

The Leaflett

California Rare Fruit Growers - Central Coast Chapter Newsletter
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Happy New Year!

2005--The Year of the Apple

Apple

Rosaceae—Malus

The History of the Apple—Part One

Apples are easily the most popular fruit in the world, mainly because of their adaptability to grow in temperate climates from Denmark to Australia, as well as their “keeping quality” which allows the fruit to be imported by many places where the trees won’t grow. They are also popular for another very good reason—they taste wonderful! Edward Bunyard, author of *"The Anatomy of Dessert"*, comments on apples and the sixth sense saying, "the **crunch** is the thing, a certain joy in crashing through living tissue, a memory of Neanderthal days".



The history of the cultivated apple is clearly tied in with the history of civilization. The apple has long been associated as the fruit Eve offered Adam in the Bible’s Creation story. (The painting shown on the left is by William Strang and is titled “The Temptation”). Neanderthals might even have eaten apples, although in a form we would not recognize today, and they would only have gathered the wild apple, not grown it. The wild apple of ancient Asia, **malus pumila var mitris**, would never have made it to our table--the trees produced hundreds of tiny fruits that were sour and consisted mostly of small, dark brown seeds and a core. The wild apple of Europe, the main ancestor of today’s domestic apple, classified as **malus sylvestris**, would not fare much better with our taste buds.

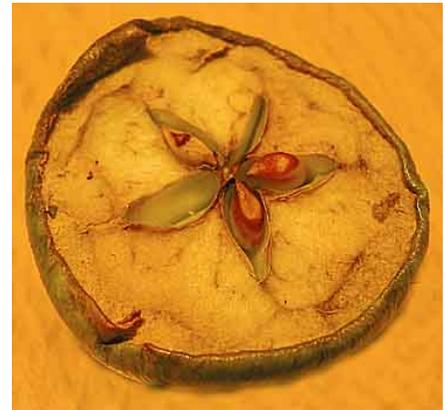
The Neolithic period, also known as the Second Stone Age, began in the Near East around 9,500 B.C. when, because of population explosions, the former “hunter/gatherers” began to settle, irrigate, and grow crops, beginning with wheat and barley. Archeologists have found a fossilized imprint of an apple seed from the Neolithic period in England and apple seeds found in Anatolia in present day Turkey were carbon dated 6500 BC. On the plains of central Anatolia lie the remains of one of the oldest civilizations on earth, called Çatalhöyük. The ruins represent a village of 300 mud brick and plaster residences, based on a farming economy--in fact, the first farming community archaeologists have discovered to date. The site was occupied from about 6300-5500 BC, and it was here that the apple seeds were found.

Exactly when people learned they could turn the wild, and not very palatable fruit into something desirable to eat is, of course, in dispute by historians. Many believe it was the Romans who discovered they could cultivate wild apples into fleshy, sweet, and juicy fruits, but in 5,000 BC, Feng Li, a Chinese diplomat, gives up his position when he becomes consumed by grafting peaches, almonds, persimmons, pears and apples as a commercial venture according to "The Precious Book of Enrichment", Part I, Chapter 4.

Dried apple slices were found on saucers in the tomb of Queen Pu-Abi at Ur near Basara, in Southern Iran, dated about 2500 BC, linking royalty to apples. In 1500 BC a tablet found in northern Mesopotamia records the sale of an apple orchard by Tupkitilla, an Assyrian, from Nuzi, for the significant sum of three prized breeder sheep. Hittite Law Codes specify a three shekel penalty for anyone allowing a fire to destroy an apple orchard! The famous Egyptian Pharaoh of the 13th century BC, Ramses II, ordered cultivated varieties of apples planted in the Nile delta.

Homer's *Odyssey*, written about 800 BC, recounts the memory of his fruit orchard to his aging father: "twelve pear trees bowing with their pendant load, and ten, that red with blushing apples glow'd..." In Attica, Greece, apples were being grown in a very limited quantity during the 7th century BC. Since they were so expensive, it was decreed that a bridal couple would have to share one apple on their wedding night. Writing about 323 BC, Theophrastos, a Greek, describes six varieties of apples and discusses why budding, grafting, and general tree care are required for optimum production—he said seeds almost always produce trees of inferior quality fruit!

However, there is no dispute that the Romans probably did more to spread the fruit than anyone else. In 100 BC, the Roman poet, Horace, notes that Italy has nearly become one big fruit orchard and that the perfect meal begins with eggs and ends with apples. Apple trees moved west with the rise of the Roman Empire as the Romans adopted the apples and the orchard skills of the Greeks and Persians before them. They took apples to the far reaches of the Roman Empire including continental Europe and the British Isles where previously only *crab* apples were known. They even created a deity of the fruit trees, the goddess Pomona. Fifty years later, another Roman, Cicero, author, statesman, and philosopher, urges his Roman countrymen to save their apple seeds from dessert to develop new cultivars.



Although it wasn't until 1904, at the St. Louis Exposition that J. T. Stinson proclaimed, "An apple a day keeps the doctor away", in the early 1100's, the Medical School of Salerno taught the therapeutic value of apples with regard to disturbances of the bowels, lungs and nervous systems. Even earlier than that, around 200 BC, famous Greek physicians living in Rome, Galen, and later Hippocrates, recommend **sweet apples** with meals as aids to digestion and **sour apples** only for fainting and constipation.

Englishman, William Lawson of Yorkshire, wrote "*A New Orchard and Garden*" in 1618, the first book in the English language about the practical aspects of apple growing. He is more often quoted on his sensual observations: "All delight in orchards" and "For whereas every other pleasure fills some one of our senses, and that only with delight; this makes all senses swim in pleasure". "What can your eyes desire to see, your ears to hear, your mouth to taste, your nose to smell that is not to be had in an orchard, with abundance of variety." Two mottos appear on the title page; "Skill and paines bring fruitful gaines" and "No man is an island". Lawson believed growing an orchard offered the best of business and pleasure.

Outside of the apple as a fruit to eat, it may have had its most historic moment when, in 1665, Sir Isaac Newton watched an apple fall to the ground and, curious as to why it fell in a straight line, was inspired to discover the laws of gravitation and motion. Maybe we could say apples have even taken us into space!

Finally, about 1790, Thomas Andrew Knight of England began the first **controlled** apple hybridization program. Knight's father was a Herefordshire clergyman who died when his son was five years old. The boy's education was neglected, and until he was nine, he remained almost illiterate. Since he was unable to read as a child, he concentrated his curiosity on the plant and animal life on the family estate. Eventually Knight did catch up with his education and with his phenomenal memory he was able to graduate from Balliol College, Oxford. He then withdrew to his farm and greenhouse at Elton, where he likely would have remained a modest experimenter and breeder had not Sir Joseph Banks convinced him to come out of hiding. Knight first met Banks, who was then president of the Royal Society, in 1795. In April of that year Knight read a paper before the Society on "The Grafting of Fruit Trees." Banks was interested in Knight's ideas and began writing to him in July of 1796. Their correspondence lasted twenty years. Knight was painfully shy and reserved, but because of the interest of such a great man he forgot himself and paid close attention to Banks' suggestions and advice.

His contributions to practical agriculture show a wide range of interests and help to explain his influence in leading other gardeners and livestock breeders to imitate his efforts. Some of the observations he made are now a standard part of plant physiology, for he made studies on the ascent and descent of sap in plants, the nature of the cambium, geotropism of roots and stems, and phototropism in tendrils. In practical horticulture "the originality and range of his investigations are practically staggering."

As we can see, people have long understood that apples not only should be developed to taste good, but that they are also good for you! Next month—**Apples in America!**

December Meeting—Food, Fun, and Fellowship

Life doesn't get much better than it was at our December chapter meeting when over 80 members and friends gathered at the PG&E Community Center near Avila Beach for food, fun, and fellowship—evidenced by the photo below which was taken by Paul Moyer.



Plans were to begin the meeting about 12:30 PM, but “technical difficulties” got us off to a later start. No one seemed to mind, though, as everyone greeted and chatted with others. Our steadfast co-chair, Art DeKleine, finally managed to settle us all down for a pre-dinner prayer in the form of singing the “Johnny Appleseed Song.” Art had taken the time to make copies for us of several “Johnny Appleseed” songs, as well as providing CD’s of apple photos for a screen-saver. Then it was time to hit the buffet line! What an amazing variety of delicious food there was on that table. While we may be growers of “rare” fruit, “rare” good cooks are not hard to find in this group! (I won’t point out any specific dishes, but the food was wonderful!) I tried my first medlar there, too, thanks to the bowlful provided by David Gurney, who grows them. My opinion of medlars—well, they are “interesting” fruits! (Hopefully, David will write an article for our newsletter on his medlar growing experiences.)



After lunch (and fabulous desserts!), Art DeKleine presented a computer-generated slide show of photos taken at meetings during the past four years. He even gave us a script to follow in the form of listing every meeting and where it was held during that time period. Joe Sabol got us enthused for our meetings in 2005 by giving us “teaser” information. Lark Carter, chair of the nominating committee, then read the names of those members who have graciously consented to have their names placed on the ballot for election for offices and committee leadership in our chapter for 2005. The elections will be held at our January meeting. (See names later in this issue.)

“Santa”, perfectly played by Doug Allen, and assisted by his two-year-old granddaughter and Marv Daniels, raffled off the large variety of plants and other items that had been brought by members for that very purpose. We even moved outside into the warm afternoon to further chat and finish the plant raffle. All-in-all, it was the perfect way to end a great year of meetings!

Our thanks go to Marv Daniels for arranging the use of the Community Center with PG&E. Hopefully, we left it in great shape and will be able to use it again next year.

The Cold Truth About Frost Protection

Back in November we had several nights of unusually low temperatures for the Central Coast, which had many of our members scrambling for ways to protect their most cold-sensitive plants. Joe Sabol posted the website address for the University of Arizona where they had some excellent information on protecting crops from frost by using several methods, including “frost cloth.” However, the site didn’t make it clear what “frost cloth” was, which prompted a few more inquiries. Out of these inquiries, came the following information.

The first quote is from Bob Vieth in an e-mail to Joe Sabol: “The material you are interested in is commonly known as row cover or cloth and is made by many manufacturers. Reemay and Agrofabric are perhaps the two best known.

Row covers are made of spun-bonded polyester or spun-bonded polypropylene. The fabric allows light, water, and air to move through but enables you to have 2-8° of frost protection. The row covers are available in a variety of weights but for frost protection, 0.5 ounces per square yard is the minimum requirement. Although the fabric is light enough to “float” over your plants, winter winds can cause abrasion so the cover should be supported with wire hoops or short stakes. To prevent the cover from blowing away, the ends should be weighed down with stones or buried right into the soil. Remember to leave enough slack to allow room for your plants to grow. The lifespan of the row cover is usually 2 seasons. When the fabric becomes a bit too ratty, use it to help germinate seeds. If it is placed over bare soil, row cover fabric acts as mulch, keeping the soil moist and raising the soil

temperature slightly. Seeds germinate very well in these conditions.

There are few points to keep in mind before deciding which method of season extension to choose.

Temperature differences - plastic will raise temperatures much higher than row covers. While plastic is great for winter lettuce, cool season crops like cabbage and kale don't need such high temperatures. Materials - not all plastics are alike. Make sure the material you use is UV treated and at least 3 millimeters thick. Non-treated plastic will degrade and crack within just one season. Moisture - If you use glass or clear plastic over your plants, remember that water doesn't come through and they will need watering from time to time. Floating row covers don't have this problem. Ventilation - On sunny days in the early fall, it's easy for temperatures within cloches and cold frames to go up more than 20 degrees over ambient temperatures. Ventilation will not only keep temperatures moderate, but it will also help bring down humidity.

A mini greenhouse can be built using two layers of row cloth which should then be covered by 4 or 6 mil polyethylene sheets.”

The next bit of first-hand wisdom comes from William of Visalia in a reply to Eunice Messner. “I too am having an exceptionally cold winter so far. I expected some frost but it has been several nights of frost in a row. The name of the antitranspirant I used is Anti-Stress 550 manufactured by Polymerag Company in Fresno, CA. You can look at their website <http://www.polymerag.com> Be sure to look at the test results from the university. It's interesting. Another website is <http://www.antistress.com> I actually got a bottle given to me from a friend of mine, and he bought his from Eastside Chemical Co (across from Mulholland's Citrus Nursery in Orange Cove, CA) Their phone number is (559) 626-4091. I'm sure any chemical company could order it from Polymer Ag Co.

I am also using Agribon-50 floating row cover. It is rated to protect plants down to 24F. Hopefully, we won't see temps that low but it's good to know that it's rated that low if needed. The nice thing about it is you don't have to build a frame for it--just simply drape it over your plants. It is lightweight enough to do this. It has so far given good protection and I'm well pleased with its protection qualities. I ordered it from Peaceful Valley Farm Supply. Hope this helps you.”

All this was good information and I followed the links Bob and William cited to learn more. I certainly saw the value of covering susceptible trees and plants (I've used many sheets and towels myself over the years!), but with the wind that blows around here almost daily, I couldn't imagine row covers staying on long enough to provide frost protection without lots of work. Since I am basically lazy, I was more than intrigued by what I discovered when I went to the antitranspirant websites. This product, which increases a plant's normal freeze tolerance by up to 6° C (10° F) is mixed with water and sprayed on! That's easy! For best protection, the spray should be applied as close to freezing temperatures as possible.

One word of caution about covering your plants to prevent freezing—don't use plastic! While the row cover type frost cloths are polymer based, their structure is not the same as regular plastic sheets used for things like painter's drop cloths. Regular plastic sheets transfer the cold to the plant parts and do even more harm than if you had just left them uncovered.

Slate of Nominees for the Central Coast Chapter for 2005

Co-Chairs: Art DeKleine and Bob Tullock; **Program Chair:** Joe Sabol; **Assistant,** Carol Scott; **Secretary:** Rhonda Underwood; **Treasurer:** Dick Pottratz; **Web Master:** Art DeKleine; **Assistants,** Pet and Marvin Daniels and John and Choung Crow; **Raffle Directors:** Marvin Daniels and David Vogel; **Historian/Archivists:** Sandra Pirghaibi and Marie Moyer; **Photographer:** Rachel Rosenthal; **Refreshments:** Coffee, Jaleah Brynn assisted by Dorothy and Wally Seelos; **Friendship Chair:** Doris Henzgen; **Newsletter Editor:** Lennette Horton;

Newsletter Mailing: Art and Doris Henzgen and Anne Furtick; **Community Orchard Coordinators:** Joe Sabol, Pet and Marvin Daniels; **Apple Grafting Coordinators:** Joe Sabol, Marvin Daniels, and Patti Schober; **Board of Directors:** In addition to the Co-chairs, Secretary, and Treasurer named above, Roger Eberhardt, Chuck Atlee, Art Henzgen, Joe Sabol, Lark Carter, Robert and Carol Scott, Bill and Anne Furtick, Marvin and Pet Daniels, and Jenny Weaver.

Announcements

Ventura/Santa Barbara Chapter Plant Sale, Saturday, January 22, 2005 at 10:00 AM: The Ventura/Santa Barbara Chapter of CRFG will hold their 4th Annual Plant Sale at Norman Beard's home, located at **200 Ellwood Ranch Road**, Goleta. There will be several nurseries, agricultural services, and a guest speaker (to be named). Norm will be giving a tour of all his Sub-tropical and Tropical plants which number in the hundreds. There will also be a scion wood exchange, so bring scion wood if you want to participate in the exchange. **Directions:** Coming South on 101 to Goleta, take the Hollister Avenue off-ramp, make a left over the freeway, turn right on Calle Real, take the first left on Cathedral Oaks, going past Winchester Road, then make left by old barn (with boats around it) on Ellwood Canyon Road, make the first right up hill until you come to the first driveway on the right—and you will be there. We have plenty of parking!

Rootstock Ordered: Joe Sabol says: “We are back in the rootstock business!!! I just placed an order for 2,550 rootstocks with the Lawyer Nursery in Montana...2400 apple roots...will arrive too late for our Feb. meeting, as usual. 100 Nemaguard roots...some will be for sale at the Feb. Meeting. 50 Pear roots...some will be for sale at our Feb. meeting.”

Web Site is Back: After all the data on our web site was lost, Dr. Art DeKleine, our versatile co-chair, has finally managed to get it back up and running. This has been a tremendous job and now he has promises of help with maintaining it from John and Choung Long. Thanks! Check the site at: www.crfg-central.org

Join the Parent Organization: Many of our chapter members are also members of the Parent association and those who aren't should consider joining. With parent organization membership you receive a wonderful color magazine, *The Fruit Gardener*, filled with great articles on fruit growing, news, chapter activities and contacts. Dues are **\$30 annually** or **3 years for \$87** as of January 2004. Applications are available from **Joe Sabol**.

Local Chapter Newsletter Fees: Is your newsletter fee current? **We don't send out reminders, so please check the list below to see if you need to update in January.** As our treasurer, Dick Pottratz explained, he puts everyone on an annual fee due basis beginning in January—so some new members get more than a year and some less, depending on when they signed up. A mere pittance of **\$6** will buy you all the monthly newsletters from our chapter for a full year! Or, for **\$25** you will get the newsletter from our chapter for **five** years and save **\$5!** Where else can you get so much information for so little money? Send your check to **CRFG Treasurer**, 2430 Leona Avenue, SLO, CA 93401. **Fees coming due in January** for the following: Sandy Ahearn, Dennis Anctil, Gary Aubuchon, Debbie Bailey, Alan & Liane Barta, Owen & Patricia Baynham, Don & Judy Beach, Paul Berdoulay, Michael Blake, David Blakely, Ronald Blakey, Glenn Britton, Dr. Howard & Fay Brown, Tom Byrd, Mary Cardoza, Gary Cooke, Monica Cooper, Forest Crowe, Evelyn Cunningham, Chris Darway, Jeff Ensminger, Gary Epstein, James Fickes, Richard & Sassi Fisher, Harold Frisch, Bill & Anne Furtick, Jerie Garbutt, Mary Giambalvo, Mella Griffen, David Gurney, Linda Hauss, Art & Doris Henzgen, Mei Hoh, Larry Hollis, Steve Johnson, Stanton Keck, Carie Kedrick, James & Lisa King, Michelle King, Jim Kramme, Alexandra Lee, Kathy Longacre, Joe Malatesta, Mary Matakovich, Joel McCormick, Whitney McIlvaine, Mike & Joan Metz, Father Albert Meyer, Jan Miller, Keri Mogret, Kendra Moshe, Henry Mulder, Rev. Stephen Odenbrett, Dattatraya Paranjpe, Russee Parvin, Sheree Pellemeier, John & Sandra Pirghaibi, Cheryl Price, Peter Risley, Eric Rose, Rachel Rosenthal, Jay

Ruskey, Carol Schuldt, Wally & Dorothy Seelos, Frank Servedio, Elsie Shimamoto, Norm & Loren Shirakata, Pete Simmons, Mark Skinner, Bailey Smith, Teresa Smith, Darrell & Gloria Snow, Robert & Zoë Sunderland, Patricia Sutton, Harry Toy, Fidel Villanueva, Rich & Laura Vorle, Hugh Wadman, Richard Wagner, Mary Walcher, Kenneth Warren, and Margaret Wiggin.

Help Needed! If **you** have any great ideas for articles for this newsletter, or if you would like to write an article related to growing “rare” fruit, please contact me at handynana@hortons.us or write me at 265 Rim Rock Rd., Nipomo, CA 93444. I’ve already got promises for articles from Carol Scott, David Maislen, and Patty Schober—won’t you join them in writing about your own growing experiences?

Calendar of Meetings - 2005

January 8: Annual Pruning Meeting, Elections, and Plant Sale at Cal Poly Crop Science Building. Our guest speaker and “Guest Pruner” will be Mr. Dan Lassanske, Professor of Ornamental Horticulture at Cal Poly. Our annual elections will be held at this time, too. Bring your neighbor and a pair of loppers--we prune our orchard at this meeting. We will also be planting a Memorial Fruit Tree in honor of Ralph Vorhies, a long time member of CRFG and a professor in the Crop Science Department at Cal Poly. Professor Dan Ray will have his students all lined up with the traditional Cal Poly Fruit Tree Sale, too! **Refreshments: H through R please.** This meeting draws many guests! **Directions:** From Highway 101, take the Santa Rosa Exit and go north towards Morro Bay. Turn right on Highland Avenue (it has a signal and is the next major intersection after you pass Foothill Blvd.) and you will enter the Cal Poly Campus. Make a left turn at Mt. Bishop Road and park immediately. (There is no longer a stop sign at this intersection.) No campus parking permit is necessary on Saturday!

February 12: Annual Scion Exchange and Grafting Party at Cal Poly Crop Science Building. This is always a fun meeting—**another one with many guests attending.** Collect, label, and store your favorite scion wood to share with others. This is a “rain or shine” meeting. Apple rootstock, grafting knives, and Buddy tape will be for sale. We will have a “guest grafter” to teach us some new grafting skills! **Refreshments: S through Z please.** See the directions to the meeting location above.

March 12: The Mushroom Farm—Tentative.