Erika grew up in upstate New York, and her earliest herpetological memories are of chasing and keeping toads. She earned a B.S. in Natural Resources from Cornell University in 1991 and completed a M.S. in Biology from Northern Arizona University in 1998, examining the effects and effectiveness of rattlesnake relocation. She is currently working on her Ph.D. in Biology at Northern Arizona University, also in nuisance rattlesnake ecology and management. Erika has been fortunate to work with great folks at the USGS and collaborate with the National Park Service since 1992. Along the way she has studied all manner of southwestern herps, most notably three species of rattlesnakes, Gila Monsters, and milksnakes. More recently, she has collaborated with very dedicated and fun folks from the Arizona Game and Fish Department, the University of Arizona, Arizona State University, the New Mexico Fish and Game Department, the US Forest Service, and many volunteers in monitoring Narrow-headed Gartersnakes. Erika currently lives in Flagstaff, Arizona, and one of her dreams is to find a *Crotalus cerberus* within city limits.

Change in Meeting Location

Please note that this month’s meeting will not be held at the Arizona Game and Fish Department office. Instead, the presentation will be at the Inn Suites, Tucson City Center, 475 N Granada Avenue, Tucson, 85701.

I-10 Alert:
I-10 is closed between Prince Road and 29th Street. We suggest that northern guests take I-10 to Cortaro Road (Exit right, MM 246). Take Cortaro Road west (right turn) to Silverbell Road (exactly one mile). Turn left on Silverbell and take all the way to Saint Mary’s Road (~10 miles). Turn left on Saint Mary’s and cross under I-10. Turn right on Granada and right into Inn Suites. We advise checking the I-10 website before leaving:
http://www.i10tucsondistrict.com/29toP.html

NEXT MONTH’S GUEST SPEAKER

Ed Moll
Herping the Galapagos
Tuesday, 16th October
Tucson Herpetological Society meetings are open to the public and are held on the third Tuesday of each month starting at 7:15 PM
Reptiles in Art: An Overview and Commentary

Royce E. Ballinger
Professor Emeritus, University of Nebraska, USA.
rballenger2142@comcast.net

As residents of the desert southwest, THS members are accustomed to familiar images of reptiles, particularly lizards and snakes, in graphic and decorative art in our region. From representations on t-shirts, hot sauce bottles, freeway walls, petroglyphs, pottery, tattoos, television commercials, and cartoons, we scarcely remark on the common use of reptile icons, much less ponder the why’s and where-for’s of such artwork. My own curiosity, intersecting somewhere between herpetology and art history, long ago stimulated me to begin collecting examples and to question who, where, why, and for what are reptiles a subject in the art around the world and through the ages. After collecting many thousands of examples, I have discovered such images to be ubiquitous geographically and throughout history. They no doubt predate writing if not being coincident with the origins of human imagination and creativity.

Resisting the urge to categorize reptile art taxonomically as a biologist or chronologically as a historian in such a short note, the purpose here is to provide a general overview to stimulate discussion and to encourage a sharing of examples. I shall provide some of the boundaries of the examples while briefly attempting to convey the richness of the whole. I know of no publications on the topic, although Rawson (1977) gave several examples in a small book on “animals in art,” and Mundkur (1983) details numerous examples in his scholarly treatment of the serpent as a cult figure. With this topic, I am on the edge of my knowledge but always eager to learn, so I hope that you will point out any mistakes or otherwise offer suggestions or examples. For this courtesy I shall be grateful.

Reptile art, like reptiles, occurs on all continents except Antarctica. Examples tend to cluster in environments where reptiles are common with few or none in areas where reptiles are rare. For example, I am not aware of reptiles in the art of peoples of the extreme northern latitudes (e.g., Eskimos or Laplanders), although reptiles are known in the art of the Nootka Indians of the Pacific Northwest. Surprisingly, an important reptile motif occurs in the art of the Vikings in a similarly northern climate of few reptiles. The usual image is that of a knotted snake with a triangular head, thus a viper. Details of the myth are not necessary here, but suffice it to say this common icon in Viking and Scandinavian art is usually attributed to the Midgard Serpent of the sea, representing unpredictable, lurking terror, but presumably under control when knotted. It is interesting but not surprising that vipers, depicted with a triangular head and sometimes fangs, found in art of the old world have the sharp pointed tail, whereas those in art of the New World bear rattles. Perhaps only herpetologists understand why this might be.

The oldest example of reptile art known to me is that of a carving on an antler tool from Montaudier, France, depicting, among other animals, two snakes during the spring mating season. This piece of Ice Age Art dates to about 10,000 BC. Presumably other examples exist in the rock art of Ice Age Europe, but I have yet to locate any. Since rock art dates to at least 50,000 years before present (ybp) in Tanzania and 60,000 ybp in Australia and perhaps as much as 300,000 ybp in the near East (Bednarik, 1998), older examples of reptile art are likely to exist. At the other extreme, reptiles are also among subjects in classic art of modern times. Alexander Calder (1898-1976) used snakes in both his graphic and sculptured art, although I have yet to see these in his famous mobiles. M.C. Escher (1898-1972) is well known for his tessellation technique in which he put lizards, snakes, and other creatures in a repetitive mosaic.

Portrayal of snakes is common in many cultures, but not to the exclusion of other reptiles. My own hypothesis is that the reptile subject depended on its importance to the culture. For example, the Asmat people of New Guinea are especially good at carving crocodiles, a critter that is critically important in their world, although they also depict turtles and occasionally snakes. Turtles are found in many cultures including Chinese and Japanese art and mythology. Turtles occur on the shields of the Arapaho Sioux, as well as in the creation myths of North American Indians (e.g., the Wyandot) and curiously in a similar myth of the Hindu of the Indian subcontinent. Mayans built a temple to the turtle in Uxmal, Mexico, and Aztecs a serpent pyramid at Teotihuacan.

Egyptians depicted the turtle in engravings and amulets initially as a good symbol (Old Kingdom, 2780-2280 BC) but later as an evil one (New Kingdom, 1580-1085 BC).

Lizards are depicted less commonly, although they were a favorite subject in the art of the Anasazi, Hohokam, and Mogollon of the southwestern United States (see Sherbrooke, 2003, for examples). The Maori of New Zealand carefully distinguished the tuatara from geckoes in their wood carvings. But generally, lizards tend to be included only incidentally, perhaps to depict a sense of reality to a painting. Significant examples include a lizard on the edge...
of a plate from the 6th century BC depicting King Arcesilas of Cyrene supervising the weighing of wool. Likewise, a lizard occurs at the very bottom of the painting “Creation of Eve” by Spanish painter Fernando Gallego (1440-1507) in his series of Christian art panels, a significant part of the permanent collection of the University of Arizona Art Museum.

Apart from the illustrations of naturalists such as John J. Audubon, I have found few significant paintings by classic American artists that used reptiles as a subject. One is the “Lair of the Serpent” by Elihu Vedder (1836-1923) depicting a huge snake among the sand dunes along a lonely beach of the east coast. Ironically, this is considered Vedder’s most famous work. Almost none of the landscape and nature painters of the late 19th century (e.g., the Hudson River School) depict reptiles as part of their compositions. The one exception is “After a Norther, Bahamas” by Albert Bierstadt (1830-1902) which features a sea turtle coming onto a sandy beach with a backdrop of an angry surf and rolling ocean. None of the 100’s of scenes that Bierstadt did (e.g., Yosemite Valley) nor any of his contemporary Hudsonian’s works feature reptiles. Perhaps this owes to the scarcity of reptiles in the places they worked. On the other hand, perhaps the largest piece of reptile art is American. This is the 1400-ft. (426.7 m) long Great Serpent Mound in southern Ohio that dates to 300 BC. There is a mimic piece, the 560-ft. (170.7 m) long “Snake Path” of slate and concrete rendered

in 1992 by Alexis Smith on the campus of the University of California, San Diego, La Jolla.

Before the study of art history became a study of the history of artists in about the 14th century AD, art was often done anonymously as either an endeavour of the powerful to decorate castles, monuments, or triumphs or an amplification of the stories of gods, superstitions, and mythology. The Egyptian pharaohs adopted the cobra as a symbol of power and protection as evident in the gold effigies of their headaddresses or carvings on the walls of their temples. Sebek the Egyptian crocodile god is portrayed widely. Many scenes containing reptiles occur in Greek and Roman architecture and sculpture. The fables of Aesops heralded the steady and persistent turtle that overcame the speed of the hare. It is also interesting that in old anonymous art when groups of animals are portrayed, the entire breadth of reptile kinds is frequently represented. This is seen in a painting depicting a popular Persian fable painted by an anonymous painter of the Mughal School in India (1590 AD). This painting depicts the gossiping crow addressing the assembled menagerie of animals that included two crocodiles, two turtles, a lizard, and four snakes among the 80 or so animals shown. Likewise, a mosaic from the 3rd century AD in Sicily illustrated Christ assuming the traits of Orpheus charming the animals that included a lizard, snake, and turtle among the assembled group of 20.

The most repeated topic of reptile art depicts the Christian biblical story of Adam and Eve in the Garden of Eden being tempted by the evil snake.

The most repeated topic of reptile art depicts the Christian biblical story of Adam and Eve in the Garden of Eden being tempted by the evil snake. There are literally 100’s of works of art on this subject from folk art (e.g., Mola art of the Panamanian Cuna Indians) to classic art works. Among the many examples include a panel of the Ottonian Empire on the famous bronze door of the Abbey Church of St. Michael in northern Germany finished in 1015 AD, a marvelous 1526 AD painting by Lucas Cranach the Elder, a famous 1504 engraving by Albrecht
Softshells are a highly derived group of turtles with rounded, flattened carapaces covered with a leathery skin; a long, retractile neck; and webbed, paddlelike feet (Ernst et al., 1994). Of five species inhabiting the U.S. (two introduced), the Spiny Softshell (*Apalone spinifera*) inhabits Arizona. The generic name, *Apalone*, comes from the Greek word for soft or tender in reference to its shell. The Latin-derived *spinifera* means thorn or spine and refers to tubercles along the front edge of the carapace (Beltz, 2006). Six subspecies are currently recognized, with that in Arizona being the Texas Spiny Softshell (*A. s. emoryi*), named in honor of William Hemsley Emory by Louis Agassiz (1857).

Texas Spiny Softshells have olive to tan-colored carapaces with a pale border. A pattern of white dots, most distinct in juveniles and males (Degenhart et al., 1996), may be present on the carapace in contrast to the black ocelli (dark blotches) of some other subspecies. The reduced plastron leaves the rear legs and tail exposed and is immaculate white or yellow. The head and limbs are olive to gray with a pattern of dark spots and streaks, and a dark line connects the eyes. The tubular snout contains a small ridge extending from the septum - another characteristic, other than the texture of the carapace, that distinguishes this species from the Smooth Softshell (*A. mutica*). Adult males reach about 22 cm (8.7 in) in carapace length, while females reach 54 cm (21.3 in; Webb, 1973; Ernst et al., 1994).

The Spiny Softshell has the widest distribution of the genus in North America, occurring over most of the eastern U.S. outside the Atlantic seaboard. The species ranges from New York and southeastern Canada (Quebec and Ontario) west to Montana, south to the Carolinas and Georgia, and southwest to New Mexico and northeastern Mexico (Chihuahua, Coahuila, Nuevo León, and Tamaulipas; Webb, 1973). Spiny Softshells occur from sea level to about 1,580 m (5184 ft; Stebbins, 2003).

The Texas Spiny Softshell is not native to Arizona; it was introduced into Arizona around the turn of the last century, when it probably entered the upper Gila River after a dike containing stocked turtles and catfish was breached (Miller, 1946). The species now occurs throughout the Gila and Lower Colorado River systems (Brennan and Holycross, 2006). The Spiny Softshell is primarily a riverine species, relying especially on a soft substrate with aquatic vegetation, sandbars, and mudflats, and generally avoiding temporary water (Ernst et al., 1994; Stebbins, 2003). However, it is a habitat generalist relative to its congeners, often thriving in altered environments (Moll and Moll, 2004). In Arizona it occurs throughout the major slow-running rivers, irrigation ditches and canals, and permanent and urban lakes (Brennan and Holycross, 2006).

The Spiny Softshell is highly aquatic, spending most of its time in the water, either foraging, floating at the surface, or buried in the soft bottom with only its head and neck protruding. *Apalone spinifera* is capable of aquatic respiration when submerged, with oxygen uptake occurring through the cloaca and skin, but also facilitated by threadlike projections in the vascular lining of the mouth cavity (Bennett and Dawson, 1976; Ernst et al., 1994). Spiny Softshells also spend...
much time basking, usually alone, on rocks, logs, floating debris, or the banks of its aquatic habitat. When basking on shore, they usually face the water, ready to make a rapid escape. Spiny Softshells are predominantly carnivorous, primarily eating insects and other invertebrates, but also fish, frogs, and carrion. They forage by probing their elongated snouts under stones and vegetation or by ambushing prey from their secretive positions nestled in the substrate (Ernst et al., 1994).

Like most aquatic turtles, their nests are preyed upon by mammals such as skunks (Mephitis) and raccoons (Procyon lotor); their young are eaten by fish, snakes, wading birds, and mammals; and the adults are taken by alligators (not as often in Arizona, however), bald eagles (G. Beatty, pers. comm.), and humans. Lying concealed within their aquatic substrate prevents them from being discovered by predators, but if captured they have generally bad dispositions and may bite and scratch savagely (Ernst et al., 1994). Platt and Brantley (1991) also reported that a female suddenly squirted blood about 15 cm (5.9 in) from both eyes in response to handling, although they were unable to induce the behavior subsequently.

Spiny Softshells may be active during all months in the southern part of their range, with mating occurring in spring. In late spring and summer, females lay one or two clutches of up to 39 eggs (trending lower toward the southwest; Fitch, 1985) in nests dug in sunny, sandy areas close to water. The eggs are relatively large at about 28 mm (1.1 in) in diameter, and Carr (1952) recounted Agassiz’ (1857, 1:407) suspicion that they came from an as-of-then unidentified species:

“The first intimation I had of the existence of another species of Aspidonectes within the boundaries of the United States was from the sight of two eggs collected in Texas . . . . These eggs were so much larger than those of either of the three other species of the family which I then knew that I did not hesitate to consider them as derived from an unknown species. My supposition was very soon changed into certainty, after I had received from the Smithsonian Institution all the specimens of turtles collected in Texas during the operations of the Boundary Survey, under the command of Colonel Emory, among which were young and adult specimens of this species, collected in the Lower Rio Grande of Texas, near Brownsville.”

Incubation lasts 2-3 months, depending on nest temperature (faster incubation under warmer temperatures), and the 30-40-mm (1.2-1.6 in) hatchlings emerge in late summer and fall (Ernst et al., 1994). Unlike most other turtles, the sex of A. spinifera is not determined by temperature. Sex ratios average 1:1 under a wide range of incubation temperatures (Bull and Vogt, 1979).

Although Spiny Softshells are not native to Arizona, they are now well established. Their impact on native wildlife, particularly native fish of precarious status, is unstudied. At least within their native range, these turtles are among the most widely exploited species for private consumption in the United States due to the large female size and good-tasting meat (Moll and Moll, 2004). They may be collected year-round throughout Arizona (with some exceptions; refer to the amphibian and reptile regulations at www.azgfd.gov) with a fishing or combination license. Given their non-native origins, Spiny Softshells may be collected in unlimited numbers in the state, but may not be possessed alive.

Literature Cited


Mojave Desert Sidewinder (Crotalus cerastes cerastes) Behavior

Charles J. Randel, III
Sapphos Environmental, Inc., Pasadena, California, USA.
crandel@sapphosenvironmental.com

Howard O. Clark, Jr.
H.T. Harvey & Associates, Fresno, California, USA.
hclark@harveyecology.com

While conducting diurnal small mammal surveys in the Indian Wells Valley of San Bernardino County (35° 39'N, 117° 27'W), we observed a Mojave Desert Sidewinder (Crotalus cerastes cerastes) use a cardboard trap shade as a possible thermoregulation site.

The Mojave Desert Sidewinder generally emerges from winter den sites from mid-March to mid-April and returns to den sites between mid-October and mid-November (Secor and Nagy, 1994). During periods of cooler daytime temperatures, Mojave Desert Sidewinders are observed diurnally and become more nocturnal or crepuscular as daytime temperatures increase (Brattstrom, 1965; Secor, 1994).

We first observed a Mojave Desert Sidewinder “cratered” in front of a Sherman live trap (H.B. Sherman Traps, Tallahassee, FL) at 0545h on 4 May 2006 (Fig. 1). “Cratering” is an activity whereby the sidewinder works the outer edges of its coils into the sand, typically in front of rodent burrows (Secor, 1994). This “cratering” behavior provides a cryptic and camouflaged position from which to ambush prey and may also serve a thermoregulatory purpose (Secor, 1994).

During our surveys, the sidewinder was observed sheltering between the trap and cardboard shade, on top of the shade, or burrowed under the trap. The sidewinder remained present at the trap site until the trap was removed and relocated to a new trapping grid at 1830h on 5 May 2006. Temperatures recorded during the sidewinder’s diurnal presence ranged from 10º to 30ºC, well within the range of 8.2-38.1ºC reported by Secor and Nagy (1994).

Sidewinders are typically eurythermal snakes with a relatively wide normal activity range (Moore, 1978). Although these snakes are essentially nocturnal or crepuscular in habit (Stebbins, 1943), they are active on the desert surface during the day only in the spring and fall (Secor and Nagy, 1994). Sidewinders are able to tolerate daytime spring and fall temperatures by repositioning themselves within shifting shade patches under shrubs and bushes. By the end of April, sidewinders become more nocturnal, and during sunset they retreat to rodent burrows (Secor and Nagy, 1994).

Our observation occurred during the month of May when sidewinders should be nocturnally active on the surface and in rodent burrow retreats during the day. The use of a cardboard shade for daytime use is of note because it appears that the snake chose

“Cratering” is an activity whereby the sidewinder works the outer edges of its coils into the sand.

Figure 1. Mojave Desert Sidewinder (Crotalus cerastes cerastes) cratered under cardboard trap shade.

Literature Cited


**Desert Tortoise Translocation**

Translocation could be used as a tool in conservation of the threatened Mojave Desert population of the Desert Tortoise (*Gopherus agassizii*) by moving individuals from harm’s way and into areas where they could contribute to conservation of the species. Numerous factors may affect the success of translocations, including the conditions experienced by tortoises in holding facilities while awaiting translocation. The tortoises available for translocation in this study had been provided supplemental water during their years spent at the Desert Tortoise Conservation Center (DTCC) in Las Vegas, potentially inducing carelessness in water conservation. In addition to generally investigating the efficacy of translocation, the authors compared the effects of ceasing the holding facility’s water supplementation regimen. After exposure to one of two water regimens, all tortoises were given the opportunity to hydrate immediately prior to release. The authors examined behavior, body mass, carapace length, movement, and mortality of tortoises for two activity seasons following release to the wild. Water supplementation at the DTCC was correlated with high rates of carapace growth and distant movements by males after release. Lengthy movements following translocation may be problematic for conservation planning, but the authors suggest that this should be evaluated in light of the goals and circumstances of each translocation project. Although mortality was 21.4% in 1997, their data suggest that drought conditions at the site rather than the translocation itself negatively affected the tortoises. None of the tortoises died during their second season at the site, and a second cohort released in 1998 experienced only 2.5% (1/40) mortality. Although initial mortality may be lower when translocations occur in years with plentiful rainfall, translocations during dry years may be acceptable because drought conditions likely affect mortality of resident and translocated tortoises similarly. Results of this study indicate that translocation should be considered a useful tool in conservation of the Desert Tortoise.


**Genetic Divergence of the New Mexico Ridge-nosed Rattlesnake**

Endangered species often consist of small, disjunct populations lacking gene flow, and such populations can be propelled into an inbreeding spiral that reduces individual survival, fecundity, and population sizes. The authors of this study used microsatellite loci and mtDNA to estimate demographic parameters and visualize historic/contemporary connectivity among populations of the New Mexico Ridge-nosed Rattlesnake (*Crotalus willardi obscurus*). *C. w. obscurus* is listed as Threatened under the Endangered Species Act and is distributed patchily within three mountain ranges (Animas [ANM], Peloncillo [PEL], Sierra San Luis [SSL]) of southeastern Arizona, southwestern New Mexico, and north-central Mexico. Molecular data support a hypothesis of northward range expansion from Mexico, with subsequent isolation on sky-islands via desertification that transformed intervening wooded valleys and low-elevation passes into inhospitable habitat. Historic and recent movements have been within rather than among mountains. All three populations are genetically bottlenecked, with PEL reflecting the sharpest declines and fewest captures per unit effort. Most recent population declines occurred ~4000 years ago. Thus, population reductions are historic and environmental rather than contemporary and anthropogenic. The authors’ data demonstrate that PEL is ecologically non-exchangeable with other sky-island populations and thus comprises one ‘evolutionary significant unit,’ while SSL and ANM comprise ‘management units’ within a second ESU.

Reptiles in Art

Continued from page 93

Dürër, and a recent find in the Museum of Fine Arts, Santa Fe – a carving in pine by the folk artist Patrocinio Barela (1908-1964). In most of the cultures of the East and before the Christian era, snakes are depicted as good, not evil. Examples of this include a Chinese bronze axe head (6th century BC) laced with snakes and the many carvings of the cobra (a symbol of protection) hooded Buddha and similarly adorned Krishna of the Hindu tradition. One of the most famous of all pieces of reptile art is that of the “Snake Goddess” of pre-Christian Minoan culture on the Island of Crete. Only a few of these small (35 cm, 13.8 in) terracotta figures are known (1600 BC). The bare-breasted female figure holds a snake in each out-stretched arm in a culture where the snake was a symbol of earth deities and male fertility. It is interesting to speculate whether the large pictographs of the Barrier Canyon Style Rock Art in the San Rafael Swell of Utah dating to the Archaic Period (8500-2000 BC) might convey similar meanings. One of the most famous, the “Head of Sinbad,” depicts a human figure with out-stretched arms and a clearly serpentine figure flying overhead. There are many examples of snakes in Barrier Canyon Rock Art, and no satisfactory explanation has been offered. Interestingly, the famous and spectacular cave art of Central Baja, of about the same age, has very few reptiles, although clearly reptiles are as common in Baja as in Utah.

Many other genre (coins, stamps, flags come immediately to mind) and thousands of additional examples of reptile art can be found all around the world, much of it as yet undocumented and uninterpreted. Certainly the diversity of reptile art is almost as intriguing and pervasive throughout history and the world as are the animals that have inspired it.

Note: Illustrations of many of the art examples cited can be found in de la Croix and Tansey (1975) and Janson (1977).

Literature Cited


2006 PHOTO CONTEST WINNER

1st Place: Turtle/Tortoise

Desert Tortoise (Gopherus agassizii) by Paul Condon

Visit the THS website (http://tucsonherpsociety.org/photo07.html) to see more winners of the 2006 Photo Contest. If you have a photo you would like to share, send a scanned image in TIFF or EPS format, minimum 300 dpi, to the editor. Include a short note about the species, location, or other interesting aspect about the photo, and you may see it in a future issue. All photos submitted may be used in Tucson Herpetological Society publications and public presentations with credit to the photographer.

Sonoran Herpetologist Local Research News

The Sonoran Herpetologist welcomes short reports for our Local Research News, a regular feature in our journal. We are interested in articles that can update our readers on research about amphibians and reptiles in the Sonoran Desert region. These articles need be only a few paragraphs long and do not need to include data, specific localities, or other details. The emphasis should be on how science is being applied to herpetological questions. Also, if you have seen an article published elsewhere in a peer-reviewed journal and would like to share it with others, feel free to submit a summary or forward the citation. Style and format are informal (see Sonoran Herpetologist July or September 2006 issues for examples). Please submit your observations to Roy Averill-Murray (averill-murray@sbcglobal.net). Submissions should be brief and in electronic form.
ANNOUNCEMENTS

Upcoming Meetings

16, 18 October 2007 – Desert Tortoise Recovery Plan Open Houses. Redlands, California (16th); Las Vegas, Nevada (18th).

A round of public open houses will be held to learn more about, discuss, and provide input on the draft Recovery Plan. Each open house will include three, 2-hour sessions (10AM-12PM; 2-4PM; and 5-7PM). Participants will be able interact with, ask questions of, and provide feedback to recovery planning staff in an informal setting. Participants are welcome to attend one or more sessions and come and go at their leisure. After considering input received at the open houses, the draft Plan will be revised, and a final, formal public comment period will be opened following the release of the official final Draft Recovery Plan near the beginning of the next calendar year. The Draft Recovery Plan will be publicly available for review approximately two weeks prior to the open houses.


Partners in Amphibian and Reptile Conservation (PARC) is pleased to announce an international, cutting-edge conference to, review what we know about Batrachochytrium dendrobatidis (“Bd”), assess scientific priorities and management needs, and identify actions to limit the spread and impact.

Anyone who cares about amphibians should attend, especially scientists; fish and wildlife managers; policy makers; veterinarians and others working in the field of conservation medicine; representatives from the bait, biological supply, frog farming, and pet industries; zoos and aquaria; non-governmental organizations; and foundations and other funding agencies.

The meeting will include presentations by many of the world’s experts on Bd, case studies of Bd detection and management, panel discussions and working groups resulting in action plans, and a poster session.

Contact Tala Woodward (tala@meyersalterman.com) to be placed on the mailing list for further information.


http://deserttortoise.org/.


Remember the THS in Your Will

Including the THS in your will is an excellent way to support the value of this organization and the conservation of the herpetofauna of the Sonoran Desert. We would like to recognize and thank anyone who has included the THS in their will. Please contact us so we can express our appreciation. For information about designating the THS in your will, please contact Kent Jacobs, Treasurer, Tucson Herpetological Society, at JacobsKent@earthlink.net.

Sonoran Herpetologist Book Review Policy

The Sonoran Herpetologist welcomes original book reviews by its members, but reviews must be previously cleared through the Book Review editor. All requests for books to review should be made to the editor, Eric Stitt. Additionally, the Book Review editor may solicit specific Tucson Herpetological Society members to review a book when that book is within a person’s specialty or area of interest. Several books are currently available for review. Please contact Eric at stitt@cox.net for further information.

BOARD MEETING SYNOPSIS

29 August 2007

Robert L. Bezy, Secretary


Directors Absent: Young Cage, Robert Villa, Erin Zylstra.

UA Student Chapter Representative Present: Kelly Donithan

Treasurer’s Report – Kent Jacobs

Beginning Balance $13,318.01
Deposits $2,565.00
Expenses $2,987.99
Ending Balance $12,895.02
Speaker’s Bureau $1,235.48
Jarchow Award $205.00
FTHL Fund $541.00
C.H.Lowe Research Fund $2,597.50
General Fund $5,769.23
CRHSD CD $9,263.35
PARC $2,546.81

Itemized Deposits: Membership $250.00, PARC $2,065.00, T-shirts $250.00.

Itemized Expenses: PARC $2,848.35, SH $139.64.
Committee Reports

Web Site – Roger Repp. A board member expressed the opinion that it is important that the design of the site be such that individual papers appearing in Sonoran Herpetologist can be easily located and retrieved via on-line searches.

Sonoran Herpetologist – Roger Repp for Roy Averill-Murray. The next two issues are nearly filled, but additional material is needed for continuous production of the journal.

Program – Elissa Ostergaard. The lineup of speakers includes:

18 September – Jarchow Award
16 October – Ed Moll
20 November – Erika Nowak & Justin Schofer
18 December – Kevin Bonine

Speakers are needed for 2008.

Student Chapter - Kelly Donithan. The first meeting will be on 5 September, and there is continuing interest in volunteering to participate in field work and other research projects.

Old Business

New Meeting Room - Roger Repp for Taylor Edwards. A shift to the Keating Building on the UA campus appears to be feasible, and the board discussed the details and timing of the potential change.


New Display Boards for the Speakers Bureau – Paul Condon for Robert Villa. Progress is being made on the design and production of the new boards.

Jarchow Award - Roger Repp. The board approved a motion for the expenditure of up to $400 for the award banquet.

New Business

Nominating Committee - Roger Repp. The president is authorized to appoint the chair of this vital committee, and anyone interested in serving should contact Roger.

Reptile Show and Sale - Roger Repp for Young Cage. Anyone interested in assisting Young in staffing the THS table should contact him.

MEMBERSHIP UPDATE

Membership Information

<table>
<thead>
<tr>
<th>Type</th>
<th>Annual</th>
<th>Sustaining</th>
<th>Contributing</th>
<th>Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>$20</td>
<td>$30</td>
<td>$50</td>
<td>$500</td>
</tr>
<tr>
<td>Family</td>
<td>$25</td>
<td>$30</td>
<td>$50</td>
<td>$500</td>
</tr>
<tr>
<td>Student</td>
<td>$14</td>
<td>$30</td>
<td>$50</td>
<td>$500</td>
</tr>
</tbody>
</table>

To receive a membership form and recent issue of Sonoran Herpetologist call (520) 624-8879 or write: Tucson Herpetological Society, P. O. Box 709, Tucson AZ 85702-0709.

Time to Renew Your THS Membership?

I hope this is a helpful reminder to those of you whose membership renewal is due this month. Please call or email with corrections and errors. 624-8879 or dhardysr@theriver.com

Dave Hardy Sr., Membership Secretary

Due in September

Bob & Sue Burgess
George Ferguson
Brooke Gebow
Tara Lukau
Joseph Mitchell
Elissa Ostergaard
Amy Rinder
Jeffrey Servoss
Frank Slavens
Stephan & Teresa Steward
Richard & Frances Zweifel

Membership Update - 2 September 2007

CONTRIBUTING

Roy & Laurie Averill-Murray Tucson
Allison Titcomb & Chuck Fellows Tucson
Marty Tuegel Tucson

NEW MEMBERS

Robert Hansen Clovis, CA

Sonoran Herpetologist Natural History Observations

The Tucson Herpetological Society invites your contributions to our Natural History Notes section. We are particularly interested in photographs and descriptions of amphibians and reptiles involved in noteworthy or unusual behaviors in the field. Notes can feature information such as diet, predation, community structure, interspecific behavior, or unusual locations or habitat use. Please submit your observations to Dale Turner (dturner@theriver.com), who is editor for this section. Submissions should be brief and in electronic form.
Sonoran Herpetologist is the newsletter-journal of the Tucson Herpetological Society, and is Copyright 2007. The contents of Sonoran Herpetologist may be reproduced for inclusion in the newsletters of other herpetological societies provided the material is reproduced without change and with appropriate credit, and a copy of the publication is sent to the Tucson Herpetological Society. Occasional exceptions to this policy will be noted. Contents are indexed in Zoological Record. A complete set of back issues are available in the Special Collections area of the University of Arizona library. They are accompanied by a copy of The Collected Papers of the Tucson Herpetological Society, 1988-1991.

Editor
Roy Averill-Murray, averill-murray@sbcglobal.net

Associate Editors
Robert Bezy, bezy@comcast.net
Don Swann, donswann@dakotacom.net
Dale Turner, dtturner@theriver.com

Art Editor
Dennis Caldwell, dennis@caldwell-design.com

Book Review Editor
Eric Stitt, stitt@cox.net

Distribution
Fred Wilson, fredtj@comcast.net
Trevor Hare, trevor@skyislandalliance.org

Membership
Dave Hardy Sr., dhardysr@theriver.com

Information for Contributors
Authors should submit original articles, notes, book reviews to the Editor, either via email using an attached word processed manuscript or by mail to the Society’s address. The manuscript style should follow that of Journal of Herpetology and other publications of the Society for the Study of Amphibians and Reptiles. For further information, please contact the editor.

Deadline for Sonoran Herpetologist 20(11): October 15

The Tucson Herpetological Society is dedicated to conservation, education, and research concerning the amphibians and reptiles of Arizona and Mexico.

Tucson Herpetological Society is a registered non-profit organization.

For more information about the THS and the reptiles and amphibians of the Tucson area visit tucsonherpsociety.org
Please Renew!
This is your only reminder.
Your membership has expired.

Sonoran Herpetologist
Newsletter-Journal of the Tucson Herpetological Society

September 2007, Volume 20, Number 9

Feature Article
92 Reptiles in Art: An Overview and Commentary

Herpetofauna of the 100-Mile Circle
94 Spiny Softshell (Apalone spinifera)

Natural History Note
96 Mojave Desert Sidewinder (Crotalus cerastes cerastes) Behavior

Current Research Summaries
97 Desert Tortoise Translocation
97 Genetic Divergence of the New Mexico Ridge-nosed Rattlesnake

Announcements
99 Upcoming Meetings

tucsonherpsociety.org