

MONTHLY MEMBERS MEETING

7:15 PM
Tuesday, December 17th

Arizona Game and Fish Department Office
555 North Greasewood Road
(between Speedway and Anklam, west of Pima Community College.)

Ed Moll

Adjunct Professor School of Renewable Natural Resources, UA

Roy Averill-Murray
Arizona Game and Fish Department

with slides by
Walt Shoepfle

Herps of Peru

Ed Moll received his BS and MS from the University of Illinois in 1961 and 1963 respectively. He received his PhD from the University of Utah in 1968 working with Dr. John Legler on the ecology of the Neotropical slider turtle in Panama. For the next 30 years, he taught zoology at Eastern Illinois University and pursued research on tropical river turtles in South and South East Asia. Upon retiring he and his wife Judy moved to Tucson. He joined the Tucson Herpetological Society in 1999 and currently serves on the THS Board.

Roy Averill-Murray received his BS in Wildlife and Fisheries Sciences in 1990 from Texas A&M University, where he worked with Jim Dixon on Concho water snakes (*Nerodia harteri paucimaculata*). In 1993 Roy received his MS in Wildlife and Fisheries Science from the University of Arizona, where he completed his thesis on monitoring desert tortoises and began his now 9-year study of desert tortoise reproduction with Cecil Schwalbe. After a brief venture through professional umpiring school and as a freelance herpetologist, he joined the Arizona Game

and Fish Department as Desert Tortoise Coordinator. Since February 2002 Roy has also assumed the role of Amphibians and Reptiles Program Manager for AGFD.

Ed and Roy (and their significant others) met in Iquitos, Peru, on a herpetological expedition up the Amazon River with William Lamar in 1998. They will be presenting slides from this and other trips to tropical Peru, while providing a general overview of Peruvian herpetofauna. Walt Shoepfle, a retired thoracic surgeon and THS member has also provided slides for the presentation from his five trips into the Peruvian Amazon.

PUBLIC MEETING ANOUCNMENT: Tucson Parks & Recreation Masterplan for Columbus Park

Tuesday, December 17, 2002, 7 pm Robins Elementary School, 3939 N. Magnetite (From Silverbell Road, turn west at Sweetwater Drive. Go to Willemite Lane which turns into Magnetite Lane, on southside of Sweetwater Dr.)

Columbus Park is between Silverbell Road and the Santa Cruz River and I-10, south of Camino del Cerro. Tucson Parks & Rec proposes to built 8 baseball or softball fields, 12 soccer fields, most lighted, American Kennel Club training area, RV camping, 8 tennis courts, horseshoe pits, bocci courts, covered basketball courts, 2 concession stands, much more parking and restrooms, a road within the Park parallel to Silverbell with a new exit on Camino del Cerro.

This area provides a key wildlife corridor between the Tucson Mountains and the Santa Cruz River, yet there has been little discussion among the public and the city on the impact this intense modification would have on native wildlife. Public input is needed for support of restoration actions that would maintain native vegetation and landscape connectivity.

Should you wish more information on the Columbus Park Masterplan, please contact:

Julie Parizek
Capital Planning and Development Unit, City of Tucson Parks and Recreation Department
791-4873
JParize1@ci.tucson.az.us
or
Joe O'Neill
791-4873 x 120
joneill1@ci.tucson.az.us

The Sonoran Desert Tortoise: Natural History, Biology and Conservation, Edited by Thomas R. Van Devender. University of Arizona Press and The Arizona-Sonora Desert Museum, 2002. 355 S. Euclid, Ste. 103, Tucson, Arizona, 85719. 388 Pages. \$70.00 cloth. ISBN 0-8165-2191-3

Eric W. Stitt

5409 E. Willard Street, Tucson, AZ, 85712.

Every once in a while a book is announced that creates in me a great deal of excitement and anticipation. For example, excerpts of *Song of the Dodo* (David Quammen, 1996) printed in *OUTSIDE* magazine prior to its release fueled my anticipation for that book. I was just beginning to delve into myriad conservation biology issues, and here was a book, well-written and epic in depth and scope, that served to catalyze my own ideas and interests. *The Sonoran Desert Tortoise: Natural History, Biology and Conservation* is another such book. It has been in press for longer than I have been studying desert tortoises. Based on a January, 1997 symposium, the book can truly be described as long-awaited. Now that it is finally in hand, I can conclude that this comprehensive synopsis of desert tortoise biology was worth the wait.

This many-authored tome contains chapters written by several of our own Tucson Herpetological Society members. Cecil Schwalbe, Roy Averill-Murray, Sherry Barrett, Craig Ivanyi, Brent Martin, and James Jarchow are among the 32 contributors. Chapters range in content from highly technical dietary physiology studies of Olav Oftedal to Gary Paul Nabhan's summary of traditional knowledge.

Much of the biology of tortoises in the Sonoran Desert can be summarized by the subtitle of Chapter 1: "Life in a Rock Pile." In this chapter, Thomas Van Devender builds the context for chapters to follow. He describes the natural history of the Sonoran desert tortoise, and emphasizes environmental factors that influence the behaviors and ecology of our local tortoises. Chapters 2 (Van Devender), 3 (McCord), and 4 (Lamb and McLuckie) provide a detailed history of the Sonoran Desert, the evolution of North American gopher tortoises, and possible mechanisms by which desert tortoises evolved. The authors address the major issues that remain unresolved, such as the timing and mechanism by which Mojave and Sonoran tortoises diverged in ecology, behavior, and genetics.

Chapter 5 (Bury, Germano, Van Devender, and Martin) updates our knowledge of desert tortoise biology south of the US-Mexico border. Unfortunately, many information gaps still exist regarding tortoise distribution and abundance in Mexico. Hopefully, this chapter will serve to focus future research priorities south of the border.

In chapters 6 (Averill-Murray, Woodman, and Howland) and 7 (Averill-Murray, Martin, Bailey, and Wirt) population biology, activity patterns, and behavior are described for Sonoran desert tortoises. Drawing heavily from their own research, the authors summarize environmental factors that may have driven divergent patterns seen between the Mojave and Sonoran Deserts. Tortoise diet is addressed in chapters 8 (Van Devender, Averill-Murray, Esque, Holm, Dickinson, Schwalbe, Wirt, and Barrett) and 9 (Oftedal). Because little dietary work has been done in Arizona, much of these chapters depend on research conducted in the Mojave. Chapter 11 (Germano, Pough, Morafka, Smith, and Demlong) details growth patterns in desert tortoises.

Chapter 12 has perhaps the broadest initial appeal in the book, as it deals with the care and diet of captive tortoises. The authors (Jarchow, Lawler, Van Devender, and Ivanyi) summarize decades of combined experience into one chapter that should be required reading for anyone with a backyard tortoise. Shelters, dietary needs, and threats from pet dogs are discussed in detail, as are over-wintering tips and tortoise health issues.

Desert tortoises in Arizona, as elsewhere, face many conservation threats; chapters 10, 13, and 14 address these threats from a variety of perspectives. Chapter 10 (Dickinson, Jarchow, Trueblood, and Devos) addresses pathogens in Sonoran desert tortoises. The authors conclude that although disease epidemics are known from some Mojave Desert populations, the current prognosis for Sonoran tortoises is relatively optimistic. However, the authors caution that urban-related impacts (e.g. release of non-native tortoises into wild populations) have the potential to cause major problems as humanity steadily encroaches into formerly remote tortoise populations.

An insidious threat to desert tortoises, not often realized by the casual observer, is landscape-scale changes in habitat due to invasive grasses and the subsequent change in fire regime. Chapter 13 (Esque, Burquez, Schwalbe, Van Devender, Anning, and Nijhuis) describes the effects of such changes on desert tortoises and the possible implications for future populations in altered environments. In chapter 14 (Howland and Rorabaugh), other threats are discussed in detail, including habitat loss and the illegal capture of tortoises for pets. The authors also discuss conservation measures intended to mitigate for such impacts. Lastly, in chapter 15, Gary Paul Nabhan provides an important summary of traditional knowledge and the historic use of desert tortoises in the American Southwest.

This book is well-written. Chapters are terse, with effective tables and figures and no discernible mistakes. Throughout, the authors do well to point out gaps in our knowledge in the Sonoran Desert, and in such cases draw heavily from findings for Mojave tortoises. This is an appropriate technique that should serve to focus research needs in the coming years. I would have liked to have seen color plates, although the black and white photos are well selected and reproduce well. Also, an author index would have been a welcome addition.

The Sonoran Desert Tortoise: Natural History, Biology, and Conservation is an important and overdue synthesis of our state of knowledge regarding the desert tortoise in Arizona and Mexico. Prior compendia of desert tortoise biology have been either genus-specific (e.g. the hard to find *Biology of North American Tortoises*, Bury and Germano, 1994), or feature a Mojave Desert emphasis (Herpetological Monographs No. 8, 1994). Further, much of the information on Sonoran desert tortoises has been locked up in agency reports, theses, or unpublished field notes. This work does a great service to compile these disparate sources into a widely available, peer-reviewed sourcebook. As such, I believe it belongs on any Southwest naturalist's bookshelf. Place it among *The Vertebrates of Arizona* (Lowe 1964) and *A Natural History of the Sonoran Desert* (Phillips and Comus 2000), because you will refer to it often. Not all chapters will appeal to everyone at any given time, but all will have need to reference each chapter on occasion. Put this on your birthday list, work a little overtime, or have a garage sale, but plan on adding this book to your collection.

Literature cited

Bury, R. B. and D. J. Germano, editors. 1994. *Biology of North American Tortoises*. Fish and Wildlife Report No. 13, U. S. Dept. of the Interior, Washington, D. C. 204 pps.
 Herpetological Monographs No. 8. 1994. A publication of the American Society of Ichthyologists and Herpetologists.
 Lowe, C. H. 1964. *The Vertebrates of Arizona*. The University of Arizona Press, Tucson, AZ. 270 pps.
 Phillips, S. J. and P. W. Comus, editors. 2000. *A Natural History of the Sonoran Desert*. University of California Press, Berkeley, CA. 628 pps.
 Quammen, D. 1996. *The Song of the Dodo*. Touchstone, New York, NY. 702 pps.

Great Plains Toad (*Bufo cognatus*)

Erik F. Enderson

Crother 2001 "2000", recognized this species as the Great Plains Toad (*Bufo cognatus*).



photo by Erik F. Enderson

Bufo cognatus is a member of the true toad family and perhaps its most ubiquitous. Adult females can reach over 11.4 cm (4.5 in.) in length, while the male of the species tend to be slightly smaller and possess a large characteristic sausage-shaped vocal sac. Dorsal coloration can be light brown to gray, usually with an olive green hue. A prominent and distinctive "V" shaped boss is formed between the eyes where the cranial crests diverge. Commonly has two to three paired, irregular oval blotches on the dorsum that are separated by a faint mid-dorsal stripe. Hind foot has a large and dark metatarsal tubercle.

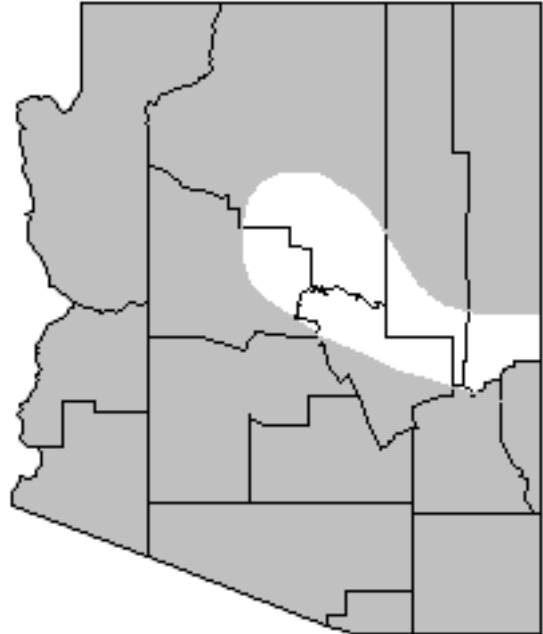
In Arizona, this species occurs statewide and is absent only from the Mogollon Rim and most of the White Mts. Found in all of Arizona's warm and temperate grassland communities. It also enters sagebrush plains, mesquite woodlands, creosote flats, and has occasionally been found in high montane forest. Has adapted well to over-grazed grassland and areas overcome by agriculture.

One of the most prolific breeders in Arizona. Reproductive activity generally takes place during the summer monsoon season, however some toads may breed before the rains come in May and June at sites with permanent water. The breeding call is a loud metallic trill that averages 25 seconds in its duration. This species is most active on wet summer nights, when it's possible to observe hundreds on roadways that transect suitable habitat.

This toad is often misidentified as *Bufo woodhousei* (Woodhouse toad). The two may be distinguished by *B. cognatus*' "V" shaped boss and its (usually) paired blotches present on the dorsum.

Recent observations indicate that this toad may be out competing, thereby replacing other anuran species within its range. Abusive grazing and agriculture may be at least partly responsible.

Current distribution of *Bufo cognatus* in Arizona



To see the herpetofauna of the 100 mile circle in color, visit the THS web site at <http://tucsonherpsociety.org>



BOARD MEETING SYNOPSIS

26 November 2002

Robert L. Bezy, Secretary

Directors Present: Bob Bezy, Jillian Cowles, Taylor Edwards, Caren Goldberg, Kent Jacobs Cristina Jones, Dick Martin, Ed Moll, Don Swann.

Directors Absent: Roy Averill-Murray, Erik Enderson

Members Present: Dennis Caldwell, Matt Goode, Marty Tuegel.

Treasurer's Report - Jacobs.

Beginning Balance	\$10,234.58
Deposits.	512.00
Expenses	385.25
Ending Balance	\$10,361.33

Speakers Bureau	\$ 970.87
Jarchow Award	50.00
FTHL Fund	100.00
C.H.Lowe Research Fund	2,243.00
General Fund	\$ 6,997.46

CRHSDIII (CD)	\$ 6,798.88
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Itemized Deposits: FTHL Fund \$5.00, Jarchow Award \$5.00, Lowe Fund \$50.00, Membership \$224.00, Raffle \$178.00, Speakers Bureau \$50.00.

Itemized Expenses: Bank Charge \$2.64, Equipment \$18.72, Lowe Fund \$200.00, Newsletter \$163.89.

Kent Jacobs also presented an interesting summary of income and expenses for the past three years. He pointed out that income and expenses (exclusive of the CRHSDII and the C.H.Lowe Fund) have been relatively stable.

	<u>2000</u>	<u>2001</u>	<u>2002</u> (11 mo.)
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Membership In.	\$3,088	\$3,024	\$2,971
Newsletter & Post Exp.	\$2,845	\$2,542	\$2,341
Speakers Bureau In.	\$ 164	\$ 274	\$ 242
T-shirts (in. - exp.)	\$ 447	\$ 678	\$ 696
Raffle In.	\$ 232	\$ 445	\$ 229

Committee Reports

Conservation - Caldwell. The committee has been busy with the SAWAMP project and an update is being prepared for Sonoran Herpetologist.

Speakers Bureau - Edwards and Moll.

7 November - Ed Moll. Roadrunner School School; afterschool program on snakes for the Pima Co. Recreation Department; 15 students.

13 November - Roger Repp. Sabino Canyon Volunteer Naturalists; Identification and Natural History of Herpetofauna; 65 naturalists.

16 November - Taylor Edwards. Prince Elementary School. 100 students.

21 November - Taylor Edwards and Caren Goldberg. Sun Line Christian School; 12 students.

Program - Roy Averill-Murray. The lineup of speakers includes

17 December - Ed Moll and Roy Averill-Murray, with slides by **Walt Shoepfle**, "Herps of Peru"

21 January - Erika Nowak, narrow-headed garter snakes

18 February - Taylor Edwards, desert tortoise genetics

18 March - Brian Wooldridge, Mojave rattlesnake venom

15 April - Richard Wagner (tentative), herp photography/venomous reptile bites

20 May - Andy Holycross, Snakes of Arizona

Old Business

PARC -Goode. Matt discussed the possible roles that the THS may play in PARC, including sending a speaker to the PARC National Conference and Education/Outreach Working Group Organizational Meeting to be held in Gainesville, Florida, on 6-8 April, 2003.

Election Results- Goldberg. President: Taylor Edwards; Vice President: Don Swann; Secretary: Bob Bezy; Treasurer: Marty Tuegel; Board of Directors: Cristina Jones, Hans Koenig, Ed Moll.

Agua Caliente Park - Goldberg. The letter has been sent by President Swann to the Editor of the Star.

Declining Amphibian Populations Taskforce Meeting - Goldberg. A meeting of DAPTF may be held at ASDM in the Spring, 2003, and meeting of PARC may be held in conjunction with it.

ADVERTISEMENTS

Ads are \$2 per line. The first two lines are free to members (approximately 240 letters and spaces), and are run the number of times specified at the time of listing with prepayment when applicable. Otherwise they are run one time only, but repeats may be requested by letter or phone. Charges for commercial ads are: 1/8th page \$5; 1/4 page \$10; 1/2 page \$20. No ad should be submitted which involves wild caught herptofauna. Acceptance of any ad will be at the discretion of the Editor and in accordance with Society policy. The Society is not responsible for the accuracy of representations made in any ad.

For Sale: Rats- small \$1.00, medium \$1.50, large \$2.00, jumbo \$2.50. \$10 minimum order. Various reptile cages and aquariums, \$10 and up. Contact: Marcia at 744-4211 (Tucson) or e-mail: boahiss@earthlink.net.

Arizona Herpetological Association

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Phoenix AZ 85082-4531

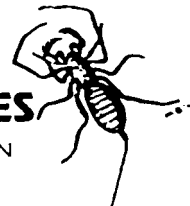
Meetings: 4th Tuesday, 7:00 PM
Location: The Phoenix Zoo, Auditorium, 455 North
Galvin Pkwy (between McDowell and Van -
Buren)

Journal: *The Desert Monitor*
Dues: Individual \$20, Family \$25, Contributing \$35
Information: (408) 894-1625

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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 *Herpetological Review*, publications of the Society for the Study of Amphibians and Reptiles. For further information, please contact Erik Enderson at eenderson@cox.net

Sonoran Herpetologist Local Research News

The Tucson Herpetological Society has started a column in its monthly newsletter, *The Sonoran Herpetologist*, titled, "Local Research News". We want to update our readers on interesting herpetology research projects happening around the state.

We are currently collecting pieces for submission. the submissions need not be more than a few paragraphs 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.

The style and format are very informal (*see SonHerp 13:123 for an example*). I will be happy to help with editing or if you already have a brief description or project summary, I will be happy to assist in formatting it.
Taylor Edwards, tayache@Ag.arizona.edu

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 December:

Young Cage	Tom Caldwell
Jon Covell	Russell Duncan
Stephen Goldberg	Melissa Gray
Randall Gray	David Hall
Marc Hammond	Steven Sekscienski
Stéphane Poulin & Yvonne Gubersky	
Michael & Mary Ann Smith	
Chip Hedgecock & Kim Morrison	



Dedicated to conservation, education, and research concerning the amphibians and reptiles of Arizona and Mexico. THS is a registered non-profit organization.

Officers

Don Swann	dswann@u.arizona.edu	President
Taylor Edwards	tayache@Ag.arizona.edu	Vice President
Bob Bezy	bezyr@theriver.com	Secretary
Kent Jacobs	jacobskent@earthlink.net	Treasurer

Directors

Roy Averill-Murray	rmurray@gf.state.az.us	2002-2003
Jillian Cowles	jillian@mindspring.com	2002-2003
Caren Goldberg	careng8@yahoo.com	2001-2002
Cristina Jones	cajones@u.arizona.edu	2001-2002
Dick Martin	dick@gailanddick.com	2002-2003
Ed Moll	e.o.moll@att.net	2001-2002
Erik Enderson	eenderson@cox.net	Past President

Society Activities

- Monthly Members Meeting
 Roy Averill-Murray, Program Chairperson
 3rd Tuesday, 7:15 PM
- Board of Directors Meeting
 No Board Meeting in December
 Arizona Game and Fish Department Office
 555 North Greasewood Road
- Speakers Bureau
 Taylor Edwards, Director
 Ed Moll, Director
 Scheduled presentations
- Herpetological Information Hotline
 Bob Brandner 760-0574
- Jarchow Conservation Award
 Taylor Edwards, Chairperson
- Publications:
Sonoran Herpetologist
Living with Rattlesnakes
Living with Gila monsters
THS Herp Coloring Book
THS Collected Papers, 1988-1991 (out of print)
- THS Internet World Wide Webpage
<http://tucsonherpsociety.org>
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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*.

Deadline for SonHerp 16 (01) is January 8

MEMBERSHIP INFORMATION

Individual	\$20	Sustaining	\$30
Family	\$25	Contributing	\$50
Student	\$14	Life	\$500

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

Sonoran Herpetologist Natural History Observations

The Tucson Herpetological Society invites your contributions to a regular feature in the *Sonoran Herpetologist*, Natural History Observations of southwestern herps. Similar to Life History Notes in *Herpetological Review*, these can include information such as size, behavior, diet, predation, community structure or other interesting observations. Please submit your noteworthy observations to Dale Turner (dturner@theriver.com), editor for this section. Submissions should be brief, typed double-spaced, and in electronic form if possible.

Your membership has expired.
This is your only reminder.
Please renew!



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NEXT MEETING

Tuesday, January 21st

Narrow-headed Garter Snakes

Erika Nowak