



NEWSLETTER

JULY 1994

**TAMPA BAY CHAPTER of the
RARE FRUIT COUNCIL INTERNATIONAL, Inc.**

EDITORIAL COMMITTEE: BOB HEATH
THERESA HEATH
ARNOLD STARK
LILLIAN STARK

PRESIDENT: SHERRY BAKER CHAPTER MAIL ADDRESS: 313 PRUETT ROAD
(Including Renewals) SEFFNER FL 33584

MEETINGS ARE HELD THE 2nd SUNDAY OF THE MONTH AT 2:00 P.M.

NEXT MEETING. JULY 10, 1994

MEETING PLACE RARE FRUIT COUNCIL CLUBHOUSE, 313
PRUETT ROAD, SEFFNER. Take I-4 to
Exit 8 North, S.R. 579; go one mile
to Pruett Road (see McDonald School
sign). Turn right (EAST). Go one
mile. See Clubhouse on left immedi-
ately past McDonald School.

PROGRAM OUR SPEAKER THIS MONTH IS JOE FREEMAN
who is a horticulturist at Cypress
Gardens. He will provide a slide
presentation on the Gardens, involving
topiary work, propagation and landscap-
ing. This should be a very interesting
display of the beauty that is Cypress
Gardens. Also, we will have our usual
tasting table and plant exchange.

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EVENTS OF INTEREST TO FRUIT GROWERS IN JULY:

July 14 - GRAPE FIELD DAY 1994

9 a.m. - 3 p.m. CFREC Leesburg

Jam, Jelly, Wine-making

Grafting demonstration

Vineyard tour

Seminar on Production, Marketing, and Utilization

July 16-17 - TROPICAL AG FIESTA

10 a.m. - 5 p.m. Fruit & Spice Park

Homestead, Fla. 24801 S.W. 187th Ave.

Phone (305) 247-5727

Ethnic food, mangoes, plants for sale

Horticultural advice

THE LYCHEE by Bob Murray

Bob Murray began his talk by asking for a show of hands of all those who had never tasted the lychee. Then he proceeded to pass out the lychee fruit to those who raised their hands. It was interesting to note how many other hands went up after he began to pass out the fruit. That brought on a hearty laugh. Bob indicated that he and his wife started their nursery in 1977, prior to which time they were mango growers. They began to grow mango trees for those who requested them from amongst their customers who bought their fruit. One thing led to another; they drifted into other trees, flowering trees, citrus. He was told that tropical fruit trees are nice to fool around with, "but don't try to make a living on them; grow hibiscus, ligustrum, that kind of thing, things that will sell." However, it kind of got out of hand, in that one of the first things they started working on was the lychee. When they tasted the fruit, they immediately fell in love with the tree. And he suddenly knew why so many people were infatuated with the lychee.

The definitive work at the time was a book called "The Lychee and the Longan" by Professor Weidman Groff. His book is very interesting in that he reports some things that he observed that leave you hanging. For example, he says, "In China there is a species called Hanging Green where the two sides of the tree look different and it has many branches emanating from the trunk. "Well," says Bob, "every tree has branches emanating from the trunk and many trees don't look the same on both sides." This kind of statement leaves you kind of hanging to understand what he's referring to. He also says that "limbs taken from this tree are always inferior to the tree itself. Try to figure that one out if you can. He also said, "Nurserymen frequently let seedling lychee trees grow to 4" to 6" in diameter before they try to graft it."

Bob said they started their nursery by going to people and asking, "Do you know where is ---, or have you heard of ---," or "know somebody with a tree that should not be growing where it is, but is growing where it is, and is fruiting, or a tree that has bigger fruit than usual; or if the fruit normally is yellow, this fruit is red; or if the fruit is normally red, this fruit is purple, etc." So they searched out those trees that were reported to be better and trees native to foreign countries.

Bob said he was fortunate to have a wife who had a natural talent for grafting and when someone had indicated that a graft on a certain species could not be done, he had to grow thousands of them and let her whittle on them and try to find out how it could be done. She spent many hours working just that way. So Bob indicated his slides today would show us many of the things they have been trying over the years, particularly with lychees, and also with many other crops, "but I hope at the close of the lecture that you won't be like the fellow who came up to me last time and said, 'I really enjoyed your talk but I don't think I understood what was going on.'"

His first slide showed the entrance to their nursery, which is located on the north central side of Pine Island off of Ft. Myers. Bob said anytime they find anything that is a little different, they propagate it. He showed us an *Annona reticulata*, bullocks heart, or custard apple. The custard apple is normally reddish on the outside but is normally white on the inside. Bob has been trying to develop the red color inside of the custard apple, but he found that Zill's Nursery had already developed the red custard apple. This is the way they continually try to develop new cultivars, and when they don't work out, they frequently cut the tree down, let new sprouts come up, and graft into those new sprouts.

What happens when you bring native cultivars of lychees out of China into a new location into a foreign environment? You get a lacy, chlorotic, unvigorous "something". He showed us an air layer from that particular tree. Also, he wanted to remind us that citrus has been in cultivation in the United States, in the Americas, from the late 1800's, so you can say that in 100 years, we've gone from eating the fruit, planting the seeds, letting them grow into mature trees to see if the fruit is sweet; if it is, plant them in your grove and label them all sweet orange, then sell them.

So now we've got literally hundreds of varieties of oranges that are all uniform, but if you read the literature, you'll find that, for instance, the Valencia orange can vary in a grove with from 3% to 18% of the trees not being true to type; close, but not exactly the typical Valencia. The color's not right, the size is not right, the leaves are not right, the stems are not right, but close enough to be called Valencia. Another example, the marsh white grapefruit on a grafted tree produced one limb on which the flesh of the grapefruit was pink, so we got Thompson Pink. Later, a limb came out on the Thompson Pink that had red flesh, so we got the red blush or ruby red grapefruit. These were sports, and this kind of thing has been happening for the last hundred years that we know of. With lychees, there is a record of their propagation for 3200 years. What if the tree is diverse, what if all the limbs on the tree are not the same? Take the example of the man who plants a complete grove of Mauritius lychees, and he tells you six of the trees just don't produce like all the rest. Is it possible that for 3200 years we've been propagating lychees degeneratively? We probably did and now it is showing up. But now we have the power to change that and make the "something" lychee look like his next slide, deep green, good growth habit, nice trunk, growing fine at the Treehouse Nursery. All we have to do is find the right combination.

The slide he was showing us, he said we should keep in mind, it is called the Emperor and it's going to be a very important cultivar. The slide was typical of the Emperor lychee groves in the state of Florida. Chlorotic, not vigorous, and when it blooms, if it blooms, the panicles are only 3" long, maybe. He said to keep this picture in mind because it is typically what the Emperor lychee looks like in Florida. The next slide, he said, is what the Emperor lychee looks like at the Treehouse. The trees are certainly beautiful. Bob indicated they are all grafted trees, and in the grafting, they ran into something unusual. They do the graft by veneer or cleft or even chip budding. But his next slide showed what they had run up against. The root stock was vigorous, which is always the case since they destroy those that are not. When they add the scion to the root stock, it overgrows the root stock, ages and imparts that aging to the root stock, and the root stock's growth is stopped, terminated. So perhaps what Professor Groff was saying is that you get an aging introduced by the grafting into the root stock with certain scions and it arrests development of the root stock. So in this case maybe he's recommending that the root stock should be 5" or 6" in diameter before it is grafted to allow it to age. This has caused them to look at some of the statements in his book a little bit differently. In addition, this plant will eventually die. When it's put into the ground, the root stock's growth is arrested, the scion continues to grow, and grows to a point where the arrested root stock can no longer support it, so it begins to wither, and will soon die. We could see from the slides that the grafts heal very nicely but after the healing, something happens.

Bob showed us two trees, the same scion but on different root stock, grafted the same day, put out in the same field. One was beautiful, the other was rapidly declining. Then he showed us another slide of a similar situation where the scion wood was overgrowing the root stock and imparting aging to the root stock, which had stopped growing, until an adventitious shoot came out from the root stock and started growing, and from there down, the root stock became normal. Several years ago, they used to put atemoya on custard apple, *Annona reticulata*, and after growing them for three or four years in the field, during a wind they broke off clean at the graft union. So you can imagine a man with a field of atemoyas that, after a wind storm, were no longer atemoyas. He would be upset to say the least. They didn't know before about the delayed graft incompatibility. Bob showed us several varieties of lychees and longans, and some he thought might be crosses between lychees and longans, and described some of the desirable characteristics of different cultivars. And the work they've been doing developing diverse lychees by planting several thousand seeds and separating out those few that seem to have special characteristics, which they use for evaluation.

Lychees normally run 9 to 13 to a pound, but with the Emperor, you may get a two ounce fruit which makes 8 to a pound, since the Emperor is a large fruit. Another one they are proud of is Ohia, in which the flesh to seed ratio is very high. Ohia is one of the few that produces both of the fruit that come out on a single stem. Most lychees abort one of the two and only produce one fruit per stem. One lychee tree, the Bengal, fruited for them 3 years in a row in a pot, but when they transferred it to the ground, it was 6 years before it fruited again. But while their consistency of bearing leaves a little to be desired, they hang in large clusters and do very well in central Florida.

Bob ended his talk by introducing his wife, Vivian, who, he said, "does all the work for which I get all the credit." Bob answered several questions, one of which concerned the browning of lychee leaf tips. He said it is salts which cause this. When chemical fertilizers hit the ground, they form hydroxyls and immediately begin to break down into water and salt, so when you add chemical fertilizers to your plants, you are dousing them with various kinds of salts. This is what causes the browning of the leaf tips and edges on the lychee trees. The use of organic fertilizers, cow manure, rabbit manure, etc., will normally clear up this condition and the new leaves coming out will be all green.

Paul Zmoda asked how one can know when the lychee is ripe enough to pick and eat. Bob suggested, "Just leave them on the tree and you will know that they're ripe when the raccoons get them." Actually, Bob said when they get red all over, they can be picked and eaten. Even though they're not fully ripe, they're still excellent. Bob indicated the lychee has male and female flowers, but that the individual flowers frequently do strange things, even changing from male to female flower, or producing deformed or incomplete flowers. This may be the result of 3,000 years of human meddling.

Answering another question, Bob said seedling trees of the lychee may take up to 20 years before they start to fruit because it frequently takes that long to break juvenility. However, if one wants to discover what kind of fruit a seedling will produce, juvenility can be broken by cutting off the scion wood from the seedling and grafting it into a mature bearing tree where it will lose its juvenility and fruit within a reasonable length of time. Concerning freezes, to preserve small lychee trees, Bob recommends a cover with a long-burning candle underneath. The cover needs to go all the way to the ground and be held in place with rocks and the candle needs to burn through the entire cold spell. It will produce enough heat to keep the lychee from freezing. This will also work very well with any other reasonably small plant. A candle also is not subject to power failure. Home Depot has a big candle in a small galvanized bucket that people set around on the patio. This kind of thing works very well.

Bob gave us his procedure for planting a tree. He said our Florida sand is an excellent medium. Set the plant in the sand. Set the root ball a little bit high because it will probably settle some, pull any roots on the outside out a little bit to help them spread, don't add anything to the planting hole, and water in the soil around the root ball so there are no air pockets and so the plant is set firm and rigid. Spread a layer of raw cow manure around the planting hole; it doesn't need to be sterilized nor composted, nor does it have to be fresh out of the cow. Spread the cow manure around but do not let it touch the trunk of the tree. Cut a square about 3' x 3' from old used carpet, cut a hole in the center and put it over the cow manure, then mulch it heavy to cover up the carpet. So the cow manure is probably full of weed seeds which sprout, germinate under the carpet, but the carpet will kill them off before they can do any damage. Horse, sheep, rabbit manure will work equally well.

Concerning premature fruit drop, Bob explained, at the point where the fruit stem attaches to the tree, there is a layer called the abscission layer. It is a layer at which the tree allows ripe fruit to separate from the tree without providing an infection point. When the fruit is juvenile at times a fungus will attack this

abscission layer and cause the tree to abort the fruit. Bob recommends Diathene M-45 and a good spreader sticker. Start the spray procedure as soon as the bloom comes out and continuing until the fruit has formed and has reached a significant size.

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What's Happening

June-July, 1994

by Paul Zmoda

We growers know from experience that not all seeds planted will ever sprout and survive, but perhaps the ones that do after periods of chilling at near-freezing temperatures are inherently better able to survive cold as older plants also. My theory is this: you may be able to select for cold-hardiness by chilling seeds for various lengths of time and then planting. The plants that do grow may be the hardiest of the lot.

I have had healthy two-year-old soursop seedlings (4 feet tall) killed to the roots during night temperatures in the low 40's F. I had stored some of the same seed for well over a year at a temperature of 38°F, and when planted, some actually sprouted! The last seedling died due to an inability to shed its heavy seed coat. This showed it could live at less than 40 degrees inside the seed, whereas a large specimen suffered extreme damage at a slightly higher temperature.

More experiments like this would certainly waste less time selecting for cold hardiness than growing lots of seeds, caring for the seedlings and finally performing field trials after waiting for winter. The selection process can be done at any season of the year. I would like to get together with interested members who would like to put my theory to the test with other species in this fashion.

Passiflora alata has just bloomed for the second time this year. A single, reachable flower surprised me by setting a large fruit

after hand-pollinating it with itself (see March, 1994 newsletter). It is over 5 inches long. I picked my two lychees after last month's meeting, since they were totally red. One had a seed and the other a "chicken-tongue" (atrophied seed, but more flesh). Both were delicious. The Colombian "Anon", a sugar apple, has one fruit on it and is doing well. I picked up a red sugar apple, "Kampong Mauve", recently. It has a lot of promise. A past lecture by Mr. Har Mahdeem mentioned it at our meeting on 7/11/93.

The PawPaw seeds are coming up! Also a previously planted pair of PawPaw are finally leafing out. The standard-size Pomegranate has 27 nice fruit so far - the most ever. This year I'll be sure to watch out for mealybugs hiding on the calices which can cause premature spoilage. Another Pomegranate (variety "Nana"), a tiny dwarf has fruit merely the diameter of a quarter. Another specimen, now believed to be a hybrid of these two, has fruit roughly two inches in diameter. A recent *Punica* acquisition, supposed to have yellow flowers, actually has a double, pink blossom. I need to get cuttings started of a pomegranate I know of which has clear juice, instead of the more common wine-red.

New plantings include a mountain soursop; my approach-grafted *Passiflora edulis* on a vigorous, nematode resistant rootstock; *Passiflora* possum purple, and a strawberry tree (*Muntingia calabura*).

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Raffle: June

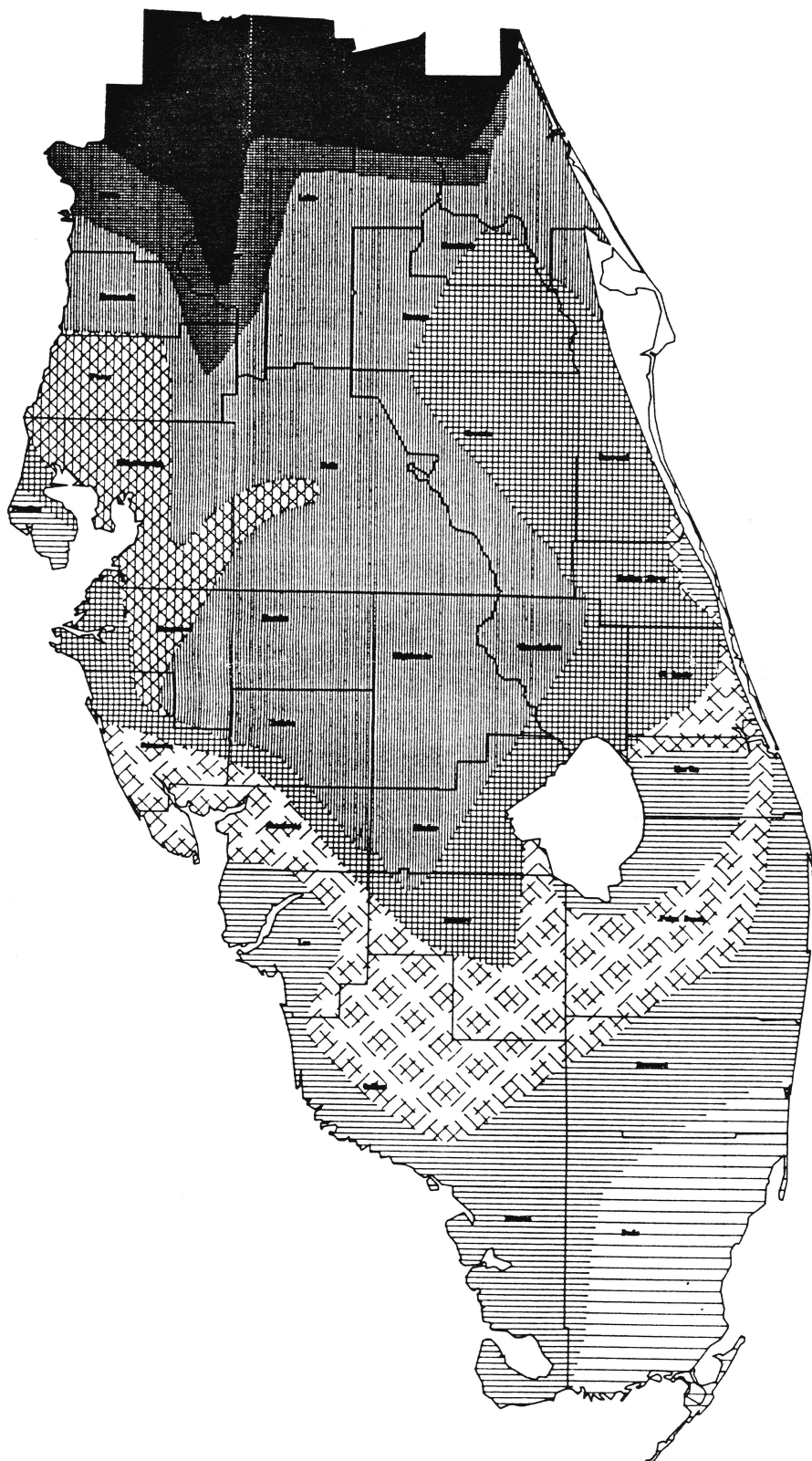
Plant Name	Donor	Winner
Grafted Avocado	Roy Gear	Phil Brown
Lemon Grass	Roy Gear	Phil Brown
Pineapple	Roy Gear	Dan Williams
Pineapple	Roy Gear	?
Loquat	Roy Gear	Chris Harper
Avocado Seedling	Roy Gear	?
Silverthorn	Roy Gear	V. Reddicliffe
Potting soil	Roy Gear	Janet Conard
Cactus (Night Blooming)	B. Reddicliffe	?
Barbados Papaya	B. Reddicliffe	Sue Tate
Carambola Pickles (2)	J. Murrie	?
Strawberry Tree	P. Brown	Zmoda
Tomato Tree	P. Brown	V. Reddicliffe
Guava	P. Brown	?
Ascomeda Arnold	R. Perry	?
Yucca	R.K. Webster	V. Reddicliffe
Yucca	R.K. Webster	Ben Hawkins
Banana (2)	R.K. Webster	Kass Scott-Rivera
Fruit Basket	Connie & Tony Ferreira	Kimberly Hunt
Rose Apple	Janet Conard	Phil Brown
Chocolate Mint	Louise R. Ball	Kimberly Hunt
Red Guava (2)	Louise R. Ball	Bev Millar
Rose Apple	Louise R. Ball	Sue Tate
Oregano	Louise R. Ball	Al Hendry
Oregano	Louise R. Ball	Bernie Spector
Silver Thyme	Louise R. Ball	Stark
P??? S???	Louise R. Ball	Jerry Amyot
Tree Basil	Heath	Sue Tate
Tree Basil	Heath	Kass Scott-Rivera
Chaya	Heath	Sue Tate
Chaya	Heath	V. Reddicliffe
Pineapple	Heath	Bev Millar
Aloe	Heath	?
Mountain Soursop	Heath	Jerry Amyot
Reticulata	Heath	Tony Ferreira
Rose Apple	Heath	Kass Scott-Rivera
Passion Fruit	Heath	Chris Hayea
Momoncillo	Zmoda	N. McCormack
Spanish Lemon	Zmoda	Al Jean
Spanish Lemon	Zmoda	Mary Ann Campbell
LâLôt	Zmoda	?
Cattleya Red Guava	Zmoda	?
Mahui Double Banana	Baker	Chris Hayes
Loquat & Pecan Conserves	Scott-Rivera	Ronald Webster
Loquat & Pecan Conserves	Scott-Rivera	J. Murrie
Cucuzza	Frank Pupello	Zmoda
Cucuzza (2)	Frank Pupello	?
Jakfruit (2)	Tony Ferreira	Dan Williams
Loquat	Dan Williams	B. Spector
Kadota Fig	Dan Williams	Kimberly Hunt
Papaya	Mary Ann Campbell	?
Custard Apple	Mary Ann Campbell	Kass Scott-Rivera
Long-Jon Papaya Seed	Bev Millar	?

CLIMATE DATA 1962-1992









STATION NAME	NUMBER OF TIMES BELOW 32	ABSOLUTE MINIMUM TEMPERATURE	STATION NAME	NUMBER OF TIMES BELOW 32	ABSOLUTE MINIMUM TEMPERATURE
Arcadia	160	18	Miami Beach	0	32
Archbold	203	13	Miami WSCO	4	30
Avon	257	18	Moore Haven	54	23
Bartow	106	18	Mountain Lake	173	16
Belle Galde	43	21	Myakka River	127	18
Bradenton	71	20	Naples	24	26
Brooksville	133	13	Oasis	12	26
Bushnell	326	12	Ocala	345	11
Canal Point	10	25	Orlando	70	19
Clermont	88	18	Parrish	87	18
Clewiston	24	26	Perrine	3	29
Daytona Beach	132	15	Plant City	153	17
Deland	300	16	Pompano	11	28
Devil's Garden	60	20	Punta Gorda	42	23
Everglades	23	24	St. Petersburg	19	22
Flamingo	12	24	Sanford	105	19
Fort Drum	117	17	St. Leo	91	18
Ft. Lauderdale	6	28	Stuart	25	23
Fort Myers	15	26	Tamiami	10	28
Fort Pierce	53	19	Tampa WSCMO	78	18
Hialeah	9	28	Tarpon Springs	79	19
Immokalee	48	20	Titusville	122	19
Inverness	272	15	Venice	41	20
Kissimmee	100	19	Vero Beach	54	23
LaBelle	106	21	Vero Beach Arpt	18	21
Lake Alfred	151	16	Wauchula	142	20
Lakeland	62	20	Weeki Wachee	missing	13
Lisbon	177	16	West Palm	13	27
Loxhatchee	44	24	Winter Haven	97	19
Melbourne	62	17			

(Please note all temperatures are in degrees Fahrenheit.)

Extreme Cold in Peninsular Florida (1962 - 1992)



Key

	300+
	200-300
	100-200
	75-100
	50-75
	25-50
	10-25
	0-10

Number of Days Temperature was Below 32 F.

R E C I P E SCALAMONDIN PIE

Filling: one cup water
 one cup calamondin puree
 1/2 to 3/4 cup sugar
 one tablespoon butter
 three egg yolks
 three tablespoons all purpose flour
 three tablespoons corn starch

meringue: 1/2 tsp. vanilla
 6 tablespoons sugar
 three egg whites

Bake and allow to cool one prepared pie shell or if handy with flour, shortening, etc., make a pie shell and do the same. To make a calamondin puree, I simply place washed fruit in a food processor and run until it's pretty fine, seeds and all. I then strain and set aside one cup. In a sauce pan bring the water, flour and corn starch to a slow boil stirring constantly to keep from sticking. Once it is at a slow boil, I continue for an additional two minutes. Add a small amount of the mixture to the lightly beaten yolks (I stir a moment with a fork) and add that mixture together with the butter to the sauce pan. Bring back to a slow boil and add the calamondin puree. This is then brought to a boil again for an additional minute and poured into the cooked pie shell.

Prepare meringue by beating the egg whites and vanilla, adding the sugar slowly once the egg whites start to fluff. I find that the egg whites work best if I put them in the freezer while I prepare the filling. I have had ice forming on the egg whites and they still worked fine. Put meringue on top of the pie, sealing the edges well. Cook in a preheated oven at 350° for ten minutes or until the meringue is browned. Cool well before serving.

I find that the left over puree makes a pretty good drink if mixed with water at a rate of one part puree to three parts water and sugar to taste.

Frank Burhenn

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NOPALES CON SALSA

Three cactus pads - cut in 1/4" x 1-1/2" strips. (Use only pads from a non-prickly cactus)

Four heaping tablespoons mild salsa

Salt to taste

Cut pads in strips and fry in vegetable oil for 5 minutes at medium heat, stirring occasionally. Add salsa and bring to boil - simmer for 5 minutes.

Serve as side dish with pork or beef roast or chicken.

Bob Heath

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Tasting Table: June

94-54

Bev Millar: papaya & seed

Janet Conard: Rose Apples & Banana cookie

Stark: Guanabana juice, passion-fruit juice

B. Reddicliffe: Chocolate-chip cookies

Pearl Luxenberg: Walnut orange cake

Connie & Tony Ferreira: Caramel cake with toffee frosting

Sue Tate: Mixed fruit

J. Murrie: Carambola pickles

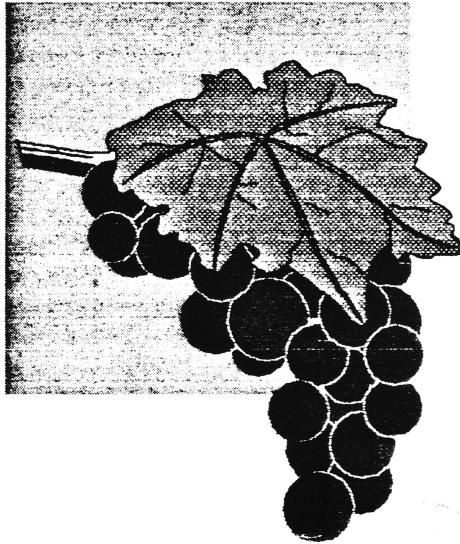
Walter A. Vines: Edible cactus

George Merrill: Guava paste

Lillian Wente: Fat-free Brown Bread

Thank You Thank You Thank You

To Bob & Terry Heath for the many days you have come out to the clubhouse to water and care for the new plantings.



Paul Zmoda kindly supplied the addresses for two nearby fruit clubs:

Sarasota Fruit & Nut Society
P.O. Box 49763
Sarasota, FL 34230
(813) 366-3310
Maddy McDowell, ed.

Manatee Rare Fruit Council
P.O. Box 1656
Bradenton, FL 34206
(813) 746-4394 or 746-0326

RFCI Tampa Bay Chapter
313 Pruett Rd
Seffner FL 33584



FIRST CLASS MAIL

P. JUDSON NEWCOMBE
314 DEER PARK AVE.
TEMPLE TERRACE, FL 33617