

KANSAS HERPETOLOGICAL SOCIETY



NEWSLETTER

NUMBER 24

APRIL 1978

FIRST FIELD TRIP OF THE YEAR -- COMING SOON

A joint field trip of the Kansas Herpetological Society and the Oklahoma Herpetological Society will be held 12 May 1978 (Friday), 13 May 1978 (Saturday) and 14 May 1978 (Sunday) in Ulysses, Kansas. All participants should plan to camp at Fraser Park (right off Highway 160), located south of Ulysses. A few of Fraser Park's offerings include: camping facilities, running water, electrical hook-ups, and rest rooms — ALL AT NO COST! This area of Kansas has many county records to offer so we need all the bodies we can get! Bring friends and plan on a fun weekend!

RECORD ATTENDANCE AT MARCH MEETING

The March meeting of the Kansas Herpetological Society held in Lawrence, Kansas was enjoyed by over fifty people. The KHS had the great honor of having two very fine men presenting talks at this meeting.

The first speaker was Dr. Robert C. Stebbins, author of A Field Guide to Western Reptiles and Amphibians in the Peterson Field Guide Series. Dr. Stebbins spoke about the effects of off road vehicles on the California deserts. The California deserts are a very delicate ecosystem and are in the process of being killed by motorcycles, dune buggies, and other vehicles driven off marked roadways. At the present time, the future for the deserts in California does not look too promising. If the desert dies, so will all the herps that inhabit it.

After a short break, Thomas Berger, Graduate Student at The University of Kansas, spoke on legislation and laws concerning reptiles and amphibians. Be sure to know the laws, both state and federal, concerning all the animals you keep as pets. For example, did you know you are required to have importation permits for all snakes in the boid family—this includes Boa constrictors! Remember the federal agents will not accept ignorance of the laws as an excuse—they will prosecute! The fines for collecting without the proper permits can be as much as a \$20,000 fine and five years in jail.—All those persons attending the SSAR meeting in Tempe during June should make sure they are knowledgeable about Arizona's collecting laws.

This meeting was a huge success! -- I hope to see all of you at the May KHS field trip in Grant County.

JUST A REMINDER...

--SAVE THESE DATES! The KHS has planned meetings or field trips on the following dates. Be sure to mark them on your calendar so you can attend. 12-14 May 1978, 14-16 July 1978, 8-10 September 1978, and 18 November 1978.

--The Chikaskia River Wildlife Study will be held 28-30 April 1978 near Drury, Kansas. Signs will be posted directing the participants to the camping site. For more information contact: Gene Trott, R.R. #2, Box 58, South Haven, KS 67104 (316/892-3587).

--Hobart M. Smith (Herp. Review, 1978) said about John Edwards Holbrook North American Herpetology, "It is, however, a virtually essential complement, and it makes this great work now readily accessible for any serious student, performing for American herpetology what Martin Luther did, in reference to the Bible, for the Christian world: making a basic work previously monopolized by the privileged few available to the common man". Members, this book can be yours by following a few simple rules: (for more details see KHS Newsletter #23, pg. 3):

- 1) Publishing an article on Kansas amphibians and/or reptiles in the KHS Newsletter before October 1978.
- 2) All participants must be KHS members.
- 3) No elected officers for 1977 or 1978 and no member of the judging committee may participate. Start writing NOW!

BIOLOGICAL SURVEY HERP PUBLICATIONS

The Biological Survey of Kansas has available six titles dealing with amphibians and reptiles in the state. Interested KHS members can obtain copies free-of-charge by writing to: State Biological Survey of Kansas, 2045 Avenue -A-, Campus West, Lawrence, Kansas 66045. The titles are:

Technical Publications

- 1976. New records of the fauna and flora of Kansas for 1975. St. Biol. Surv. Kansas Tech. Publ., 1:1-97.
- 1977. New records of the fauna and flora of Kansas for 1976. St. Biol. Surv. Kansas Tech. Publ., 4:1-78.

Reports

- 1976. Preliminary inventory of the biota of Woodson County State Fishing Lake and Game Management Area. St. Biol. Surv. Kansas Report, 5:1-76.
- 1977. A bibliography of the amphibians and reptiles of Kansas (1854-1976). St. Biol. Surv. Kansas Report, 12:1-56.

- 1977. The amphibians of Cherokee County, Kansas. St. Biol. Surv. Kansas Report, 14:1-12.
- 1977. The amphibians and reptiles of Cheyenne County, Kansas. St. Biol. Surv. Kansas Report, 15:1-18.

CURRENT LITERATURE

This current literature section has been compiled by J.T. Collins, and contains titles of books and articles on amphibians and reptiles of possible interest to KHS members. Generally, titles listed here are those written by KHS members, those which contain direct reference to Kansas herpetofauna, or those of significance regarding North American amphibians and reptiles.

- Echternacht, A.C.
 - 1977. How reptiles and amphibians live. Elsevier-Phaidon, Oxford, England. 142 pp. Numerous color plates. U.S. distributor unknown.
- Goin, C.J., D.B. Goin and G.R. Zug

 1978. Introduction of herpetology (Third revised edition). W.H.
 Freeman and Company, San Francisco. \$15.95.
- Hlavachick, B.D.
 - 1978. Rare, threatened and endangered (wildlife in Kansas). Kansas Fish and Game, 35(1):18-24. Available for 50¢ from: Kansas Fish and Game, R.R. #2, Box 54-A, Pratt, Kansas 67124.
- Johnson, T.R.
 - 1978. The central newt--a salamander with three lives. Missouri Conservationist, 39(2):30. Available from: Missouri Department of Conservation, 2901 North Ten Mile Drive, Jefferson City, Missouri 65101.
- Powders, V. N.
 - 1978. Observations on oviposition and natural incubation of eggs of the alligator snapping turtle, <u>Macroclemys temmincki</u>, in Georgia. Copeia, 1978(1):154-156.
- Powell, R. and H. Gregory
 - 1978. Emergency: Snakebite! Pamphlet produced by American Red Cross and the Avila College Department of Continuing Education. This pamphlet is free to all KHS members and is included with this mailing of the KHS Newsletter.
- Sena, A.P.
 - 1978. Temperature relations and the critical thermal maximum of Holbrookia maculata maculata (Reptilia: Iguanidae). Southwest. Naturalist, 23(1):41-50.

Whitaker, J.O., Jr., D. Rubin and J.R. Munsee
1977. Observations and food habits of four species of spadefoot toads, Genus Scaphiopus. Herpetologica, 33(4):468-475.

SSAR REGIONAL HERPETOLOGICAL SOCIETIES CONFERENCE 1 JUNE 1978

Arizona State University, Tempe, Arizona

Conference Co-moderators: Tom R. Johnson and Jeffrey Black

- 1:00 PM Introductory remarks. Tom R. Johnson (SSAR)
- 1:10 PM Functions of Regional Societies. Special Guest Speaker: Roger Conant (University of New Mexico)
- 1:40 PM State wildlife laws and herpetological collecting. <u>Pat O'Brien</u> (Arizona Game & Fish Commission)
- 2:00 PM How to form a new regional herpetological society. Neil B. Ford (Greater Cincinnati Herpetological Society)
- 2:15 PM Rattlesnake round-ups in Oklahoma. <u>Jeffrey H. Black</u> (Oklahoma Herpetological Society)
- 2:35 PM A valuable project for a regional herp society: A herpcare seminar for pet shops. Martin Rosenberg (NOAH)
- 3:00 PM BREAK (Coffee will be available)
- 3:30 PM Alternatives to regional herp society meetings. <u>James</u> Glenn (Utah Herpetological Society)
- 3:45 PM Field research and regional herp societies: Herptile behavior as an indicator of environmental quality. Tom Bloomer (Assoc. Conservation of Turtles & Tortoises)
- 4:00 PM Producing a top quality regional herp society newsletter.

 <u>John Murphy</u> (Chicago Herpetological Society)
- 4:20 PM SSAR mini-grants in herpetology. Max A. Nickerson (SSAR)
- 4:40 PM Regional herp society publications archives. Ron Heyer (National Museum of Natural History)
- 5:00 PM DINNER (site to be announced at the conference)
- 6:30 PM Open meeting of assembled RHS representatives discussion of general interest and resolutions. <u>Jeffrey H. Black</u> (moderator)
- 7:30 PM COLOR SLIDE PRESENTATIONS. All attending the RHS Conference are encouraged to bring their best color slides (limit 15).
- IMPORTANT: All sessions of the Second Annual SSAR Regional Herpetological Societies Conference will be held in the PIMA ROOM of the ASU MEMORIAL UNION building

COMPARATIVE REPRODUCTION STUDIES OF TWO COLUBRID SNAKES

INTRODUCTION

According to Fitch (1970) snakes are known from all definable temperate life zones of the world and from a wide variety of surroundings, including dry deserts, forests and aquatic situations. The types of surroundings mentioned above affect reproductive cycles and the number of eggs or young in a clutch vary according to environmental surroundings.

Reproductive cycles of snakes may be triggered by precipitation or length of daylight. In captivity, these environmental conditions may be altered by the removal of predators and control of light source. Some snakes do well in captivity and breed during their normal season, while others will not do well because of the altered environment. Most snakes do not use the prolonged period of winter inactivity as a trigger for breeding.

Different types of breeding cycles are dependent on the length of time for the development from birth to maturity, the number of eggs or young per clutch, the interval between each clutch, the size of the parent snake and the size at birth of the young snakes. In most cases the fewer the number of young, the larger they will be at birth. In some species the young may be nearly one-half the size of the parent snake, but have a shorter growth time to maturation. Some young snakes are one-fourth or more smaller than the parent snake, and the majority of snakes fall in this latter group. The relationship of size difference between young and parent is noticeable, but this relationship is affected by ecological factors and food habits.

This project involves comparative reproductive studies of two colubrid snakes, the red milk snake (<u>Lampropeltis triangulum syspila</u>) and the red-sided garter snake (<u>Thamnophis sirtalis parietalis</u>). Much of the following information about the natural history of these species is based on Collins (1974).

The preferred food of red milk snakes consists primarily of small lizards, other snakes and small mice. Food items are overpowered by constriction.

Red-sided garter snakes feed primarily on earthworms, frogs, toads, salamanders and small fish. They overpower prey by grabbing and swallowing it alive. Constriction is not employed.

In eastern Kansas, the red milk snake inhabits rocky hillsides of open woods or woodlands. It is fossorial and spends much time beneath the ground or under rocks and logs. It is annually active from April to November, and during hot summer months becomes nocturnal. Since it

rarely prowls in the open, the red milk snake frequently is found beneath a sunwarmed rock or log where it maintains an optimal body temperature.

Red-sided garter snakes inhabit diverse habitats such as marshes, wet meadows, margins of ponds, woodland edge, flood plains and cultivated fields. They prefer moist situations. The red-sided garter snake is annually active from March to November. It tolerates a wider range or air temperature than the red milk snake, and will even emerge from hibernation on warm days in December and February. The red-sided garter snake is diurnal and has a home range of 22-25 acres, an activity area probably larger than that of the red milk snake.

The most common predators of the red-sided garter are hawks, large snakes and mammals, and predation pressure is apparently high in this species. The red milk snake has similar predators, but predation pressure is comparatively lower due to its more secretive habits.

Red milk snakes apparently have low population density when compared to red-sided garter snakes. Red-sided garter snakes average more young per brood (approx. 33) than red milk snakes which have fewer eggs per clutch (approx. 7). Survival of the young may be greater in red milk snakes because of lower population density.

This project compares and quantifies the reproductive modes of these two species of snakes, and hypothesizes that red-sided garter-snakes (live-bearers) must produce many more young than red milk snakes (egg-layers) in order to perpetuate themselves.

MATERIALS and METHODS

I initially obtained living, gravid specimens from two different species in cooperation with the Museum of Natural History at the University of Kansas. I recorded the weights of the speckled kingsnake and the western massasauga. The snakes were confined for weighing by using a cotton cloth bag as a container while weighing. The weight of the bag was subtracted from the weight of the snake, and in this way proper comparative weights were obtained. The weights of the two different types of snakes showed significant difference and the data indicated that there was great variability of weights in the two species initially selected for the project.

The project encountered problems because of the cool temperatures in the museum. The female snakes either reabsorbed or aborted developing eggs and young, and this part of my project was terminated. Consultation with George Pisani and Joseph T. Collins enabled me to use data they had obtained from two other colubrid snake species,

<u>Lampropeltis triangulum syspila</u>, and <u>Thamnophis sirtalis parietalis</u>, two snakes common in northeastern Kansas.

RESULTS

Adult lengths of the two species compared were not uniform; the red-sided garter snake was 1125mm total length (TL) and the red milk snake was 630mm TL. The red-sided garter snake weighed 437.7 grams before birth and weighed 331.1 grams after birth, and the red milk snake weighed 61.1 grams before birth and weighed 33.1 grams after birth.

The brook of the red-sided garter snake consisted of 33 young which averaged 2.33 grams each. The red milk snake used in this study laid 7 eggs and, after hatching, the average weight of each young was 3.2 grams. The average length of the red-sided garter snake young was 213mm, and the average length of the red milk snake young was 223mm.

The percentage of weight loss for the adult red-sided garter snake was 25% and for the adult red milk snake the loss was 45%.

CONCLUSION

After birth, the amount of body weight loss was 25% in the female red-sided garter snake. The red milk snake laid 7 eggs, and comparative weight loss after birth was 45%.

When comparing the brood of the red-sided garter snake which averaged 2.33 grams per young in weight, and the red milk snake egg-clutch which averaged 3.8 grams in weight, there was a difference of 1.47 grams.

Comparison of the young red-sided garter snake that averaged 2.33 grams in weight to the red milk snake young that averaged 3.2 grams in weight, showed a difference of 0.87 grams. No significant difference was recorded between the average lengths of the red-sided garter snake and the red milk snake.

Although the red-sided garter snake weighed more (1125mm) than the red milk snake (630mm), the red milk lost more weight percentage-wise (45%) than the red-sided garter snake (25%). This indicates that live-bearing snakes don't loose as much weight as the egg-layers even though they (live bearers) give birth to more young than egg-layers.

The weight of the individual young shows that the red-sided garter young are smaller by weight than red milk snakes.

ACKNOWLEDGEMENTS

I want to thank the following people who helped me during my project. They were an influencing part of my project and without their help and support this project would not have been possible.

Janice Perry let me use the red milk snake and red-sided garter snake

in the exhibits at the Museum of Natural History at Kansas University. George Pisani gave me ideas during the beginning of my search for a project. Joseph T. Collins helped me weigh the snakes. He edited my report and gave me a lot of logistical support.

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1974. Amphibians and Reptiles in Kansas. Univ. Kansas Mus. Nat. Hist. Pub. Ed. Ser., 1:1-283.

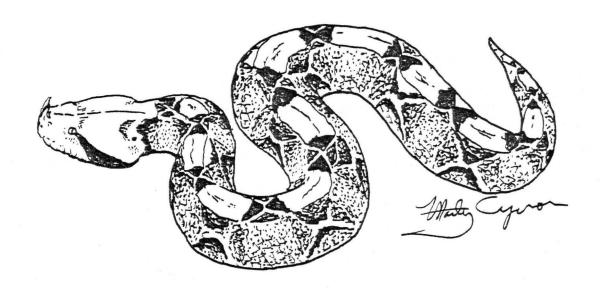
Conant, R.

1975. A Field Guide to Reptiles and Amphibians of Eastern and Central North America. Houghton Mifflin Co. Boston, xviii + 429 pp.

Fitch, H.S.

1970. Reproductive Cycles in Lizards and Snakes. Misc. Publ. Univ. Kansas Mus. Nat. Hist., 52:1-247.

---AMY LI, 1108 Avalon, Lawrence, Kansas 66044.



---The Kansas Herpetological Society Newsletter is issued every other month by the Kansas Herpetological Society. All interested persons are invited to become members. Membership dues per calendar year are: \$3.00 (Regular) or \$15.00 (Contributing) payable to: Marjorie Perry, Secretary-Treasurer, 812 Murrow Court, Lawrence, KS 66044. All manuscripts and notes should be sent to the Editor: EDITOR: Janice Perry, Museum of Natural History, University of Kansas, Lawrence, KS 66045. ASSOCIATE EDITOR: Rose Etta Kurtz, Museum of Natural History, University of Kansas, Lawrence, KS 66045.

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Haldea valerea elegans	Johnson, R. no.17, p.3,	
see <u>Virginia valeriae</u>	Johnson, R. no.20, p.11.	-15
Hemiphractus sp.	Lampropeltis triangulum	
Simmons, J. no.11, p.7	Johnson, R. no.17, p.3	
Heterodon nasicus	Perry, J. no.3, p.3	
Johnson, R. no.12, p.6	Smith, R.E. no.13, p.8	
Heterodon platyrhinos	Lampropholis quichenoti	
Collins, J.T. no.20, p.7	Perry, J. no.4, p.5	
Lardie, R. no.5, p.4	Leimadophis sp.	
Perry, J. no.3, p.2 Holbrookia texana	Simmons, J. no.11, p.7	
Johnson, R. no.11, p.10	Leiolopisma laterale	
Simmons, J. no.16, p.6	Capron, M. no.15, p.8 Perry, J. no.21, p.3	
Hyla arenicolor	Pisani, G. no.4, p.3	
Johnson, R. no.12, p.5	Smith, R.E. no.13, p.8	
Hyla chrysoscelis	Leiopelma liochstetteri	
Grow, D. no.13, p.2,3	Pisani, G. no.4, p.3	
Perry, J. no.21, p.3	Leptotyphlops dulcis	
Hyla cinerea	Grow, D. no.19, p.1	
Ashton, R. no.14, p.9	Lichanura trivirgata	
Perry, J. no.4, p.2	Johnson, R. no.17, p.3	

		D1 1 3	
Limnaoedus ocularis	3.1.	Phrynosoma dougla	1881
Ashton, R. no	0.14, p.9	Johnson, R.	
Litoria sp.		Phrynosoma modes	
Perry, J. no	o.4, p.6	Simmons, J.	no.16, p.6
Lygosoma laterale		Phrynosoma solare	9
see Leiolopisma 1	Laterale	Johnson, R.	
Macroclemys temmino		Phylobates lugub	
Capron, M. no			no.17, p.9-12
	, , p. 11-17		
Masticophis sp.	16 - 6	Pituophis melano	
Simmons, J. no	0.10, p.0	Capron, M.	no.10, p.3
Masticophis bilinea	tus	Capron, M.	no.14, p.2
Johnson, R. no		Johnson, R.	no.11, p.9
Masticophis flagell	Lum	Johnson, R.	no.12, p.5
Capron, M. no Capron, M. no Collins, J.T. no	0.8, p.5	Perry. J.	no.3, p.2
Capron, M. no	0.15, p.7	Rundquist, E.	no.7. p.2
Collins, J.T. no	0.17. p.16.	Simmons, J.	no.16, p.6
Tardie R. no	0.5. D.4	Plethodon gluting	nelle
Lardie, R. no Smith, R.E. no	13 n 8	Capron, M.	70 15 7 8
Magticarhia taoniat	7, 1, p. 0	Digani C	no.15, p.8
Masticophis taeniat	- 10		no.4, p.3
Johnson, R. no	0.11, p.10	Smith, R.E.	no.13, p.8
Lardie, R. no	0.5, p.4	Pseudacris clark	<u>L</u>
Natrix sp.		Grow, D.	
see Nerodia sp.		Pseudacris nigri	ta
Nerodia erythrogast	ter	Ashton, R.	no.14, p.9
Grow, D. no	0.12. p.8	Pseudacris ornata	
Grow, D. no		Ashton, R.	
Irwin, K. no		Stegall, E.	no.21, p.12
Miller, L. no		Pseudacris streck	
Perry, J. no			
	J. ZI, p. J		no.22, p.1
Nerodia fasciata	3	Stegall, E.	no.21, p.11-13
Irwin, K. no	0.15, p.5	Pseudacris trise	
Nerodia grahami	-1-	Capron, M.	no.14, p.2
Capron, M. no	0.14, p.1	Garber, S.	no.21. p.14
			, 1
Grow, D. no	0.13, p.2,3	Perry, J.	no.7, p.4
		Garber, S. Perry, J. Rundquist, E.	no.7, p.4 no.7, p.1,2,3
Nerodia rhombifera	o.13, p.2,3	Rundquist, E.	no.7, p.4 no.7, p.1,2,3
Nerodia rhombifera Capron, M. no	0.13, p.2,3 0.14, p.1,2	Rundquist, E. Python sp.	no.7, p.1,2,3
Nerodia rhombifera Capron, M. no Grow, D. no	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3	Rundquist, E. Python sp. Capron, M.	no.7, p.4 no.7, p.1,2,3 no.10, p.3,4
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no	0.13, p.2,3 0.14, p.1,2	Rundquist, E. Python sp. Capron, M. Python molurus	no.7, p.1,2,3 no.10, p.3,4
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3 p.15, p.5	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3 p.15, p.5	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R.	no.7, p.1,2,3 no.10, p.3,4
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3 p.15, p.5 p.8, p.5 p.14, p.2	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3 p.15, p.5 p.8, p.5 p.14, p.2 p.13, p.2,3	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3 p.15, p.5 p.8, p.5 p.14, p.2 p.13, p.2,3 p.15, p.4,5	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3 p.15, p.5 p.8, p.5 p.14, p.2 p.13, p.2,3	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3 p.15, p.5 p.8, p.5 p.14, p.2 p.13, p.2,3 p.15, p.4,5	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no	p.13, p.2,3 p.14, p.1,2 p.13, p.2,3 p.15, p.5 p.8, p.5 p.14, p.2 p.13, p.2,3 p.15, p.4,5 p.21, p.3 p.13, p.8	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.21, p.3 0.13, p.8 0.19, p.3	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Grow, D. no Irwin, K. no Ferry, J. no Smith, R.E. no Notophthalmus perst	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.13, p.3 0.15, p.4,5 0.19, p.3 triatus	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.21, p.3 0.13, p.8 0.19, p.3	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.15, p.4,5 0.13, p.8 0.13, p.8 0.19, p.3 0.19, p.3 0.14, p.9	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.13, p.8 0.13, p.8 0.19, p.3 0.19, p.3 0.14, p.9	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no Lardie, R. no	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.13, p.8 0.13, p.8 0.19, p.3 triatus 0.14, p.9 0.15, p.7 0.5, p.4	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L. Perry, J.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10 no.7, p.4
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no Lardie, R. no Perry, J. no Decry, J. no Dec	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.13, p.8 0.15, p.9 0.15, p.9 0.19, p.3 triatus 0.14, p.9 0.15, p.7 0.5, p.4	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L. Perry, J. Perry, J.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10 no.7, p.4 no.21, p.3
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no Lardie, R. no Ophisaurus attenuat	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2,3 0.15, p.4,5 0.13, p.8,5 0.15, p.4,5 0.11, p.3 0.11, p.3 0.12, p.3 0.13, p.3 0.14, p.9 0.15, p.7 0.15, p.7 0.15, p.7 0.15, p.4 0.15, p.3 0.17, p.9	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L. Perry, J. Perry, J. Rundquist, E.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10 no.7, p.4 no.21, p.3 no.7, p.2,3
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no Lardie, R. no Ophisaurus attenuat Capron, M. no Ophisaurus attenuat Capron, M. no	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.15, p.4,5 0.13, p.8 0.14, p.9 0.15, p.7 0.19, p.3 0.14, p.9 0.15, p.7 0.15, p.7 0.15, p.7 0.15, p.7 0.15, p.7 0.15, p.4 0.16, p.9 0.17, p.9 0.18, p.9	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L. Perry, J. Perry, J.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10 no.7, p.4 no.21, p.3
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no Lardie, R. no Ophisaurus attenuat Capron, M. no Ophisaurus attenuat Capron, M. no	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.8, p.5 0.14, p.2,3 0.15, p.4,5 0.13, p.8,5 0.15, p.4,5 0.11, p.3 0.11, p.3 0.12, p.3 0.13, p.3 0.14, p.9 0.15, p.7 0.15, p.7 0.15, p.7 0.15, p.4 0.15, p.3 0.17, p.9	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L. Perry, J. Perry, J. Rundquist, E.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10 no.7, p.4 no.21, p.3 no.7, p.2,3
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no Lardie, R. no Ophisaurus attenuat Capron, M. no Ophisaurus attenuat Capron, M. no	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.13, p.8 0.15, p.4,5 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.14, p.9 0.15, p.4 0.15, p.4 0.19, p.3 0.14, p.9	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L. Perry, J. Perry, J. Rundquist, E. Trott, G.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10 no.7, p.4 no.21, p.3 no.7, p.2,3 no.19, p.3
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no Lardie, R. no Perry, J. no Ophisaurus attenuat Capron, M. no Pisani, G. no Phrynosoma cornutum	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.14, p.2 0.13, p.2,3 0.15, p.4,5 0.13, p.8 0.15, p.4,5 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.14, p.9 0.15, p.4 0.15, p.4 0.19, p.3 0.14, p.9	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L. Perry, J. Perry, J. Rundquist, E. Trott, G. Rana catesbeiana Capron, M.	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10 no.7, p.4 no.21, p.3 no.7, p.2,3 no.19, p.3 no.14, p.2
Nerodia rhombifera Capron, M. no Grow, D. no Irwin, K. no Nerodia sipedon Capron, M. no Capron, M. no Grow, D. no Irwin, K. no Perry, J. no Smith, R.E. no Trott, G. no Notophthalmus perst Ashton, R. no Opheodrys aestivus Capron, M. no Lardie, R. no Perry, J. no Ophisaurus attenuat Capron, M. no Pisani, G. no Phrynosoma cornutum Capron, M. no Phrynosoma cornutum Capron, M. no	0.13, p.2,3 0.14, p.1,2 0.13, p.2,3 0.15, p.5 0.14, p.2,3 0.13, p.2,3 0.15, p.4,5 0.13, p.8 0.15, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.19, p.3 0.15, p.4,5 0.14, p.9 0.15, p.4	Rundquist, E. Python sp. Capron, M. Python molurus Capron, M. Johnson, R. Rana areolata Caldwell, J. Collins, J.T. Rana berlandieri Lardie, R. Rana blairi Capron, M. Collins, J.T. Irwin, K. Miller, L. Perry, J. Perry, J. Rundquist, E. Trott, G. Rana catesbeiana	no.7, p.1,2,3 no.10, p.3,4 no.10, p.4 no.17, p.3 no.17, p.6-7 no.7, p.8 no.5, p.3 no.14, p.2 no.7, p.8 no.20, p.1 no.18, p.10 no.7, p.4 no.21, p.3 no.7, p.2,3 no.19, p.3

Rana catesbeiana	(continued)	Sceloporus jarro	vi (continued)
Grow, D.	no.13, p.2	Johnson, R.	
Grow, D.	no.16, p.4	Johnson, R.	no 12 n 5 6
Irwin, K.	no.15, p.4,5	Sceloporus magis	ter
Irwin, K.	no.20, p.1	Johnson, R.	
Johnson, R.	no.11, p.10	Sceloporus occid	entalis
Lardie, R.	no.5, p.4	Grow, D.	
Miller, L.	no.18, p.10	Pisani, G.	
	70.10, p.10		
Perry, J.	no.3, p.3	Sceloporus oliva	
Perry, J.	no.21, p.3	Lardie, R.	
Rundquist, E.	no.7, p.2	Sceloporus poins	etti
Rana clamitans	· -	Simmons, J.	no.16. p.6
Irwin, K.	no.15, p.4	Sceloporus undul	
	110.15, p.		
Rana heckscheri	- 14 - 0	Capron, M.	
Ashton, R.	no.14, p.9	Irwin, K.	
Rana palustris	*	Lardie, R.	no.5, p.3
Irwin, K.	no.15, p.4	Perry, J. Rundquist, E.	no.3. p.3
Smith, R.E.	no.13, p.8	Rundquist, E.	no. 7. n. 2
	110,13, p. 0	Smith, R.E.	no.13, p.8
Rana pipiens	20 - 10	Danton, N. E.	110.15, p.0
Collins, J.T.	no.20, p.10	Trott, G.	
Garber, S.	no.21, p.14	Sceloporus varia	
Irwin, K.	no.20, p.1	Lardie, R.	no. 5. p. 3. 5
Miller, L.	no.12, p.2	Sceloporus virga	
Perry, J.	no.7, p.4	Johnson, R.	no.8, p.2,3
	no. 7, p. 4		
Perry, J.	no.21, p.3	Johnson, R.	no.12, p.5
Simmons, J.	no.16, p.6	Siaphos aqualis	
Smith, R.E.	no.13, p.8	Perry, J.	no.4, p.5
Stegall, E.	no.21, p.13	Sistrurus catena	tus
Rana sylvatica		Capron, M.	
Smith, R.E.	no.13, p.8	Sonora episcopa	p. 1
			ma 10 m 1
Rana utricularia		Grow, D.	no.19, p.1
Capron, M.	no.14, p.2	Perry, J.	no.3, p.3
Grow, D.	no.13, p.2	Sphaerodactylus	
Irwin, K.	no.15, p.4,5	Ashton, R.	no.14, p.10
Regina grahami		Sphenomorphus qu	oyii
see Nerodia gr	ahami	Perry, J.	no.4, p.5
Rhinocheilus lec	ontai	Sternotherus odo	notus
Lardie, R.	no.5, p.6	Grow, D.	no.13, p.2,3
Salvadora graham		Lardie, R.	no.5, p.4
Johnson, R.	no.12, p.5	Perry, J.	no.21, p.3
Lardie, R.	no.5, p.4	Storeria dekayi	
Salvadora hexale		Rundquist, E.	no.7, p.2
Johnson, R.		Tantilla gracili	, p. 2
		Cannon M	<u> </u>
Scaphiopus bombi	Trons		no.15, p.8
Capron, M.	no.14, p.2	Perry, J.	no.7, p.4
Perry, J.	no.3, p.3	Smith, R.E.	no.13, p.8
Rundquist, E.	no.7, p.2,3	Tantilla nigrice	ps
Scaphiopus couch		Grow, D.	no.19, p.1
Johnson, R.		Terrapene sp.	
			no 15 - 0
Simmons, J.		Capron, M.	no.15, p.8
Sceloporus clark		Terrapene caroli	
Johnson, R.	no.11, p.10	Capron, M.	no.15, p.7
Sceloporus graci	osus	Grow, D.	no.13, p.2
Grow, D.	no.7, p.7	Perry, J.	no.21, p.3
Sceloporus jarro		Terrapene ornata	
Johnson, R.	no.8, p.1,2	Capron, M.	no.15, p.7

Terrapene ornata	(continued)	Tiligua scincoid	es
Grow, D.		Perry, J.	
Irwin, K.		Trionyx sp.	
Perry, J.	no.21, p.3	Capron, M.	no.14, p.2
Perry, M.		Irwin, K.	no.15, p.5
Rundquist, E.	no.7, p.2	Trionyx muticus	•
Thamnophis cyrto		Dawson, M.	no.3, p.4
Johnson, R.	no.12, p.5	Rundquist, E.	no.7, p.3
Simmons, J.		Trott, G.	no.19, p.3
Thamnophis elegar		Trionyx spinifer	us
Garber, S.	~	Grow, D.	no.13, p.2
Thamnophis marcia		Miller, L.	no.19, p.4
Lardie, R.		Perry, J.	no.21, p.3
Perry, M.		Typhlotriton spe	
Thamnophis proxim		Perry, J.	no.7, p.4
Grow, D.		Smith, R.E.	no.13, p.8,9
Lardie, R.		Urosaurus ornatu	S
Miller, L.		Johnson, R.	no.8, p.2
	no.21, p.3	Johnson, R.	no.11, p.10
Simmons, J.		<u>Uta stransburian</u>	<u>a</u>
Thamnophis radix		Grow, D.	no.7, p.7
Capron, M.	no.14, p.1	Varanus sp.	
Capron, M.	no.15, p.7	Ashton, R.	no.14, p.10
Thamnophis sirta		Perry, J.	no.4, p.6
Capron, M.	no.14, p.1	<u>Virginia striatu</u>	
Grow, D.	no.12, p.8	Pisani, G.	no.4, p.4
Perry, J.	no.21, p.3	<u>Virginia valeria</u>	
Rundquist, E.	no.7, p.2	Capron, M.	no.15, p.8
Smith, R.E.	no.13, p.8	Smith, R.E.	no.13, p.8
Trott, G.	no.19, p.3		

References from common names (inverted)

FROGS AND TOADS

EDOGG AND MOADS				
FROGS AND TOADS American se	e Bufo americanus	Spadefoot, Couch's	200	Scanhiopus couchi
Arrow Poison.	e baro americanas	Plains	See	Scaphiopus bombifrons
	e Dendrobates auratus	Tailed		Ascaphus truei
	e Phylobates lugubris	Texas		Bufo speciosus
	e Rana catesbeiana	Treefrog, Canyon		Hyla arenicolor
Chorus, Florida se	The state of the s	Cuban		Hyla septentrionalis
	e Pseudacris ornata	Gray		Hyla chrysoscelis
	e Pseudacris clarki			Hyla versicolor
	e Pseudacris streckeri	Green		Hyla cinerea
Western se	e Pseudacris triseriata	Western		Bufo boreas
Crawfish se	e Rana areolata	Wood	see	Rana sylvatica
Cricket se	e Acris crepitans	Woodhouse's	see	Bufo woodhousei
Fowler's se	e Bufo woodhousei	LIZARDS		
Great Plains se		Alligator, Arizona		Gerrhonotus kingi
	e Rana clamitans	Texas		Gerrhonotus liocephalus
	e <u>Bufo valliceps</u>	Dragon, Bearded		Amphibolurus barbatus
	e Rana pipiens	Frilled		Chlamydosaurus kingii
	e Rana blairi	Earless, Texas	see	Holbrookia texana
Rio Grande se		Collared		Crotaphytus collaris
	e Rana utricularia	Fence, Northern		Sceloporus undulatus
	e Limnaoedus ocularis	Western	see	Sceloporus occidentalis
Narrow-mouthed,	2 1 1	Gecko, Reef		Sphaerodactylus notatus
Great Plains se	e Gastrophryne olivacea	Texas Banded	see	Coleonyx brevis
	e Leiopelma liochstetteri			
Peeper, Spring se				
	e Rana palustris			
F	e <u>Bufo punctatus</u> e Rana heckscheri			
	e Bufo woodhousei			
Rocky Mountain se Southern se				
Southern se	e paro rerresurra			

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LIZARDS (continued)
  Glass, Slender
                            see Ophisaurus attenuatus
                       see Klauberina riversiana
  Granite Rock
  Horned, Regal
Round-tailed
                          see Phrynosoma solare see Phrynosoma modestum
                           see Phrynosoma cornutum
     Texas
  Iguana, Desert see Dipsosaurus dorsalis
Night, Island see Klauberina riversiana
  Plateau, Striped see Sceloporus virgatus
Prairie see Sceloporus undulatus
Racerunner, Prairie see Cnemidophorus sexlineatus
                          see Cnemidophorus sexlineatus see Sceloporus variabilis see Sceloporus graciosus
     Six-lined
  Rose-bellied
  Sagebrush
  Short-horned.
     Mountain
                           see Phrynosoma douglassi
  Side-blotched see <u>Uta stransburiana</u>
Skink, Blue-tongued see <u>Tiligua scincoides</u>
     Broad-headed see Eumeces laticeps
                            see Eumeces anthracinus
see Eumeces fasciatus
     Coal
     Five-lined
     Grass, Common
Great Plains
                            see Lampropholis quichenoti
                            see Eumeces obsoletus
see Leiolopisma laterale
     Ground
                            see Eumeces septentrionalis
see Ctenotus lesueurii
     Prairie
     Striped
                            see Siaphos aqualis
     Three-toed
                            see Sphenomorphus quoyii see Sceloporus clarki
     Water
  Spiny, Clark's
                            see Sceloporus poinsetti
see Sceloporus magister
     Crevice
     Desert
                            see Sceloporus olivaceus
     Texas
                            see Sceloporus jarrovi
see Urosaurus ornatus
     Yarrow's
  Tree
  Whiptail, Spotted see Cnemidophorus gularis
SALAMANDERS
  Cave
                            see Eurycea lucifuga
                            see Eurycea longicauda
  Dark-sided
  Flatwoods
                            see Ambystoma cingulatum
                            see Typhlotriton spelaeus
  Grotto
                            see Ambystoma annulatum
see Plethodon glutinosus
  Ringed
  Slimy
                            see Ambystoma maculatum
  Spotted
  Striped Newt
                            see Notophthalmus perstriatus
  Tiger
                            see Ambystoma tigrinum
SNAKES
  Black-headed, Plains see Tantilla nigriceps
  Blind, New Mexico see Leptotyphlops dulcis
  Blind, New Mexico
Boa constrictor
Mexican Rosy
Rainbow

Brown

Brown

See Boa constrictor
See Boa constrictor
See Lichanura trivirgata
See Epicrates cenchris
See Storeria dekayi

Dituophis melanoleuce
                           see Pituophis melanoleucus
  Coachwhip
                           see Masticophis flagellum
  Copperhead
                            see Agkistrodon contortrix
  Cottonmouth
                           see Agkistrodon piscivorus
  Crayfish, Graham's see Nerodia grahami
  Earth, Rough see <u>Virginia striatula</u>
Smooth see <u>Virginia valeriae</u>
                           see Virginia valeriae
     Western
  Flat-headed
                           see Tantilla gracilis
  Garter,
     Black-necked
                          see Thamnophis cyrtopsis
                            see Thamnophis marcianus
     Checkered
                            see Thamnophis sirtalis
     Eastern
     Plains
                            see Thamnophis radix
                            see Thamnophis sirtalis
     Red-sided
                            see Thamnophis elegans
     Wandering
                            see Pituophis melanoleucus
  Gopher
  Green, Rough
                            see Opheodrys aestivus
  Ground, Great Plains see Sonora episcopa
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SNAKES (continued)
                          see Heterodon platyrhinos
  Hognose, Eastern
                          see Heterodon nasicus
     Western
  Kingsnake.
                          see Lampropeltis getulus
    California
    Gray-banded see Lampropeltis mexicana Mountain, Arizona see Lampropeltis pyromelana
                          see Lampropeltis calligaster
    Prairie
                          see Lampropeltis getulus
    Sonora
                          see Lampropeltis getulus
see Lampropeltis getulus
    Speckled
     Yuma
                          see Rhinocheilus lecontei
  Long-nosed
                          see Sistrurus catenatus
see Lampropeltis triangulum
  Massasauga
  Milk
                          see Agkistrodon piscivorus
  Moccasin, Water
  Patch-nosed, Desert see Salvadora hexalepis
                          see Salvadora grahamiae
see Salvadora grahamiae
    Mountain
    Texas
                          see Python molurus
see Chondropython viridis
  Python, Burmese
    Tree
                          see Coluber constrictor
  Racer
                          see Elaphe obsoleta
see Elaphe obsoleta
see Elaphe guttata
see Elaphe triaspis
see Elaphe guttata
  Rat, Baird's
    Black
    Great Plains
    Green
    Rosy
                           see Elaphe subocularis
    Trans-Pecos
  Rattlesnake,
    Diamond-backed
     Black-tailed
                          see Crotalus molossus
                          see Crotalus atrox
see Crotalus scutulatus
    Mojave
                           see Crotalus viridis
     Prairie
                           see Crotalus willardi
    Ridge-nosed
                           see Crotalus lepidus
    Rock
                           see Crotalus tigris
    Tiger
                          see Crotalus pricei
     Twin-spotted
  Ribbon, Arid Land see Thamnophis proximus
                          see Thamnophis proximus
     Western
                           see Diadophis punctatus
  Ringneck
                          see Hypsiglena torquata
see Nerodia erythrogaster
  Texas Night
  Water, Blotched
     Broad-banded
                           see Nerodia fasciata
                           see Nerodia rhombifera
     Diamondback
                           see Nerodia grahami
     Graham's
     Midland
                           see Nerodia sipedon
     Northern
                           see Nerodia sipedon
                           see Nerodia erythrogaster
     Red-bellied
  Whipsnake,
Central Texas
                          see Masticophis taeniatus
                           see Masticophis bilineatus
     Sonora
     Striped
                           see Masticophis taeniatus
                           see Carphophis amoenus
  Worm
TURTLES
Box, Ornate
                           see Terrapene ormata
                          see Terrapene carolina
see Graptemys pseudogeographica
    Three-toed
  Map, False
     Mississippi
                           see Graptemys kohni
                           see Kinosternon subrubrum
  Mud, Mississippi
                           see Kinosternon flavescens
see Chrysemys picta
     Yellow
  Painted
                           see Chrysemys scripta
  Red-eared
                           see Chrysemys floridana
see Chrysemys concinna
  Slider, Missouri
     Texas
  Snapping, Alligator see Macroclemys temmincki
Common see Chelydra serpentina
Northern see Chelydra serpentina
  Softshell, Smooth see Trionyx muticus
Spiny see Trionyx spinifer
                           see Sternotherus odoratus
  Stinkpot
  Tortoise, Aldabra
                           see Aldabra Tortoise
                           see Gopherus polyphemus
     Gopher
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