

Wild Tracks

southwest wildlife rehabilitation & educational foundation, inc.

Summer 2006



Double the Power of Your Donation!

One of our donors has made it possible for you to **DOUBLE** the power of your donation to Southwest Wildlife!

This donor will match—dollar-for-dollar, up to \$10,000!—every donation made toward the construction of Southwest Wildlife's much-needed bear cub rehab area.

Southwest Wildlife plays an important role as a sanctuary for little orphaned bear cubs. It is very important that these baby bears imprint on other bears rather than humans so that when they are released they will avoid people and thereby avoid

Bear Rehab

continued on page 3

Inside this issue:

Recent Rescue	3
<i>Wild About Wildlife X</i>	3
Bear Mythology	3
Notable Quote	3
Desert Tortoise Facts	4
Book Review	6
Special Thanks	6
Unsung Hero	6
Volunteer Opportunities	7

Aestivation

Like hibernation, aestivation is a state of torpor, commonly compared to a deep sleep or dormancy. However, animals aestivate to escape extremely high temperatures and/or extremely dry conditions, times when food and water may be scarce.

During aestivation, the animal's breathing and heart rates slow. Unlike hibernation, when low ambient temperatures require many hibernating animals to utilize energy from stored foods or body fats in order to maintain a minimum body temperature, aestivating animals don't require much food. Generally, during aestivation, animals won't move, eat, or grow.

Who Aestivates?

Both land-dwelling and aquatic animals—from fish to insects to amphibians and reptiles to mammals—may aestivate. Some examples of animals that aestivate include lungfish, bees, earthworms, frogs, salamanders, newts, snails, mud turtles, snakes, lizards, and hedgehogs. The only primate known to aestivate is the also the only tropical mammal known to aestivate: the Madagascan fat-tailed dwarf lemur. This lemur aestivates, often in the hollow of a tree, during the several months of the dry season each year, when its food sources are extremely scarce.

Most animals who aestivate bury themselves under the ground, a great insulator from the heat, waiting for the wet season or cooler temperatures. Some dig their own burrows; other utilize burrows left empty by previous tenants. Underground burrows often have a higher level of relative humidity, reducing water losses due to evaporation.

Aestivation may last from hours to months,

Aestivation

continued on page 5

Bear Rehab

continued from page 1

trouble.

In order to accomplish this, it is necessary that we build an area where we can integrate baby cubs with one of our non-releasable female bears so that the bear cub is raised with bears and not with humans. That will give our cubs a better chance to survive in the wild without conflict with humans.

The cost of the bear cub rehab area will be over \$20,000. But the advantage to the released adolescent cubs will be immeasurable!

If you have considered making a donation to Southwest Wildlife, there could be no better time than today! With the matching program in place for the bear cub rehab area, the power of your donation will double!

We currently have three orphaned bear cubs who deserve to live out their natural lives in the wild once they are strong enough to be released. If past years

are any indication, it is extremely likely that more bear cubs will find sanctuary, and another chance for the life nature intended, at Southwest Wildlife.

Their chances to successfully live the lives of normal bears will be greatly increased if they can grow strong in the presence of a female bear in an enclosure specifically designed for their preparation to return to the wild. Please help us prepare them for the lives they were born to live.

For your donation to qualify for the matching funds, we must receive your donation by September 10, 2006.

You may make your donation online via credit card or mail your donation with the enclosed donation form on page 7. Be sure to mark the box indicating that your donation is for the "bear cub rehab area" for us to receive the matching funds. You may also print out a bear cub rehab area donation form from our website and mail your donation to Southwest Wildlife.



Southwest Wildlife needs YOU!

We need volunteers, whether you can help from your home or on site, whether you can work a few hours each week or a few hours each month.

Please see article on page 7.



Recent Rescue: A Young Skunk

It was a dangerous mission, but someone had to do it.

It all began when a little skunk, venturing away from mom for the first time, found a Wal-Mart Garden Center. The nursery seemed to be a perfect spot to live. With lots of water, shady places to hide, and, of course, plants and insects and maybe even a few little mice to eat if he was lucky, this

young skunk had hit the proverbial jackpot! While exploring his own personal Eden that first night, he had no idea that this wonderful oasis would become downright dangerous in the morning.

He was rudely awakened by the noise and activity that arrived with the people and machinery. He was terrified, so he remained hidden in his cozy, dark den, which was actually a pallet full of plant containers. Then the unthinkable happened. A forklift came and moved the pallet—his den!

Well, being a skunk, he did what came naturally: he sprayed! He was certain that would scare away the noisy monster that was trying to destroy his new home. He was right. It stopped everyone in their tracks. Both staff and shoppers left the Garden Center as fast as they could.

For 3 days, the staff tried to get him to move, but no luck. Since they needed to reopen the Garden Center, the manager called Southwest Wildlife to see if we could help. He told us it appeared that the skunk had a leg injury, which may have occurred when the pallet was moved.

Long-time Southwest Wildlife volunteer and friend Jeannie Garret, along with her companion Woody, were called out to the rescue. When they arrived, they were directed to the specific pallet under which the skunk was hiding. After showing the volunteers where the injured skunk was, the man asked that they not start while he was present. After he exited through a steel door, they heard dead bolt locks closing, as if a dead-bolted steel door could protect him from the odiferous little guy!

Jeannie and Woody retrieved the injured little skunk without incident. They delivered him to Southwest, where he is being treated for a broken leg.

You won't want to miss this...

Wild About Wildlife X: a Celebration of the Bear

Saturday
March 24, 2007

at
6:00 p.m.

Four Seasons Resort
Scottsdale
at Troon North

Bear Mythology

In the Native American Zuni culture, the American black bear is believed to be the Guardian of the West and, because bears hibernate, Bear is closely associated with change.



The Bear Clan, according to Zuni mythology, is in charge of the seasonal changes that bring the cold and snow. As such, Bear is associated with the diseases that are commonplace during the winter. However, Bear is not considered the cause of these illnesses, but as having the power to heal them.

“The Supreme reality of our time is...the vulnerability of our planet.”

~John Fitzgerald Kennedy

The Desert Tortoise

The desert tortoise is found in the southwestern U.S. and northern Mexico. Three distinct subspecies of *Gopherus agassizii* have developed, each adapted to the region in which they live: the Mohave, the Sinoloan, and the Sonoran, which is found in the Sonoran Desert in Arizona and Sonora, Mexico.

Sonoran desert tortoises usually live on rocky slopes and upper bajadas populated with palo verde trees, saguaro cacti, and desert scrub. Their preferred shelters are burrows they have dug under large rocks or boulders using their broad front legs. They may take temporary shelter in pack rat structures or in a depression under thick vegetation during the heat of the day.

The home range of most tortoises includes the area in which they were born, although a few have been known to disperse farther. Home range size averages 35 acres, but can vary from 2-132 acres. In addition to sharing their home range with other desert tortoises, it is very common for them to share shelters. There may be a very loose hierarchy of males, but they don't generally spend much energy on a social structure. Tortoises will bob their heads in recognition of others, as a threat, and during courtship. They can make a wide range of sounds, primarily when startled or in distress, that include grunts, hisses, whoops, huhs, and pops.

Because they are cold-blooded, their body temperatures are subject to their environment. Sonorans hibernate during the cold months, from November to March. Spring activity extends from April to mid May. From mid May through June, they will aestivate. During the rainy season of the late summer, from July through October, they will be active again. They are most likely to be active when temperatures are between 68°-104° F. Core body temperatures above 109° F or below 24° F will be lethal.

Fresh plants and dew are their primary source of water. They can hold up to 40% of their body weight in water within their large bladders and can survive up to a year without drinking because urates are precipitated as solids within their bladders and eliminated as a white paste, instead of urine, allowing them to conserve water. Only if they are well hydrated can tortoises obtain food value from dry plant material. Tortoises favor fresh grasses, herbs, and vines. If winter rains have been adequate, Sonorans will eat fresh plant growth in the spring. Following their emergence from aestivation, they may not eat at all until it rains and they have been able to drink water. Then, they can eat dried plants, grasses, and mesquite beans while they wait for the fresh plant growth prompted by the monsoons. Prickly pear fruit, which ripens in late summer and provides them with fat reserves, is a vital part of their diet. Although they are primarily herbivorous, they may eat insect larvae and feed off carrion.

The carapace is the hard, domed upper shell which is 4-6" tall, up to 15" long, has hexagonal shields, and is green to tan to dark brown. The plastron is the lower shell. Each shield has scutes, or annual growth rings, which can, until they are about 25, help to determine the age of a tortoise. Tortoises' best defense against predators is to draw their heads and legs into their shells. Only mountain lions have jaws strong enough to crack the shell of an adult tortoise.

The point at which a tortoise reaches adulthood and is capable of reproducing is determined more by carapace length than by age. Minimum length for a Sonoran female is about 8.5", which is usually reached at 15-20 years. In late June or early July, female Sonorans will use their rounded hind legs to dig a nest into which they will deposit their eggs. The average clutch size is 5 eggs, but varies from 1-12. The eggs were fertilized by sperm that she had stored in her cloaca after breeding with multiple males during the previous year. In dry years, only larger females are likely to lay eggs, and their clutch size is likely to be reduced.

Their hard shells may prevent desiccation, but the eggs are vulnerable to predation by Gila monsters, snakes, coyotes, foxes, roadrunners, and badgers. Females may stay near the nest and may be able to protect the eggs from some predators. The hatchlings will begin to break out of the white eggs in approximately 90 days. Hatchlings are about 1.6" long. During the first few weeks, their shells are soft, making them extremely vulnerable to predators, including raptors. Although their eggs provided enough food and water for them to survive their first hibernation, they may feed for up to one month on fruit and new plant growth if it is available.

Juveniles must grow quickly in order to survive, as smaller tortoises are more vulnerable to predators, and the growth rate is much faster for hatchlings and juveniles than adults. It is estimated that only one hatchling out of 12 clutches survives to adulthood. Once a tortoise reaches adulthood, it is likely to live many more years, up to 65-80 years in the wild.

Aestivation

continued from page 1

depending upon the species. For example, snails may aestivate only during the hot hours of the day. They will try to escape from the heat by moving high into vegetation and will protect themselves from water loss by secreting a membrane that acts as a cork in the opening of their shells. Lungfish, on the other hand, can aestivate for many years at a time. They will bury themselves in the mud of dried-up lake beds and wait for enough rain or runoff to once again form a lake.

Because reptiles are cold-blooded, their body temperatures are dependent upon the ambient temperature. The extremely high temperatures of summer, along with a lack of water, may force many reptiles for aestivate during the hottest, driest months of the summer in order to survive.



Desert Tortoise

As their name would imply, desert tortoises have evolved to tolerate the dry heat of deserts. However, they will aestivate during the hottest, driest months of the summer, usually in burrows but sometimes in the cool shade under rock piles. In the extreme dry heat of the Mohave Desert, desert tortoises are most active from February to May. They will spend the remainder of the long, dry summer aestivating. In the (relatively) cooler Sonoran Desert, the monsoon

rains allow desert tortoises to be most active from July to October.

Couch's Spadefoot Toad

Many of us have heard it following the monsoon rains: a strange, incessant sound that lies somewhere between the bleating of a lamb and the quacking of a duck. The vibrations of the rain on the ground are the spadefoot toad's cue that the complete inactivity of aestivation is over and a fleeting breeding season can begin. Immediately after they exit their burrows, the males sit at the edge of pools of water, calling loudly to females.



Although spadefoot toads may exit their dens during a brief monsoon storm to eat, breeding will only occur if there have been sufficient rains. The spadefoot can eat enough in one evening to satisfy its energy requirements for an entire year! One favorite food is flying termites, also attracted by the monsoon rains.

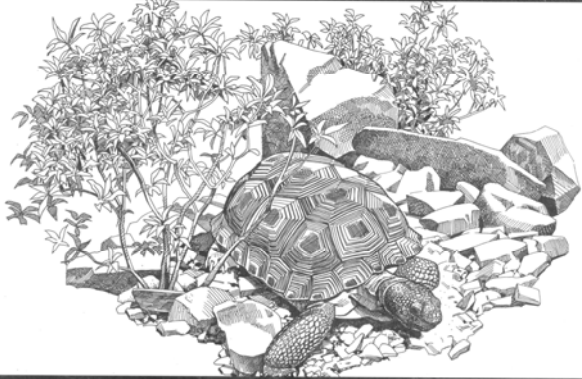
A female Couch's spadefoot will lay up to 3,000 eggs, each of which has the quickest development of any frog or toad in America: the eggs can hatch within 15 (up to 36) hours and tadpoles can metamorphose into froglets within 9 (14 on average) days. This speed is absolutely essential for the eggs to become froglets, as water holes can dry up very quickly in the desert.

For those eggs that made it to the froglet stage, another challenge awaits. Although adults can burrow right back into the ground in order to avoid the potentially fatal drying heat of the summer following breeding and a good meal, the froglets must spend several days on the surface in the moistest places they can find, looking for food. After eating their fill, they will use the sickle-shaped, spade-like knobs on their hind feet to burrow into the ground—aestivating until the monsoon arrives the following year.

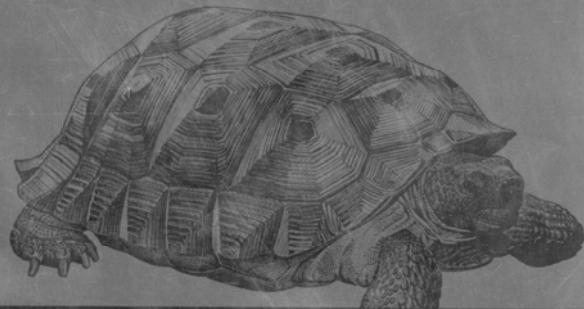
As animals have evolved, they have adapted to desert climates in many different ways. For some animals, aestivation is the only way they can survive the hot, dry summers of the desert southwest. In fact, some animals that would be active during the summer if they lived in more temperate areas will aestivate if they live here.

BOOK REVIEW

Arizona-Sonora Desert Museum Studies in Natural History



The Sonoran Desert Tortoise
Natural History, Biology, and Conservation



Edited by Thomas R. Van Devender

The Sonoran Desert Tortoise:
Natural History, Biology, and Conservation

edited by

Thomas R. Van Devender

In addition to the extensive information contained in a chapter dedicated entirely to caring for captive tortoises, this book thoroughly covers the natural history and biology of the Sonoran desert tortoise. It is frequently compared to the other two subspecies of desert tortoises, the Mohave and Sinaloan, to the extent that such research/information is available.

The authors provide comprehensive, easy-to-understand scientific explanations of exactly how changes in geography and climate, as well as the types of foods available relative to seasonal rainfalls & topography, have affected the evolution of these subspecies. Also discussed: the potential effects of increased human development and the introduction of non-native plants species on the desert tortoise.

A Special “Thank You” to Our Volunteers

You, our volunteers, are the backbone of Southwest Wildlife. We’d like to express our gratitude to all of you who, each your own way, have made a difference for wildlife. Because we receive no state or federal government money for our operations, we subsist entirely on donations, grants, and the hard work of our volunteers. It is the dedication of our extraordinary volunteers who have made it possible to achieve our goal of “saving our wildlife, one life at a time.”

Unsung Hero



Pepper was rescued from the euthanasia list by Director Linda Searles in 1995. Although he has served Southwest Wildlife as both a blood donor & guard dog, his real calling has been to alert us to the presence of rattlesnakes within the Educational Compound. He’s scouted out

dozens of the venomous snakes over the years, and saved many of the educational animals from dangerous, and potentially life threatening, bites.

When Pepper finds a rattlesnake, he carefully tracks it while letting out a non-stop, high-pitched bark until someone arrives, in answer to his alarm, and removes the snake. He is never wrong and has never alerted us to the presence of any other species, only rattlesnakes.

Kachina, one of our oldest residents, is a coyote who lives in the Educational Compound and has, over the years, developed a special bond with Pepper. We recently arrived on the scene, as a result of Pepper’s rattlesnake alert, only to find that he had been bitten!

The snake was within inches of entering Katrina’s enclosure. We can never know for certain, but believe that he actively attacked this particular snake in an effort to protect his long-time friend, Kachina.

Pepper was rushed to Sonora Veterinary Specialty Hospital, where he was treated with extremely expensive anti-venom. After spending 2 days in intensive care, he was released and returned home. Although he will not return to his usual duties as a guard dog until he regains his strength, Pepper is a hero to all at Southwest Wildlife.

Southwest Wildlife Donation Form

You may also make donations online at: www.southwestwildlife.org

Please help
Southwest
Wildlife
by making a
tax-deductible
donation.

Our 501(c)3 number
is 86-0765249.

I/we would like to
donate:

_____ \$25
_____ \$50
_____ \$100
_____ \$250
_____ Other

You may make your donation via Visa or
MasterCard by completing the following.

Name, as it appears on card:

Billing address for card:

Card number:

CVS # (usually located in signature strip on back of card):

Expiration Date:

Authorization Signature:

Name(s):

Address:

Please use my donation:

for the Bear Cub Rehab Area

as needed

Thank You for your support!

Volunteer Opportunities at Southwest Wildlife

We always welcome new volunteers and, as our responsibilities and needs continue to grow, we encourage you to consider joining the Southwest Wildlife family of volunteers. We especially need on-site volunteers during the summer months, when so many of our regular volunteers leave the Valley for cooler climates or go on family vacations.

There are many very important volunteer jobs that can be done from the comfort of your own home. We need people who can write grants, perform data entry or educational outreach tasks, do fund raising work, and perform general office work. If you like to write about wildlife, you may want to help with our newsletter.

If you can work on site, we always need volunteers to answer phones, clean the clinic, care for animals (including reptiles), clean enclosures, feed animals, clean crates and food crocks, and help with record-keeping. We also need carpenters, plumbers, electricians, welders, and vet techs, as well as people interested in general maintenance and repair and landscape maintenance.

Once a volunteer gains enough experience, he or she may want to be trained to help with Southwest Wildlife's rescue teams. Our rescue teams are available 24 hours of every day to assist with wildlife emergencies and perform wildlife rescues.

We also need volunteers with wheels who can transport animals to and from veterinary clinics and to run general errands. Volunteers with trucks are needed to pick up produce and meats donated by area stores and deliver these to our facility.

The volunteer opportunities at Southwest Wildlife are nearly endless in nature. You are sure to have a skill that would be helpful, whether you can work at our facility or from your home. If you are interested in volunteering for Southwest Wildlife, you may call us at 480-471-9109 or visit our website at www.southwestwildlife.org.



Southwest Wildlife

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Southwest Wildlife wishes to thank all individuals and organizations that have given so generously to enable us to help the many animals that come through our doors—we couldn't do this without your help!

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AJ's Fine Foods for produce and meat
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Basha's in Carefree for produce
Whole Foods
Sprouts
Arch Wireless for pagers
Extreme Internet for the web site
Safeway eScrip Program
Bill Hood, Scottsdale Accounting Service
Shalako Nut Farm
Sunstate Equipment
Nestle Purina

California Pools for continuing to maintain the pump and filter for the bear pool
Chris Hock of North Valley Pump for his help in continuing to keep our well in good order, for donating two pressure tanks and installing the concrete pad and tanks
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Tohono O'odham Farming Community
Dale Husband of Husband Car & Truck Repair

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The Denver Foundation

To arrange an educational tour of Southwest Wild life, please contact our Educational Department at 480-471-3621.