



NEWSLETTER

JANUARY 1993

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

EDITORIAL COMMITTEE: BOB HEATH
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(INCLUDING RENEWALS)

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

NEXT MEETING JANUARY 10, 1993

MEETING PLACE RARE FRUIT COUNCIL CLUBHOUSE. 313 PRUETT RD.,
SEFFNER. Take I-4 to Exit 8 North, S.R. 579,
go one mile to Pruett Rd. (See McDonald School
sign) Turn right (East). Go one mile. See
Clubhouse on left immediately past McDonald School.

PROGRAM BILL LESSARD WILL PRESENT A SLIDE PRESENTATION ON
BANANAS. Bill is a banana farmer in Homestead
who grows over 40 varieties of bananas and has
recently published the book "The Complete Book of
Bananas". He will have banana plants and his book
for sale. Very interesting. Also we will have
our tasting table & raffle.

Thank You Thank You Thank You

To Karl Rossa for designing and constructing the traffic control stanchions used at the sale. They were made so that they will be of use for many years to come.

To George Anderson, last month's speaker, for donating to the raffle the macadamia plants he grafted at the meeting-and for the nuts for planting.

Recipe of the Month: Cranberry-Apple Relish by Joan Murrie.

2 oranges, including zest or grated peel, seeded and finely shopped

2 green apples, cored and diced

1 (12 oz.) package fresh cranberries, chopped

1/3 to 1/2 cup sugar

1 1/2 Tbs fresh parsley, chopped

1/2 cup coarsely chopped walnuts (optional)

Place all ingredients, except walnuts, in a large bowl. Cover and refrigerate at least 8 hours. Sprinkle walnuts on top just before serving.

Meeting Notice: The Agricultural Research and Education Center in Dover, in conjunction with the Florida Cooperative Extension Service has scheduled a Strawberry Field Day at the Center on Wednesday, February 10, 1993. The Center is located at 13138 Lewis Gallagher Road, Dover, Florida 33527-9664. The contact person is Dr. Earl E. Albregts. Telephone #:(813)659-2801.

Raffle: December

Plant Name	Donor	Winner
Fried Egg Fruit	Stark	Charles Novak
<i>Passiflora serratifolia</i> (sawleaf)	Zmoda	J. B. Creighton
<i>Passiflora serratifolia</i> (sawleaf)	Zmoda	Tom Mixson
"Rudolph" decoration	J. Murrie	Al Hendry
Red Pineapple	L. & K. McKone	J. B. Creighton
Tree Basil	Heath	Tom Mixson
Tree Basil	Heath	Al Hendry
Husk Tomato	Heath	Audrey Rossa
Pineapple	Heath	A. Thomson
Cherry of Rio Grande	Heath	Diana Mills
"Young" Avocado	Heath	Dan Williams
Carambola/Passion Fruit	Heath	Al Hendry
Costa Rica Guava	Heath	Diane Friedman
Ponderosa Lemon	Merrill	Diana Mills
Ponderosa Lemon	Merrill	Bob Wente
4 Carambolas	Newcombe	Diane Friedman
4 Carambolas	Newcombe	Monica Brandies
Barbados Cherry	Fred Sexton	?
Papaya Fruit	Samm Philmore	J. Murrie
Pond Apple	Honeycutt	Diane Friedman
Pond Apple	Honeycutt	Dan Williams
Grumichama	Honeycutt	Audrey Rossa
Grumichama	Honeycutt	Kaye Mixson
Chayote	Honeycutt	Heath
Macadamia	Anderson	Diana Mills
Macadamia	Anderson	George Merrill
Macadamia	Anderson	Al Hendry
Macadamia	Anderson	C. Novak
Macadamia	Anderson	Nancy McCormack
Macadamia	Anderson	Honeycutt
Loquat	?	Nancy McCormack

Tasting Table: December

Stark: cookies, lemonade

J. Murrie: Cranberry Apple Relish

Heath: Persimmon/Banana nut cake

Merrill: Chocolate covered Kona coffee beans

McCormack: Whole Wheat Raisin Bread

Mixson: Tangelo juice and citrus fruit

MACADAMIA TREES by George Anderson

George Anderson's interest in macadamia nuts began several years ago on a trip to Hawaii. He was given several nuts and told to soak them three days in water and then plant them and they would probably come up. Four of them did and he had four macadamia trees. At that point he became very interested and began to ask around for information on growing macadamias. But nobody seemed to have a whole lot of information. He finally found a couple of long time natives who knew of some earlier attempts to raise macadamias in south Florida on a commercial basis but none of the attempts were really successful. The problem with the Hawaiian varieties of macadamias in Florida is the long hot summers which Hawaii doesn't have. Macadamias seem to like cooler summers and warmer winters than are available in Florida. The macadamia nut is native to Australia. From there it spread to other countries and finally to Hawaii where it found excellent growing conditions and has become a major crop. More recently, California has attempted to get into the macadamia business and very many acres of macadamia trees have been planted there. Last year California produced about 100,000 pounds of nuts from their macadamia groves. However Hawaii produced some 48 million lbs. of nuts, so you can see California does not pose any threat to the Hawaiian macadamia production.

Australia and some other countries are also getting into the production of macadamias and the price of Hawaiian nuts has dropped drastically recently. Macadamias are getting closer to other nuts in price. Growers in California thought they would make their place in the market but the Colorado River water is now rationed and there is the drought in California. Approximately 1/3 of the fields in the California macadamia cooperative have been allowed to wither and die. They are only allotted about 2/3 of the water they need to keep their total groves in production and the cost of the water is so high as to make macadamia production just borderline profitable. Unless the drought in the far west ends soon, California macadamia production is probably doomed because one of the things that macadamias require is a lot of water. However, in the meantime, there are people working with macadamias in California who are doing interesting things. A gentleman there named Tom Cooper edits a magazine called "A Macadamia Quarterly" which is a source of much of George's information. He advised us if we want to subscribe to his quarterly newspaper, mail it to Rancho Neuz Industries, 1378 Willow Glen Road, Fallbrook, California 92028, attention Mr. Tom Cooper. The subscription is \$15.00 per year for four issues and he gives you a lot of information about macadamias that you just cannot find anywhere else.

George has three or four different varieties that he has produced that look very promising for production in Florida. By traveling around Florida, George has also located some trees that seem to be more cold hardy than those grown in California and Hawaii. He has been making air layers of every fruiting tree he can find and apparently some of them have developed some cold hardiness by adapting to Florida's climate. Unfortunately, the nuts are undersized and the production is not very great. In general, they're not commercial quality.

The two macadamias that are most often grown in California and more adaptable to Florida's climate are the Beaumont and the Kate, and probably about 75% of the groves are using the Kate.

George met a Mr. Arkin in California who is quite versed in the cultivation of macadamias and he is working with some of the old varieties, such as the Limbaugh, which is a very large nut and normally produces large clusters. It was first produced in Australia where it was introduced into Hawaii and later into California. At present, George has about 80 grafted and air layered trees which he produced from the budwood that he obtained from Mr. Arkin. He also

obtained budwood from a new one, called the Kelsie. The Kelsie is a large nut and the main thing that impressed George was the fact that it consistently produced more than 70 nuts in a cluster. Because contrary to the way most macadamias fruit, the cluster fruit stem consisted of 4 or 5 individual stems all covered with nuts. And the trees he saw were bowing down to the ground with the weight of the nuts. George also was able to get a cutting from a tree that the owner called a Ping Pong. The Ping Pong was developed in Hawaii but it showed up in a row of experimental trees and was marked to be kept but unfortunately in digging up the row of trees that were to be destroyed, the workers also destroyed the only other Ping Pong in existence so his friend has the only surviving tree of that particular variety. George grafts his Hawaiian varieties which are not particularly noted for cold hardiness on to a variety called a tear drop which is the cold hardiest root stock of which he is aware. He also has found a no-name macadamia which he feels is considerably more cold hardy than some of the others and he is also using that for a root stock.

The cultivated macadamia tree comes in two different types that are the Integrifolia and the Tetraphylia, which is the one grown in California. And then there are hybrids between the two different types.

The flowers of the macadamia are very tiny and develop in a large cluster along a single stem. When the fruit first begins to develop, it looks just like a hair which almost immediately begins to swell and develop into the nut. So how do we tell one type of macadamia from another? Integrifolia has a smooth leaf without spines and a smooth shell. Macadamia tetraphylia has a rough shelled nut and a spiny leaf. Unfortunately, there are hybrid crosses of the two species so the hybrids can be intermediate in the leaf structure and the roughness of the nut.

George uses a splice graft for grafting macadamias. A splice graft is similar to a whip & tongue, except without the tongue. However, the whip & tongue graft or side graft will probably do just as well. Late winter or early spring is probably the best time for grafting. Central Florida is probably the northern extent of practical macadamia growing because the trees are cold sensitive. They should be planted on the south side of a building and protected through the winter until they have achieved some significant size. The trees are relatively easy to care for. A fertilizer program similar to citrus or avocados should work very well. Macadamias require a considerable amount of water but do not like wet feet. A well drained rich soil is recommended. Macadamias also have a very long shelf life, probably the longest of all nuts, and are the last ones to go rancid. The nuts may be viable as seeds for up to 6 months.

Squirrels are the greatest enemy of the macadamia here in Florida because the squirrel will attack the nuts when they're still green and relatively soft.

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Excerpt from THE NATURE CONSERVANCY, FLORIDA CHAPTER Newsletter:

RARE MINT PATCH MAKES IDEAL PICNIC SPOT

Researchers have discovered a powerful, natural insect repellent within the leaves of an endangered mint plant in central Florida. Even a whiff of the substance sends ants and other insects fleeing, they report in the February "Chemoecology". Thomas Eisner of Cornell University in Ithaca, NY, grew curious about the plant, *Diceranda frutescens*, while walking through a patch of it at the Archbold Biological Station in Lake Placid, FL. Its intense scent, resembling that of peppermint oil, filled the air after the biologist's walk disturbed the plants. A look at the leaves showed they were "remarkably free of insect-inflicted injury," Eisner says. His colleagues' chemical analysis of the leaves revealed a new mint oil, which they named trans pulegol. The oil remains sealed in tiny capsules that act as chemical "grenades", exploding when insects chew the leaves.

WHAT'S HAPPENING

DEC. '92 - JAN. '93

by Paul Zmoda

It's not too late to build a greenhouse.. They are very useful for extending the growing season as they shelter your cold-tender plants from cooling winds and frosts. The temperatures within a greenhouse can be 10 to 20 degrees F warmer than outdoors. Using treated lumber to construct the frame insures resistance to rot and termite damage.

First, level the site and sink 4 x 4 inch posts at each corner. Two feet deep is fine. Connect the top and middle of each post with 1 x 4 or 2 x 4 inch boards. Then attach lathe or strips of wood on the inside walls every few feet. Old metal pipes or fence rails are good for the roof beams as they offer strong support for hanging plants and the weight of rain water. Place these every two feet. Next, staple clear sheet plastic to the outside. When stapling, be sure the staples go thru 1 inch squares of cardboard first. This trick helps prevent the staples from pulling through during strong winds. Now, nail more strips of wood to the outside over the plastic. Then lay more metal pipes on the roof over the plastic between the first pipes. Their weight will hold down the plastic on top. The bottom edge of the plastic is best buried into a shallow ditch around the perimeter. Always leave a door way and a roof vent of overlapping plastic. Metal clips or clothes pins are good for securing them at night and during cold snaps. Then comes the most important part - imparting rain resistance.

Cold fronts bring sudden downpours. This rain will collect in depressions on the roof and eventually the great weight will destroy the plastic and let in the killing cold. To make sure this doesn't happen, run the garden hose over your new greenhouse roof evenly until you can plainly see all the low places gathering puddles. Now, from underneath, cut slits at each low point with a sharp razor blade but not more than 3-4 inches long. The water will empty and later rains will do likewise, preventing collapse of the roof plastic. Do not merely punch holes for drainage since they clog up with leaves too easily if the holes are small. Also, they let too much warm air escape if the holes are made large enough to prevent clogging.

Add your plants and enjoy. Remember to ventilate well when inside temperatures reach 80°F.

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FREEZE PROTECTION FOR PLANTS

Many past winters of damaging freezes make us hope we get a freeze-free one this year. However, just in case we don't, here are some ways to protect tender plants from hard winter freezes. The principle of the patented freeze protectors may be applied in home-made form to many plants. The principle the protector uses is the heat of fusion and heat capacity of water. This means that a relatively large amount of heat must be removed from water for it to freeze and furthermore, until a given container of water is completely frozen, its temperature doesn't go below 32°F. The commercial protector includes two slender containers of water inside the insulator next to the plant's trunk. The insulation slows down the heat loss from the air around the plant's trunk to the cold outside air, and the water volume keeps it from going significantly below freezing as long as there is still unfrozen water in the containers.

This same principle can be applied easily to other plants which don't have size or trunk shapes for which the commercial protector was designed. All you need is

containers of water right next to the plant, free space for the air to circulate between the plant and the water containers, and an insulation covering over the whole business to slow down the heat loss as much as possible. The containers of water are almost like local heaters with their thermostats set at 32°F. The good thing about "doing your own" this way is that one can partially compensate for poor insulation in the covering (blankets vs. styrofoam in the commercial unit) by including more water next to the plant.

The water can readily be put next to the plant by using any of a number of convenient forms such as plastic milk jugs, 2-liter plastic soft drink containers, etc. The larger the volume of water used, the better. The containers should not have insulating walls since good heat transfer between the water and the surrounding air is needed. The milk jugs and 2-liter containers have shapes which conveniently permit tying them along the plant trunk or on supporting stakes to provide better protection farther up in the plant.

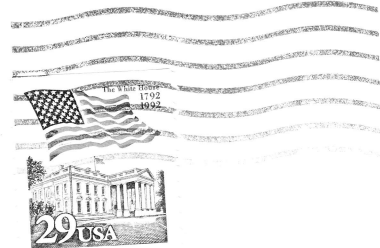
In summary:

- 1) Put lots of water in containers right next to the plant - the more the better.
- 2) Cover the plant and water as best you can to provide insulation and to minimize air flow between the inside and outside. Newspapers, fiberglass pads, old blankets, etc. will provide some insulation.
- 3) Wrap the water jugs and insulation with plastic or old sheets or tablecloths.

A second method of protecting small plants is to build a light wooden frame over the plant and cover it with plastic or a blanket, bringing the cover all the way to the ground. A light bulb under the cover (100 watt or bigger) will provide enough heat in most cases. Of course, the light bulb must be plugged in and turned on.

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