FEBRUARY 1990

RFCI NEWSLETTER

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

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(including renewals)

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

NEXT MEETING . . . . . FEBRUARY 11, 1990

MEETING PLACE . . . . . HILLSBOROUGH COUNTY AGRICULTURAL BUSINESS CENTER. (COUNTY AG. AGENTS' BUILDING, SEFFNER) Take I-4 to Exit 8 South, State Road 579, go past traffic light at U.S. 82 intersection. Building is less than 1/2 mile on left (east) side of U.S. 92. Use parking lot. Meeting room is in rear of building. Main door will probably be locked. Walk around.

PROGRAM . . . . . PESTICIDES: BRIAN CARDIN, who works for the chemical company, Ceiba Geigy, a manufacturer of pesticides, will talk on the impact of pesticides on our society, uses, dangers, and long term effects. This should be an informative program and critical for us who are trying to grow fruit.
We will have our library, plant raffle and tasting table as usual, and ask those who can contribute to please do so.

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RECIPE OF THE MONTH

BLUEBERRY SAUCE (taken from June 15, '89 Issue of Florida Market Bulletin)

1/2 cup Florida sugar
2 tsp cornstarch
1/2 cup water
1 pint fresh Florida blueberries
1 Tbs Grand Marnier Liqueur
1 tsp Florida lime juice

Combine sugar and cornstarch. Stir in water. Add blueberries and Grand Marnier. Bring to a boil, then simmer until clear and thickened (about 4 minutes). Remove from heat and add lime juice; chill. Serve over pound cake, pudding, baked custard or pancakes. Yield: 3 cups

For RENT or LEASE:

3.1 Acres of undeveloped land, next to the MASARYKTOWN Canal in Pasco County, near U.S. 41. For more information contact:

Jerome C. Kos
6390 W. Flagler St.
Miami, Fl 33144
(305) 266-5098

MESSAGE FROM THE PRESIDENT

Some of our information on pesticides comes from people whose business it is to entertain us. I am not sure about the information we receive from people who are discussing things not related to their expertise. There are many knowledgeable people who are expert in the problems of our modern society and, while they may not always agree, they are certainly better informed than our news media. This is very evident when we consider pesticide residue on our food crops. T.V. personalities get more television time and have even been invited to testify before Congress. They look good and speak well, but this is no reflection on their knowledge.

For information on pesticide residue, listen to the experts on both sides of the question and then make up your own mind concerning the consumption of apples and Chilean grapes.

"Fine Gardening" is a great gardening magazine. It's available in newstands and book stores. The Jan./Feb. issue has an article on growing subtropical fruit in Pennsylvania. Jaboticabas, guavas, cherimoyas and feijoas are grown in pots outdoors in summer and indoors in winter. It might be the only way that those of us in colder locations can succeed. There is also an article on a 30 year pot grown calamondin grown in New Jersey.

Al Hendry

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FIGS (Ficus carica)

The fig is in the family Moracaea, the Mulberry family. There are some Ficus species that are deciduous, as is the common fig, and there are also evergreen species. Some are even vines. Hybridization between Ficus species, including crossing tree forms with vines, has been performed, but with no useful results to date.

Any form of pruning or training (e.g., espaliering) may be used in growing figs. In the southeast, the most common form is the bush. This is because they sucker prolifically from below ground here, making a multiple trunk form of growth. If a tree shape is desired, the suckers must be removed constantly.

The fig prefers full sun, but will perform fairly well in half shade or exposed to the morning or afternoon sun. In full shade it will have problems.

The fig leaf is palmate in form with three to five lobes. Different varieties have recognizably different leaf forms, some more deeply lobed than others. Also, not all leaves on the same tree are identical, which can complicate the identification process.

Some time ago, a nurseryman in Houston bought what he thought was a load of magnolia trees and they turned out to be fig trees. So he called them "Magnolia" figs. The "Magnolia" fig used to be grown commercially in Texas, between Galveston and Houston. In Europe it is known as the "Brunswick".

Although the common fig grown in the south will set fruit parthenocarpically, it is capable of being sexually fertilized. When grown in Europe, where the fig wasp is present, these same figs will be pollinated and produce fruit of different color and shape than that produced here. As a result, different names get attached to the same tree in different locations. In Florida the nomenclature is very confused. The common "Brown Turkey" of the southeast is also known as "Everbearing", "Texas Everbearing", "Harrison", "Ramsey", "Lee's Perpetual", etc. The "Celeste" is also "Blue Celeste", "Celestial", "Little Brown", "Purple" and "Sugar". The "Green Ischia" can be "Ischia Green", "White Ischia" and "Ischia Verte".

The major leaf disease of figs is "fig rust". The only control is to spray the undersides of the leaves with copper, either in neutral copper form or in a Bordeaux mix. Other fungicides are of no use. Spray every two weeks religiously. Be aware that this is a preventive treatment only. A monthly application of a nitrogen fertilizer

will force leaf production and overcome the rust problem to some extent. Most leaves will then hold until fall, though they may drop a bit early, which is no problem.

In the spring,before new leaves come out, some fig varieties will form figs on the old wood. This "breba" crop will ripen later, after the tree has a full set of leaves. A second crop will then form in the axils of the leaves. Some varieties, like Celeste, will usually drop all of the breba crop and bear only the leafy crop, which appears continuously until fall.

Pruning tends to stimulate longer internodes (the distance between leaves), and, hence, a longer crop season. You should get more fruit without pruning, but a condensed crop season. Pruning will extend the season, but give you a reduced crop.

The fig is a unique type of "fruit", called a syconium. It is actually a hollow stem with flowers on the inside. It contains hundreds of male and female flowers, the females forming the true fruits, or seeds. In the Smyrna fig, the tiny Blastophaga wasp enters the syconium through the opening (eye or ostiole), searching for a place to oviposit her eggs in the female flowers, As she enters, she brushes pollen from the male flowers and thereby serves to pollinate the female flowers. The wasp will leave and enter other figs, thereby performing cross-pollination.

A tightly closed eye is preferred to southeastern figs. An open eye permits water to enter and results in fruit splitting and souring. A closed eye also discourages insects from entering. A long stem, resulting in a drooping habit of the fruit, is also desirable here, since it helps prevent water from entering the eye. Although the Kadota fig has an open eye, there is a drop of honey-like fluid in the opening which prevents water and insects from entering.

The milky latex which exudes from figs contains an enzyme, ficin, which is similar to papain, found in papayas. Like papain, it breaks down proteins and can be irritating to the skin. Those who are especially sensitive to it should wear gloves while handling the fruit. Ficin has been employed to clarify beer, but is much more difficult than papain to extract from its source.

Celeste, with its tightly closed eye and excellent eating quality, is the preferred variety for Florida. The Eastern Brown Turkey (different from the western Brown Turkey) is another favorite, having a larger fruit and the advantage of setting a breba crop. Green Ischia is also a good fresh fruit. Although not useful for preserves, it has the advantage of not attracting birds due to its green color when ripe. Another good fig is the Kadota, a yellow-green fruit. It is a good fresh fruit and makes an excellent preserve. It also has a breba crop. "Lemon", a yellow fig, is quite common, but has a rather insipid fruit.

Birds may be discouraged from attacking the fruit by the use of toy snakes placed in the trees. The snake must be moved daily, however, or the birds will ignore it.

Nematodes in the soil are a severe problem for figs on their own roots. A very heavy mulch will lessen the damage. If the fig is planted near a building, sidewalk or paved driveway, that will allow its roots to grow where the nematode population is lower. In warmer regions, nematode resistant rootstocks are employed, such as Ficus cocculifolia, F. glomerata (F. racemosa), F. gnaphalacarpa and F. palmata. F. cocculifolia is the preferred rootstock. Like the others, it is cold sensitive and has a tendency to send up suckers, which must be removed.

Fig propagation is usually by dormant wood cuttings, 6" to 12" lengths and up to 3/4" diameter. Cut directly beneath nodes or joints and plant in a well-drained media, leaving 1" of stock above soil level. Keep moist, but definitely not wet. Leafy shoots will root under intermittent mist. Marcotting, or air-layering, is also employed.

Use chip bud, patch bud, side graft or inlay graft on rootstocks. Chip bud and side graft are preferred when wood is 1/2" or less, patch buds for 1/2" to 1-1/2" wood, and inlay graft for larger stocks. Latex flow from cuts does not hinder graft union.

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January Hospitality Table:

Alicia Pruett.....Peanut Butter Fingers & Fruit Platter
Pat Jean.....Sour Orange Squares & Cranberry-Orange Bread
Pearl Nelson.....Banana Bread
Susan Eubanks.....Apple-Orange Brownies

January Plant Drawing:

PLANT	DONOR	WINNER
Surinam Cherry	Frank Honeycutt	Susan Eubanks
Surinam Cherry	Frank Honeycutt	Karen Eubanks
Tree Basil	Bob Heath	Alicia Pruet
Black Sapote Fruit	Armando Mendez	Bob Heath
Brogden Avocado	RFCI	Win Miller
Chayote	Monica Brandies	Bob Heath
Chayote	Monica Brandies	A & L Stark
Chayote	Monica Brandies	Bob Heath
Loquat	John White	Nan McCormack
Loquat	John White	?????
Kwaimuk	L & M Stark	Charles Pruet
Seeds (Misc)	Lillie B. Simmons	Susan Eubanks
Kiwi	Charles Novak	Frank Honeycutt

Tampa Bay RFCI's new Membership Directory is enclosed with this newsletter. Please remember this list is for our membership's personal use only. Do not provide it to others!

PLEASE, PLEASE, PLEASE remember to save your PUBLIX receipts (colored paper - usually yellow), and get your relatives, friends and neighbors to save them for you. Academic Achievement Center, the school which will occupy our new building, is participating in the Apple Computers for Schools program. If one can be obtained through Publix receipts, RFCI will have access to this computer. Please bring them to the next meeting or mail them to the newsletter address. Thank you. Arnold Stark

PAPAYA RELATIVES, by Ray Thorndike

In recent years, especially in California and New Zealand, much interest has been shown in the various relatives of the tropical Papaya (Carica papaya), particularly those species native to the higher elevations, because of their greater tolerance of cold. The Caricas (family Caricaceae) are all native to the Central and South American tropics and some are found at the 8000' to 9000' levels in Colombia and Ecuador.

The common Papaya, being a native of the lowland tropics, will begin to suffer damage at temperatures slightly below freezing. Blackening of leaves will occur with light frosts and severe damage may begin at 30°F. (-1°C) The lower trunk of a mature Papaya may survive to 25°F (-4°C), or below if at least 8" to 10" caliper and in a semi-dormant state after exposure to temperatures below 50 to 55°F. (10 to 13°C.) Even when killed to the ground, shoots may rise from the roots when warm weather returns. Basically, temperatures below 28°F (-2°C) cause loss of the top, leaved portion of the trunk. Also, most or all fruit is lost due to direct damage or by freezing of the stems.

It should be noted that regrowth of a freeze damaged Papaya results in multiple branching and the fruiting capacity of the "tree" is increased by as much as 50%. Unless braced or the fruit thinned, heavily loaded branches may break off. Thus, the Papaya can be a perennial even in a normally inhospitable climate. Prior to an imminent freeze, the upper trunk can be cut off at the 2-1/2' to 3' level and the remaining stump protected until warm weather returns.

In the California climates and soils there are other factors limiting success with the Papaya. Cold, wet winters coupled with soggy, poorly drained soils are a fatal combination for a plant that cannot tolerate wet feet. So, aside from container culture or building a tall greenhouse, perhaps there are solutions to the climate and soil problems among the more hardy Papaya relatives. One or more may serve as substitute or as rootstock.

Carica candamarcensis, the "Mountain Papaya", is found in the Colombian and Ecuadorian highlands (8000' to 9000') and was described by Popenoe (4) as being similar in appearance and growth habit to C. papaya, but smaller in all respects. The leaves, besides being smaller, are more deeply lobed and are pubescent (having soft, downy hairs) on the undersides. They are quite numerous and are dark green above and pale beneath. They are 15" across, rounded-heart-shaped, and 5-lobed to the center with pinnatifid lobes. The trunk is relatively stouter for its height and the tree may not exceed 8 to 10 feet, sometimes reaching 12 feet. The small, pointed, 5-angled fruits, 3" to 4" long, have a pleasant, sweet/acid, aromatic flavor and are deep orange or golden yellow when fully ripe. The creamy flesh is less than 1/2" thick and surrounds a central cavity filled with many seeds embedded in a translucent, gelatinous, edible pulp. Peeled and cooked, the fruit is often used in the form of a conserve, jam or preserve. This is a very ornamental plant and said to be very popular in its native districts. Like other Carica species, it is normally dioecious, both male and female plants being required for fruit production. 28°F (-2°C) is said to cause only minimal damage and the plant is reputed to be hardy enough for the southern California climate.

C. pubescens, the "Papuela" or "Siglalon", sometimes confused with C. candamarcensis, is a large, heavy-trunked plant. It is semi-deciduous, shedding its leaves for a short time in the winter. The fruit, which ripens in spring and early summer, is sour but has a pleasant aromatic flavor when steamed with sugar. When ripe, the Siglalon has a very short shelf life.

(TO BE CONTINUED)

THE AMAZON JUNGLE by Dr. Paul Beaver

The Amazon jungle is the largest jungle in the world, larger than all the other tropical rain forests combined, nearly as large in size as the continental United States. When you mention Amazon to people, most think of Brazil. While most of the Amazon forest is in Brazil, substantial parts are found in several other countries, including Guana, Colombia, Venezuela, Ecuador, Peru, Bolivia and Paraguay. Paul Beaver has spent most of his adult life in Peru, which is the part of the Amazon furthest west. It is here that the rain forest reaches its thickest, densest growth. It's here that we find the greatest variety of plant and animal life of any environment in the world. Here we find vast regions of the rain forest that are virtually unexplored by white man. A case in point: it was only a few years ago that, through satellite photography, several large pyramids were discovered in the southern jungles of Peru. Since that time, three expeditions have gone in to learn more about the pyramids. Not one person has returned alive. Unfortunately, from these expeditions we still have some regions of this environment which remain a mystery to us.

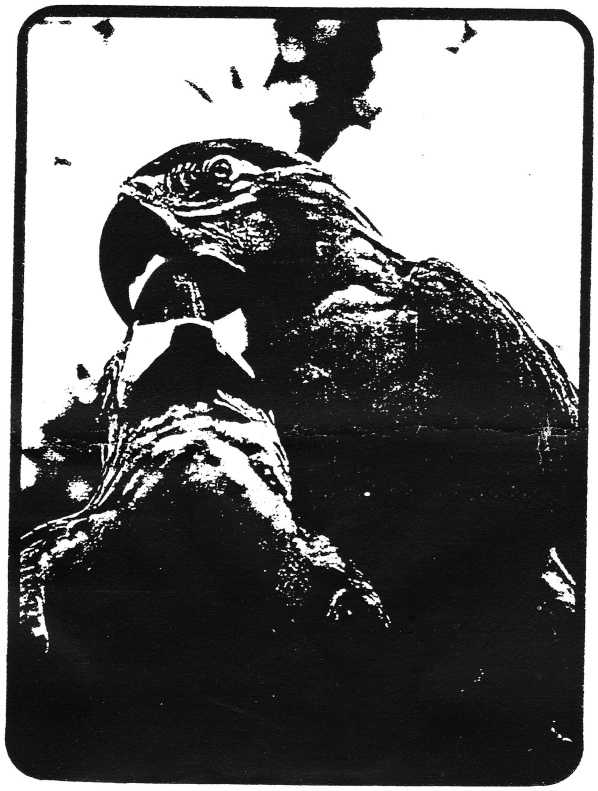
The reason that the jungle attracts people so well is that it is among the most beautiful habitats that exist in all the world. A Garden of Eden grows here. In the Amazon we can find spectacular species of plants such as the bud of a heliconia about six feet long, a beautiful red flower with yellow tips. The Amazon has the greatest variety of flowering plants in all the world, beautiful red passion flowers, the hot lips flower which looks like a pair of red lips, and untold others. A lot of the flowers we see in the Amazon jungle are bright red, which is very attractive to hummingbirds, of which there are over 100 varieties. Hummingbirds are the chief means of pollination of the plants of the Amazon forest. Here we also find the greatest variety of orchids anywhere in the world. (Paul had many beautiful slides of orchids and other brilliant flowers.) Many people come on these expeditions to see the flowers, photograph them and collect the seeds.

Three-toed sloth

There is also the greatest variety of trees in the world, over 1000 species. They don't grow in the Amazon rain forest like they grow in the North American forests. You don't find a grove of maple or pine or tropical forest trees. The species of trees in the jungle are widely disbursed throughout the area. You can walk for two hours through the Amazon and never see the same species of tree twice, very many unusual species and many fruiting species. For example, Paul showed us a palm tree called the walking palm tree because of the unusual supporting mechanism the tree has developed. The palm tree may be as much as 100 feet high and no more than 5 inches in diameter. Roots project out from the trunk near the base at an angle and anchor to the ground to give the tree a supportive base. This palm tree has a very delicious edible nut that tastes similar to a coconut. The tree is protected by spines but when the nuts fall on the ground, they frequently get a certain type of grub inside. Besides eating the palm fruit, the natives also eat the grub they say has a buttery taste. Paul has tasted the grub but declines to say it really tastes like butter. The palm also has an extremely hard bark that the natives use for tools. They make their spears and arrowheads out of the bark, which they also use for tools because there is no rock readily available in this area.

Bromeliads are a very common plant in the Amazon. They grow on the trunks and branches of trees. In some areas of the Amazon, the bromeliads grow so thick on the trees that there is no vacant space left on any of the trunks or branches of the trees. There are hundreds of different species of bromeliads and some grow to gigantic sizes. At times, the bromeliads will grow so large on a small branch that they will bring the branch crashing to the ground. Some of the flowers are as big as beach balls. Also, the bromeliad is so shaped that it can hold water, and some hold so much water that certain insects and amphibians live out their whole lives in the water in one plant.

The plants which give the jungle the feeling of being dense with foliage are the vines. It is spectacular to see these vines starting at the tree tops some 200 feet tall, sending their thin root systems to the ground where they take root and then grow thicker and thicker until, in some species, they become as thick as a human body. The vines are very useful to the people in the jungle. There are three species with absolutely fresh clear water within. There is no reason to lack for water in the jungle. One species of vine, when cut open, will fill several canteens. Of course, you need to know which vines are which because some species of vines have a liquid that is deadly poison.



Blue and yellow Macaws

There are two types of people who go on these expeditions. Either people who want to enjoy the beautiful tropical nature of the forest, perhaps to collect some things, nuts, orchid seeds, butterflies; or the adventurous people, because it is a very adventurous environment, where they can swing on a vine over a crocodile infested stream.

There is a variety of lily pad there that grows up to six feet in diameter with turned-up edges that look like a round boat. Even some of the mushrooms are exquisitely beautiful.

In the Amazon we find the greatest variety of insect life anywhere in the world. Any textbook about insect diversity on the planet Earth, published more than 10 years ago, will indicate that there are about 2 billion species of insects in the world. Now, however, a biologist with the Smithsonian Institute indicates that there may be as many as 30 million different species of insects in the Amazon basin alone. There are caterpillars that look like creatures from Mars, beetles that grow up to six inches in length, praying mantises so beautifully camouflaged that they are difficult to find, and the greatest variety of butterflies anywhere in the world. Scientists have already classified over 30,000 species of butterfly alone, and a variety of species of leaf cutter ants. (Paul was busy showing us slides of all these beautiful butterflies and other insects at this point.) Over 4,000 species of fish are known to inhabit the Amazon River, which is twice the number of species they've found in the Atlantic Ocean. The most common species and the one best known by North Americans is the piranha, which inhabits every lake and river in the Amazon basin. It is largely a Hollywood myth that piranhas are dreaded man eaters. It is perfectly safe to swim in the waters with piranhas. Under certain conditions, piranhas will go into a feeding frenzy. If an animal is bleeding in the water and thrashing around, it will attract numerous piranhas. However, piranhas do make delicious meals for humans. Fresh caught pan fried piranhas are excellent eating.

There are many species of snakes in the Amazon, but the majority are constrictors and the best known, of course, are the boa constrictor, and the world's largest snake, the anaconda. Crocodilia of the Amazon are called caimen. They are much more slender than the alligators and crocodiles of Florida and also much smaller. Among other reptiles are the iguanas that get up to four feet in length.

But the Amazon is probably best known for its bird life. On one bird watching expedition, Paul's group counted over 1700 different species of birds, which is three times the number of species living in North America. Best known are the brilliant colored macaws and toucans.

The Amazon also has the world's greatest variety of mammals, including several very large species of rodents, the largest of which is the well known capybara. The tapir also lives in the Amazon basin and is thought by some to be a relative of the elephant. There are three-toed and two-toed sloths, and that relative of the racoon, the agile kinkajou, which means night walker, because they are so active at night.

Predators consist of the leopard-sized ocelot and the house cat-sized margay. There are also some 16 different species of primate in this region. The fresh water dolphin is also native to the Amazon River.

Of primary interest to us are the some 600 different species of fruiting plants that grow in the Amazon basin, many of which have never been adequately researched and some of which are virtually unknown to modern man. There is a virtually inexhaustible source of gene material and scientific material for research and development.

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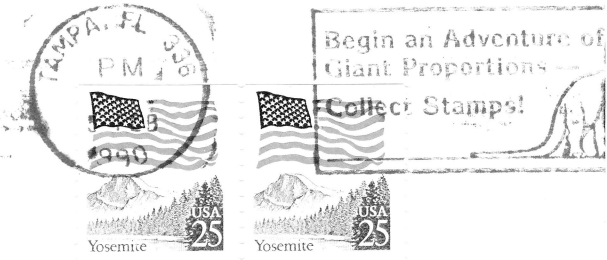

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