NEW PROSPECTS FOR AN ALL-AROUND SPICE

People use anise to add a hint of licorice to everything from holiday Springerle cookies to robust bottles of ouzo and raki. Noe Agricultural Research Service (ARS) postdoctoral scientist Nurhayat Tabanca and plant pathologist David Wedge have found that anise (Pimpinella sp.) is more than just another jar in the spice rack.

Teaming up with colleagues in Mississippi and Turkey, they isolated 22 compounds in Pimpinella’s essential oils and found high levels of organic mixtures called phenylpropanoids. Phenylpropanoids are found in a wide variety of plants, and some are thought to have health-boosting benefits.

However, the chemical structure and biological activity of the Pimpinella phenylpropanoids are unique. Some phenylpropanoid compounds the team found have only been found in Pimpinella, and four of the compounds they isolated had never before been identified in any plant.

The compounds were evaluated for their activities against the plant fungus Colletotrichum, which causes anthracnose diseases worldwide. One unique compound was especially effective against strawberry anthracnose and strawberry soft rot and leaf blight. In addition, Pimpinella isaurica essential oils were more effective in controlling aphids than isolated Pimpinella phenylpropanoids.

These compounds were also tested for their activity against various major and minor microbes. A few showed some effectiveness against Plasmodium falciparum, the parasite that causes malaria in humans, and Mycobacterium intracellulare, a bacterium which can cause illness in immunocompromised patients.

Some phenylpropanoids exhibited anti-inflammatory activities. Pimpinella essential oils also showed estrogenic effects in a yeast model and were considered to have phytoestrogen properties.

These results suggest that Pimpinella essential oils may be a source of potent compounds that could be used in developing powerful new pharmaceuticals and agrochemical agents.

Tabanca and Wedge work at the ARS Natural Products Utilization research laboratory in Oxford, Miss. Other researchers who contributed to this research include K. Husnu Can Baser and Nese Kirimer with Anadolu University in Eskisehir, Turkey; Erdal Bedir with Ege University in Izmir, Turkey; Ikhlas Khan and Shabana Khan from the University of Mississippi and Blair Sampson who works at the ARS Thad Cochra Southern Horticultural Laboratory in Poplarville, Miss.
By Kim Kaplan— ARS

Scientists from the US Department of Agriculture’s Agricultural Research Service (ARS) have found that the Israeli acute paralysis virus (IAPV), a virus recently shown to be associated with Colony Collapse Disorder (CCD) of honey bees, has been in the United States since at least 2002, according to a note published in the American Bee Journal.

Research entomologists Yanping (Judy) Chen and Jay D. Evans, both with the ARS Bee Research Laboratory here (Beltsville, Md) conducted a detailed genetic screening of several hundred honey bees that had been collected between 2002 and 2007 from colonies in Maryland, Pennsylvania, California and Israel.

“Our study shows that, without question, IAPV has been in this country since at least 2002,” said Chen. “This work challenges the idea that IAPV is a recent introduction from Australia.”

Evans added, “Our study in no way rules IAPV out as a factor in CCD. We have always believed that CCD is a complex issue likely involving multiple elements. Research by several groups will now focus on understanding differences in virulence across strains of IAPV is a recent introduction from Australia.”

IAPV showed a high degree of genetic diversity in the US, with distinct lineages in California, Maryland and Pennsylvania. The virus was found to be substantially different from the well-studied Kashmir Bee Virus.

IAPV, first described in Israel in 2002, came to national and international attention in September when university and ARS scientists showed a strong association between the presence of IAPV and CCD.

That first study also found IAPS in honey bees from Australia that had been imported into the United States, as well as in royal jelly imported from China. Australian bees began to be imported from Australia into the United States in 2005. Questions were raised about a connection between those imported bees and the appearance of IAPV in the United States. beekeepers have sought out Australian imports of bees to replenish their hive populations.

ARS has begun several experiments to determine what factors may be most involved in CCD. Combinations of four areas are being examined: pathogens, parasites, environmental stresses, and bee management stresses such as poor nutrition.

CCD became a matter of concern in the winter of 2006-2007 when some beekeepers began reporting losses of 30-90 percent of their hives. While colony losses are not unexpected during winter weather, the magnitude and rapidity of loss suffered by some beekeepers was highly unusual.

The defining trait of CCD is a low number of adult honey bees present with few signs of dead honey bees in the hive. Often there is still honey in the hive and immature bees (brood) are present, indicating recent brood rearing.

Pollination is a critical element in agriculture, since honey bees pollinate more than 130 crops in the United States and add $15 billion in crop value annually. There were enough honey bees to provide pollination for the US agriculture this year, but beekeepers could face a serious problem next year and beyond if CCD becomes more widespread and no treatment is developed.

More information about CCD can be found at www.ars.usda.gov/is/br/ccd/.

Why should the public care about honey bees?

Bee pollination is responsible for $15 billion in added crop value, particularly for specialty crops such as almonds and other nuts, berries, fruits and vegetables. About one mouthful in three in the diet directly or indirectly benefits from honey bee pollination. While there are native pollinators (honey bees came from the Old World with European colonists), honey bees are more prolific and the easiest to manage for the large scale pollination that US agriculture requires. In California, the almond crop alone uses 1.3 million colonies of bees, approximately one half of all honey bees in the United States, and this need is projected to grow to 1.5 million colonies by 2010.

The number of managed honey bee colonies has dropped from 5 million in the 1940s to only 2.5 million today. At the same time, the call for hives to supply pollination service has continued to climb. This means honey bee colonies are trucked farther and more often than ever before.

Honey bee colony health has also been declining since the 1980s with the advent of new pathogens and pests. The spread into the United States of varroa and tracheal mites, in particular, created major new stresses on honey bees.
MARCH GARDEN TIPS
By Dixie La Rock

March Honey Do’s

We are all eager to get outside and start planting but, remember our average last freeze date is between April 1 and April 20.

Be prepared to protect young plants from the desiccating winds and cold nights of March. Row covers, old blankets, and walls of water come to mind.

Check irrigation systems. Add more drip emitters if needed to water under drip line of plants.

Irrigate established shrubs and trees, preferably to a depth of 18 inches. Use a soil probe to determine depth.

Don’t forget to start new plants for the April 12 plant sale.

Trees, Shrubs, and Vines

Finish planting bare root material before mid-month.
Cut back overgrown or freeze damaged shrubs and vines.
Remove dead ocotillo canes. Bend cane gently; if it snaps off, it’s dead. Then make a clean cut with loppers.
Plant Carolina jessamine, Virginia creeper, trumpet vines, silver lace vine, and Lady Banks roses.

Fruits and Nuts

Fertilize established fruit and nut trees.
Plant strawberries and grape vines.

Flowers, Herbs, and Ornamental Grasses

Plant canna, crinum, dahlia transplants, hollyhock seeds, verbena, gaillardia, gazania, marigold seeds, Maximilian sunflower, aster, coreopsis, statice, and petunia.
Divide and replant perennials such as chrysanthemum, daylily, and Shasta daisy.
Cut back frost damaged perennials herbs such as mint and sage, then fertilize and water.
Cut back pampas grass and other warm season ornamental grasses.
Clean up cool season ornamental grasses by “combing” with your fingers or a rake. If plant is large and ratty looking, cut it back also.

Vegetables

Finish planting cole crops, radishes, parsley, lettuces, kohlrabi, and leafy greens.
Plant garlic, beets, brussel sprouts, and Chinese cabbage.
Late March, plant tomatoes, eggplant, peppers, summer squash, sweet corn, and ‘New Zealand’ summer spinach.

Lawns

If you didn’t fertilize cool season grass in February, do so now.
Scalp warm season grasses, lower mower height and mow to remove dead leaf tissue. Rake or bag clippings. Clean air filter often during this process and wear a dust mask.
Take lawn mower to the shop for a tune up.

Pests

Keep an eye out for aphids on the new succulent growth of roses, lilacs, and others. Hose them off with a strong jet of water.
To reduce problems with powdery mildew, water susceptible plants in the early morning. Also, clean leaf litter from under plants. This will reduce pathogens.
Flea beetles attack Mexican evening primrose foliage and tender spring vegetables.
The discussions about providing web resources for Master Gardeners got me to wondering about what is available on the national level through extension. Turns out that there is a larger picture developing for extension and for master gardeners, as well as new ways to access those resources by both Master Gardeners and the public.

You can tap into that resource if you have an online connection and at least a beginning knowledge of how to use the internet.

What is the resource, what does it offer and how do I use it?

eXtension is an educational partnership of more than 70 universities to help you improve your life every day with access to objective, research-based information and educational opportunities. (from the website)

- eXtension provides information to you any time, any place, any format and on any Internet-ready device.
- eXtension is available to you 24/7/365, whenever you need to make decisions to improve your life, to answer life questions, or to learn more about any topic available.
- eXtension has the national shared strength of the Land Grant University System customized to focus on your needs where you live.
- eXtension’s content is dynamic and evolving, offering you timely information on topics that matter to you.

eXtension complements and enhances the community-based Cooperative Extension System of the land-grant universities, a resource you now have at your fingertips.

You can only grasp the full extent of this by going to the website and exploring it for yourself. I found it easy to navigate, extremely useful, as well as always available. But, is it local or regional and does it serve the Master Gardener population as well as the public? The answer is both yes and no. It is regionalized at the extension office and staff level, but not well integrated into local MG groups. I think the mechanisms are in place to integrate the local MG groups into this effort, depending on the interest and participation by individual Master Gardeners and extension agents. It appears that state coordinators play a key role in connecting local groups to the national level.

The section of the website that serves our particular interests is Garden, Lawns and Landscapes (link). The section is divided into categories by subject each containing further divisions, including one for Master Gardeners. I have searched several of the categories and found them all rich in content and easily explored. Accessing New Mexico information is more difficult, but you can link to our State Master Gardener Coordinator, and get the monthly calendar for Albuquerque Master Gardeners.

I tested out the “Ask An Expert” function with a question regarding specific information about local sources of compost, and received a personalized answer from Daniel Culbert, Okeechobee County Extension Horticulture Agent, IFAS/ University of Florida. He wrote a general answer and referred me to one of NMSU Hort. Publications about compost as well as two other references. So, you too can get your most complex questions answered by an expert. The first level of response is to search their database for relevant answers, but if there is none; questions are referred through their response protocol.

The “Ask An Expert” service is set up to serve the public, and designed to include Master Gardeners as the “Experts” within their local area of knowledge. It would have been most exciting if my question came from a Dona Ana Co. Master Gardener.

You can get daily information sent to you through the web by using the RSS feed subscription service of the website. I subscribe to the Gardens, Lawns and Landscapes RSS feed and receive new additions to that section every day. The content is relevant and an excellent way to continue learning. There is also a section of the website called “Self Learning” which is intended to serve as an online-extended learning portal for the eXtension service. At present, it ranges from “no content”, in Gardens, Lawns and Landscapes to full content in “Horses”. There are plans to use this function to facilitate some Master Gardener training at the national level.

So, if you want to easily access the resources of 70 land grant universities, have new information delivered to you daily and have an expert answer your most pressing gardening questions then link up with the new eXtension. (http://www.extension.org/)

Till next time,

Darrol Shillingburg
Dona Ana Extension Master Gardener
ADVENTURE IN YOUR OWN BACKYARD

By Dee Davis

Now that days are warming up we can look forward to a parade of insects showing up, some of which we don’t necessarily want around. Even so, in a healthy garden, those undesirable pests have their role to play. Annoying insects that we’d like to blast to “kingdom come” are much needed food for “beneficial” insects. For example, Adult Lady beetles dine on soft-bodied insects or mites; and Damself bugs munch on leafhoppers and aphids. If you understand there’s a symbiosis occurring among insects that moves toward a balanced center, then you’ll won’t haphazardly spray a garden with a pesticide.

As Master Gardeners, we may be aware that “beneficials” contribute to the well-being of a garden, but can we identify them? Pictures of many common ones can be found in the Cooperative Extension Service Circular 607, Guide to the Biological Control of Some Common Yard and Garden Pest Insects in New Mexico. This was my first introduction to some of the insect life that cohabits with the plants, flowers, fruit trees, and bushes surrounding my house.

The first step of learning what a “pest” and what is a “beneficial” begins by becoming aware of what’s flitting around and landing on your plants. Perhaps the first couple of times you’ll see very little that stands out, but as your eyes acclimate to differences in color and movement I guarantee you’ll begin to zero in on in a magic show that will astonish you. The first time I saw a very tiny Praying Mantis perched on a leaf, I gave it one of those vaudevillian second looks because it couldn’t have been more than 1/4th of an inch long -- and a perfect miniature of an adult.

When you have your first surprise, like mine, go to the public library and explore reference books to identify what you just saw. While you’re turning the pages, learn to distinguish other “beneficials,” such as the Lacewing, Spined Soldier Bug, and Big-eyed bug -- and find out what they enjoy munching on.

Be sure to check out the section on spiders. Spiders, such crab spiders, wolf spiders, jumping spiders, and pirate spiders are some of the best predators around. Also explore the section on beneficial bees, parasitic wasps, and flies. You may be surprise at what they do to keep your garden in balance.

To encourage and support “beneficials,” include mints, rosemary, and thyme in your landscape. Flower nectar from these plants is a supplement to their diet when target insects are scarce. Also, include coneflowers, a spread of daisies, and yarrow because the pollen of these plants is also nourishing to them.

Until you become familiar with insects, practice caution killing anything that flies or crawls. If physical controls are needed, sometimes a fly swatter or a hearty blast from a garden hose will do the trick. A water spray kills an insect by physically damaging it and unlike chemical sprays, pests can’t develop resistance to it.

Covering plants with a fabric called Reemay (which can be purchased through the Internet or seed houses) is another effective way to deter pests, especially the Beetleleaf Hopper responsible for infecting and killing tomato plants. A piece of Reemay wrapped around a tomato cage, and affixed with clothespins, will protect tomatoes all season long. Beetleleaf hoppers fly parallel to the ground and when they hit a wall of Reemay they don’t have the sense to fly up and into the opening at the top.

A serious infestation of any type usually indicates a serious imbalance, or lack, of “beneficials”; but before you resort to using a pesticide, first try applying deterrents such as traps, tree bands, and cutworm collars. If this doesn’t work and you’re afraid you’ll lose your vegetation, explore “natural” botanical insecticides. However, even they have their downside because many of them contain pyrethrin -- a chemical that doesn’t affect birds or mammals but kills, among many things, lady bugs (something you don’t want to do.)

Be mindful of the fact that when a pest has invaded and is making its impression in your garden, a “beneficial” is not too far behind. Be patient. Be respectful of the process, and you might be amazed to see how Mother Nature applies her checks and balances.

Master Gardener Profile:
Katrin Sumpter
Master Gardener Eager to Share
The Skills She Learns
By Ann Palormo

Katrin Sumpter completed the classroom part of the Master Gardener program in December 2007. Now she is active in the intern phase, sharing that knowledge and gaining more working the Master Gardener Hotline. “One thing I tell all newcomers to this area is that “full sun” does not mean “full southern New Mexico sun.”

A resident of Las Cruces for 35 years, she lives in the Four Hills area off Highway 70.

“I don’t have much space but I like to grow tomatoes and perennials,” Katrin states. “I don’t think I am a good gardener. I signed up for the program, hoping that understanding more would improve my skills.”

“I may not be able to keep a plant alive,” she laughs, “but now I understand better why it died.” One of her goals for the coming year is to learn more about container gardening.

For Katrin, who retired from a career in retail management in 2007, life isn’t all about gardening. She plays tennis, enjoys music, shares her life with cats and has a strong interest in literacy, health and aerospace. In 2007 she lost her husband Lonnie who was the executive director of the New Mexico Spaceport Authority.

By Ann Palormo
John White was our featured speaker at our February meeting. He spoke about the Chihuahuan Desert Gardens located on the UTEP campus. Lots of great pictures and good information, of course, and we got to visit with him just a bit before and after the meeting. John also managed to get volunteers for the Chihuahua Desert Gardens Native Plant sale April 24 – 27. If you are interested in volunteering and haven’t already signed up, contact him at jmwhite@utep.edu. The new Educational Programs committee has already set up more great speakers. On March 19, Ann Shine Ring will speak on roses; April 16, Bill Lindemann will talk about composting; and May 21, Carol Sutherland will update us on current pests and cures. Thanks to them for their hard work. If you have suggestions for future speakers, please contact Colette Bullock, colettecb74@hotmail.com.

Linda Fredrickson reports that the hotline was productively busy on Feb. 18 which is certainly more fun for all. She has scheduled a hotline refresher course for Tuesday, March 4, from 9 – 11 am at the office. Please contact her at lindapfred@aol.com or call if you are interested in attending. There are numerous openings in the hotline schedule available in March and April for experienced volunteers; please go by the office to sign up. We also learned that Richard Heerema is the pecan specialist at NMSU and that he is willing to answer hotline questions and to visit trees. His name and contact information are now posted in our office. There is also a lot of information available at on pecans at pecans.nmsu.edu.

Several of the local elementary schools would like to offer garden tours as an alternative to pizza parties for their students towards the end of school. If you are interested in helping with these, or with assisting in the after school training program for the 4-H horticulture contests which will start after spring break, please contact Juliet Williams, jwx2@earthlink.net.

The Master Gardeners are now certified to be vendors at the Farmer’s Market. This entitles us to set up our booth more than once per month. You will be allowed to continue to be classified as a non-profit one Saturday per month and then will work other weekends as vendors. If you are interested in working on either March 22 or March 29, please contact Barb Sallach, bsallach@nmsu.edu. Sign ups for April will be available at the next meeting.

Our plant sale is scheduled for April 12. If you plan on donating plants, please give the names of your plants to Valice Raffi, valice1@earthlink.net, as she will be making signs for the sale. Naturally, the earlier you can contact her, the better. If you need help dividing plants, etc., please contact Barb Sallach.

Our local garden expo committee gathered information on possible topics and sites for the expo at this meeting and will continue to gather information at future meetings in order to refine the plans. If you have suggestions, please contact Dee Davis, om_dd34@yahoo.com, and she’ll make sure they get to the committee.

Our salsa contest at the chile conference went very well. Dixie’s report as well as the recipes are available elsewhere in the newsletter. John White happened to be the only attendee at the Think Trees conference and he says it was an excellent source of information. Joan Lane thought the Mastering Organic Certification presentation was excellent and that 3 was the magic number as you needed to be using organic methods for three years prior to certification. Several members attended the High on the Desert conference in Sierra Vista and said that it was excellent as usual. Larry Dickson reported that the Las Cruces Iris Club had voted to donate $100 to the Master Gardener Program.

A new quarterly e-newsletter about gardening in the desert southwest is being started by Daphne Richards, a horticulturalist in El Paso with the Texas AgriLife Extension Service. If you are interested in receiving it, please email her at drichards@ag.tamu.edu. You may also download the newsletter at http://elp.tamu.edu/hg. Highlights from the first issue include some tips on pruning and planting roses and planting container gardens. Each issue will contain a great plant for the desert, the top five gardening tasks for each month, a calendar of events and presentations, and other timely desert gardening tips.

Coming up, John White will be presenting a program on “Living in a Desert” on March 29 – 30, 2008 as part of the Sunscape Conference in El Paso. The cost is $45. The registration form has been sent out via email. Contact John, jmwhite@utep.edu, for more information. Volunteer opportunities will be available on April 1 – 3 for Kids, Kows, and More and for the Tour of Gardens on June 7th, so mark your calendars. More information on both of these will be available at the next meeting on March 19th.

Have a great gardening month!

Barb and Juliet

If you are an individual with a disability who is in need of an auxiliary aid or service to participate in an Extension activity, please contact John M. White at 505-6649 at least two weeks prior to the event.

New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and the US Department of Agriculture Cooperating.
Salsa Contest Results by
Dixie La Rock

On Monday, February 4th, the Master Gardeners hosted a salsa tasting contest for attendees of the Chile Conference. We had 10 salsa entries. Six were traditional types ranging from chunky to well blended and hot to mild. There were 3 fruit varieties containing mango, papaya, or cranberry. One tasty entry contained curry, an entry from a salsa maker from Nepal.

Our event was very popular. People really enjoyed tasting each salsa and talking among themselves about the wonderful combinations of flavors. I overheard comments like: “Wow, come taste this one” and “What seasoning is in this one – it’s so good.” We even had some fruits and cheese to cleanse our palates. After the tasting, everyone voted on their favorite. Myles Muñoz won the grand prize which was brunch for two at the Double Eagle restaurant in Mesilla for his Chile de Arboll Red Sauce. Ms. Jit Baral won a $20 gift certificate to the Chile Pepper Institute for her Curried Salsa and Carla Clouser won a $10 gift certificate to the Chile Pepper Institute for her delicious Mango Picante.

The best part of the evening came at the end of the festivities as I was cleaning up. Some of the salsa chefs had to leave early so I volunteered to take the dishes home to wash. Pretty smart as I got home with 5 of the most delicious culinary creations. We have some outstanding cooks in our Master Gardener group. Thanks to all who participated and. I know people will be looking forward to next year’s salsa contest. Ann Palormo suggested that we publish the recipes so printed blow are the recipes for 8 of the 10 salsas we enjoyed. I’ll try to get the other two and publish them later.

Chile de Árbol Red Sauce

Makes about 2¼ cups

- 8 – 10 chiles de árbol (depends how hot you want it), wiped clean, left whole with stems (if any)
- 1 or 2 (8 oz.) cans of tomato sauce
- 1 tablespoon of dried oregano
- ¼ teaspoon of onion powder
- 1 garlic clove, roughly chopped

About ½ cup of water
Salt to taste

Put an ungreased comal or griddle over low heat and place the whole Chile into the comal or griddle. Toast the chiles, turning quickly (they tend to burn fast). Add all ingredients into blender and blend to a rough textured sauce. Dilute with water and add salt to taste. This sauce can be kept in the refrigerator for up to a week depending on how cold the refrigerator is. Freezing is not recommended. Enjoy!

Joan’s Fruit Salsa

2 cups diced ripe papaya
2 cups diced ripe mango
¼ cup diced jicama
¼ cup diced green onion (include tops)
¼ cup diced cilantro
1 – 2 mild green chilies (roasted, peeled, and diced)
1 small Jalapeno chile (roasted, peeled, and diced)
Juice of 1 – 2 small limes
¼ tsp salt

Mix together all fruit in a large bowl; add chili, salt, and onion, stirring gently. Sprinkle lime juice and toss gently. Allow to macerate for 20 – 30 minutes. This is wonderful when served with grilled or sautéed fish.

Mango Picante

1 ½ avocado (chopped)
2 cups green chile (chopped)
3 jalapeños (chopped fine)
1 mango (chopped)
1 small lime squeezed
Garlic salt or powder to taste
Cilantro (optional)

Combine all ingredients, refrigerate, & serve.

Habanero Salsa

2 – 3 Habanero Peppers
8 – 10 roasted & peeled green chiles (hot)
1 15 oz. can diced tomatoes
Garlic powder & salt to taste

Boil habaneros in 3 oz water then pour into blender; blend on high; add green chile, tomatoes, garlic powder & salt. Add enough water to achieve desired consistency; blend.
**Pico de Gallo**

Combine 2 green chiles, 1 jalapeno, 1 tomatillo, half each of green and red peppers, ¼ onion, 3 tomatoes, handful of cilantro, clove of garlic, salt and pepper in food processor. Chop at medium speed until all ingredients are a good size for dipping chips. Chill and serve.

(This tastes best in the summer when you can pick most of these ingredients fresh from the garden. Select chiles according to your hotness preference.)

**Cranberry Salsa**

1 (12 ounce) bag fresh whole cranberries rinsed and drained
2 jalapeno peppers, seeded and minced
¼ cup chopped cilantro (or more to taste)
2 tablespoons diced onions
½ cup fresh lime juice
½ cup sugar
½ teaspoon salt
¼ teaspoon freshly ground pepper

Cover cranberries with water, bring to a boil, and cook over medium-high heat for 2 minutes, just until most berries split. Drain well and transfer to plastic or glass container. Add remaining ingredients and combine thoroughly. Cover and refrigerate for up to 1 month.

**A Quickie Salsa**

3 – 5 jalapeño peppers
4 – 5 fresh garlic cloves
½ cup fresh cilantro
2 green onions
1 large can whole tomatoes
½ teaspoon oregano
½ teaspoon black pepper
Salt to taste

To be prepared in a blender. De-stem and core the jalapeños to remove some heat from the salsa – also remove the jalapeño veins. Chop the rest of the ingredients and add into the blender. Reserve the juice of the canned tomatoes – add slowly to determine the thickness of the salsa. Add spices and salt to taste.

Be sure to have a bag of chips on hand for many taste testing trials. Can add more of any amount of the ingredients to increase flavor.

Refrigerate and serve.

**Chile de Árbol Sauce**

Makes about 1 ¼ cups

- 8 oz. tomatillos-husk removed (about 11 small ones)
- 8 – 10 chiles de árbol (depends how hot you want it), wiped clean, left whole with stems (if any)
- 1 garlic clove, roughly chopped
- About ½ cup of water
- Salt to taste

Put an ungreased comal or griddle over low heat and cook the whole tomatillos, turning them from time to time until they are soft and slightly charred, about 15 minutes. Place the whole chile pods next to the tomatillos if there is room. Toast the chiles, turning quickly (they tend to burn fast). When cool set them in a blender and grind them to a powdery texture. Add garlic, cooked tomatillos and blend to a rough textured sauce. Dilute with water and salt to taste. This sauce can be kept in the refrigerator for two or three days, depending on how cold the refrigerator is. Freezing is not recommended.

**ROLBLEDO MTNS FIELD TRIP**

**VISIT PRE-DINOSAUR TRACK WAYS**
(MILLION YEARS BEFORE DINOSAURS)

**COLLECT PERMIAN AGE FOSSILS**

Bring collecting stuff – tote bag, newspaper for wrapping specimens, rock hammer, hand lens, and anything else you might need. Moderate hiking. Bring plenty of water and lunch.

*Check the weather - dress appropriately*

Meet Sunday, March 30th at 9:00 am
I-10 at Transmountain Rd at the Shell Station
Maximum 25 Persons

Cost—Free  Duration 4-6 Hours

Contact: Luis Hernandez 858-1386 or luis.hernandez7@att.net  
John Sharp 772-5509
**SunSCAPE . . . The Sensible Way**

*Learn about using native plants and gardening in harmony with the desert.*

**Seminar** March 29 and 30, 2008
Saturday and Sunday, 8:00 to 4:30 each day

**Chihuahuan Desert Gardens at the Centennial Museum**
The University of Texas at El Paso

Presenters are regional horticultural professionals and include Wynn Anderson, Botanical Curator of the Chihuahuan Desert Gardens at the Centennial Museum; Oscar Mestas, West Texas Regional Forester, Texas Forest Service; John White, Assistant Botanical Curator, Chihuahuan Desert Gardens.

Class is limited to 25 first-to-register participants. Registration fee is $45. Please make checks payable to The University of Texas at El Paso and send to Kaye Mulinis, The Centennial Museum, The University of Texas at El Paso, Wiggins Road and University Avenue, El Paso, Texas 79968-0533. For more information, call 915-747-8994. Enter parking area off University Avenue for elevator entrance.


Name
Phone (Home)       Phone (Work)       FAX
Address             City
State               Zip +4

FOR MUSEUM USE: SunSCAPE Seminar, March 29 & 30
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<td>Telephone Hotline Extension Office 9 am to 1 pm Pamela Crane (In) Joan Lane OPEN</td>
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<td>Telephone Hotline Extension Office 9 am to 1 pm Paul Hutchins (In) Ann Shine-Ring Dee Mondragon</td>
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<td>Telephone Hotline Extension Office 9 am to 1 pm Karen Gray (In) Dee Davis Margaret Shutt</td>
<td>MONTHLY MEETING Extension Office 9 am to 11 am</td>
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<td>Telephone Hotline Extension Office 9 am to 1 pm Carolyn Standridge Ann Palorno OPEN</td>
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<td>Telephone Hotline Extension Office 9 am to 1 pm Janet Brydon (In) Ann Palorno OPEN</td>
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<td>Telephone Hotline Extension Office 9 am to 1 pm Ina Goldberg (In) Sharon Poindexter OPEN</td>
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<td>SunSCAPE Seminar Barbara Arispe</td>
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<td>Ciclovia (DAC Sponsor) Chihuahuan Desert Gardens 9 am Free</td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm Karen Gray (I) Dixie LaRock Fran Connor <strong>Kids Kows &amp; More</strong></td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm John Blackman (I) Alberta Morgan <strong>OPEN</strong></td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm Sam Resch (I) Dixie La Rock Frank Connor</td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm Dii Mondragon (I) Anne Shine-Ring <strong>OPEN</strong></td>
<td><strong>Master Gardener Plant Sale</strong></td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm Sandi Resch (I) Marti Taylor <strong>OPEN</strong></td>
<td><strong>Master Gardener Monthly Meeting</strong> 9 am to 11am <strong>Extension Office</strong></td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm <strong>OPEN</strong> Dee Davis Margaret Shutt</td>
<td><strong>Farmer’s Market</strong></td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm Ina Goldberg (I) <strong>OPEN</strong> <strong>OPEN</strong></td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm <strong>OPEN</strong> <strong>Native Plant Sale UTEP Campus</strong></td>
<td><strong>Native Plant Sale UTEP Campus</strong> 9 am to 4 pm Both Days <strong>Farmer’s Market</strong></td>
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<td><strong>MG</strong> Telephone Hotline Extension Office 9 am to 1 pm Paul Hutchins (I) <strong>OPEN</strong> <strong>OPEN</strong> <strong>“Living in the Desert” Program”</strong></td>
<td><strong>“Living in the Desert Program”</strong> El Paso John M. White $45.00</td>
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