are my own doing in not watching carefully enough to see that new roots (1 to 2 inches long) are showing before transplanting.

The beds will be fertilized again in early February and immediately after blooming at the rate of 3 pounds of 8-8-8 per 1000 square feet. Rapidgro could be used anytime to give them an extra kick.

When and how often to water is a question I have not resolved yet. I have had 25 percent losses when allowing the plants to go dry and giving limited watering, (with Subdue added), in the heat of summer. No losses occurred, however, when watering weekly after bloom time and up to digging time in October. (Subdue was used during this period every 6 weeks.) In a third watering variation, WISH FULFILLMENT and PAJARO DUNES, planted in the seedling bed, were watered every one or two days, and they thrived! This is in line with John Weiler's experiences in Fresno and indicates that periodic applications of Subdue in combination with regular watering is the way to go.

Anyway, its lots of fun. So get some seeds, plant, and get going!

PACIFICAS FROM SEED, A SUMMARY

Adele Lawyer

Since the second issue of the Almanac, Spring 1974, 26 references in this publication have covered growing Pacificas from seed. This article concentrates the information to date in a single issue to simplify reference on this subject.

In a way, it seems unnecessary to issue instructions on a function which most PCNs perform very well without any outside assistance. Roy Davidson remarks "Local conditions (in the Seattle area) are ideal so that seedlings come up like grass if left alone and cause a weeding problem" In another Almanac entry, Phil Edinger echos Roy's remarks, "Here (in

Northern California) they come up like grass whether I've planted them carefully in pots of sterile soil or whether capsules have opened and shed their crops on decidedly unsterile earth!"

Nevertheless, planting seeds of PCNs is the most dependable method of establishing these sometimes tempermental *Californicae* in both hostile and friendly environments.

Growers who wish to preserve the identity of a collection of named varieties must cut off flower stalks on these cultivars before they set seed. On the other hand, seeds are carefully collected when crosses have been made, when a quantity of seed is needed for distribution to fanciers, or when plants

are selected which exhibit favorable characteristics which could thus be perpetuated.

SUMMARY

A general summary of the most frequently recommended methods in the compilation to follow is: Plant the seeds in the fall in pots or flats and cover with about a seed's thickness of planting medium. The medium should be fast-draining with a pH of 6.5 to 7.0. Plant as many seeds as you can physically separate at transplanting time. Keep the planting medium moist until the seeds germinate in about two months. Transplant when the seedlings are 3 to 4 inches tall in March to May. They can be transplanted into the ground or into containers maintaining the proper pH. They prefer filtered shade or morning sun, especially when summers are hot. Details and variations from many contributors are compiled below.

The outline which follows is divided into five sections: Storage, Pre-conditioning, Time of Planting, Planting Methods and Media, and Transplanting Seedlings.

SEED STORAGE

Three individuals plant their seeds as soon as they are harvested. Most store their currently harvested seed until all the season's seeds are collected and plant in the fall. Most collect into envelopes.

Residual seed can be stored as long as 10 years without losing viability. Roy Davidson recommends covered jars for long-term storage to avoid desiccation.

PRE-CONDITIONING

Dora Sparrow of New Zealand seals seeds in a plastic container and puts it in the freezer for a few weeks before planting. To avoid the possibility of seed-borne disease, Francesca Thoolen suggests soaking the seed in a fungicide before planting, and Dorothy Hujsak of Oklahoma has soaked seed in tap water for one or more days before planting. She also tried putting seeds in moist peat for a one-month period 1) refrigerated, 2) frozen, or 3) at room temperature before planting in African violet mix. The best and fastest of the three methods was room temperature.-If seed is dry and shriveled, Roy Davidson says to try re-hydrating it by starting germination in a saucer in frequently changed water.

TIME OF PLANTING

Although this subject is included in

the section to follow, it was mentioned often enough so that some generalizations are possible: Seventy six percent of those who mention time of planting specify late July through fall. (Phil Edinger noted that planting outdoors in fall provides a cool, moist environment and, with the prevalent rains, also provides leaching of germination-inhibiting substances.) One person from Indiana specified spring planting. Three people said they got good germination anytime. Two of these retained their planted pots for two years and pinched out seedlings as they emerged during that period. The third person could control temperature after germination in plastic bags so that transplanting time could be regulated.

PLANTING METHODS AND MEDIA

Many contributors plant their seed in a potting mix of some kind. The formula used and the methodology employed vary greatly. Phil Edinger specifies that potting mixes should be one third sand for fast drainage and have a pH ranging from 6.5 to 7.0. Seed can be planted close together in pots or flats and must be kept constantly moist until they germinate. Roy Oliphant, like Phil, from Northern California, also uses a good commercial potting mix but plants in plastic pots which have been soaked in potassium permanganate solution before planting. He also screens the potting mix which is placed immediately above and below the seed through quarter-inch-mesh screening to remove hunks of bark. The pots are filled and firmed, watered, planted, covered, and firmed again. They are then covered with plastic until germination.-Trevor Nottle of the Adelaide area, South Australia, plants seed, whenever he gets it, in a potting mix of peat, coarse sand, pine bark, and slow-release fertilizer. Robert D. Fabel-Ward of Little Rock, Arkansas, also plants in pots filled with a sand-peat moss mixture, as does Dara Emery of the Santa Barbara Botanic Garden. To two parts each of washed sand and Canadian peat moss, Dara adds 1 part medium-grade Sponge Rok and a complete organic fertilizer: blood, bone, cottonseed meal, kelp meal, rock phosphate, decomposed granite, and oyster shell. After planting and covering, he waters with a solution of non-pathogenic micro-organisms to compete and overwhelm any pathogens which might be present.

PACIFICAS FROM SEED (continued)

Dorothy Hujsak reported in 1981 that she was using a mix of three parts of milled sphagnum, two parts vermiculite, and one part Perlite. She planted in 6-pack plastic containers (1 by ½ inch) with the bottoms cut out and a number of seeds planted in each section. The 6-packs were grouped together and sunk into the ground outdoors where they were covered with chopped oak leaves and hardware cloth to discourage invaders.

Caroline Spiller of the Strybing Arboretum in San Francisco, Dora Sparrow of New Zealand, and Lee Lenz of Southern California have all planted seed in potting mix and put the containers in a freezer for a 1 to 3 month period before taking them out and experiencing good germination. Lee tried putting potting mix in the containers and over this spread a thin layer of finely screened sphagnum. Seed was sowed between layers of this screened material. After thoroughly moistening the surface, the container was put in a refrigerator for 3 to 4 months, keeping the surface moist. When removed to the greenhouse, the seeds "popped up like a flat of grass".

Caroline Spiller notes that Strybing at present is planting the seed in a moist medium in zip-lock plastic bags. This is also a procedure recommended by Roy Davidson and Dorothy Hujsak. Caroline and Dorothy use moist peat in the plastic bags whereas Roy reported using a sterilized mixture of chopped sphagnum with ground peat, sterile compost, vermiculite, etc. The medium should be wet, but not soggy, and the seeds should be surface sterilized before planting. Seal the bag tightly, leaving plenty of air inside. Both Roy and Caroline say the bags can then be loaded into a box or carton, stacked one on the other, and put in a cool place, - under the bench in a potting shed, in an attic, a basement, a protected area outdoors. Examine the bags as temperatures raise and move those showing some growth to a slightly warmer but still shady location. Germination time can be manipulated. When you wish them to sprout they can be put in the light. They can germinate within weeks of planting and produce flowers the following spring. The advantage to this method is that moisture retention is automatic and that germination can be controlled. The disadvantage is the pos-

sibility of loss when the sensitive, somewhat sterile plants are moved into the much less sterile outside garden bed.

Bonnie Bowers of Volcano, California does not specify the planting medium she uses to fill the 2-gallon black plastic pots in which she plants her seed. She sprinkles a preparation called "Aqua-Stor" on top of the seed before she covers and waters them and notes that the pots need less water during the summer months when this material is used. Aqua-Stor is a polymer-based powder capable of absorbing many times its own weight of water.

Dorothy Howard reported that Jim Keithley of Oklahoma plants PCNs in pots outdoors and moves them into his garage when particularly cold weather hits. His planting medium is not recorded, but he has had excellent results.

Some of our Almanac contributors used field soil, sometimes amended, rather than potting mix, and many planted directly into the garden.

We can start out with Roy Davidson who also contributed the plastic bag method, suggested to him originally by Hattie Hubbard. In Volume 8, Number 1 of the Almanac he tells of planting seed in a sandy-humus soil in large pots or gallon cans in the fall. The moisture should be watched carefully so that the seeds, once wet, should never dry out. Some early-germinating seeds can be pricked out and transplanted into 3-inch plastic pots, but most are left in for one year.

Francesca Thoolen, in answer to a question from France, advised planting in a soil with sharp drainage, humus added, and of neutral pH. Both the soil and the seed should be soaked separately in a fungicide before planting in 6-inch pots, - about 30 seeds per pot.

John Adan, Johannesburg, South Africa uses ordinary moist garden soil in flats. He scatters the seed over the surface, covers with river sand firmed with a block of wood. Richard Richards of Corona also likes to plant in soil but tries to obtain a soil similar to that in which the species is native. To this he adds soil sulphur, since he finds that seeds germinate better under acid conditions. The late George Stambach, Richard's neighbor, also liked to use acid-amended soil, but added compost and some earthworms to his pots. George

advised against the use of peat in pots because it dries out if neglected and is difficult to wet, once dry.

Peg Edwards plants her seeds outside in Massapequa Park, New York, in a cold frame in full sun. She leaves them in the frame for a full year before setting them out. Some even bloom while still in the frame.

Elaine Hulbert, Kathryn Wright, and Robert Fabel-Ward plant directly into the garden. Elaine Hulbert, who now lives in Virginia, was referring to her former home in Connecticut when she reported successfully establishing PCNs in her garden in 1977 by planting seeds in various areas of her property until she found the most favorable conditions. Kathryn Wright used much the same technique in Terra Haute, Indiana. She planted seed in sandy loam soil on a slope in the spring. Those that have emerged are doing well without coddling. Robert Fabel-Ward grows his plants in raised beds in his Little Rock, Arkansas garden. He allows seed from his PCNs to drop to the ground unaided. They sprout freely and produce strong, healthy plants in his heavy clay soil, modified with leaf mold, pine needles, and sand.

The late Dr. Matthew Riddle, of Oregon, wrote in a 1950 American Iris Society Bulletin that seed should be sown in the open, one quarter inch deep and in rows 6 inches apart. He planted in the fall. Lewis Lawyer also plants his seedlings in the open in Oakland, California. Seeds are sown in the fall in a semi-shaded area enriched each year with peat moss. He plants seed one half-inch deep, ten plants per foot, with rows four inches apart. If space permits, a 6-inch spacing makes digging at transplant time even easier. Winter rains take care of the bulk of the watering but hand watering to prevent drying out may occasionally be necessary. Seedlings emerge in two months and average germination is 54 percent. The seeds planted by Lewis are new crosses and seed lots range in germination from 90 to zero percent. He finds that interspecific crosses often have poorer germination than homozygous crosses.

TRANSPLANTING SEEDLINGS

John Adan, South Africa, transplants when his seedlings are 3 inches tall. He uses peat pots containing a mixture of soil, peat moss, and sulphur, and

he also recommends pine-needle compost. He sets them out from the pots into the garden in the summer, by which time they have strong, fleshy roots. A half day of sun is provided and peat and a light application of sulphur is added to the beds before planting. He has also incorporated well-matured mushroom compost on occasion with good results. He mulches with pine needles.

Peg Edwards, New York, moves her seedlings from the cold frame even when they are in bloom because "they have become acclimated." She loses about half the seedlings in the first year, but the survivors are "nice, healthy, vigorous plants". She can't move them successfully from the cold frame after the beginning of July.

Joan Cooper of Minnesota transplants to a moderately acid, moderately shaded, north-sloped wildflower garden. All those that survived seemed reasonably healthy and happy.

Dan Hargreave, who worked on *Californicae* in Australia for over 30 years, planted them in autumn, transplanted seedlings in the spring, and had bloom the next spring. Trevor Nottle, also of Australia plants in autumn when the rains come. He moves his established clumps then, too. He finds this time best because it is damp and cool.

Dara Emery transfers his seedlings to 3-inch pots when they are 2 to 3 inches tall in January and February. He prefers small pots rather than flats or trays because less root damage will occur when the plants are cut apart or otherwise removed for their next transplanting. Dara applies fish emulsion to water-in the seedlings to give them a good start and he fertilizes these pots every two to three weeks thereafter with the fish emulsion. During this period the small pots must be protected from birds and baited for snails and slugs. In late June or July the "liners" are transplanted into gallon cans and finally, in the fall, they are planted out or sold. In the case of "breeding work, the liners are sometimes planted directly into the field provided they can be watered, weeded, and degophered as needed."

Robert Fabel-Ward transplants his hybrid seedlings into styrofoam cups where they grow from December until March. Some are planted out in the garden at the end of March and others

PACIFICAS FROM SEED (continued)

are reserved for fall planting. They are set out in the styrofoam cups with the bottoms cut out. When established, the sides are also cut out and removed.

When Roy Davidson moves his PCN seedlings from their plastic bag nest in the peat, he opens the bag a day or two before moving and adds some dilute Hyponex or Rapid Gro fertilizer. They are then moved into pots and set into a coldframe or cool greenhouse.

Phil Edinger and Francesca Thoolen recommended that seedlings be set out when they are 3 to 4 inches tall, either into pots or the ground. If in the garden they should be situated in an area receiving morning sun or in filtered shade. They can be set out in March or April in Northern California.

Lewis Lawyer moves his seedlings from one peat-enriched area in his garden to another lining-out location in May when they average 6 inches tall. They are planted in the native decomposed rhyolite soil to which compost has been added a month or more before planting. Peat is incorporated at time of planting and acidity ranges from 5.5 to just under 7.0. Where the pH is 7 or above a small amount of sulphur is added. Seedlings are dug and the soil washed from the roots. The crown and roots are then immersed for 10 minutes or longer

in a solution of Subdue (metalaxyl) at one quarter teaspoon-full per four gallons of water. *(See footnote below) After drenching, the seedlings are lined out for selection in rows 12 inches apart with 6 inches between plants in the row. A portion of these plants will bloom the following spring.

*A dropper bottle is a simpler method of application when less than 4 gallons of soak solution is needed. It is necessary, however, to calibrate the dropper bottle used in order to achieve the recommended dosage of 0.3 ml per gallon. Count the drops necessary to fill a one quarter teaspoon measuring spoon and divide this number by 4 to arrive at the number of drops per gallon. John Weiler in the Spring 1987 issue of the Almanac, uses from 6 to 8 drops per gallon whereas Lewis has used 8 to 12, depending on the characteristics of the dropper bottle. A drop or two more is neither phytotoxic nor of extra benefit, only unnecessary. Also, no phytotoxicity occurs if the plants remain in the solution longer than 10 minutes, (even up to overnight), or if some or all portions of the leaves in addition to the roots and crown, are immersed in solution. Subdue is a systemic fungicide which will move into the leaves from the roots without direct contact.

POLLINATION TECHNIQUES FOR PCNs

Lewis Lawyer, with a section on storage of pollen by Dr. L. Lenz

The simplest way to pollinate most flowers is to let a bee or other insect do it for you; furthermore, if this method is used, you can name your new seedling something cute like "BY A BEE" as was done by Roy Davidson for a Starker Cal-Sibe. On the other hand, although you may know the mother, the father will always remain anonymous, and if you want to know or choose both parents, then you will have to do the pollinating yourself.

In the case of Pacific Coast iris, the simplest way for you to do this is to pluck a pollen-laden anther from the desired male flower with a pair of tweez-

ers and carry it to the stigmatic lip of the desired pod parent. Carefully rub the pollen side of the anther across each of the three stigmata. The AIS publication, *World of Iris*, states (p 327) that "...a full set of seeds may often be obtained if only one stigma is pollinated," but I have no personal experience to back up that statement. I have, however, often found the reverse to be true, that is: a poor set of seeds, even though all three stigmata were pollinated. I have found this to be true more often when I do the pollinating rather than when the bees do it. Perhaps you could lay this on the centuries of experience the bees have had in this sort of thing, but I have a feeling that at least some of it is due to injury to

the stigmatic lip when I rub the anther across its surface. It is possible that applying the pollen with a small camel's hair brush or other similar soft-bristled paint brush would alleviate this problem, but for the past two years I have been using both methods with no discernable difference between them. I now believe that most of my problem is the result of incompatibility. Most of the crosses I am trying to make have genetic backgrounds involving at least four different species, and this often leads to various expressions of incompatibility: no seed set, poor seed that fail to germinate or germinate poorly, etc. For example, one of the crosses from which I was particularly anxious to obtain seed was made two years ago between my seedling now registered as SIERRA DELL and pollen from a Lee Lenz blue seedling. I made brush crosses to eleven perfect flowers using ample pollen, and not a single seed pod set. Other pollen brought to the same plant produced seed, as did the Lenz pollen brought to other plants.

The next problem occurs when two desirable parents bloom at different times and the bloom dates don't overlap. The same sort of problem occurs when you want to ship pollen to someone in another area. It can even occur when two desired parents, especially two young seedlings, are in bloom at the same time but the flowers seem to alternate between the two plants and are never at the right stage on the same day. All the above circumstances require pollen storage. This can cause problems since the freshly-plucked anthers are damp and will mold if not handled properly, especially if you are storing more than one or two anthers in a container.

We knew that DR. Lee Lenz would have had as much experience with storing pollen from PCNs as anyone, since he had done so much work on interspecific crosses and there was no way he was going to convince all of them to bloom at the same time. Furthermore, he had previously shipped us pollen in little, clear plastic boxes, and we had used it successfully. So during our recent trip to Southern California we questioned him about his experiences. The following is from a taped recording made in his office at the Santa Ana Botanic Garden in Claremont.

"Several years ago I carried on an experiment using different storage conditions in humidity-controlled storage chambers. I don't have the exact data here now, but the conclusion reached at the time was that drying or low humidity (around 35 % was optional) was the most important factor in the preservation of pollen. Since that time, I have used nothing but dried pollen and have even kept pollen, dried and refrigerated, from one year to the next.

"To keep the pollen dry, I use a material called, 'Drierite'. This is a commercial desiccant obtainable from Van Waters and Rogers or other laboratory supply dealers. There are other similar materials which are probably more readily available by someone not working in a laboratory. Two such desiccants which come to mind are calcium chloride and silica gel. Silica gel is used for drying flowers and is obtainable in florist supply or hobby shops. It looks and feels like fine sand. All these materials can be redried in an oven and used over and over.

"The desiccant is put in the bottom of a suitable air-tight container. I use a small glass laboratory desiccator but any available air-tight canister such as are used for food storage should do equally well. I cut a piece of hardware cloth to fit inside the desiccator and form a false bottom over the top of the drying agent so there is no contact with it and the pollen. Then you place your open pollen containers on the mesh bottom and close the lid. After the pollen is sufficiently dried, the little containers can be sealed and placed in the refrigerator; or if you have space, the whole desiccator can be kept refrigerated.

"I have not tried freezing pollen so I have no direct experience to say if it would be better or worse than refrigeration. If it was desirable, however, the freezing would have to be done much quicker than would be possible with a home freezer in order to prevent the formation of ice crystals which rupture the cells. A quick freeze with a coolant such as liquid nitrogen might work; but, as I say, I have only used refrigeration and certainly quick-freezing is beyond the equipment capabilities of most gardeners."

The AIS, *World of Iris*, recommends storing the dry pollen in small paper

POLLINATION OF PCNs (continued)

envelopes, gelatin capsules, or the small transparent plastic cases used for selling small fishing lures. The containers used by Dr. Lenz for shipping pollen were similar to the small, clear transparent plastic cases described above. They were about 2 inches by 2 inches, and a half-inch deep, with a fairly tight-fitting lid. In shipping, the jolting had loosened the pollen from the anthers and it was clinging to the sides and bottom of the little boxes. It was a simple matter to pick it up on the tip of a small camel's hair brush and carry it to a receptive flower.

Last year I got the idea of using the little black plastic containers in which 35 mm color film is packaged for delivery. They have tight-fitting lids, are easy to carry around, and are more than large enough to hold any number of anthers. In order to eliminate any identification mixups, I labeled each container AND ITS LID on self-adhesive paper labels before I placed the anthers inside. Since the film boxes are quite small, I used small pieces of Avery self-adhesive typewriter correction tape, which is available at most stationery stores, for this purpose.

The instructions for the use of a brush in *World of Iris* recommends sterilizing the brush between each cross by dipping it in 50 percent alcohol. If you only have a small quantity of pollen from a very desirable plant, however, this can be quite wasteful. I figured that it would be less wasteful of pollen and more convenient to have a separate brush for each pollen source. Little red-sable watercolor brushes purchased at an art supply store can be unbelievably expensive, but I found that I could get reasonably priced substitutes by the dozen in a school supply store. (Look in the yellow pages under 'School Supplies'). I cut off the long wooden handles down to the metal ferrule. This makes the

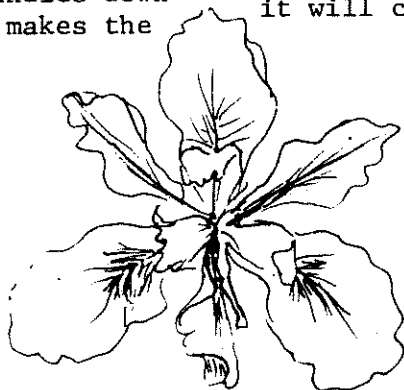
brushes short enough to store inside each individual film container. The brushes get covered with pollen and are always ready to use.

Last year I did not use a desiccant for drying and in two cases where I evidently closed the case too soon after gathering the anthers I ran into mold and had to discard the mess. This year I will use a drying agent, probably silica gel since Adele already has a supply for drying flowers.

I haven't done this before, so I am only guessing, but it seems to me that an ideal substitute for a laboratory desiccator would be one of those rectangular plastic food storage containers with its air-tight plastic lid such as you can find in most supermarkets. A piece of hardware cloth with its edges bent down to keep it above the drying agent would be quite simple to construct and you would be in business. To hold the film containers, which are 2 inches high, the larger container would have to be at least 3 inches deep. A can, such as a coffee can with a plastic lid, or a jar, might also work for drying small amounts of pollen.

For readers who are new at hybridizing and who do not have access to the *World of Iris*, the best time to make a cross or gather anthers is immediately after the flower has opened. Some prefer to do it even before the flower opens, but tearing the flower apart to do this is in conflict with my aesthetic nature and I prefer to wait for the flowers to unfurl on their own so that I can enjoy their beauty as well as exploit their procreative attributes.

One final word of caution: You should always remove the anthers from the selected pod flower before pollinating the flower. This is especially true when using a brush because the pollen from the anthers of the pod flower is usually in a position where it will contaminate the brush.



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TREASURER'S REPORT

SOCIETY FOR PACIFIC COAST NATIVE IRIS

TREASURER'S REPORTS SINCE LAST PUBLISHED IN THE ALMANAC, FALL, 1985

BALANCE ON HAND FEBRUARY 25, 1986	\$680.65	BALANCE ON HAND APRIL 23, 1986	\$231.58
RECEIPTS:		RECEIPTS:	
Dues collected	\$50.00	Dues collected	\$603.00
Dues collected - AIS	63.00	Dues collected - AIS	330.00
Sales of Cohens	7.50	Sales of Cohens	99.50
Sales of Almanac	4.00	Sales of Check List	137.50
Donations (2)	<u>50.00</u>	Sales of seed	40.40
	174.50	Sales of Almanac	<u>16.00</u>
	<u>\$855.15</u>		<u>1226.40</u>
DISBURSEMENTS:		DISBURSEMENTS:	
50 Cohens, plus postage	\$ 59.80	Postage	\$ 28.00
Fall '85 Almanac	183.00	Almanac, Fall 1986	410.89
Third Cumulative Check List	380.77	100 Cohens & envelopes	136.87
	<u>623.57</u>	Stationery	<u>17.23</u>
BALANCE ON HAND APRIL 23, 1986	\$231.58		<u>592.99</u>
		BALANCE ON HAND JUNE 30, 1987	\$864.99
Dorothy Foster, Treasurer		Certified check to A. Lawyer	864.99
		BALANCE ON HAND JULY 28, 1987	0

Adele Lawyer
from data supplied by
Dorothy Foster, Treasurer

SOCIETY FOR PACIFIC COAST NATIVE IRIS

TREASURER'S REPORT JULY 28 THROUGH NOVEMBER 16, 1987

BALANCE ON HAND JULY 28, 1987	0
RECEIPTS:	
Certified check, D. Foster	\$864.99
Dues collected	253.00
Dues collected - AIS	90.00
Sale of Cohens	7.00
Sale of Carolee print	6.00
Interest	<u>13.11</u>
	<u>\$1234.10</u>
DISBURSEMENTS:	
Almanac expenses, Fall 1986	28.12
Almanac expenses, Spring '87	301.55
Postage	18.78
Notices and file cards	<u>34.45</u>
	<u>382.90</u>
BALANCE ON HAND NOVEMBER 16, 1987	\$851.20
Adele Lawyer, Treasurer	