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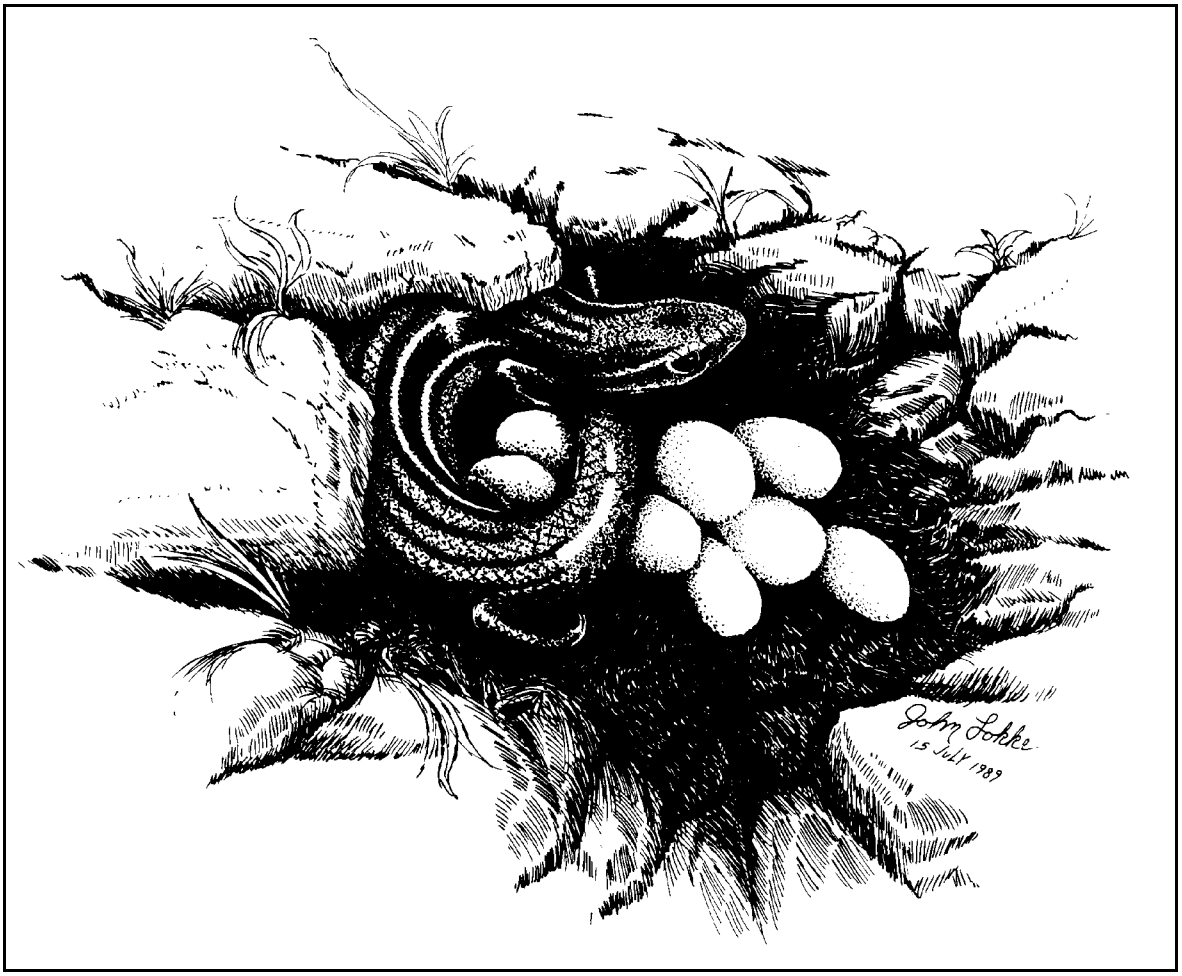

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Cover: Female northern prairie skink, *Eumeces septentrionalis*, guarding a clutch of eggs in Nebraska. Original artwork by John F. Lokke.

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Parental Behavior in Lepidosaurs and Turtles: Source Addendum

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Parental behavior is widespread and well-known within the crocodilians (Böhme, 1977; Lang, 1987; Shine, 1988; Böhme and Nickel, 2000; Bustard, 2001). However, among the lepidosaurian reptiles (lizards, snakes, tuatara, and amphisbaenians) and turtles, parental behavior is regarded largely as absent (Gardiner, 2002; refuted by Somma, 2003a), uncommon or, at most, unevenly distributed (Shine, 1988; Ernst and Barbour, 1989; Clutton-Brock, 1991; Burghardt and Layne, 1995; de Fraipont et al., 1996; Allport, 1997; Obst, 1998; Morafka et al., 2000; Pough et al., 2001; Zug et al., 2001), yet has received the attention of a variety of recent overviews (Shine, 1988; Branch, 1989; Somma, 1990; de Fraipont et al., 1996, 1999; Gans, 1996; Blackburn, 1999; Shine and Lee, 1999).

In order to draw further attention to observations and studies on parental behavior in these taxa, I have compiled a revised literature survey (Somma, 2003b). In my survey I document literature reports and personal communications for various forms of parental behavior in 336 species of lepidosaurians and seven testudinians; of these, the reports that I judged reliable refer to 236 species (24 families) of lepidosaurs (one tuatara, 133 lizards, and 102 snakes) and six species (three families) of turtles (Somma, 2003b). During the time interval in which my bibliography went to press, I became aware of a variety of sources that I was not able to add to manuscript due to the usual technical constraints involved in publishing. In this article I am providing these sources in order to complement my publication; ultimately making available a more thorough database for researchers interested in parental behavior in non-archosaurian reptiles. Moreover, I have cited several online sources (all last accessed 15 January 2003) in order to augment these data, but with the caveat that these sources are notoriously ephemeral (Markwell and Brooks, 2002, 2003; also *in* Leslie, 2002); I have not made any attempt to provide an exhaustive list of them.

There is fascinating evidence that a number of ancient writers thought that parental behavior was common in snakes (Somma, 2003b). I have recently come across another historically important source. Philostratus the Elder, in his *De Vita Apollonii* [c. AD 220], claims that mother vipers (obviously *Vipera*) lick their young, "caressing" them with their tongues (translated in Eells, 1967). (The earliest English translation of Philostratus [Blount, 1680] is incomplete and lacks this statement.) Whether this is based upon an exaggerated observation of a mother *Vipera* tongue-flicking her neonates, or simply a fanciful story, is not obvious. At least one twentieth century researcher, Rudolf Mell, thought that parental behavior was common to snakes, based upon his ecological observations of Southeast Asian colubrids, elapids, and viperids (Mell, 1931).

Reviews by Shine (1988) and myself (Somma, 1990, 2003b) provide a sizable body of literature that attribute mother snakes, especially vipers, with the ability to protect their young from danger by temporarily swallowing them. This unsubstantiated folklore has an old history and continues to be regarded by many people as part of the accepted natural history of both snakes and, at one time, the lizard *Lacerta vivipara* (Hopley, 1882; Boulenger, 1903a; Ditmars, 1937; Shine, 1988; Allport, 1997; Fitzgerald and Painter, 2000; Somma, 2003b). To add to this historical literature, William Harrison (1577, 1587) claims to have observed this behavior in the English adder, *Vipera berus*, and supports his claim by citing the aforementioned statement made by Philostratus. (There are several variants to each of Harrison's earliest two editions; I only completely cite the versions I have seen.) Belief in this widespread myth sometimes made its way into fiction (Hopley, 1882; Shine, 1988; Somma, 2003b). In the "tragi-comedy," *The Humorous Lieutenant* (Beaumont and Fletcher, 1647), act 3, scene 4, the character Celia laments:

> This is three Bawdes beaten into one; blesse me heaven,
> what shall become of me? I am i'th' pitfall:
> O' my conscience, this is the old viper, and all these little ones
> Creep every night into her belly; do you heare plumpe servant
> And you my litle sucking Ladies, you must teach me,
> For I know you are excellent at carriage,
> How to behave my selfe, for I am rude yet:
> But you say the Prince will come?

This play, originally titled *Demetrius and Enanthe* (Hoy, 1982), was first performed in 1619, but was not published in print until 1647 (Hoy, 1982; Oosby, 1992). Most authorities attribute the playwriting entirely to John Fletcher, not Francis Beaumont (Hoy, 1982; Oosby, 1992). In addition to the first published version (Beaumont and Fletcher, 1647), I have examined various later versions of *The Humorous Lieutenant* ([Fletcher], 1697; Beaumont and Fletcher, 1717, 1761). While they are variously rewritten or edited, they all contain Celia's remark about "the old viper" swallowing her young.

In my bibliography I cite Fayrer's (1872) description of maternal behavior in *Naja naja* and *Ophiophagus hannah* (Somma, 2003b). The fact that Fayrer's book went into a second edition seems known to some (Adler, 1986; Haines, 2000; Moriarty, 2001), but it has occurred to me that the second edition of this rare work may be marginally easier to obtain than the first. Fayrer's remarks on cobra reproduction are identical in both editions. In the interest of utility and historical documentation I herein cite it (Fayrer, 1874).

It is historically interesting to note that a number of authors (cited in Somma, 2003b) have made vague references to Robert Ridgway finding a *Farancia abacura* with her eggs in the 1880s. I was not able to determine the exact reference to this earliest observation of mud snakes brooding eggs (Somma, 2003b). Recently, Minton (2001) has solved this mystery for

me by determining that the snake and its 11 eggs were discovered in "Wheatland," Indiana, in the 1880s, and turned in to the National Museum of Natural History. The snake and her eggs (USNM 13386) were collected by D. Ridgway from Wheatland, Knox County, Indiana, in "1883," donated "living" by R. Ridgway, and catalogued on 8 July 1883 (R. Crombie, pers. com.). Unfortunately, *F. abacura* now seems to be extirpated from Indiana (Minton, 2001).

Several modern publications have provided additional observations on parental behavior in squamates. Vitt (2001) found a tropidurid lizard, *Stenocercus roseiventris*, with "its clutch of eggs" (presumably a female), but did not suggest if he thought this was an example of parental behavior, or simply a recently oviposited clutch that the parent had not yet abandoned. There also is tenuous evidence that female *Leiocephalus stictigaster* aggressively guard their clutches (Pether, 2002). These two observations may add a sixth, and perhaps, seventh species, and a fourth genus, to the list of tropidurids potentially exhibiting some form of parental behavior (Somma, 2003b). Additionally, family-group social structures have been reported for the agamids *Laudakia caucasicus* ([Panov and Zykova], 1993) and *Laudakia erythrogaster* ([Zykova and Panov], 1993), but not genetically verified. Similar social behavior may exist in at least six other species of agamid lizards (Somma, 2003b). Unverified observations on a cordylid made by Neimeier (2001) suggest that maternal *Cordylus tropidosternum* might care for her neonates by briefly allowing them to share her home refuge. Similar observations have been reported for five other species of cordylid lizards, and verified for three of these species (Somma, 2003b). Maternal *Mesaspis monticola* commonly remain with their live-born young, briefly caring for them (Savage, 2002); not surprising given that maternal behavior is common to 17 other species of anguid lizards (Somma, 2003b). Female crocodile skinks, *Tribolonotus gracilis*, brood their single-egg clutches, and care for and aggressively defend neonates for at least two weeks after hatching (Hartdegen et al., 2001; Reams and Urbanek, 2001). Thus, when added to my previous data, verified parental behavior in skinks occurs in 14 genera, 45 species. (Or 15 genera following the revision of the genus *Eumeces* by Griffith et al. [2000]; in which *E. algeriensis* and *E. schneiderii*, both egg-brooders [Somma, 2003b], are placed in the genus *Novoeumeces*.)

A color slide illustrating a *Pituophis melanoleucus* coiled around her eggs is captioned "Northern Pine Snake with eggs. Many female snakes guard their eggs until they hatch. In a few species body warmth may incubate the eggs" (Leszczynski, 1981a). Female *P. melanoleucus* do not brood their eggs despite exhibiting complex oviposition and nest building behaviors (Burger and Zappalorti, 1991; Leszczynski and Zappalorti, 1996); thus, they are an inappropriate species to use to illustrate brooding in snakes. Female *Psammophylax multisquamis*, a colubrid snake, brood their eggs (Spawls et al., 2002); adding a fourth species to those in this genus known for maternal brooding behavior (Somma, 2003b). Females of the recently described *Morelia nauta* do not differ from 29 other species of pythons (Somma, 2003b; this study) in that they brood their eggs (Barker and Barker, 2002). An old observation of oophagy in a *Corallus ruschenbergerii*, seen ingesting dead young and infertile eggs after parturition (M[ole], 1926a), simply verifies that this behavior is common to viviparous boids (eight other species: Somma, 2003b). Lastly, four additional species of oviparous vipers that exhibit maternal brooding include *Bothrops colombianus* (Ayerbe *in* Campbell and Lamar, 1992), *Protobothrops mucrosquamatus* ([Lue et al., 1999]), *Ovophis tonkinensis* (Orlov et al., 2002), *Trimeresurus borneensis* (Manthey and Grossmann, 1997), and, perhaps (?), *Ermia mangshanensis* ([Zhao and Chen], 1990 *cited and translated in* David and Tong, 1997).

Viviparous vipers commonly remain with their neonates until their natal ecdysis (Greene and Hardy, 1997; Greene, 2001; Pough et al., 2001; Greene *in* Angier, 2002a, b; Greene et al., 2002; Somma, 2003a, b). In an addition to the multitudinous observations (perhaps dating back to Philostratus?) that I cite in my bibliography, and new citations that I provide here (Table 1), Smith (2001) recalls finding maternal rattlesnakes with their neonates. His comments refer to observations of *Crotalus molossus* (H. Smith, pers. com.), which he co-reported in an early publication (Dunkle and Smith, 1937). Maternal attendance in this species recently has been verified (Greene et al., 2002; Table 1). Observations of female *Crotalus cerastes* (Reiserer *in* Greene et al., 2002), *C. intermedius* (Campbell *in* Greene et al., 2002), *C. mitchellii* (Greenberg *in* Greene et al., 2002), and *C. scutulatus* (Brown, Reiserer, Redwine and Whorley, Tomberlin *in* Greene et al., 2002) attending their young, add four more species to the list of *Crotalus* exhibiting maternal care. Moreover, maternal care of neonates may exist in two species of the genus *Gloydius*: *G. blomhoffii* (Wall, 1903) and *G. intermedius* ([Ataev], 1985, also *cited in* Gloyd and Conant, 1990.) If eventually verified, this potentially adds another genus and two species to the number of vipers exhibiting parental behavior; now totaling 13 verified genera, 31 species when added to Somma (2003b).

Additional sources for descriptions of parental behavior in lepidosaurians and turtles that I have encountered include those cited in Table 1. These observations add to previously cited sources for these same 78 species (Somma, 2003b). Criteria for accepting the validity of these sources are detailed in Somma (2003b).

My bibliographic research does not cover the nonmammalian cynodonts per se, but I do briefly mention speculation that these extinct taxa could have exhibited parental behavior toward their young (Somma, 2003b). To this hypothesis I add a report of a juvenile skull of a species of *Thrinaxodon* found associated with an adult skull of an individual thought to have been its mother (Brink, 1955). Such evidence is not definitive, but certainly suggestive (Brink, 1957; MacLean, 1990).

In summary, the data in this paper combined with my bibliographic survey provide documentation for parental behavior in 364 species of lepidosarians; those that I regard as reliable are limited to 255 species (one tuatara, 137 lizards, and 117 snakes). The data for the number of testudinian species exhibiting parental behavior remains unchanged. Of approximately 7392 extant species of lepidosaurians and 295 extant testudinians (Uetz, 2000; Zug et al., 2001), parental behavior in some form occurs in at least 3.4% of all lepidosaurs and 2% of all

turtles. Thus, these reproductive behaviors are rare or simply, and perhaps more realistically, underreported in these taxa (Somma, 2003b).

Surely there are a variety of gaps in my bibliographic research. Most likely these omissions will occur in highly regional literature (especially regional society newsletters), and many overseas (non-North American) herpetocultural and natural history observations; particularly those published in Asia, Australia, and Europe. I welcome and encourage information on any new literature or personal observations which readers may wish to send my way.

Acknowledgments

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I heartily thank Ronald I. Crombie (Collection Manager, Division of Amphibians and Reptiles, National Museum of Natural History, Smithsonian Institution) for verifying the existence of Ridgway's mud snake and her eggs.

Table 1. Additions to the literature on parental (primarily maternal) behavior in lepidosaurs and turtles. All species listed have been previously observed by authors cited in Somma (2003b). Uncertain or unverified observations are indicated by a "?" before the citation.

Taxa	Oviparous or Viviparous	Source
Testudines		
Kinosternidae		
Kinosternon flavescens	O	Farrar, 2001[a]
Testudinidae		
Manouria emys	O	Manthey and Grossmann, 1997; Das, 2002
Rhynchocephalia		
Sphenodontidae		
Sphenodon punctatus	O	Guillette et al., 1991; Thompson and Daugherty, 1992; Tyrrell, 2001
Squamata		
Lizards		
Anguidae		
Diploglossus bilobatus	O	Savage, 2002
Elgaria multicarinata	O	Langerwerf, 2002
Ophisaurus apodus	O	Langerwerf, 2002
Cordylidae		
Cordylus giganteus	V	McKeown, 2001
Gekkonidae		
Gekko gecko	O	Manthey and Grossmann, 1997[b]; van der Hulst, 2001[b]
G. smithi	O	?Manthey and Grossmann, 1997[c]
Rhacodactylus chahoua	O	Sameit, 1988; Seipp and Henkel, 2000
R. trachyrhynchus	V	Sameit, 1988; ?Pether *in* Myers, 1999; Seipp and Henkel, 2000

Table 1. (cont'd)

Taxa	Oviparous or Viviparous	Source
Iguanidae		
Cyclura carinata	O	Gerber and Iverson, 2000
C. collei	O	Gerber *in* Alberts, 2000; Vogel, 2000
C. cychlura†	O	Iverson *in* Binns, 2002
C. nubila	O	Gerber, 2000
C. stejnegeri	O	Wiewandt and Garcia, 2000
Iguana iguana	O	Reed, 1995; Kaplan, 2003
Lacertidae		
Timon lepidus (= *Lacerta lepida*)	O	Langerwerf, 2001
Scincidae		
Corucia zebrata	V	?Harmon, 2002[b]
Egernia saxatilis	V	O'Connor and Shine, 2003[b, d]
E. stokesii	V	Gardner et al., 2001[d], 2002[d]
Eumeces anthracinus	O	Hulse et al., 2001
E. fasciatus	O	Ortleb, Schuette and Parson, Schuette and Richey *in* Smith and Powell, 1993; Hulse et al., 2001; Zug et al., 2001; Schwartz and Golden, 2002
E. inexpectatus	O	Leszczynski, 1981b
E. laticeps	O	Hulse et al., 2001
E. obsoletus	O	Church *in* Hammerson, 1999; Alamillo, 2001
E. septentrionalis	O	Frese, 2001, in press; Hooper, 2001
Gnypetoscincus queenslandiae	V	Cook and Sumner *in* Chambers, 2002
Tiliqua adelaidensis†	V	Milne, 1999; Milne et al., 2002
Varanidae		
Varanus giganteus	O	Vincent and Wilson, 1999[b]
V. komodoensis	O	Ciofi *in* King et al., 2002; Halverson and Spelman, 2002; King et al., 2002; Walsh et al., 2002
V. rosenbergi	O	Vincent and Wilson, 1999[b]
Snakes		
Boidae		
Antaresia childreni	O	Firth and Sheikh-Miller, 2001; Barker and Barker, 2002
Aspidites melanocephalus	O	Barker and Barker, 2002
A. ramsayi	O	Price, 1999
Calabaria reinhardtii	O	R. Staub, pers. com.
Liasis fuscus	O	Barker and Barker, 2002
Morelia bredli	O	Kortlang and Green, 2001
M. spilota	O	Price, 1999; Fearn et al., 2001; Kortlang and Green, 2001; Barker and Barker, 2002; Clark and Acheson, 2002; Pearson et al., 2003
M. viridis	O	Price, 1999; Riley *in* Barker and Barker, 2002
Python anchietae	O	Barker and Barker, 2002

Table 1. (cont'd)

Taxa	Oviparous or Viviparous	Source
P. brongersmai	O	Manthey and Grossmann, 1997; Barker and Barker, 2002; Tepedelen, 2003
P. curtus	O	Manthey and Grossmann, 1997; Barker and Barker, 2002
P. molurus	O	Mader, 1996; Manthey and Grossmann, 1997; Briggs, 2001; Zug et al., 2001; Das, 2002; Spencer [no surname?] *in* Barker and Barker, 2002; Das, 2002; Kaplan, 2003
P. regius	O	Broghammer, 2001; Carmichael, 2001; Clark, 2001; Felsman, 2001; Barker and Barker, 2002; McKeown, 2002; Sutherland and Sutherland, [2002]; Anonymous, 2003a, b; Kaplan, 2003
P. reticulatus	O	Manthey and Grossmann, 1997; Samuelson, 2001; Anonymous, 2002
P. sebae	O	Stevenson-Hamilton, 1947; Cimatti, 1999; Linzey, 2001; Spawls et al., 2002[e]
Colubridae		
Clelia clelia	O	Brazil *in* M[ole], 1926b
Farancia abacura	O	Ridgway *in* Minton, 2001
Lampropeltis triangulum	O	?Minton, 2001
Lycodon capucinus	O	?Das, 2002
L. striatus	O	?Das, 2002
Ptyas mucosus	O	Manthey and Grossmann, 1997; Das, 2002
Rhabdophis subminiatus	O	Das, 2002
Xenochrophis piscator	O	Das, 2002
Elapidae		
Bungarus caeruleus	O	Das, 2002
Naja kaouthia	O	Manthey and Grossmann, 1997[b]; Das, 2002
N. sumatrana	O	Manthey and Grossmann, 1997
Ophiophagus hannah	O	Manthey and Grossmann, 1997[b]; Das, 2002
Pseudonaja textilis	O	Whitaker and Shine, 2002
Viperidae		
Agkistrodon contortrix	V	A. G. Smith, 1940; Oliver, 1955; ?Fitch and Clarke, 2002
Calloselasma rhodostoma	O	Manthey and Grossmann, 1997; Orlov et al., 2002
Crotalus adamanteus	V	?Van Hyning, 1931; ?Chesser *in* Wright and Wright, 1957; Cadle *in* Greene et al., 2002
C. horridus	V	Oliver, 1955
C. lepidus†	V	Greene, unpubl. data *in* Greene et al., 2002; Schuett and Repp *in* Greene et al., 2002
C. molossus	V	Hardy and Greene, 2001; Smith, 2001; Greene et al., 2002
C. oreganus	V	Charland *in* Greene et al., 2002
C. viridis††	V	Fogell, 2001, pers. com.; Holycross and Fawcett, 2002; Persons *in* Greene et al., 2002
C. willardi†	V	Tanner, Wilson, Hardy and Greene, Bowler *in* Greene et al., 2002
Deinagkistrodon acutus	O	Orlov et al., 2002
Lachesis melanocephala	O	Ripa, 2000a, b

Table 1. (cont'd)

Taxa	Oviparous or Viviparous	Source
L. muta	O	Boulenger, 1903b; Mole, 1903; Parker, ca. 1903 (postcard photo *in* Boos, 2001); Mole *in* Roosevelt, 1917; Wehekind, 1960a, b; Enríquez M., 1999; Ripa, 2000b; Franklin, 2001
L. stenophrys	O	Ripa, 2000a, b
Ovophis monticola	O	Manthey and Grossmann, 1997[b]; Orlov, 1997; Orlov et al., 2002
Protobothrops kaulbacki	O	M. A. Smith, 1940
Sistrurus catenatus	V	?Goldberg and Holycross, 1999; ?Johnson, 2000
S. miliarius	V	Palmer and Williamson, 1971; Greene et al., 2002
Trimeresurus flavomaculatus	O	Burger, 2001

a. In this recent article on Iverson's continuing research on *K. flavescens* in the Nebraska Sandhills, female nest attendance is again mentioned but not in the context of the parental care strategy which he described earlier (Iverson, 1990).
b. Biparental care (probably not verified for *Ophiophagus hannah* and *Ovophis monticola*).
c. Paternal care of neonates.
d. Family groups genetically verified.
e. Female heats eggs through thermogenesis, but unlike most other thermogenic pythonines (Shine, 1988; Somma, 2003b) does not exhibit shivering behavior. Additionally, some of the literature referring to brooding behavior in *Python sebae* (Somma, 2003b) includes the recently elevated congener, *P. natalensis*.
† Previously listed as "reliability uncertain" (= unverified sensu Somma, 2003b), but herein regarded verified.
†† Some of the literature referring to parental behavior in *Crotalus viridis* (Somma, 2003b) includes the recently elevated congener, *C. oreganus* (sensu Ashton and de Queiroz, 2001).

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Book Review: *Reptiles and Amphibians of Europe* by E. Nicholas Arnold and Denys W. Ovenden 2002. 288 pp. Princeton Field Guides. Princeton University Press, Princeton, NJ, 08540. Softbound. ISBN 0-691-11413-7. $35.00*

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Many of us in the herpetological community have been waiting for years with high expectations for this book. It replaces the original work in 1978 entitled *A Field Guide to the Reptiles and Amphibians of Britain and Europe* by E. N. Arnold and J. A. Burton, and illustrated by D. W. Ovenden (Collins, London). The new volume fulfills these expectations admirably, and takes its place as the most up-to-date, thorough, and well-illustrated field guide to the amphibians and reptiles of Europe. The species coverage is comprehensive, up to date, and detailed; the colored illustrations are beautifully done by D. W. Ovenden; the black and white drawings are numerous and useful; and the geographic and range maps are much improved from the original work The book is definitely well-worth the moderate price.

The new book is quite different from the first edition. There are 49 color plates rather than the original 40 and there are more black and white drawings (250 in the new edition). The species list has increased from 125 to 198, reflecting the new methods in herpetological systematics that have been employed since 1978. The area covered in the new book has been extended eastward almost to Moscow. New and spectacular discoveries detailed include the Majorcan Midwife Toad (*Alytes muletensis),* a species named on the basis of a fossil in 1977 and then found alive in 1980; the big Tenerife Speckled Lizard (*Gallotia intermedia)*; and the La Gomera Giant Lizard (*Gallotia gomerana*). All of these new forms are illustrated in color.

The introductory section of the book has been substantially revised. Maps of the Greek and Atlantic Islands (absent in the first edition) are provided; and these are vital considering the new species that have been named from these isolated bodies of land. The map of the total area covered by the book is superior to the one in the first edition, as the individual countries are outlined and labeled in the new edition. The section on species and species variation is brought up to date in the light of new criteria involved in the naming of herpetological taxa. A section on venomous snake bite and its treatment, present in the first edition, is absent in the new one.

The heart of the book details the European species of amphibians and reptiles. The volume is not only is concerned with identification, but provides coverage of such topics as range, voice, variation, miscellaneous notes, and a very thorough coverage of habits. Major topics are (1) Salamanders and Newts, (2) Frogs and Toads, (3) Tortoises, Terrapins, and Sea Turtles, (4) Lizards, and (5), Snakes. A well-illustrated key is provided for each of these groups; and with the excellent color plates and black and white drawings provided, most people should be able to identify most of the taxa presented. The section on the "small lacertas" is noteworthy as these numerous lizards are discussed on the basis of seven different areas delineated on a map that outlines the various countries involved.

The end matter contains the following topics (1) Identification of Amphibian Eggs (with key and illustrations), (2) Identification of Amphibian Larvae (with key and illustrations), (3) Internal Characters (a few illustrations of skeletal characters), (4) Glossary, (5) Further Reading, (6) Distribution Maps, and (7) Index. The sections on amphibian larvae and are well done and useful, but not extremely detailed. It would be nice if more skeletal material was featured, but my vertebrate paleontological background prejudices me in such matters. The further reading section is helpful. The glossary is useful and the index is easy to use. The 192 distribution maps (126 in the first edition) are a very important feature of the book. They are much better than the original ones in that the individual countries are outlined.

* This book will be offered for sale at upcoming CHS meetings. Also, this and many other books and other products are available at Amazon.com. If you first visit the CHS web site, www.chicagoherp.org, and then use the Amazon icon you find there to enter Amazon's site, then any purchases you make will help to support the CHS.

Bull. Chicago Herp. Soc. 38(4):77-81, 2003

HerPET-POURRI

by Ellin Beltz

Greetings and April felicitations to all my readers and contributors this month! Having just spent much of the rainy season transferring computer files from my old and dying Windows machine to my new and shiny Mac, I went through all my column files and put all the CHS *Bulletin* columns on my website. Click on http://ebeltz.net/column/chsindex.html to read or reread the past 17 years of this column. For this month, I went through each year and selected my favorite stories for this roundup!

April 1987

"Thank God I only have amphibians," exclaimed a CHS member upon reading the weekly grocery list of the Lincoln Park Zoo. In an average week, the reptile house uses 50 lbs of fresh water smelt for its alligator, 50 lbs of salt-water herring, 9 anoles, 8 lbs of bananas, 18 lbss of apples/oranges/sweet potatoes, 6 bunches of celery, 28 lbs of carrots, 10 heads of lettuce, 8 bunches of spinach, numerous other fruits and vegetables, 400 lbs of rat chow, 1100 small rodents, 48 chickens, 1500–2000 crickets, 3½ dozen raw/hard cooked eggs and 3 lbs of Reptile Fare. (*Lincoln Park Zoo Review*)

Through the determined efforts of hundreds of local volunteers and worldwide conservation groups, Britain has opened its first tunnel under a motorway for the protection of toads migrating to their breeding ponds. The road has been edged with a barrier which will divert the creatures into the tunnel and thence, safely to their pond. Lord Skelmerdale dedicated the project in the name of Queen and amphibian and snipped an appropriately small ribbon. This tunnel is the first of a series planned to prevent the yearly slaughter of some 20 tons of toads by British drivers. Until now the toads were carried across the road in buckets by volunteers. One said, "Our evenings won't be the same without a bucket of toads to carry."

April 1988

Two protesters from Earth First chained themselves to a fence at a city park in Taylor, Texas, during the local rattlesnake roundup. Another 10 people picketed stating that the roundup disturbs the central Texas environment and harms wildlife. My personal thanks to those committed individuals.

The Florida Game and Fresh Water Fish Commission will permit hunters to legally "harvest" alligators next September for the first time in 26 years. Environmentalists pointed out that hunting may have endangered the animal in the first place and that people are likely to get hurt since the law prohibits the use of firearms to hunt gators. Officials expect the hunt to net about 1,500 animals. Currently about 1,000 are killed each year for research and 3,000 are killed after they become a "nuisance." Well, at least they're not following the famous cartoon's advice about what to do when you're up to your ears in alligators, they have few enough swamps left as it is!

April 1989

The next time a person says that snakes are bad because of the serpent in the Bible, calmly ask, "Which one?" A religious member of my family recently pointed out two quotations that make it appear as though God really doesn't have snakes on His hate list after all. Numbers 21:8-9 says, "And the Lord said to Moses: Make a brazen serpent and set it up for a sign: whosoever being struck shall look at it, shall live…" John 3:13-15 refers to the brazen serpent and uses it as a metaphor for the Son of Man.

China has issued a stamp to commemorate the Year of the Snake. — Designed by Lu Shengzhong, a teacher at the Central Academy of Fine Arts, the stamp portrays the reptile in a positive light. He said, "Snake designs on pottery and bricks dating from the Han dynasty (206 BC – 220 AD) show that originally the snake was a symbol of safety. In folk stories, it is often related to love and kindness." The stamp is spare and shows a flowered and decorated snake coiled on a white background. The overall design represents traditional Chinese beliefs that the earth is square and the sky round. The forked tongue of the snake which is usually a symbol of evil, was replaced with a sprig of the Chinese herb used to symbolize the power to restore life. In much of Chinese tradition folklore, the snake is one of the "five evil things," along with scorpions, toads, geckos and centipedes. In modern China, the snake is being put to "practical" use. Venom is an ingredient in a variety of medicines, snake's gallbladder and medicinal herbs are combined to make effective cough medicine, snakeskin is used to produce handbags and shoes for the export trade, and in southern China, snakes are considered a delicacy — a custom considered strange in the north. Chinese astrology says that people born in the year of the snake are intelligent, mysterious, tender and kind!

April 1990 (No CHS Column)

April 1991

With great big thanks to — everybody who volunteered for the 25th-Anniversary Party of the CHS including: John Christianson, John Levell, Brian Jones, Meg Shepstone, Ilene Sievert, Todd and Amy Hixon, Eloise Beltz-Decker, Howard Weiner, Joel Weiner (with family and friend), John Raymond, Holly Collins, Stacy Miller, Ron Humbert, Don Wheeler, Mike Dloogatch, Ralph Shepstone, Ken Mierzwa, Paul Sievert, Matt Morris and Daelyn Erickson. Our guests included founding members Yolanda and Kris Erickson — and Ellis Jones, the only current CHS member who was also a member of the Chicago Herpetologists' Club. Entertainment included exceptional geckos by Jim Zaworski and marvelous gecko slides by Mike Miller. Several people suggested making a party a regular part of our year. [The first Gulf War started the same night as the party.]

Quote of the Month — "As human activities increase, native species are lost. When we lose keystone species, we can expect fairly rapid and unexpected changes. This shows we need to know more about what kinds of species have disproportionately large effects when present or removed, something surprisingly little research has been done on." Dr. James H. Brown, Professor of Biology, University of New Mexico. (*New York Times*, December 25, 1990)

April 1992

Venomous mystery uncoils — A pastor of the Church of Jesus With Signs Following and his wife are facing each other in an Alabama courtroom trying to solve the puzzle of "did she get bitten by a rattlesnake attempting to pick one up to kill him — or did he force her hand into the cage in an attempt to kill her?" [Akron, Ohio *Beacon Journal*, February 13, 1992, contributed by Steven L. Frantz]

Beam me up, Spotty — A few Japanese red-bellied newts will blast off in the NASA Space Shuttle's Microgravity Lab II. Female newts will be hormonally stimulated to drop their eggs, which a male astro-newt will then fertilize. Develop-

ment of their offspring will take place in a gravity-free environment and the offspring will be studied to see if they have difficulty adjusting to earth's gravitational pull. [*Technology Review*, Feb./March 1992, contributed by Mike Dloogatch]

April 1993

Sea turtle in Kansas?—Researchers who use satellites to track ocean going sea turtles were confused when their signals definitely pinpointed one of the giant reptiles in Salina, Kansas! An on-the-ground search for the turtle turned up just the transmitter in a farmer's back yard. He had found the device while on vacation in Texas and taken it home. [*Destination Discovery*, February 1993, contributed by P. L. Beltz]

Animals rights activists protested at Epcot Center—Known for cute rodents, Walt Disney World recently penned up dozens of gopher tortoises and bulldozed their dens for development. Some tortoises may be resettled elsewhere on Disney's 30,000 acres, some may be given to the University of Florida, and some may be euthanized. The trade-off of all this is that Disney is giving $20 million to buy and protect the 8,500-acre Walker Ranch, 17 miles to the south in Osceola County. In exchange, wildlife officials gave Disney the right to wipe out up to 2,300 tortoises during the next 20 years. Disney executives say they will donate the tortoises to the University of Florida along with $700,000 to study upper respiratory disease. Central Florida's largest environmental groups gave the deal support in a new approach to making amends for ecological damage by protecting large areas of land instead of setting aside small parcels that can't sustain a species. Holly Jensen, a Gainesville environmentalist and animal-rights activist said, "Disney has made billions off the commercialization of wildlife and nature. They have a moral obligation to go beyond the letter of the law." [Orlando, FL *Sentinel*, February 1, 1993, contributed by Bill Burnett]

April 1994

An opinion piece in the Phoenix [AZ] *Gazette* from Tom Taylor of Tempe suggests that the drive for legalization of toad venom may be lead by CROAK (Committee Reacting to Our Amphibian Kinships), GROSS (Group Recommending Organized Slime Sucking) and BARF (Biting Amphibians is Really Fun).

After several years of reporting amphibian decline, the press really went overboard on the recent announcement that one study had linked disappearing frogs and an increase in ultraviolet-B rays striking the Earth's surface due to a thinning ozone layer. Andrew Blaustein and John Hays of Oregon State University, in an article in the *Proceedings of the National Academy of Sciences* (March 1, 1994) report that ultraviolet radiation is killing the eggs of frogs in the Cascade mountains of the Pacific Northwest. In addition, they found that species in decline have a limited ability to repair damage from the ultraviolet radiation which causes change in their DNA or genetic coding molecule due to the absence of a protective enzyme. Blaustein was quoted, "Showing damage to an animal means there probably will be an effect on humans. So I think that it's very important that people listen to this warning signal." One frog species studied, *Pseudacris regilla*, the Pacific chorus frog was found to have six times as much of the enzyme as the other two species. The western toad (*Bufo boreas*) and the Cascades frog (*Rana cascadae*) had far less of the enzyme and are both in decline. [March 1, 1994, South Bend, IN *Tribune* from Garrett Kazmierski, Memphis, TN *Commercial Appeal* from Bill Burnett, *Chicago Tribune* from Claus Sutor, Phoenix, AZ *Gazette* from Tom Taylor, and March 2 Orlando, FL *Sentinel* from Bill Burnett, March 6 *Chicago Tribune* from P. L. Beltz]

April 1995

Nature Conservancy Magazine [March/April 1995, from J. N. Stuart] reports that ranchers in southeastern Arizona have been hauling water to frog ponds by truck in an effort to help the Chiricahua leopard frog. The ponds are actually isolated stock ponds and constitute a "bullfrog-free zone" where the smaller species has a hope of survival.

From the *Chicago Reader* "The City File," February 17, 1995 by Harold Henderson [clipping from Steve Ragsdale] "Come here often? I SAID, COME HERE OFTEN? `In other experiments, anurans living near highway noise could not determine the direction of sound sources as well as those living in quieter places,' reports Ronald Larkin in *Illinois Natural History Survey Reports* (January/February). `The males near highways altered their calling and spaced themselves differently when attempting to attract females. We obtained similar results by playing recorded highway noise from loudspeakers,' thus verifying `that it was the noise generated by the highway traffic and not other kinds of pollution or indirect causes that affected the anurans.'"

"Hello my honey, hello my baby" hello my new TV network?—Michigan J. Frog, a "song-and-dance amphibian" who starred in a 1956 Chuck Jones cartoon called "One Froggy Evening" is the spokes-frog for the new Warner Brothers television network. His creator said, "I only made the one cartoon with him, and it was probably the best-known single cartoon that I ever made. I've ended up spending the last 30 or 40 years trying to figure out how to make another one. But we are making it, calling it `Another Froggy Evening.' It will be Michigan J. Frog through history, his effect on history. Eventually it will go on television, but it's not designed for that purpose. All of our cartoons, from the time I started as a director in 1937 until the present were made for theaters." [*Chicago Tribune*, January 19, 1995, from Steven Ragsdale]

Recent flooding in California has washed up all kinds of odd debris including snakes on California beaches. Twenty-six snakes, mostly venomous, were removed from Del Mar Beach and four others from Solana Beach. Both are near San Diego. Snakes are not rare sunbathers in southern California, but they are usually relocated by "lifeguards" more accustomed to hauling other types of vertebrates. [*Las Vegas Review-Journal* and *Las Vegas Sun*, March 11, 1995, from Bob Pierson and *Houston Chronicle*, March 12, 1995, from Gary Durkovitz]

April 1996

"The breeding habitat of the golden toad has been monitored by either experienced volunteers or paid staff every year since

their disappearance in 1989. There have been a couple of false alarms (e.g., *Eleutherodactylus* that are very orange) but no confirmed sightings since the single male I caught in 1989. The hypothesis we presented was not simply that rainfall was inadequate, but that the transition from dry season to wet was too abrupt and this disrupted the toads' natural breeding pattern. Alan Pounds subsequently presented an analysis of the El Niño events of the early 1980s and their possible effects on the hydrology of the site and hypothesizes that the toads were extirpated by an underground drought. His paper was published in *Conservation Biology* in about 1992 or 1993. One attempt was made to age golden toads through skeletochronology on toe tips that were removed as part of a mark–recapture protocol. No rings were apparent in the bone. Thus we really have no idea of how long the toads live. The golden toad may represent one of the few (only?) vertebrate extinctions that has been observed and recorded by humans, but not caused by humans. On the other hand, we're keeping our fingers crossed that they will reappear, and keeping in touch with the people who monitor the habitat." Frank Hensley, Elon College & Duke University [via E-mail]

Remember dime-store sliders?—Louisiana turtle breeders hope to bring back the ubiquitous pet of yesteryear after trying for years to overturn the Federal Food and Drug regulation which prevents domestic sale of turtles with a carapace length of less than four inches. The breeders have been busy building up an overseas market. Last year 6.5 million baby turtles were shipped out of the country. The breeders claim the babies have been cured of *Salmonella* bacteria by means of a method developed by a Louisiana State University microbiologist Ronald Siebeling. Only 2% of baby turtles hatched at the farms have been found to carry the bacteria. Turtle farming is regulated by the Louisiana Department of Agriculture and Forestry, but has recently come under fire for alleged price fixing by the U.S. Department of Justice. Farmers deny price fixing; one said, "What we've got here is the cleanest, most documented pet in the world." [Baton Rouge, LA *Sunday Advocate*, February 5, 1995] In Mississippi, turtle farming is not as common as catfish farming, cotton, soybeans or rice farming. Even so, one farm sold 350,000 babies in one year, the offspring of 50,000 to 60,000 wild-caught breeder turtles. Two-thirds went to Southeast Asia, the rest to Canada, Europe and the People's Republic of China. Some of the offspring are retained for future breeding purposes and a very few are released in the wild. The *Salmonella* cleansing process is done to the Mississippi eggs, too, mostly by school kids earning summer money. [Houma, LA *Courier*, August 13, 1995. Both articles from super-clipper Ernie Liner]

April 1997

Smoking can be hazardous—A Dutch tourist returning from a Caribbean vacation was shocked when authorities found a drugged iguana in his suitcase at customs control in Rotterdam, Netherlands. Authorities believe that the iguana as planted in his luggage for confederates to retrieve later. The man had gone through the "anything to declare" lane at Customs because he had too many cigarettes. [Reuters, February 22, 1997, from Allen Salzberg]

Bud-wiser! Bud-wiser!—In a February 10, 1997, reply to a letter by Steve Grenard, a Budweiser spokesman wrote: "Anheuser-Busch will not sponsor any rattlesnake sacking competitions [at rattlesnake roundups] this year. We were a participating sponsor in previous years, but have decided to place our sponsorship funds with other events. Anheuser-Busch has a longtime commitment to protection of wildlife and preserving the environment. We do not knowingly participate in any events that are contrary to this corporate philosophy."

Spring, glorious spring—"But on this night a slight rain fell, and the temperature hovered in the low 50s. . . . The hikers smelled the swampy, earthy aroma of decaying vegetation. They saw their breath hang like smoke in their flashlight beams. They heard the calling of frogs, spring peepers peeping and chorus frogs trilling, like a thumb running down a comb." [*Richmond Times-Dispatch*, March 6, 1997, from Mr. Laverne A. Copeland]

April 1998

An unidentified resident of South Dade, Florida, was bitten by a black mamba and taken to the emergency room by ambulance. Bill and Nancy Haast were contacted by the poison control center, but had no black mamba antivenin. They called a private collector who quickly sent nine vials of antivenin. Haast said, "I heard that the man did not receive a very serious bite, that perhaps it was only one fang." [*Miami Herald*, March 14, 1998, from Alan Rigerman] The average cost of medical treatment for a venomous snakebite is $11,000.

Do unto shippers?—*The Caymanian Compass* reports from "Willemstad, Curacao—Hundreds of tropical lizards suffocated in cardboard boxes without ventilation on a flight from the Caribbean Dutch island of Bonaire to Amsterdam, KLM Dutch airlines said. . . . The airline . . . halted shipments of unaccompanied animals from Bonaire while it investigates. . . . Eight hundred lizards arrived dead at Amsterdam's Schipol Airport . . . after a nine-hour flight. . . . It was not the first time the lizards . . . had been exported . . . to Amsterdam, but it was the largest shipment yet. . . . [A] local government official . . . said the reptiles were not protected and no export license was required." [February 13, 1998, from L. W. Reed]

April 1999

Don't drink the water—"A new study suggests that atrazine, the nation's most popular weed killer, may be partly responsible for the abnormal hormone levels and undersized male genitals found in some Florida alligators. . . . Computerized wind models show that large amounts of atrazine are wafting from sugar fields and falling or raining into four lakes north of Orlando. Those are the same four lakes where . . . [researchers] have found sexually altered alligators. . . . [A vice president for one sugar company said,] `He's jumping to conclusions. . . .' Atrazine's Switzerland based manufacturer, Novartis Crop Protection, has shown that any amount of the chemical falling with rain would be far too diluted to harm wildlife, said . . . the company's environmental products manager." [Leesburg, FL *Daily Commercial*, January 3, 1999, from Bill Burnett]

Ravens following development in the Southwest are eating desert tortoise babies. One researcher said that until their shells harden around seven years of age, baby tortoises are "like walking raviolis," to the ravens. Other threats include loss of habitat, road kills and an upper respiratory disease. [*National Wildlife*, April/May 1999, from Mark Witwer]

April 2000

Keep washing your boots anyway—While a recent report in *Science News* suggests that frog killing chytrid organisms are implicated in declining amphibians, they also report that chytrids have been found in museum specimens from the 1970s from widely spread areas of the world. The earliest Australian specimen is from a dainty tree frog which was pickled in 1978. Closer to home, U.S. researchers have found that 2 of 12 preserved leopard frogs from various collections, and some *Bufo canorus* from the Sierra Nevada, California, were also infected. The "wandering herpetologist" theory of the chytrid spread has also been discounted; one researcher pointed out that "you'd have to have a really active person who had nothing else to do," because the dieoffs are so widespread in place and time. She also pointed out that the "major cause of amphibian declines is habitat loss." [Volume 157, February 26, 2000, from Marty Marcus]

Life imitates art—Another writer was annoyed by that "we were surrounded by snakes" automobile advertisement which seems to have disappeared utterly and unlamentably from the airwaves. Writing in the *Albuquerque Journal*, Jim Belshaw (a westerner through and through) describes the commercial for a luxury sedan automobile with a built-in help button. The couple claimed they had a flat tire and were surrounded by snakes and scared and that the nice people at "On Star" helped them get out of their distress. Belshaw interviewed a herpetologist who pointed out that snakes would have just left the scene of the blowout since most snakes would rather slither away than stay anywhere near a person with a tire iron. But it was what his nonherpetologist Western friend said that stuck with me even more than the reasonable argument. The man pointed out that the snakes were an allegory. "For `desert' substitute `Mission District.' For `snakes' substitute `people who look funny.' The true subtext. . . . If you break down in a weird neighborhood, all you have to do is lock the door . . . and push that button and wait for the brawny guys from the towing service to come do whatever they do." Belshaw gives a third reason, "Plus it irritates herpetologists in the desert, and you never know when you might need one if your magic button breaks down about the same time your tire goes flat." [January 21, 2000, from J. N. Stuart] I finally realized that the luxury car maker is marketing a car to people too dumb to know how to get or use a cell phone. I haven't driven near one since.

April 2001

Happy Year of the Snake—Chinese folklore reports that at the dawn of civilization, the Emperor of Heaven let all animals compete for the 12 spots on the zodiac. The snake made it. The creator of the universe in Chinese mythology, Pan Gu, has the body of a snake and the head of a dragon. [*China Daily*, February 1, 2001, from P. L. Beltz]

Is this news?—"International drug syndicates are smuggling rare Australian reptiles out of the country for private overseas dealers, according to Environment Australia. Federal Government intelligence reports suggest smugglers bring in drugs and take out reptiles. In the past decade, the world trade in reptiles has increased to the level where about $14 million worth of reptiles are imported legally into the United States. The U.S. black market is believed to deal with more than $1 billion worth of reptiles every year. Reptiles native only to Australia can be bought on the Internet from specialist shops throughout Europe and the U.S." [*Environment Australia*, March 2, 2001, from Raymond Hoser]

April 2002

Loose lizards found in Hawai'i—You knew it would happen one day, but the future is now. The fourth iguana found since New Years 2002 on Oahu was discovered by the owner of two pit bulls. The dogs went crazy night after night and finally their owner saw a 4½-foot-long iguana in the yard. After what is described as a wild chase, the iguana was locked in a dog kennel and "everyone took turns looking at the largest reptile they'd ever seen, next to Godzilla." [*Honolulu Star-Bulletin*, March 7, 2002, from Ms. G. E. Chow] Not even two weeks later, a dead 16½-inch-long veiled chameleon was found in a Maui field and turned into wildlife officials. Speculation abounds. Was the animal a solo release, or was it part of a breeding population? Other animals have been released to breed here so that their descendants could be utilized. Veiled chameleons are even more of a threat to the environment than Jackson's chameleons because the veiled eat insects, plants, small mammals and birds. [*Honolulu Advertiser*, March 19, 2002, both from Ms. G. E. Chow]

Lake Griffiths mystery continues—After four years, researchers are no closer to explaining why more than 400 gators became lethargic, acted strangely and died in Lake Griffiths since 1997. Some biologists feel that toxic algae (*Cylindrospermopsis* and *Microcystis*) found in the water are the key. It has been suggested that fish eat the algae, gators eat the fish and so the toxin—or its metabolic effect—is concentrated up the food chain. Autopsies of dead gators have revealed vitamin B (thiamine) deficiencies and brain lesions. The biggest mystery is why Lake Griffiths, when many lakes around it are subject to similar runoff and impacts. Bass, other sport fish and birds are affected, too, but only at Lake Griffiths. The state legislature has refused to fund more studies. [*Orlando Sentinel*, December 26, 2001, from Bill Burnett]

Thanks to everyone who has contributed for the past 17 years. You'll find your name and what you sent on the website. Please send more material! Send whole pages of newspapers or magazines (they don't weigh much more than clippings), be sure the date and publication slug is attached, and put your name on each piece. Mail to: Ellin Beltz, POB 934, Ferndale, CA, 95536.

Unofficial Minutes of the CHS Board Meeting, March 14, 2003

Lori King called the meeting to order at 7:45 P.M. Board members Darin Croft, Jim Hoffman, Zoe Magierek and Jenny Vollman were absent.

Officers' Reports

Recording Secretary: Zoe Magierek was absent. Erik Williams read the minutes for the February 2003 Board meeting, corrections were made and the minutes were accepted.

Treasurer: Jim Hoffman was absent.

Vice-president: Linda Malawy said that our March speaker will be Don Wheeler, and April's will be Jim Pether. The June meeting will be the annual Show & Tell.

Membership Secretary: Mike Dloogatch indicated that membership numbers are holding.

Corresponding Secretary: Erik Williams will change the return address on the official letterhead to the current mailing address of the CHS. The Freedom-of-Information-Act request to the Army Corp of Engineers regarding the massasauga conservation project was filed, and a form letter response has been received.

Publications Secretary: Mike Redmer indicated that the "Position of the Chicago Herpetological Society regarding Commercial Trade of Reptiles and Amphibians in Illinois" is now published on the CHS website. He also suggested that minor details on the website, such as typographical errors, be sent directly to Chris Lechowicz rather than being submitted for his approval.

Standing Committees

ReptileFest: Darin Croft was absent. The ReptileFest committee indicated that preparations were on schedule. Lori King and Erik Williams will be on WGN radio March 29, and will be promoting ReptileFest.

Grants: Thank you letters are being received from grant recipients. One recipient working on a project in Panama may be available to give a program to the CHS in the future, concerning the project that was funded.

Shows: Jenny Vollman was absent. Lori King said that recent shows have been successful. Both the Navy Pier show and Reptile Rampage have yielded large donations to the CHS and related conservation projects. A photo booth was utilized at the Arlington Family Pet Show for the first time, and was deemed successful. The Wisconsin Herpetological Society's show, Snake Days, was discussed, as was a recent show the CHS participated in at the Oak Park Conservatory. Lori King was optimistic about CHS participation in semi-monthly shows at the Peggy Notebaert Nature Museum, possibly starting as early as the third week of April.

Monthly Raffle: Raffle items are running low. Erik Williams indicated that solicitation letters have been sent.

Adoptions: Linda Malawy said that the new donation system for the adoptions program was working out well, with a YTD income of $285.

Chicago Wilderness: Great Herp Searches, in cooperation with the Audubon Society, are slated for the 2003 season. The first will be on April 5, with a raincheck date of the 6th, at Mckinley Woods. May 31 will be at the Midewin National Tallgrass Prairie, but can only be open to a limited number of participants. Mike Redmer indicated that 20 people, in no more than six vehicles, seemed to be a reasonable number.

Conservation: The Massasauga Project committee will be able to participate in a field trip to the project site on April 12–13. The Upstate Herpetological Society expressed an interest in acquiring some Massasauga shirts without "Illinois" on the sleeve, to support their own populations. John Archer volunteered to design ads for the shirts in the *Bulletin* and the CHS website. Lori King leaves Monday, March 17, for Utila Island to attend the International Iguana Society conference being held there. She also suggested that Bob Powell has some good news regarding the reproduction of *Cyclura nubila lewisi* on Grand Cayman Island.

Speakers Bureau: Mike Redmer has been asked to give a talk on June 20. The Grand Victoria Casino grant application deadline is coming close; if received, the CHS would use the funding to purchase a digital projector for PowerPoint presentations. Erik Williams offered to donate a standard slide projector to the CHS for use in similar presentations.

Ad Hoc Committees

Trips: The 2003 CHS zoo trip will take place at the Indianapolis Zoo. Some possible dates in June were discussed, but the board agreed that a fall date would be preferable.

Animal of the Month: April will be horned frogs and pyxie frogs, and May will be monitor lizards. There will not be an animal of the month for June, because of Show & Tell.

Old Business

State Reptile/Amphibian: Two state representatives have responded to the movement enthusiastically, although funding remains problematic.

Board of Directors Insurance: Lori King presented some new information which called February's vote into question. Most important was the fact that the additional coverage thought to be included in the more expensive policy, was actually not included but was available for an additional charge. The premiums would therefore be $1100 for Great American, and $1500 for St. Paul. Both policies offer identical coverage. Mike Dloogatch made a motion to purchase the Great American policy. Jack Schoenfelder seconded. A vote was taken and the motion carried unanimously. This vote rescinds the February 2003 vote regarding board of director's insurance.

New Business

Joan Moore made a motion to change the by-laws of the CHS

in regards to the duties of the sergeant-at-arms, article VI section 8. Mike Redmer seconded. A vote was taken, and the motion carried unanimously. The proposed amendment will be published in the April 2003 *Bulletin*, and voted upon at the general meeting on April 30, 2003, as per article XII of the Bylaws.

Joan Moore moved to accept a plan to sell books at CHS general meetings. Profits would go directly to the CHS. She requested a working budget of $1000, and presented a set of six responsibilities she would incur as a result: to take charge for at least 12 months, to keep accurate records, to store inventory at her home or another secure location, to turn in receipts at least monthly, to bring relevant inventory records to board meetings monthly for review, and to not lose money on the project. Mike Dloogatch seconded. A vote was taken, and the motion carried unanimously.

Round Table

Jack Schoenfelder suggested that we request more tables for the general meetings, in response to the need for more space for sales of books and "Reptiques." He also requested information about the nutritional value of various types of trout chow as turtle food.

The meeting was adjourned at 9:28 P.M.

Respectfully submitted by Erik Williams for Recording Secretary Zoe Magierek

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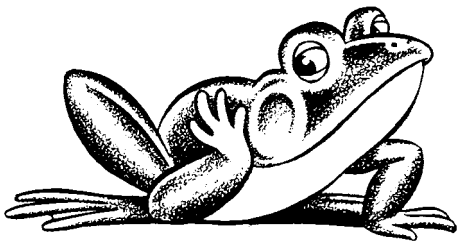
Bull. Chicago Herp. Soc. 38(4):83, 2003

The Tympanum

The Loss of a Special Snake



She was over nine feet long, and forty pounds or more. Her head was large and fat. She was to me, the most beautiful, big female boa constrictor around. I had her for about eighteen years, and she was about five or six years old when I purchased her in my middle twenties. A combination of serious health factors resulted in a tearful decision to end her life.

Anyone involved in the ReptileFest, past or present, would have seen her draped endlessly around people, young and old, for the chance for that exotic picture. Thru those countless shows and pictures, my boa could always awe the look in a child's face. Then, at the end of a show, or when the pictures slowed down, I would sit with her in my lap. It would be then, that a child or adult would approach, and gently rub her beaded, muscular body, or with cupped hand, carefully hold her head. It was then, the person connected with an animal that communicates thru unspoken words of sublime, living beauty.

I can only ask of my fellow herpers to always know the power and respect of your animals. These wonderful creatures do speak of a lost past, and of survival in the present.

Robert Hilger, 5028 N. Nottingham, Chicago IL 60656.

Herpetology 2003

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

EARLIEST KNOWN SALAMANDERS

K.-Q. Gao and N. H. Shubin [2003, Nature 422:424-428] note that salamanders are a model system for studying the rates and patterns of the evolution of new anatomical structures. Recent discoveries of abundant Late Jurassic and Early Cretaceous salamanders are helping to address these issues. The authors report the discovery of well-preserved Middle Jurassic salamanders from China, which constitutes the earliest known record of crown-group urodeles (living salamanders and their closest relatives). The new specimens are from the volcanic deposits of the Jiulongshan Formation (Bathonian), Inner Mongolia, China, and represent basal members of the Cryptobranchidae, a family that includes the endangered Asian giant salamander (*Andrias*) and the North American hellbender (*Cryptobranchus*). These fossils document a Mesozoic record of the Cryptobranchidae, predating the previous record of the group by some 100 million years. This discovery provides evidence to support the hypothesis that the divergence of the Cryptobranchidae from the Hynobiidae had taken place in Asia before the Middle Jurassic period. The authors describe *Chunerpeton tianyiensis*, a new genus and species.

TIMBER RATTLESNAKE PHYLOGEOGRAPHY

A. M. Clark et al. [2003, J. Herpetology 37(1):145-154] point out that the timber rattlesnake (*Crotalus horridus*) is beset by a variety of conservation problems, including habitat loss and persecution. Effective management plans require an understanding of rangewide population structure and intraspecific evolutionary subdivisions. Northern and southern populations have been recognized as distinct subspecies, but this classification remains controversial. A proposed alternative arrangement recognizes southern, northern, and western morphotypes. To resolve intraspecific partitions, the authors examined a 319 base-pair (bp) fragment of mtDNA cytochrome *b* in 123 specimens of *C. horridus*. Neighbor-joining and parsimony analyses reveal a shallow gene genealogy ($d_{max} = 0.024$) and shar-ing of haplotypes among putative subspecies. Analysis of molecular variance demonstrates that traditional subspecific divisions explain only 3.5% of variation, whereas the alternative geographic classification (southern, northern and western regions) explains 18.6% of genetic variation. The superior performance of the regional grouping can be attributed to an east-west phylogeographic partitioning at the Appalachian and Allegheny Mountain ranges, which were probably uninhabitable at higher elevations during glacial intervals. Distribution of haplotypes and climatic data suggest that a radiation into more northern areas occurred after the most recent (Wisconsinan) glaciation. Hence, the mtDNA data indicate distinct population segments across the range of *C. horridus* but do not show evolutionary separations that would support subspecific designations.

SURVIVAL OF DESERT TORTOISES AFTER HANDLING

R. C. Averill-Murray [2002, Chelonian Conservation and Biology 4(2):430-435] states that desert tortoises (*Gopherus agassizii*) mitigate their exposure to arid conditions by using their urinary bladders as water reserves. He investigated whether tortoises that urinated and lost water during handling by field researchers had lower survival compared to tortoises that did not urinate. Data were analyzed from 6 years at 3 sites in the Sonoran Desert of Arizona. Survival varied by site, increased with body size, and decreased if tortoises urinated during handling. Mean annual differences in survival of average-sized tortoises between individuals that urinated during handling and those that did not ranged from approximately 5 to 13% among the 3 sites. Recapture rates also varied by site and increased with body size, but urinating had no detectable effect. These results highlight the importance of developing well-defined study objectives and procedures that minimize the probability of desert tortoises urinating during processing, not only to avoid compromised data due to reduced survival (or other dehydration-induced behavioral, reproductive, or physiological responses) but also to ensure that research activities do not compromise the status of study populations themselves.

SOFTSHELLS OF THE GENUS *CHITRA*

W. P. McCord and P. C. H. Pritchard [2002, Hamadryad 27(1):11-56] present taxonomic, distribution and morphological data for the trionychid turtle genus *Chitra* (Testudines: Trionychidae). Many confusing taxonomic details are clarified. Types and type localities are described for both previously named *Chitra* species. Details of forelimb scalation, chromatic and pattern characteristics, original head drawings accentuating phenotypic characters, shell morphology, general skeletal details, and mitochondrial and nuclear gene sequencing results are presented. The overall range of the genus *Chitra* is discussed, with details of field collections confirming previously undescribed Indonesian populations. A new species of narrow-headed softshell, *Chitra vandijki*, is described from the Ayeyarwady River drainage, Myanmar, distinguished from its congeners by its distribution, a unique combination of carapace, head and neck patterns, and genetic sequence divergence of a level corresponding to full species recognition. A new subspecies of narrow-headed softshell turtle, *Chitra chitra javanensis*, is described from eastern Java, Indonesia, distinguished from the nominate subspecies by its distribution, by details of carapace, dorsal head and chin patterns, and by a genetic sequence divergence level appropriate to subspecies status. Lastly, a first-use chresonymy is presented for the genus *Chitra* and included species.

PSAMMOPHIS SPECIES OF SOUTHERN AFRICA

D. G. Broadley [2002, African Journal of Herpetology 51(2): 83-119] reviews the status, relationships and zoogeography of the 14 taxa of *Psammophis* found south of Latitude 12°S. The review includes a key to the 14 taxa, and systematic accounts and dot maps for each. The following taxonomic changes are proposed: 1. *Psammophis trinasalis* and *P. namibensis*, previously treated as subspecies of *P. leightoni*, are recognized as good evolutionary species which show ecological differences; 2. *Psammophis orientalis*, previously regarded as a subspecies of *P. subtaeniatus*, differs from the latter in a suite of characters and is parapatric with it in Zimbabwe, so it is now recognized as an evolutionary species; 3. *Psammophis brevirostris* and *P. leopardinus*, previously regarded as subspecies of *P. sibilans* (Linnaeus), are recognized as relict evolutionary species. The Zambian populations previously assigned to *P. leopardinus* have been described elsewhere as a new species.

HERPETOFAUNAL LOCALITIES ON CORFU

T. Tóth et al. [2002, Herpetozoa 15(3/4):149-169] note that since Mertens' comprehensive study in 1961 on the herpetofauna of the island of Corfu, no other publications have appeared that fully cover this subject. The present study compiles the herpetological record localities on Corfu Island mentioned by name in the literature as well as unpublished observations of the authors. The record localities of eight amphibian and 26 reptile species occurring on the island are presented on separate maps each.

GOPHER TORTOISE HABITAT MANAGEMENT

D. C. Rostal and D. N. Jones, Jr. [2002, Chelonian Conservation and Biology 4(2):479-487] studied two populations of gopher tortoises (*Gopherus polyphemus*) in southeast Georgia from 1994 to 1996 to determine population structure and reproductive output. Habitat quality and burrow placement relative to habitat structure and fire management regime were monitored. Habitat quality was correlated with tortoise size and reproductive success. Tortoises from a managed site (Fort Stewart Army Reservation [FSAR]) were larger than tortoises from a nonmanaged site (George L. Smith State Park [GLS]). Females were significantly larger at FSAR (mean carapace length [CL] = 306 mm) than GLS (mean CL = 290 mm). Mean clutch size was significantly different between sites (FSAR: 6.52 vs GLS: 4.52 eggs). Eggs and hatchlings varied significantly in mass (FSAR: 42.6 vs GLS: 40.7 g per egg; FSAR: 32.2 vs GLS: 29.4 g per hatchling) while hatchling CL did not vary significantly (FSAR: 46.4 vs GLS: 46.4 mm CL). Habitat characteristics at active burrows were similar between sites (FSAR: 25.8 vs GLS: 26.1% canopy; FSAR: 40.4 vs GLS: 35.6% groundcover) while overall habitat characteristics were significantly different (FSAR: 40.3 vs GLS: 76.4% canopy; FSAR: 28.6 vs GLS: 12.2% groundcover). Tortoises appear to select burrow location based on canopy cover directly above the burrow and percent groundcover around the burrow mouth. These results indicate that the fire management regime at FSAR results in more available habitat suitable for gopher tortoise than at GLS.

GOPHER TORTOISES AND URTD

R. A. Seigel et al. [2003, J. Herpetology 37(1):137-144] note that although Upper Respiratory Tract Disease (URTD) has been recognized as a potentially serious problem threatening the viability of gopher tortoises, little is known about the impact of this disease on tortoise populations in the wild, and some researchers regard the disease as relatively benign. The authors monitored the impact of URTD on gopher tortoises at the Kennedy Space Center, Florida, and found a striking increase in the proportion of tortoises showing signs of URTD between 1995 and 2000. They also documented a sudden increase in the number of tortoises found dead at the site, starting in 1998 and continuing through 2001. Based on condition and position of dead tortoises, the authors strongly suspect that URTD was the cause of death. Sex ratios and body sizes of tortoises found dead were not distinguishable from samples of living tortoises, indicating that mortality was not confined to a single gender or age class. Combined with recent reports of large-scale mortality of tortoises from other sites in Florida, the authors suggest that URTD is not benign but may instead have a substantial impact on tortoise populations. If so, the "protected lands paradigm" that many resource managers rely on to conserve tortoise populations may be violated, suggesting that more active management measures are needed.

GIANT SOFTSHELLS

R. G. Webb [2002, Hamadryad 27(1):99-107] describes the population of *Pelochelys* in northern New Guinea (Papua New Guinea and Irian Jaya, Indonesia) as a new species, *Pelochelys signifera*. It is diagnosed by the unique juvenile carapace pattern of contrasting, close-set, dark markings. The new species differs from the distinctive *P. bibroni* in lowland parts of southern New Guinea, and from the geographically isolated *P. cantorii* in southeast Asia. The early history of some specimens of *P. cantorii* (including holotype), previously treated as *Chitra*, is discussed. *Pelochelys cantorii* in western Thailand may be distinctive. The occurrence of *P. cantorii* in the Philippines is discussed.

ROAD TRAFFIC AND DESERT TORTOISES

K. von S. Hoff and R. W. Marlow [2002, Chelonian Conservation and Biology 4(2):449-456] surveyed desert tortoise (*Gopherus agassizii*) habitat for sign (live or dead tortoises, burrows, scat, etc.) at 100 m intervals from roads at seven different sites in southern Nevada. Traffic levels on the roads ranged from 25 to over 5000 vehicles per day. They detected reductions in tortoise sign abundance more than 4000 m from the road at the highest traffic level. There was a linear relationship between traffic level and the distance from the road that reduction in sign count could be detected. The cumulative impact of a network of roads significantly reduced the effective area of conserved habitat defined by management prescriptions that do not include road barriers. Traffic on roads and highways in desert tortoise habitat has a profound impact on tortoise populations and on efforts to conserve and manage this species.

Advertisements

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, 6115 SW 137th Avenue, Archer FL 32618, (352) 495-9024, E-mail: GrmtRodent@aol.com.

For sale: murine-pathogen-free rats and mice available in all sizes, live or frozen: pinkies, fuzzies, crawlers, small, medium and large. Frozen crawler mice in lots of 2000, $.17 each. Also available, full grown hairless mice. FOB shipping point. Master Card accepted. Call (518) 537-2000 between 8:00 A.M. and 5:00 P.M. or write SAS Corporation, 273 Hover Avenue, Germantown NY 12526 for prices and additional information.

For sale: from **The Mouse Factory**, producing superior quality, frozen feeder mice and rats. We feed our colony a nutrtionally balanced diet of rodent chow, formulated especially for us, and four types of natural whole grains and seeds. Mice starting from: pinks, $.17 each; fuzzies, $.24 each; hoppers, $.30 each; weanling, $.42; adult, $.48. Rats: starting with pinks at $.45 each, to XL at $1.80 each. Discount prices available. We accept Visa, MC, Discover or money orders. P.O. Box 85, Alpine TX 79831. Call us **toll-free** at (800) 720-0076 or visit our website: http://www.themousefactory.com.

For sale: from Bayou Rodents, excellent quality feeder mice and rats. Every size available. Pinks starting at $20/100. Orders are shipped by overnight service Monday thru Thursday. We accept Visa, MasterCard and Discover. For more info, contact Rhonda or Peggy, (800) 722-6102.

For sale: **high quality frozen feeders**. Over a decade of production and supply. Seven sizes of mice availabe: small newborn pinks up to jumbo adults. Prices start at $25 per 100. Feeders are separate in the resealable bag, not frozen together. Low shipping rates. Free price list. Kelly Haller, 4236 SE 25th Street, Topeka KS 66605, (913) 234-3358 evenings and weekends.

For sale: **Pillstrom Snake Tongs** are available from the manufacturer and are shipped worldwide. Lengths/prices: 26"/$58, 36"/$59, 40"/$60, 46"/$61, 50"/$62. Shipping and handling costs in the U.S.: $8 for the first tong, $1 for each additional. Pillstrom Tongs, 4617 Free Ferry Road, Fort Smith AR 72903-2363, (479) 452-3001 phone, (479) 452-3671 fax. E-mail: pillstromt@aol.com. Website <members.aol.com/mpillstrom>.

For sale: herp books. *Wildlife in Papua New Guinea* by Eric Lindgren, 1975, 94 pp., 193 excellent color photos, 22 pp. on herps including info/photos on D'Albert's, Boelen's, and green tree pythons and the emerald monitor, DJ, hardbound, $40; *Handbook of Common New Guinea Frogs* by J. I. Menzies, 1976, 75 pp., 12 color plates, plastic boards, $27; Herpetology in AustraliaA Diverse Discipline edited by Lunney and Ayers; 1993; 414 pp., color and b&w photos, tables, figs., papers on conservation, natural history, behavior, systematics, and viewpoints by authors such as Richard Shine, Harald Ehmann, John Cann and Chris Banks, also 12 book reviews, softbound, $38; *Reptiles of Australia* by Charles Barrett, 1950, 168 pp., many b&w photos, figs., drawings, no DJ, hardbound, $100; *Forty Queensland Lizards* by Floyd Dale, 1973, 64 pp., drawings of each species, softbound, $15. All books in excellent condition. Postage paid for orders over $25, $2.50 for orders under $25. William R. Turner, 6014 Blue Ridge Dr. - Apt. A, Highlands Ranch, CO 80l30; (720) 344-6197; E-mail: naturetours@mailstation.com All books in excellent condition. Postage paid for orders over $25; $2.50 for orders under $25. William R. Turner, 6014 Blue Ridge Drive, Apt. A, Highlands Ranch, CO 80130; (720) 344-6197; E-mail: naturetours@mailstation.com.

For sale: Now accepting reservations for the following **rare & unusual** garter snakes. A 20% refundable deposit guarantees your place on a waiting list. Orders paid in full by May 1, 2003 receive a 10% discount. Here's the list of expected 2003 offspring: **Easterns**, (Erythristic × melanistic), erythristics, $100, melanistics, $35, erythristic (pure), $100, super flames (erythristic/Blais flames × erythristic/Blais flames), ?; Blais speckled flames, $125, Blais flames, $100, Blais peach, $50, melanistic, $35 each & het melanistic (Florida × melanistic), $25. **Plains**, red/anerythristic × red/anerythristic ?, red/hypo × albino × red/hypo × albino ?, snows (Iowa and Nebraska strains) $275, albinos (Iowa and Nebraska strains), $100, anerythristic, $50, axanthic × Iowa albino (axanthic has a lime green dorsal stripe), $50, quad het, $85, Christmas albino, $200, super Christmas albino (Christmas × red/albino), $300, possible hets, $35 & normals, $25 ea/2 for $40. **Red-sideds**, albinos (limited number available), $350, possible het albinos (66%), $50, anerythristic, $100, het anerythristic, $50, possible het anerythristic (66%), $35 & normals, $25 ea/2 for $40. Florida "true" blue-striped (***similis***), $40–100, **Santa Cruz** (orange and yellow morphs), $60, **California red-sided**, $125, **Wandering** albino, $150, het, $75 & normals, $25 ea/2 for $40. (?= Price is to be determined at birth). Questions, E-mail: SFelzersgarters@nc.rr.com or call Scott, (919) 365-6120 EST, thanks! Web address: http://www.thamnophis.com/features/ScottFelzer/

Herp Tours: Why pay more? Travel with the International Fauna Society, a 501 (c)3 not-for-profit organization, and experience the Costa Rican rainforest! Stay at the beautiful Esquinas Rainforest Lodge in the untouched herpetological paradise that is Piedras Blancas National Park. Meet new friends, relax in the naturally-filtered swimming pool or in the lush, fauna-filled tropical garden. May 3–10, 2003, $1195 per person excluding airfare. Discounts for IFS and Chicago Herp Society members. For details, visit The International Fauna Society website at www.faunasociety.org or E-mail: joea@faunasociety.org.

Herp tours: Adventure trips to **Madagascar**! Journey somewhere truly unique to seek and photograph nature on the world's least-studied mini-continent. For maximum herp fun and discovery, join Bill Love as we go where few people will ever venture in their lives. Let his experience assure a comfortable tour finding the most colorful and bizarre species on the planet! Get all the details at Blue Chameleon Ventures' comprehensive new website: <http://www.bluechameleon.org>, E-mail: bill@bluechameleon.org, or call (239) 728-2390.

Herp tours: Experience the Amazon! Road-ride in Costa Rica! See and photograph herps where they live, have fun doing it, make good friends and contacts, and best of all . . . **relax!** From wildlife tours to adventure travel, **GreenTracks, Inc.** offers the best trips led by internationally acclaimed herpers and naturalists. See our website <http://www.greentracks.com> or call (800) 9-MONKEY. E-mail: greentracks@frontier.net.

Pet Services in Your Home: **All Pets, Unlimited** is owned by a licensed, certified and bonded veterinary lab technician with >20 yrs. experience. This service specializes in patient care as well as caring for your pets in your absence. **Exotics** are welcome and the service is veterinarian recommended. Please call Beverly McGrane for pricing information @ (312) 328-0648.

Wanted: We need a person who can assist in the care and maintenance of an extensive tortoise collection. Our primary concern is in having a dependable care-giver while we are gone on a few weekends per year but particularly while we travel for a week at a time 2 to 3 times per year. Must have a passion for animals and have a basic understanding of the environmental and dietary requirements of reptiles; tortoises and turtles especially. Far Northwest Suburb. We will train the right person. If you are or know of anyone who is responsible and dependable and has the interest in learning, please contact: Bob or Denise Krause, (847) 844-1328 or E-mail: robertk@superpet.net.

Wanted: I'm looking for my soulmate. I want to settle down to a family before it is too late. But I have this problem. . . . When we get into hobbies and interests: old popular records, jazz and show tunes, and antique electronics are fine, but when I mention turtles, "What, are you crazy?" So maybe this is a better place to look. Please don't try to separate me from my turtles—at least not most of them. If interested, please drop a line to Ellis Jones, 1000 Dell, Northbrook IL 60062, telling a bit about yourself and giving a phone number.

Line ads in this publication are run free for CHS members—$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to: Michael Dloogatch, 6048 N. Lawndale Avenue, Chicago IL 60659, (773) 588-0728 evening telephone, (312) 782-2868 fax, E-mail: <MADadder0@aol.com>.

FOR MEMBERS IN INDIANA AND ILLINOIS:

The Field Museum is conducting a survey of academic institutions, government agencies, and private organizations throughout Indiana and Illinois to determine how many teaching or research collections of fishes, amphibians, and reptiles exist in each state (preserved specimens only, not live animals). We feel significant contributions can be made to the natural history of both Indiana and Illinois by reporting on the existence and status of small collections that are not well known by the scientific community. If your organization or institution maintains such a collection, please contact Jamie Ladonski (jladonski@fieldmuseum.org) for more information on how your collection can be counted. Even if your department or office does not have such a collection, that information is valuable to our survey and we ask that you please contact us simply to note that fact. Please consider that collections may be at other locations if your institution has satellite campuses, field stations, or a similar network of offices.

THE JOSEPH B. SLOWINSKI AWARD

The Board of Directors of the Center for North American Herpetology (CNAH) is pleased to announce the appointment of a panel of three distinguished herpetologists who will select the recipient of the Joseph B. Slowinski Award for Excellence in Snake Systematics. The panelists are: Frank T. Burbrink (City University of New York, Staten Island), Brian I. Crother (Southeastern Louisiana University, Hammond), and Robin Lawson (California Academy of Sciences, San Francisco). The first recipient of the Slowinski Award will be chosen based on research published in calendar 2002. The initial award, $500 and a plaque, will be given in July 2003.

Joseph Bruno Slowinski was the Curator of Herpetology at the California Academy of Sciences in San Francisco, and died on the morning of September 12, 2001, from the bite of a many-banded krait (*Bungarus multicinctus*) in the mountains of northern Myanmar (Burma), despite extraordinary efforts to save him by his field companions.

Born in New York City on November 15, 1962, Joe received his Bachelor's Degree from the University of Kansas in 1984, and was awarded his Doctoral Degree from the University of Miami (Coral Gables) in 1991, working under his major professor, Jay Savage. Other academic appointments included a Postdoctoral Fellow (morphological systematics of elapid snakes), National Museum of Natural History (1991-92); Postdoctoral Research Associate (molecular systematics of elapid snakes), Museum of Natural Science, Louisiana State University (1992-94); Instructor of Biology, Louisiana State University (1994-96); Instructor of Biology, Southeastern Louisiana University (1996-97).

His principal research interests were herpetology (especially venomous snakes), molecular evolution, and phylogenetic analysis. He authored numerous scientific articles as well as one book, Introduction to Genetics, published in 1998 by NTC. He was editor-in-chief and co-founder (in 1997) of the first online herpetological journal, *Contemporary Herpetology*, and a member of the editorial board of *Systematic Biology*. Prior to his death, he was collaborating with Robin Lawson, Director of the Academy's Osher Laboratory, on several studies of the molecular phylogenetics of snakes, incorporating both mitochondrial and nuclear genes. He was conducting a comprehensive survey of the herpetofauna of Myanmar. In addition, Joe was part of a large project involving a number of other Academy scientists and several institutions in Yunnan, China, to survey the biodiversity of the western part of the Yunnan Province, specifically a mountain range known as the Gaoligongshan. Joe had previously taped two National Geographic specials (during which, he received a dry bite from a monocled cobra and had venom streamed into his eyes by a new species of spitting cobra that he ultimately described). Joe had recently been awarded a two million dollar grant from the National Science Foundation, to extend his work across the Myanmar border, into China.

The Joseph B. Slowinski Award for Excellence in Snake Systematics was established in 2002 by the Board of Directors of the CNAH as a trust in perpetuity in recognition of the scientific achievements of the late Joseph B. Slowinski. Donations by check should be made out to CNAH and sent to: The Slowinski Award, The Center for North American Herpetology, 1502 Medinah Circle, Lawrence, KS 66047. For additional information contact: Joseph T. Collins, Executive Director, The Center for North american Herpetology, (785) 749-3467, jcollins@ku.edu.

2003 HERP SEARCHES

Join other herp enthusiasts, frog monitors, and curious friends to look for frogs, salamanders, snakes, turtles, and lizards. The Herp Searches are led by experienced herpetologists, and all ages and experience levels are welcome.

April 26 – Rollins Savanna in *Lake County, IL*, from 1:00 to 4:00 P.M. Between Routes 83 and 45, near Grayslake. Park in the grass parking lot on Washington Street, just west of Atkinson Road. Call Aaron Schirmer for directions or details, at (847) 797-5708, or schirma1@hotmail.com.

May 17 – Middlefork Savanna in *Lake County, IL*, from 1:00 to 4:00 P.M. At Waukegan Road (Route 43) and Middlefork Drive north of Route 60 and south of Route 176. Turn west onto Middlefork Drive and follow signs to the Preserve parking area. Call Aaron Schirmer for directions or details, at (847) 797-5708 or schirma1@hotmail.com.

May 24 – Freeman Kame in northeast *Kane County, IL*, from 1:00 to 4:00 P.M.. From Route 72 near Gilberts, head north on Galligan Road 1.25 mi, then head west on Freeman Road about 0.5 mi. Entrance and grass parking lot are at the RR crossing. Call Karen Glennemeier for directions or details, at (847) 965-1150 or kglennemeier@audubon.org.

May 31 – Wadsworth Savanna in *Lake County, IL*, from 1:00 to 4:00 P.M. Take I-94 to Wadsworth Road. Go east on Wadsworth and meet at the Newport Fire Department next to the Post Office, off Wadsworth Road. Call Aaron Schirmer for directions or details, at (847) 797-5708 or schirma1@hotmail.com.

May 31 – Midewin National Tallgrass Prairie, 9:00 A.M. to noon. Bring binoculars and dipnets if you have them. Mike Redmer will teach some techniques for finding and identifying turtles and tadpoles. Meet at the Newton and Henslow Trails Interim Parking lot. Take I-55 south from Chicago to the River Road Exit (Exit 241). Go left (east) on River Road, and continue east 2.7 miles to Rte. 53. Turn left on Rte. 53 and go 2.3 miles north to Explosives Road. Go left (west) to the parking lot. *Note: Access to Midewin is still a bit logistically difficult, so we need to limit attendance to the first 20 people responding. Carpool if possible, and call* Mike Redmer *to RSVP at* (847) 381-2253, x240, or Mike_Redmer@fws.gov).

UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, April 30, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. **Jim Pether** will be coming all the way from the Canary Islands to speak to us about "Giant Lizards of Gomera." These impressive lizards of the genus *Gallotia*, so far found only in one locality on the island of La Gomera, were unknown to science until 1999. Jim Pether has been appointed curator of the captive breeding program for this lizard by the government of the Canary Islands. Jim is also director of his own private reptile zoo, Reptilandia, located on the island of Grand Canary.

The regular monthly meetings of the Chicago Herpetological Society are held at Chicago's newest museum—the **Peggy Notebaert Nature Museum**. This beautiful new building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the May 16 board meeting, to be held at the North Park Village Administration Building, 5801 North Pulaski Road, Chicago. To get there take the Edens Expressway, I-94, and exit at Peterson eastbound. Go a mile east to Pulaski, turn right and go south to the first traffic light. Turn left at the light into the North Park Village complex. At the entrance is a stop sign and a guardhouse. When you come to a second stop sign, the administration building is the large building ahead and to your left. There is a free parking lot behind the building.

The Chicago Turtle Club

The monthly meetings of the Chicago Turtle Club are informal; questions, children and animals are welcome. Meetings normally take place at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Parking is free. For more info call Lisa Koester, (773) 508-0034, or visit the CTC website: http://www.geocities.com/~chicagoturtle.

HERP OF THE MONTH

Each monthly meeting will showcase a different herp. CHS members are urged to bring one specimen of the "Herp of the Month" to be judged against the entries from other CHS members. Prizes will be awarded to the top three winners. For the April meeting bring **horned frogs (*Ceratophrys* spp.) or pyxie frogs (*Pyxicephalus adspersus*)**. For May bring any **monitor lizard**.

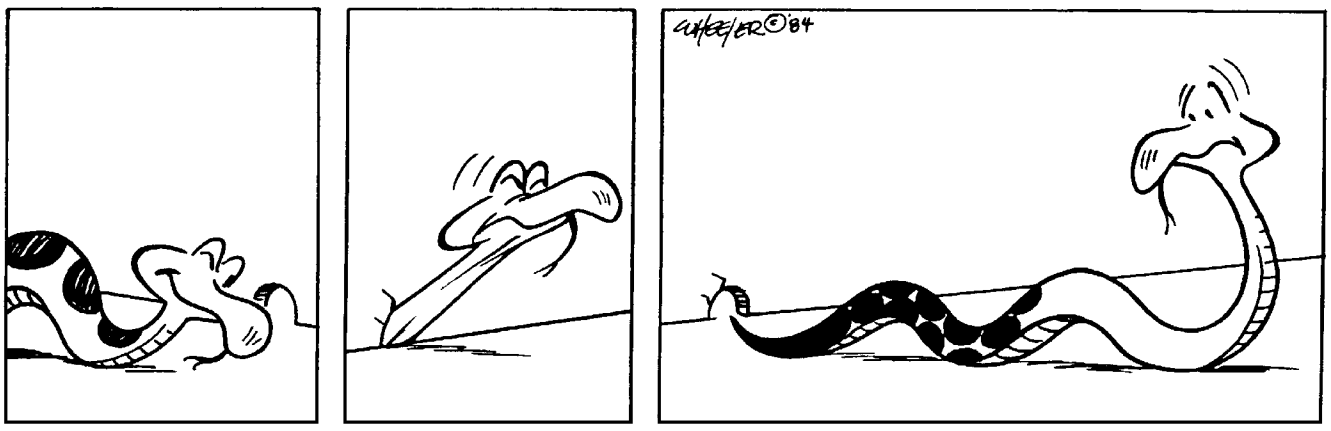
PROPOSED AMENDMENT TO THE CHS BYLAWS

Subject to approval by two-thirds of the members voting at the May general meeting, the Board of Directors has passed the following change to Article VI, Section 8, of the Bylaws of the Chicago Herpetological Society:

Now reads:
The Sergeant-at-arms shall maintain order at the Society meetings. He shall be responsible for maintaining a register of all members and visitors who attend the meetings. He shall also be responsible for leaving the meeting hall in good condition.

Shall be amended to read:
The Sergeant-at-arms shall maintain order at the Society meetings, shall be responsible for taking a count of all people who attend the meeting, and shall also be responsible for leaving the meeting hall in good condition.

THE ADVENTURES OF SPOT



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