



# Desert Breeze

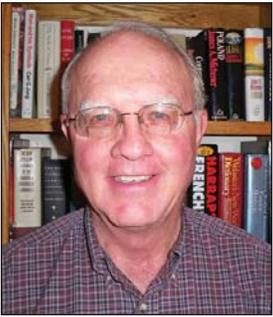
Newsletter of the Tucson Cactus and Succulent Society

November 2009

Thursday, November 5, 2009

## "The Use of Emulsified Pure Oils to Control Insects and Diseases Attacking Cacti and Succulents"

Presented by Dr. Jerald Wheeler.



Pure oils can be obtained from the local drugstore. "Mineral Oil" is a great intestinal lubricant, Odorless - Tasteless - Crystal Clear, 1-2 tablespoons at bedtime. My grandfather used it but I did not understand the actual significant use of oils until I started working and understanding their use in agricultural application. The use of pure oils for pest and disease control for cactus

and succulents is safe, effective and really quite unknown to most people.

Jerald E. Wheeler, Ph.D. is a Plant Pathologist. For those who need a better explanation of what a plant pathologist does, here is a short definition. A plant pathologist is one who studies, interprets, and diagnoses diseases and abnormalities of plants. Plant Pathology is defined as the study of the organisms and environmental conditions that cause disease in plants, the mechanisms by which this occurs, the interactions between these causal agents and the plant (effects on plant growth, yield and quality), and the methods of managing or controlling plant disease. It also interfaces knowledge from other scientific fields such as mycology, microbiology, virology, biochemistry, bio-informatics, etc. Educational background: BS. Purdue University, 1966, Agriculture and Plant Sciences MS. U. of Arizona, 1969, Plant Pathology/Botany Ph.D. U. of Arizona, 1970, Plant Pathology/Agricultural Biochemistry 1968-1970 U. of Arizona, In charge of plant disease clinic under Dr. Hine Professional History 1970-1971 Assistant Professor of Plant Physiology, Univ. of Freiburg, Germany 1971-1973 Assistant Professor of Agronomy and Plant Genetics at the University of Arizona 1973-1975 Development Plant Pathologist, University of Wisconsin, Brazil 1975-1988 Owned and/or Managed Acre, Inc. 1988-2002 Product Development Manager, United Agri Products 2002-2004 Product Development Manager, Western Farm Service 2003-present Product Development Manager, Agrilience/Winfield Solutions Dr. Wheeler has also been published with his writings in 17 Scientific Publications in referred journals.

Please plan to come to this last regular meeting for 2009. Dr. Wheeler is a fantastic speaker that will add a lot of information that will be of value to you and your garden. It has been a very

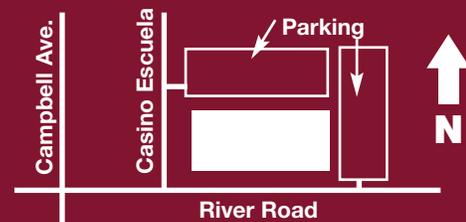
busy year for everyone in our organization. We have achieved many goals and are now looking to another amazing year in 2010.

Sunday, December 6, 2009 from 12-3 PM  
TCSS Holiday Party 12pm - 3pm  
Junior League of Southern Arizona

### TCSS MONTHLY MEETING FREE PLANT GIVEAWAY Lithops Care (Pot Culture)

LITHOPS should be given a dry rest in winter when the new growth is drawing moisture from the old leaves. At this time, water very lightly, just enough to keep the root hairs alive. As the old leaves dry up in the spring, give them more water until the long, hot summer days bring the growing period to a standstill. During summer only regular light watering is required to prevent the plants from shriveling and the soil from going bone dry. As flower buds appear in late summer and fall, another watering period begins, tapering off during winter after flowering has ended. (Those growing plants under lights will probably need to water some during the winter when the plants show signs of shriveling). Lithops should be grown in filtered sunlight. We pot our lithops in our standard succulent medium. It's approximately 50% pumice (perlite works just as well for the plant, though it tends to float). Two crucial factors in lithops cultivation are fast-draining soil and good air movement.

**Meetings are held on the first  
Thursday of each month.**



**Junior League of Tucson, Kiva Bldg.  
2099 E. River Road**

### November Refreshments

Those with family names beginning with J, K, L, M and N, O, P please bring your choice of refreshments to the meeting. Your generous sharing will be greatly appreciated and enjoyed!

## President's Message



On November 12, 2009, the Tucson Cactus and Succulent Society will complete its first 50 years and I have had the good fortune to be involved for the last 40 years. In this last decade the society has rapidly grown and reached out to more people and their diverse interests. This year we have more than 1,100 members, mostly from the Tucson area but also from many other communities in Arizona, 16 other

states and at least 1 international member. This certainly makes us the largest local Cactus and Succulent Society in the country if not the world. We are truly the Cactus Capital.

We need to think about the future and how our society can contribute in areas like discovery (research), information, conservation and education. We already have a research grants program which provides financial support. Our monthly newsletter "The Desert Breeze" and our website [tucsoncactus.org](http://tucsoncactus.org) provide great information on a whole range of topics to members and the general public. Our celebrated rescue programs has saved over 46,000 plants from destruction and found them new homes. This has made it possible to provide grants to K thru 12 teachers to do classroom educational projects about cacti and succulent plants. Finally, you have benefited from the almost 600 meeting speakers in the last fifty years.

We will be introducing some new software on our website to make it possible for you to upload pictures and more for everyone's enjoyment and also including an online scrapbook starting at our beginnings and continuing into our future. We will be adding more general information about growing succulents in the desert for your benefit.

Your ideas and interests are important and we will be surveying them in our next general mailing.

Our Holiday Party is set for December 6, 2009 at the Junior League facility. Save the date. You will get all the information in the general mailing in mid November.

We will have nomination from the floor for all open officer and Board positions at the November meeting. Please see the report of the nominations committee in this newsletter.

Thank you for your continued support,

*Dick Wiedhopf, President*

## 2010 Slate of Nominees for Officers and Board of Director Members

According to our by-laws, a nominations committee was elected and charged with securing at least one nominee for all open positions.

Additional nomination will be accepted from the floor at the

November general meeting. The nominee must be in attendance and agree to accept the nomination or the nominator must have a written statement from the nominee that they will accept the nomination.

The committee members, Bill Salisbury, Bill Hicks and Ed Bartlett presented their nominee list to the October Board of Directors meeting. The report was accepted by the Board.

### The Nomination Committees nominees are:

President	Richard Wiedhopf
Vice President	Vonn Watkins
Secretary	Dave Moyer
Treasurer	Joe Frannea

### Board of Directors ending December 31, 2012

Chris Monrad  
Keimpe Bronkhorst  
Dale Johnson

### CSSA Affiliate Representative

Bill Holcome

## Library Update

### An Illustrated Guide to Arizona Weeds by Kittie F. Parker

A full page is devoted to a black and white illustration of the weed with description and distribution information on the opposite page. The illustrations are well done and identification should be easy.

Some websites to go to for more information on obnoxious weeds are Arizona Noxious Weeds List at the Arizona Department of Agriculture.

[www.azdot.gov/Highways/NResources/Priority\\_Weeds\\_List.asp](http://www.azdot.gov/Highways/NResources/Priority_Weeds_List.asp)  
This site is point and click to see the description and a picture of the weed. The former just gives a list of all noxious weeds.

### Field Guide to the Wild Plants of Oman by Helen Pickering and Annette Patzelt

A photographic field guide covering the geographical regions of Oman. The main sections of this book cover 250 common species, divided by the color of flowers. There is an additional section for trees and grasses. Each color group is organized alphabetically by botanical family.

*Joie Giunta*

## Getting Ready for Frost

from Mark Dimmitt

### Growing Succulents in the Desert (series)

With temperatures still near 100 degrees F this October, it's difficult to think about winter. But the average date of first frost in Tucson is in mid November, and the coldest areas have had frost before November even arrives. Of course, tender tropicals must be brought indoors for the winter. But this article is about protecting the more frost-hardy succulents. These plants will fare much better if they are properly prepared before frost hits. Consider this: The coldest official temperatures for Tucson are in the mid teens, and most of our native plants can tolerate such temperatures in mid or

late winter. But in 1978 a warm, wet autumn ended with a hard frost of 19 degrees in early December. The plants had not hardened off, and there was wholesale death all across the desert. In the Tucson Mountains almost all of the large saguaros were killed outright or succumbed in the next few years.

Hardening off is very important. Immature leaves and stems will freeze at a higher temperature than mature, hardened growth. This presents a conflict. September and October usually have ideal temperatures for the growth of warm-season succulent plants. If you take advantage of this season and continue to water and fertilize your plants, be prepared to protect them if there is an early freeze. At least by the end of October, water and fertilizer should be withheld to harden the plants against the first hard frost that usually occurs in December.

Most summer-growing, cold-hardy succulents benefit from becoming dehydrated during winter. Succulents that grow in cold winter habitats produce antifreezes – compounds that lower the freezing point of the sap. Generous watering that keeps the plant fully hydrated dilutes the antifreeze and makes the plant more susceptible to freezing. In very cold areas such as the northern states and Canada, native prickly pears shrivel so much in the fall that they look nearly dead. They survive below zero temperatures in this condition for weeks on end and suffer no damage.

We are fortunate in that most of our frosts are only in the mid to upper 20s, and temperature remains below freezing for only a few hours. This enables simple covers to provide significant extra protection. A solid, opaque cover such as a sheet or paper bag gives at least 10 degrees of protection. In other words, a plant that would be damaged by 28 degrees in the open will survive 18 degrees under cover. Even a tree with a 50% canopy cover provides several degrees of protection. Planting next to a heat-retentive object such as a boulder or house wall also aid winter survival.

Don't be afraid to experiment; you may discover that you can grow more "tender" plants than you know. My typical winter minima are in the upper teens. Mexican tree ocotillo (*Fouquieria maccougali*) is hardy to 26, but I have had a 6-foot tall specimen under a palo verde tree for several years with minimal damage. I have a *Welwitschia mirabilis* in the ground; it has survived 17 degrees under a double blanket. So has a *Zamia furfuracea* that has been in the ground for many years. Sometimes the leaves freeze even under the



*When this Welwitschia mirabilis grew too heavy to carry indoors, I began wrapping it in frost cloth. It has been through about 10 winters with no damage. The succulent orchid Eulophia petersii (left) is moved into the patio in Figure 3. It survives well, but does not flower unless kept warmer over the winter.*

cover, but the buried crown resprouts in spring. An *Alluaudia ascendens* was wrapped in frost cloth every winter; it grew to 20 feet tall in about 10 years. *Adenium arabicum* specimens planted in the ground in my glass-roofed patio grow and flower very well; they suffer only twig damage at 25 degrees.

Throughout the winter, pay attention to the weather forecasts and be prepared to take extra measures when the rare catastrophic freeze hits. I've been planting out many succulents in my yard for 30 years, and they had survived several nights in the upper teens with the protective measures described above. But a couple of years ago a bad freeze happened, with the temperature dropping two degrees lower than it ever had since 1978. I had become overconfident, and lost some really fine old specimens (including my giant *Alluaudia*).

## TCSS BOARD Officers

**President: Richard Wiedhopf**  
885-6367

**Vice President: Vonn Watkins**  
**Secretary: Dave Moyer**  
**Treasurer: Joe Frannea**

## Board of Directors: (Ending December 31, 2009)

Dan Birt  
Chris Monrad  
Mark Sitter

(Ending Dec. 31, 2010)

Linda Bartlett  
Martin (Marty) Harow  
William (Bill) Hicks  
John Swarbrick

(Ending Dec. 31, 2011)

Ed Bartlett  
Mark Dimmitt  
Joie Giunta  
Bill Salisbury

**CSSA Affiliate Rep:**  
Helen Barber (2009)

**Cactus Rescue**  
[cactusrescue@tucsoncactus.org](mailto:cactusrescue@tucsoncactus.org)

**Cactus Rescue: Chris Monrad**  
**Educational: Joe Frannea**  
**Free Plants: Chris Monrad**  
**Librarian: Joie Giunta**  
**Programs: Vonn Watkins**  
**Refreshments: Patsy Frannea**  
**Technology: Kevin Barber**  
**Research Grants: Gerald Pine**

**Editor: Karen Keller**  
[runbunny@cox.net](mailto:runbunny@cox.net)  
**Deadline for copy: 15th of each month**

**TCSS Web Page:**  
[www.tucsoncactus.org](http://www.tucsoncactus.org)  
**Webmaster: Keimpe Bronkhorst**

**Everyone is Welcome!**  
**Bring your friends, join in the fun,**  
**and meet the cactus and**  
**succulent community.**

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**Cacti Rescued**  
227 Rescues Accomplished

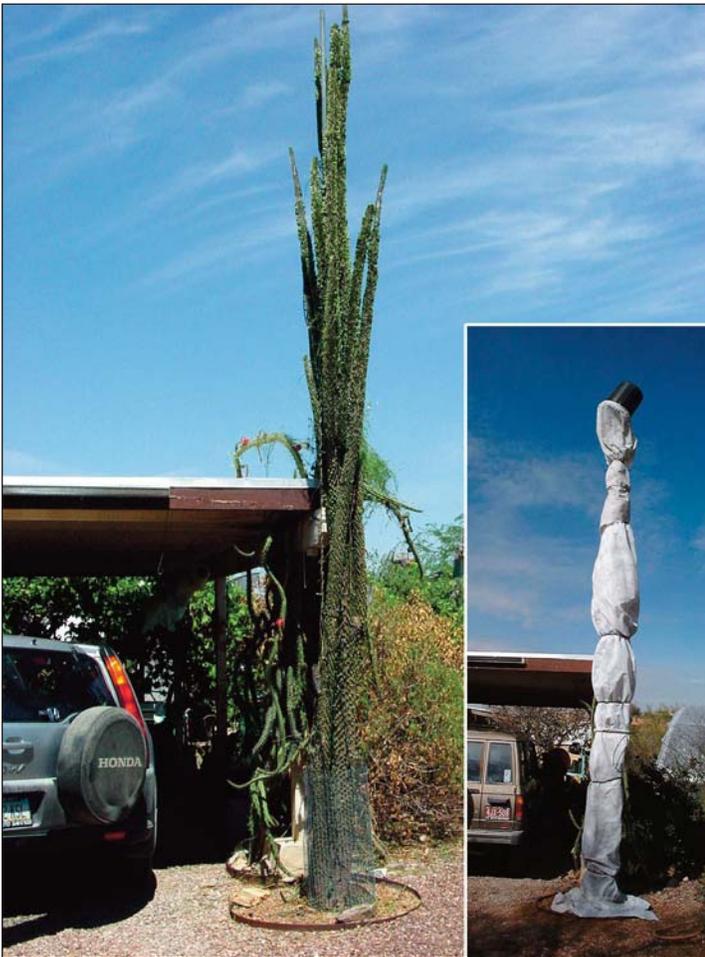
Please see our Web site calendar for the next rescued cactus sale. They are scheduled at various times during the year based on our inventory.

TCSS Club Members receive a 10% discount

**November 2009**

Thursday, November 5, 2009	7:00pm Monthly meeting: Presented By Jerald Wheeler. "The Use of Emulsified Pure Oils to Control Insects and Diseases Attacking Cacti and Succulents."
Tuesday, November 10, 2009	7:00pm Board Meeting at the U of A College of Pharmacy

**Some of Mark Dimmitt's Adeniums and other plants**



*Alluaudia ascendens* grows as a narrow column, making it easy to wrap with frost cloth (inset), at least until it's 3 stories tall



This *Adenium arabicum* has been in the ground in an enclosed patio for 10 years. It and the *Stapelia gigantea* surrounding it tolerate mid 20s with no or minor damage