

Tortoise Group Newsletter

The Organization for the Protection of Nevada's Resident Tortoises, Inc.
A non-profit organization since 1982

Hotline: 702-739-7113

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www.TortoiseGroup.org

Las Vegas, Nevada

Where is Cactus Cate?---not at the Government Center habitat!

By Betty Burge

Cactus Cate is not a punk rocker or a concert junkie. In fact, the sound level from the concerts at the amphitheater was more than she could stand. She was actually crawling the walls!

Also, the burrow failed in its critical function, to protect the tortoise from overheating when temperatures above ground can lead to death. As the Tortoise Group consultant, I recommended a burrow design that was as close to what a wild tortoise would dig in the soil with the least possible compromise in construction material. A burrow design that we have found does its job.

The County representative rejected our design, wanting to eliminate the chance of flooding and collapse and any need to rebuild the burrow after one of our periodic, flood-producing rains. This elaborate, supposedly-foolproof design is shown under construction. The burrow became a heat sink. Internal temperatures at the far end of the burrow during summer were in the mid to high 90's (F)! In several Tortoise Group-type burrows of soil with a plywood roof covered with soil, temperatures at the far end were all a comfortable 82-87° F.

We know that a tortoise can move out of the burrow and sleep in the open at night in summer, benefiting from the natural cooling. However, during the day the coolest place to prevent overheating is the burrow interior. The preferred body temperature of a tortoise is about 86 to 93.2° F. Critical Thermal Maximum, the temperature that is the limit above which the tortoise dies of overheating, is 103-109.4°F.

We wanted to avoid the stress of removing Cate before each concert and then returning her. That was no way to maintain a tortoise. The limiting factor was the noise level not the burrow, which could have been reconstructed. Tortoise Group decided for Cate's

welfare she should be removed from the habitat. She was adopted by one of her caregivers.

The habitat remains an excellent example of a tortoise habitat and is of continuing educational value. In fact, an artificial tortoise, strategically placed and secured would be visible 100% of the time, whereas Cate would be visible maybe 2% of the time.



County design for Cactus Cate's burrow at the Government Center using manmade materials creates a heat sink. Tortoise Group guidelines were rejected. A concrete base laps over bottom edges of PVC pipe along its length. Floor is concrete covered with EPDM, the playground substrate, and then a layer of soil. White cylindrical cover of shaft at rear allows emergency access to Cate by a slender person. Wood forms were removed.

What should we learn from this?

Tortoise Group recommendations on habitat and care come from years of personal experience with captive situations, field work, and knowledge of the published data. That work includes monitoring wild tortoise movements and their internal temperatures in relation to temperatures inside and outside natural burrows.

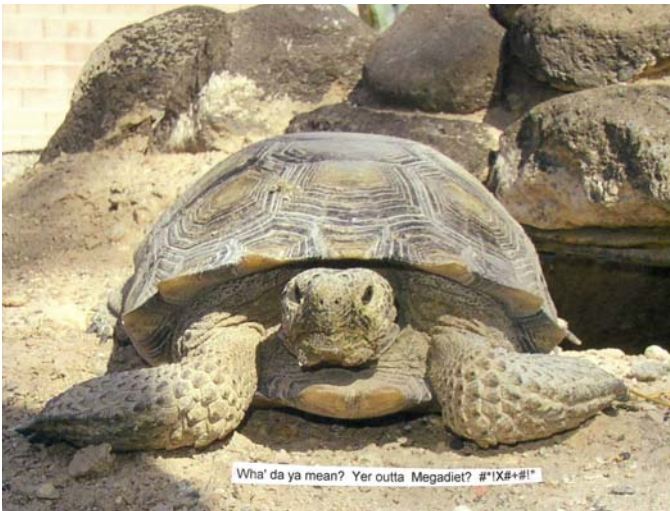
Guidelines in the booklet, *Desert Tortoises, Adoption and Care*, can be trusted and are a proven compromise in design for the captive tortoise because we, not the tortoise, usually have to dig that burrow. Please respect your tortoise and rely on proven methods for tortoise care.

MegaDiet Corner

MegaDiet Pricing Change

Becoming a member of Tortoise Group now provides a significant advantage. MegaDiet is priced at \$8.00 for members and \$12.00 for non-members (\$8.50 and \$12.50 online).

The membership push is twofold: 1) Many people buy MegaDiet and use our other volunteer time and free services year after year without showing the support of membership, and (2) Greater membership numbers will place us strategically to obtain grants to further our efforts to increase public awareness about tortoise care. It takes big bucks. If you haven't already, please help by becoming a member today.



“Wha’ da y a mean? Yer outta MegaDiet? #*!X#+#!*”
with Spike by Audrey & Merrill Larsh

Creative Tips on Introducing MegaDiet

- Soften MegaDiet to cookie dough consistency. Try unsweetened apple juice, apple sauce, or liquefied lettuce instead of water
- Grate apple to juicy state to soften MegaDiet.
- Soften and roll up MegaDiet in a grape leaf, rose petal or other favorite leaf (not lettuce)
- Hollow out half a cherry tomato and fill with softened MegaDiet
- Soften MegaDiet and stud the surface thickly with rose petals or desert willow flowers.

- Go cold turkey. No muss, no fuss.
- Email your tips to Kathy at kutiger@embarqmail.com

Remember that these tips are to get your tortoise started on MegaDiet. Later, gradually lessen the apple or juice so your tortoise eats plain MegaDiet.

MegaDiet Satellite Sellers

Please call sellers for appointment

Nellis & Owens	Georgi – 459-1274
I-215 & Lone Mtn	Lynn – 655-5698
I-215 & Far Hills	
	Kathy & Pauline – 804-0472, 9am – 7pm
Rainbow & Alta	Kellie – 353-5513
W. Tropicana & Hualapai	
	Athena – 891-8585
Tropicana & Maryland	Betty – 739-8043
Dean Martin & Blue Diamond	
	Carolyn – 876-0668, ext. 874
Silverado Ranch & S. Maryland Pkwy	
	Helene – 878-7877
Boulder Hwy & Equestrian	
	Gail – 334-0015 Cell
Warm Springs & Lake Mead	
	Gay – 563-1924
Pahrump	Sheri – 775-727-5557
Kingman, AZ	Toni – 928-757-8317

OnLine Store at:

<http://www.tortoisegroup.org/sales/intoshop.php>

No computer? Call Betty – 702-739-8043

A 1½ lb bag costing \$8.00 (\$12.00 for non-members) lasts a large desert tortoise about one month. MegaDiet is also sold at Tortoise Group meetings.

Spring Events

Nevada State Museum
& Historical Society

700 Twin Lakes Drive (in Lorenzi Park)
Call Kathy at 804-0472 for directions

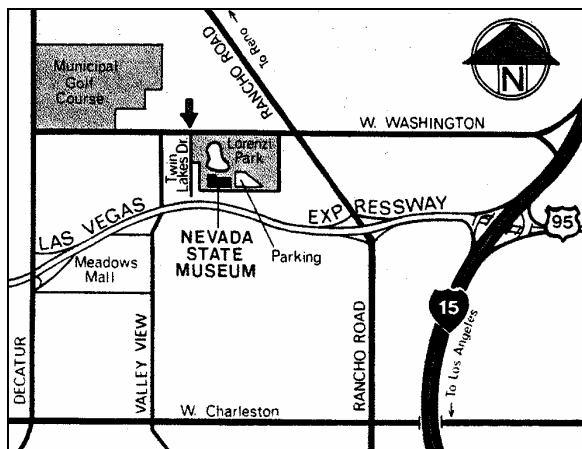
May 17, Saturday, 9 am to noon Pizza and Packing Party

MegaDiet Labeling and Bagging Day! Volunteer a few hours putting labels on MegaDiet bags and filling those bags with MegaDiet! Take time to talk tortoise, swap stories, and we'll finish off with some pizza! Please call or email Kathy to let us know you'll be there kutiger@embarqmail.com or call 804-0472.

June 21, Saturday, 1 to 3 pm Trekking Alone in Search of Desert Tortoises

By Betty Burge, M.S.

Betty will share photos of desert tortoises and other desert critters, and scenes of special interest and beauty during her several-thousand-mile trek through the Mojave Desert in California, Nevada, Utah, and in the very different habitat of the Sonoran Desert in Arizona. Share the challenges and rewards, humorous and scary events and the excitement of finding tortoise droppings after days of finding no evidence of a tortoise.



Dandelions

Don't wait to transplant dandelions! Soon the hot weather will decrease survival after transplanting without watering several times a day. So if you work outside your home, find your sources quickly and follow the instructions in our Information Sheet # 13, *Transplanting Dandelions*. When you are trying to start hatchlings on MegaDiet, having dandelions, flowers, and grass available as alternatives will keep those little ones going until they catch on. Dandelion leaves at the grocer's cost about \$2.00 a bundle and they don't last long.



Blue Boy and Peek-a, Winner of Tortoises Alone in Tortoise Group 2007 Photo Contest, by Mikayla Whitmore

Endangered Species Resources

A wonderful source of information for adults and children can be found at the website for the U. S. fish and Wildlife Service <http://www.fws.gov>. Facts about specific species, particular locations such as Nevada, even Las Vegas. A Fact Sheet Series for teachers and club leaders, a brochure about illegal trade in wildlife, additional websites, phone numbers, and addresses.

Question Corner by Betty Burge

Answers to FAQs can be found on our website, www.tortoisegroup.org, our Hotline, 702-739-7113, and in our free booklet, *Desert Tortoises Adoption and Care*, available at all animal hospitals and branches of the public library in Clark County.

Q. My female tortoise has been living alone for many years and she continues to lay eggs every year or so. Is that normal?

A. Laying infertile eggs is not usual but it does happen with some females. Maybe more than we know because we may not see the laying and there is no hatching. Considerable protein and calcium goes into the production of eggs. Providing those things for the eggs without drawing from the tortoise's bones for calcium and muscles for protein is something you want to support. Feeding MegaDiet provides those needs. The substantial protein and calcium in MegaDiet also support not only day-to-day maintenance but growth and ridding the body of excess potassium. These processes need to be supported by diet or the body will sacrifice itself to do those functions. If you add egg production, well, as they say, "You do the math."

Q. Why was my tortoise so late emerging from brumation/hibernation, this spring?

A. Spring has had a hard time getting in gear this year, with hardly two days in a row of warm weather. This may be part of the reason. The individual biological alarm clock may be affected by temperature and the tortoise remains in its winter burrow. However, many tortoises will move out of their cold winter burrows in early March when the outside temperatures may be low and move to superficial cover where the sun will shine on the body. The tortoise remains in this exposed situation and does not return to the cold winter burrow where the heat gained would be lost to the burrow interior. I have seen tortoises spend several weeks not

moving from this superficial cover until the daytime temperature becomes considerably warmer.

Kudos from Our Mail Box

.... Yesterday !!!

April 21, 2008

Trilla allowed me to hold the wee tortoise yesterday at the plant sale at CSN. I want you to know how much this meant to me. I have sent this picture to all friends and family. ...it was the grandest day I have had in a great while.

Thank you, Nancy A. Thompson-Jones



Great Advice

You absolutely responded to me and gave me great advice. I did exactly what you said and the tortoises are fine. I love having you as my tortoise consult!

Thanks again, Vicki Quinn

Excellent Pamphlet

Received food yesterday. Your *Desert Tortoises* pamphlet excellent. Thank you for everything!

Mike Dunn

What's Tasty Browsing in Your Yard?

Have you found an ornamental that your tortoise enjoys and the name is not listed on our Information Sheet #21, *Plants to Grow for Tortoises*

<http://www.tortoisegroup.org/infosheet21.html> ? If so, please let us know. We will try it and possibly add it to our list.

Dr. K's Kolumn

**By Christine Kolmstetter, DVM
Cheyenne West Animal Hospital**

Hello again! In our previous column, we discussed the importance of proper nutrition for our backyard desert tortoises. Today I will describe some of the severe health problems that inevitably occur when these animals are fed an inappropriate diet.

The consequences of a poor diet are most readily apparent in hatchling tortoises. If these youngsters do not receive proper nutrition, their growth will be severely stunted. The most common nutritional disease of young desert tortoises is metabolic bone disease, or MBD. Hatchlings develop this disease when the calcium and protein levels in the diet are too low and the phosphorous levels are too high, as is the case with lettuce or fruit diets. The most obvious defects are often apparent in the shell. Instead of developing into a hard carapace and plastron (i.e., the upper and lower portions of the shell), the scutes often are abnormally shaped and the shell remains very soft. MBD also results in abnormal bone development. Leg bones are most commonly affected and become very soft and misshapen. Many of these youngsters do not walk normally; they are weak and cannot lift themselves up on their legs when they walk.

Radiographs (i.e., x-rays) of these debilitated youngsters reveal very poorly calcified and deformed bones, and often the presence of one or more bladder stones. The formation of bladder stones in these youngsters likely results from the combination of poor diet and lack of access to drinking water. Unfortunately, an even worse scenario often occurs when, in addition to receiving an inadequate diet, these hatchlings are maintained indoors in an enclosure with no access to UVB sunlight, minimal or no drinking water, and a sand substrate. The sand is often ingested and results in intestinal obstructions with life-threatening consequences.

Improper nutrition can also lead to poor development of the immune system, making the youngster more susceptible to infectious diseases such as respiratory disease. The eyelids may become swollen and nasal discharge is often present. Subsequent impairment to vision and smell results in inappetance (lack of appetite) and progressive overall deterioration.



Poor diet caused a soft, collapsed carapace, swollen eyelids and splayed nails. Photo by Betty Burge

Although youngsters are most susceptible to the effects of inadequate nutrition, adult tortoises will also suffer from health problems if they are fed a poor diet. Unfortunately, it may take months to years in an adult tortoise for the effects of a poor diet to become apparent, and owners often mistakenly assume that the lettuce and fruit diet that they are feeding is appropriate and that their pet is 'doing just fine.' Recurrent respiratory problems, poor shell formation, overgrown 'beak' areas, skin problems, anemia, and kidney and liver problems, are just some examples of health issues that occur slowly over time with an inadequate diet.

What is the best advice for keeping your backyard desert tortoises healthy and ensuring a long and happy life for them? Provide them with a safe and appropriate backyard desert environment and feed them properly! MegaDiet provides a complete diet, including all vitamins and minerals. And don't forget their yearly veterinary examinations!

The Desert Tortoise is Our State Reptile

By Susan D. Alesevich

Have you ever wondered how the desert tortoise became our state reptile? The answer is: from the efforts of two of my fifth grade classes at Tom Williams Elementary School. In 1989 I read an article in our local newspaper about developers bulldozing tortoise burrows to clear the land for houses. I became incensed at the wanton disregard for a creature that has inhabited this earth for a lot longer than humans have. I brought the information to my students and suggested a campaign to save the desert tortoise. I wanted them to learn how to make a difference in this world.



Photo by Wayne C. Kodey, Review/Journal, March 1989
Clare Couturier (left), Nicole Randenbush and Joshua Ignatowicz hold Hot Rod, a desert tortoise. The students and their classmates are trying to get the Legislature to designate the tortoise as the official state reptile.

We went to the building site for Desert Shores and probed burrows to make sure no tortoises were still in there. The students wrote letters to every local and state official, including the President of the United States, George Bush Sr. They wrote Letters to the Editors of our local papers. At that time the Sun had a special children's insert in which we were featured. The children were interviewed for local news programs and we received a lot of publicity.



Photo by Tony Blei, Sun, March 2, 1989
Favorite Reptile – Fifth-graders Karla Jester and Robert Cybil feed a desert tortoise, their candidate to become Nevada's state reptile. The students are among a group at Tom Williams Elementary School seeking to raise awareness of the endangered species.

Around that time I attended a meeting at the Nevada Department of Wildlife where I met someone advocating for tortoises. She told me I should consider having the children work on designating the tortoise as our state reptile. That person referred me to Betty Burge, Chairman of Tortoise Group, who gave me ideas on how to lobby the legislature for passage of a bill.

I took the ideas to my students. We contacted our local representative, and a bill was introduced before the legislature by State Senator Thomas Hickey. Equipment was brought to the school for the first-ever long distance teleconference in support of a bill before the legislature. Several children were questioned as to why the legislature should pass this bill and we were able to hear how each legislator voted. How we cheered when we heard the results!!! The desert tortoise had become Nevada's state reptile. It was the most thrilling experience for my students and me, one we'll always remember.

MegaDiet Factoid

The Online store is selling lots of MegaDiet!

Meet Board Member Christine Bergman

Christine is a native of California but has lived in five other states and South Australia. Other than food and her partner Amy, her true passions in life include: caring for abandoned animals, international travel and philosophizing



about life over a good bottle of wine. Currently, she is a Professor in the Department of Food and Beverage Management at the University of Nevada, Las Vegas (UNLV). She teaches food science and nutrition related courses and performs research to

understand the health-beneficial properties of various antioxidants in rice bran.

At Christine's home, Tilly the tortoise shares her life with various dogs, cats and humans. All of the mammals are rescues (well, except for the humans) and consequently have one or more idiosyncrasies. Thankfully, none of their odd behaviors include interest in hanging out with tortoises. Thus, Tilly is left to browse and bask in the sun with little to no contact from her fellow family members.

Have You or Your email Address Moved?

Please remember to send us your new physical and email address.

Please send stories and photos to
kutiger@embarqmail.com (new address)

----- Cut Here -----

Tortoise Group Membership Form

A portion of memberships and contributions *should* be tax deductible
Memberships are individual. They expire each December 31

1. Please Print the COMPLETE address

Name (one name only please)	Phone	
Address		
City	State	Zip Code
E-mail		

2. Check One Newsletter Option

2008

- Send my newsletter in hard copy, and send meeting notices and other news by e-mail
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- Send my newsletter in hard copy

3. Renewing Member

New Member

() \$15 () \$25 () \$35 () \$50 () \$75 () Life \$500

Special Contribution: _____

33% discount on MegaDiet and 10% on other Tortoise Group goodies to members and their immediate families

**Make check payable to Tortoise Group. Mail with form to:
Tortoise Group ♦ 1201 S. Casino Center ♦ Las Vegas, NV 89104**

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The Tortoise Group newsletter is
published four times yearly:
March, May, July, and September

Spring Calendar for 2008

May 17, Pizza and Packing Party – 9 am-noon, Saturday

Volunteer a few hours labeling and bagging MegaDiet. Help gear up for the season, talk tortoise, and treat yourself to pizza!

June 21, Trekking Alone in Search of Desert Tortoises – 1-3 pm, Sat.

Betty Burge shares photos of desert tortoises and other desert critters, and scenes of special interest and beauty during her several-thousand-mile trek through the Mojave Desert in California, Nevada, Utah and the Sonoran Desert in Arizona. Her stories will interest and amuse you!

Details & contact information on page 3

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