

COOPERATIVE EXTENSION

University of Arizona and U.S. Department of Agriculture cooperating.



the Cochise County Master Gardener

NEWSLETTER

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THE MISTLETOE MESS

Barry R. Bishop
Staff Writer

"Love this mistletoe. Why you should see how many girls kissed me today."

"This lousy mistletoe is killing my mesquites. They can't breathe."

Let's you and I dispel old wives' tales and seek the truth about this amazing parasite.

The English name mistletoe is said to have been derived from Misteltan (Mistel - different, tan - twig, referring to the difference between mistletoe and its host, the branch on which it is growing). Druids (remember Stonehenge?) believed that mistletoe protected its possessor from all evil, and branches were used by them to enter the new year.

Scandinavian legend has it that Balder, their God of Peace, was slain with an arrow made from mistletoe. Later he was restored to life at the request of other Gods and Goddesses and the plant, mistletoe, was given to the keeping of the Goddess of Love. To honor her, it was ordained that everyone who passed under it should receive a kiss. This was to show all that mistletoe was an emblem of love and not that of hate.

Both of these ancient customs probably carried forth to our modern day ritual of hanging mistletoe over entry-ways and then kissing whoever enters under it. After a kiss is obtained, the kisser is to remove one of the white berries until they are all gone. A smart person buys several branches containing berries and when one branch no longer has berries on it substitutes another.

There are two distinct types of mistletoe found in Arizona: dwarf mistletoes found in conifers and the true mistletoe, *Phoradendron californicum*, found growing on palo verdes, acacias, and mesquites.

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P. californicum is a perennial, evergreen, shrubby, photosynthetic, plant-parasitic seed plant belonging to the family Viscaceae. It has no roots and is parasitic on the stems of woody plants from which it derives water, mineral nutrients, and small amounts of the organic compounds carried in xylem sap. The wood of mistletoe has been found to contain twice as much potash and five times as much phosphoric acid as the wood of the host tree.

Mistletoe preferentially receives water during times of drought and wastes water by continuing to transpire even under water stress. This causes severe water stress in mistletoe hosts and is one of the main causes of vigor and dieback. *P. californicum* is a "hemiparasite" as opposed to other true mistletoes. What this means is that it is able to make its own chlorophyll and is able to produce most of its own organic nutrients through photosynthesis and obtains little carbon from its host.

It has tiny scale-like leaves on long pendulous stems, in time attaining lengths greater than two and one half feet and forming dense bushes. It is dioecious (male and female flowers on separate plants). Its white flowers form in May and are inconspicuous. The berries which house the seeds ripen in December and are white to reddish. If you use the mistletoe outdoors you have got to be careful not to sow the seed. The fruit of the mistletoe is reportedly toxic to livestock as well as humans.

Green straggly, bushy growth of mistletoe hang from infested branches of the host tree. These branches and stems become swollen, with atrophy and dieback closer to the tree trunk than the parasite. Infections on the lower trunk are more damaging than infections in the upper branches.

It is very difficult to control. Recommendations are to prune out tainted branches one foot below the infected area. Do not forget good pruning practices. Never prune more than one third of the host's annual foliage. Perhaps cutting off the berries of the mistletoe will prevent it from spreading. As far as prevention, keeping a close watch on your neighbor's trees and alerting him to a problem as it grows is about all you can do.

WHAT IS A MASTER GARDENER?

The Master Gardener program began in King and Pierce Counties of Washington state in 1972 when an overworked Horticultural Extension Agent, Dr. David Gibby, began training volunteers to assist him in providing support to the community. Dr. Gibby's program was simple and effective. In exchange for a promise to donate a certain number of hours service, he gave volunteers specialized, university-level training in horticulture. Word of his success in recruiting volunteer support soon spread to other communities, and today Master Gardener programs are flourishing throughout the United States and Canada.

The Master Gardener program was started in Cochise County in 1987 by Horticultural Extension Agent, Dr. Deborah Young. The current agent, Robert Call, has continued the program teaching the thirteen week Master Gardener course twice a year. Prospective Master Gardeners who take the course study such topics as soil, pest management, botany, gardening, landscaping, and environmental stewardship. For information on the next class, please call the Sierra Vista Cooperative Extension office.

FOR SALE: Conference commemorative T-shirts and posters are available at the Sierra Vista Cooperative Extension office (Monday - Thursday 1:00 pm - 5:00 pm and Friday 9:00 am - noon). Also for sale are indoor plant guides/doctor "wheels" for a nominal fee.

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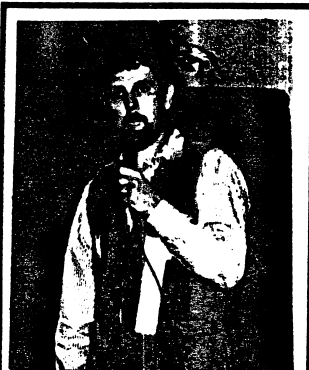
CONFERENCE HUGE SUCCESS - AGAIN!

Gary A. Gruenhagen

Another *High on the Desert* conference has passed into history. The Second Annual High Desert Gardening and Landscaping Conference was held at the Ramada Inn in Sierra Vista on February 16-17 with optional tours on the 18th. Once again we drew people from far and wide, and once again those who attended enjoyed the conference immensely. At least that's what their evaluations tell us. Those of you who didn't attend missed an exciting and rewarding experience. By the way, I have been told that some people didn't come to the conference because it was "only for Master Gardeners." Nothing could be further from the truth. The conference, sponsored by the Master Gardeners, was for everyone interested in gardening and landscaping in the high desert.

One of the highlights of the conference this year was the large number of prizes given away. Jerry Ambrose and his crew did an outstanding job of lining up sponsors and coming up with a great selection of prizes, including many plants and a fountain. Someone at the conference counted up the prizes and the number people attending and calculated that everyone had nearly a one hundred percent chance of walking away with a prize of some sort. Of course, prizes are important but a conference can be no better than its speakers.

Horticulture Agent, Rob Call and his committee, produced an excellent group of speakers. Like most people who attended, I had to make some hard choices in selecting which seven of the 21 presentations to attend. I think I

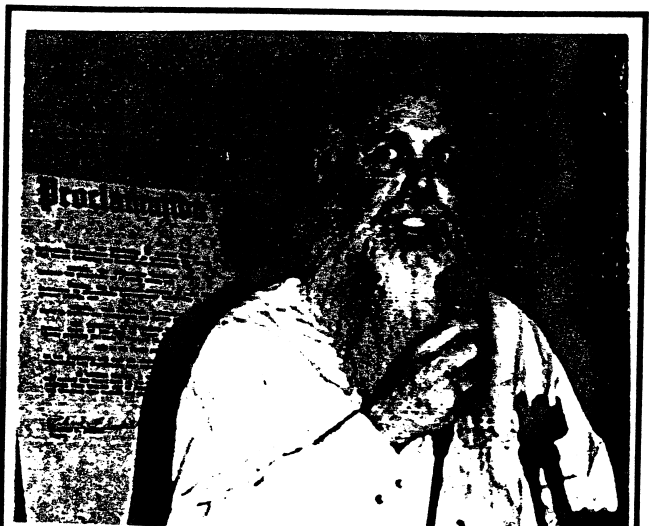


Gary Paul Nabhan, Ph.D., keynote speaker on Thursday, Feb. 16, is the cofounder of Native Seeds/SEARCH.

made the right choices, but everyone I talked to also enjoyed all of the sessions they attended. In addition to the individual sessions there were two general sessions, one on each day of the conference.

Thursday's general session presentation was given by Gary Paul Nabhan, cofounder of Native Seeds/SEARCH and author of many books on ethnobotany, natural history, and desert life. Dr. Nabhan's presentation on Native American crops and agricultural practices showed how working in harmony with Nature, rather than against her, can produce crops in dry land gardens that are not only bountiful but more nutritious than modern crops. A highpoint of the conference was the talk given by Howard-Yana Shapiro to the general session on Friday. Dr. Shapiro, Vice President of Seeds of Change, a New Mexico-based seed company, spoke on sustainable agriculture and biodiversity. All who heard his inspiring talk came away with a much greater appreciation of how precious and fragile a resource we have in the pool of plant genes we have inherited and how hard we must work to preserve it.

The third annual *High on the Desert* conference is scheduled for March 1-2, 1996 (that's a Friday and Saturday) at the Ramada Inn in Sierra Vista. Hope to see you there!



Vice President and Director of Agriculture of Seeds of Change, Howard-Yana Shapiro, Ph.D., spoke on the subject of Sustainable Agriculture and Biodiversity.



Wildflower Alert

It looks like it is going to be a great year for wildflowers! For a weekly recorded message about wildflower locations around the state, call the Desert Botanical Garden Wildflower Hotline in Phoenix at:
1-602-481-8134.

Don't forget!

SPRING PLANT SALES

- March 24-26: DESERT BOTANICAL GARDEN, Papago Park, Phoenix. Members only sale 24th (3:00 - 6:00 pm); general public, 25 & 26 (9:00 am - 5:00 pm).
- March 25-26: TUCSON BOTANICAL GARDENS, 2150 N. Alvernon, Tucson. General public (10:00 am - 4:00 pm both days.)
- March 31 - April 9: BOYCE THOMPSON SOUTHWESTERN ARBOR-ETUM, (8:00 am - 5:00 pm all days.)
- April 1-2: DESERT SURVIVORS, 1022 W 22nd St, Tucson.
- April 8: ARIZONA SONORA DESERT MUSEUM'S Third Annual Plant Promotion, showcasing new varieties of desert-adapted plants; (9:00 am - 3:00 pm.)
- Year round: TOHONO CHUL PARK, 7366 Paseo del Norte, Tucson; Hours from Oct. 1 - May 1 are 10:00 am to 2:00 pm, May 1-Oct. 1 are 9:00 am to 1:00 pm.



MARCH REMINDERS

- Winter prune trees
- Water periodically
- Cold-moist stratify seeds
- Order from seed catalogs
- Prune rose bushes
- Plant bare root trees
- Prepare spring planting beds
- Clean & repair drip irrigation systems
- Plant seeds indoors for transplanting after last frost date

Freebies!

- Gardener's Supply Co. of Burlington, VT is offering a free, 24 page irrigation source book/catalog in connection with the 25th anniversary of Earth Day. The company says water conservation has lagged since the first Earth Day. Call 1-800-234-6630 for a copy.
- Burpee Seed is offering customers a toll-free garden information telephone service. "While we hear a lot of buzz about computer gardening, most gardeners prefer to talk over a problem with a knowledgeable human being," says the announcement. The service can be reached at 1-800-333-5808 from 9:00 am to 6:00 pm (EST) Monday through Friday and from 9:00 am to 5:00 pm on Saturday.
- Free clippings are yours if you assist with "clean-up" at Arizona Cactus and Succulent, in Bisbee. Clean-up takes place the third Sunday of every month from 10:00 am - 4:00 pm. For information, call 432-7040.

THE AGENT'S OBSERVATIONS

Robert E. Call
Horticulture Agent

QUESTION: When and how should I prune my gardenias?

ANSWER: Most gardenias need little pruning. On old, unproductive branches and weak stems should be removed 6 to 8 inches from above the ground. This will encourage new basal growth. Do this in early spring before growth begins. During bloom thin out weak stems that have not produced flowers and that have few or small leaves. On leggy plants (those with weak, spindly growth) lightly cut back branches to encourage side-shoot formation and growth. Continue these practices each year until the entire plant is young and vigorous again.

Source: *Sunset Pruning Handbook*. 1991. Sunset Publishing Corporation, Menlo Park, CA. Page 62.

QUESTION: I have seeded some broccoli and cabbage in peat pots. They have germinated but are tall and very weak at the base, so weak in fact that some are starting to fall over. What am I doing wrong?

ANSWER: Most plants when they germinate and emerge from the soil need light to grow. When the light supply is limited the plants become etiolated; a term meaning plants stretch for light. Remember the beans that you or your children germinated in the dark? Oh you never have seen them? Well plant some bean seeds in a cup and keep them moist and in the dark and you will see etiolation. Broccoli and cabbage are members of the Brassica plant family and are very prone to etiolation. What you need to do is place them in nearly full sunlight or place them under a fluorescent light that is only sev-

eral inches from the plant leaves. I have found it easiest to hang lights from light weight chains, then place the chains over hooks screwed into the ceiling or shelves. This allows for gradual raising of the lights as the plants grow.

QUESTION: When should I dethatch my lawn?

ANSWER: It depends on the type of lawn you have. Dethatching is done with either a machine rented from a rental shop or with specialized rakes that give the user a very good workout! Dethatching is done to remove excessive build up of plant materials that lies just beneath or just on top of the soil. The former are rhizomes and the later stolons. Stolons are stems that "creep" on top of the soil and rhizomes are underground stems. Both serve as sites from where new grass plants are formed. Dethatching is not for the removal of built-up grass leaf blades in the sod. These normally decompose naturally. Fescue type lawns do not have rhizomes or stolons and are never dethatched. Bluegrass has only rhizomes. These are cool-season plants and grow best with cool temperatures. Bermuda grass can spread by means of seeds, rhizomes and stolons and is a warm-season grass, growing best in warm weather. Dethatching is a damaging procedure and should be done only when plants are vigorously growing and have plenty of time to recover from the damage caused by the machine or rake. Therefore, dethatch bermuda grass lawns about a month after it is growing well, normally the end of May or June. Bluegrass is rarely in need of dethatching but if need should be done in later September or October. Fescues never need to be dethatched because they do not produce stolons or rhizomes.

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Address correction requested

Thank you! Thank you!

The University of Arizona Cooperative Extension Master Gardeners could not have had such a successful conference if it hadn't been for the following.

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And a very special thank you to all the committee members who gave so much of their time, energy, and talents!