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**BULLETIN**

of the

**Chicago Herpetological Society**

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**Volume 26, Number 3**  
**March, 1991**



**In 1972 Jackson's chameleons were accidentally released on Oahu, one of the Hawaiian Islands. These animals belonged to the Mt. Kenya subspecies, *Chamaeleo jacksonii xantholophus*. Since that time they have become well established in several different geographic areas of the island and continue to expand their range. This female was photographed on Oahu by Sean McKeown.**

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## Jackson's Chameleons in Hawaii Are the Recently Described Mt. Kenya Subspecies, *Chamaeleo jacksonii xantholophus*

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A new subspecies of Jackson's chameleon is described by Perri Eason, Gary W. Ferguson and James Hebrard in *Copeia* (1988). This form is native to the moderately moist southern and eastern slopes of Mt. Kenya in East Africa. Five statistically independent factors are used to differentiate this new subspecies *Chamaeleo jacksonii xantholophus* from *C. j. jacksonii* and *C. j. merumontana*. The "new" Mt. Kenya race is distinct from the other two in total length (TL), snout-vent length (SVL), and in the convexity of occipital and postocular scales, parietal and dorsal crest pigmentation, and crest interval size relative to crest scale cluster size.

In less scientific terminology *Chamaeleo jacksonii xantholophus* is the largest of the three subspecies. Adult males are light emerald green to yellow on the body, dorsal crest and tail. The head is darker green or turquoise and the labial scales and ocular region are yellow. Adult females are variable in color ranging from charcoal, to uniformly grey, olive and green. The horns are either totally absent or greatly reduced on females of this form.

Interestingly enough, this newly described race is the type that was exported out of Kenya in very large numbers for the American pet trade during the late 1960's and 1970's.

In 1972 a pet shop owner in Kaneohe, Hawaii, was issued a State Department of Agriculture permit to import one dozen Jackson's chameleons. They were obtained from a large southern California reptile wholesaler. The lizards quickly sold and another permit for three dozen was issued. This second group of Jackson's chameleons appeared thin and dehydrated upon arrival. Thinking they could be retrieved as needed, the pet shop owner released the lizards to recover in his well planted backyard on Kaneohe Bay Drive.

Chameleons from this group spread through the mesic well-planted suburban neighborhood. By the late 1970's populations were established along nearby watershed areas at the base of the Koolau mountains (McKeown, 1978). Today, *C. j. xantholophus* occurs in several different geographic areas of Oahu. These lizards continue to expand their range although several of the breeding colonies, including the original one along Kaneohe Bay Drive, have been extirpated by unscrupulous individuals who have overcollected the lizards for sale to the mainland pet trade. In fact, between 1984 and 1990 virtually all of the *wild caught* "Jackson's" for sale in the continental United States were Hawaiian specimens.

Jackson's chameleons on Oahu, as in Kenya, have shown surprising plasticity in adapting both to suburban neighbor-



Male *Chamaeleo jacksonii xantholophus* from Oahu. Photograph by Sean McKeown.

hoods and to low and mid-elevation secondary forest. Their habit of crossing roadways on the ground has contributed to the dispersal of these lizards: motorists pick them up out of curiosity and may later release them at another location. Breeding groups have even been observed on the much drier leeward side of the island.

It is important to note that *C. jacksonii* is a low density species with regionalized distribution on Oahu. Many introduced species of insects have become established in Hawaii during the past 200 years. Since chameleons have repeatedly been documented as being generalized feeders that quickly tire of the same fare, these lizards should continue to have a negligible effect on the endemic species of invertebrates that are also present.

Genetic drift may already be taking place with the *C. j. xantholophus* on Oahu. Kaneohe Bay Drive specimens looked essentially the same as wild caught Mt. Kenya specimens. However, individuals from the watershed at the base of the Koolaus typically have two outer horns that droop or are uneven. One can speculate that because only a very few specimens colonized this area originally, this trait is a product of inbreeding.

Museum specimens of Hawaiian *C. j. xantholophus* are in both the B. P. Bishop Museum and Hawaii Department of Agriculture Plant Quarantine Station collections.

The author wishes to point out that it is now illegal to import any reptile or amphibian into the Hawaiian Islands without a State Department of Agriculture import permit. These regulations are rigorously enforced by the Hawaii State Department of Agriculture.

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## The European Pond Turtle, *Emys orbicularis*, in La Brenne, France

Jozef Nijs<sup>1</sup>, Caroline Navez<sup>2</sup> and J. Merckx<sup>3</sup>

### Abstract

La Brenne (France) probably has one of the densest populations in Europe of the European pond turtle, *Emys orbicularis*. In the middle of May 1989, we were able to visit the region and to do some measurements (including carapace length, carapace width, carapace height, plastron length and cloacal temperature) on 18 animals. On one turtle, we measured the number and the length of the growth rings and calculated the theoretical growth rate over the years. Striking facts are the unusually large sizes attained and the high growth rates of the animals, probably due to a high-protein diet of fish carrion.

### Introduction

In France, La Brenne is known under the name of "Le pays aux mille étangs" [the land of a thousand ponds]. These ponds are usually a few hectares large and are mainly used as carp ponds. Thus, they are essentially private property and not accessible to the public. This of course provides nicely for the peace and quiet of the turtles.

One disadvantage though, is that during the winter some ponds are drained and dredged, with the result that the animals hibernating in the mud are dug up and killed. In spring, when the cane fields are burned off, many animals die as well.

### Study sites

We visited three locations where we were able to observe *Emys orbicularis*. At two of them we took some measurements.

1.) Etang du Renard: This pond was about to dry up. The maximum water depth was 50–60 cm. The bottom was very swampy. Apart from *Emys orbicularis* the place was alive with juvenile marsh frogs, *Rana ridibunda*. The European water snake, *Natrix natrix* and the green lizard, *Lacerta viridis*, were also seen in this area.

In this pond we were able to measure 15 turtles. Remarkably the turtles' carapaces were marked with little orange spots instead of the usual yellow ones. This orange color is probably caused by the composition of the water or the subsoil (high iron content?), as the phenomenon does not occur in other ponds and disappears if the animals are kept in captivity for some weeks in tap water.

2.) Etangs des Vigneaux: Here as well *Rana ridibunda* and *Lacerta viridis* were observed along with *Emys orbicularis*. The owner of the ponds told us that a few weeks earlier he had already seen females of the European pond turtle traveling in search of a nesting place. In these ponds three animals were measured. They showed the normal yellow spots.

3.) Etang de la Brenne: In this protected nature reserve, well known to ornithologists, we could not do any measurements. The reserve is not accessible to the public and the

area was scanned with binoculars. Apart from basking *Emys orbicularis*, we noticed *Rana ridibunda*, *Lacerta viridis* and the wall lizard, *Podarcis muralis*.

### Parasites

Several turtles were parasitized by brown-green leeches, later identified as *Haementeria costata* (Dresscher and Higgler, 1982). The leeches feed on blood of vertebrates such as frogs, turtles, waterfowl and mammals. We learned that people can also be attacked when one of us was bitten several times. In the past these leeches were used in Russia for bloodletting.

### Materials and Methods

Turtles were captured by hand or with dip nets. Each turtle's carapace and plastron lengths were measured to the nearest millimeter, using vernier calipers, and the turtles were weighed to the nearest gram. Growth rings were measured to the nearest .05 mm.

The cloacal temperature of the animals was measured with the aid of a FLUKE 52K/J digital thermometer to the nearest .1°C. A probe connected to the thermometer was inserted into the cloaca for about 1 cm. The reading was taken when the temperature had stabilized. The measurements were taken as quickly as possible upon capture.

### Results and discussion

Table 1 shows the results of measurements done on 18 European pond turtles, *Emys orbicularis*, in La Brenne, France.

On one animal (number 13) we measured the number and the width of the growth rings. We calculated the theoretical growth rate over the years and also the proportional annual growth of the turtle.

Animals that go through cyclic periods of rest (hibernation or aestivation) show growth or year rings in their skeletons. Reptiles and amphibians too can show these rings.

A year ring consists of two typical zones, namely: a) a broad fibre-rich layer, witnessing increased growth during the active period of the year; and b) a narrow layer formed

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**Table 1.** Measurements taken on 18 European pond turtles, *Emys orbicularis*, in La Brenne, France.

Study site	No.	Air temp. (°C)	Water temp. (°C)	Carapace length (mm)	Carapace width (mm)	Carapace height (mm)	Plastron length (mm)	Body weight (g)	Cloacal temp. (°C)
Etang du Renard	1	28	25	49	42	23	45	24	26.1
	2	26	26	71	60	30	67	58	27.0
	3	28	26	73	63	31	70	72	—
	4	29	26	83	72	34	78	100	26.0
	5	26	24	94	78	36	87	128	—
	6	28	26	121	94	47	116	—	—
	7	26	24	123	97	48	120	330	—
	8	28	25	137	108	55	130	385	23.6
	9	26	24	150	125	72	156	—	—
	10	26	24	150	109	57	135	462	—
	11	28	25	154	123	71	147	625	20.7
	12	29	26	155	122	65	148	670	24.3
	13	28	25	156	125	57	140	605	24.1
	14	28	26	158	131	65	162	768	—
	15	29	26	170	129	71	161	805	28.0
Etangs des Vigneaux	16	24	26	132	101	49	119	360	25.5
	17	24	26	138	110	50	129	460	26.1
	18	24	26	139	109	49	127	410	23.3

during the passive period. By counting the rings with the aid of a magnifier, one can fix the ages of such reptiles (Castenet and Cheylan, 1979) and amphibians (Hemelaar, 1981, 1988).

Turtles also show growth rings on their carapace and plastron scutes. Castenet and Cheylan (1979) were able, by counting the rings on the carapace scutes of *Testudo hermanni* and *Testudo graeca*, to determine their ages, providing the animals were not yet 12 years old. When the tortoises become older, the rings can fade away or become blurred due to wear, and the measurements become inaccurate.

Shealy (1976) used the inter-annulus widths (year rings) of the femoral scutes to calculate the growth of *Graptemys pulchra* in Alabama.

Cagle (1946, 1954) showed that the relative lengths of the abdominal scute and the plastron remain approximately the same throughout life in *Chrysemys*. He also showed that the original abdominal scute of hatchlings does not increase in size but remains constant as new growth is initiated around it.

Using these relationships, an idea of growth can be obtained by measuring the plastron length, the abdominal scute length and the widths of the various growth annuli on the abdominal scute and applying the equation  $L1/L2 = C1/C2$ , where C1 represents the width of the annulus, C2 the length of the abdominal scute, L2 the plastron length and L1 the unknown or length of the plastron at the time the annulus was formed.

We used this equation to calculate the theoretical growth rate of animal number 13 (Figure 1).

From the data acquired from Table 2 (PL) and with the help of the formula  $G_s = 100(G_x - G_0)/G_0$ , we can calculate

the proportional annual growth of the plastron (see Figure 2). In the formula,  $G_s$  represents the proportional annual growth of the plastron,  $G_x$  the plastron length after the growing year and  $G_0$  the plastron length of the previous growing year.

Figure 1 shows that the animal's growth was explosive, resulting in an exceptional size.

This seems to be the rule in La Brenne, judging from a curve in Fretey (1986). We measured five animals whose weights varied between 605 and 805 g. Also, half of the turtles measured by Franck (1988) weighed more than 500 g, with a maximum of 910 g. Animals originating from Yugoslavia and Turkey and kept in captivity for several years by the authors, had a maximum weight of 500 g. And Rogner and Philippen (1986) did not find animals on the island of Corsica with a

**Table 2.** Values for animal number 13 of the measured widths of the annuli (WA); the theoretically calculated plastron length growth per year (PLG); the theoretically calculated plastron length (PL); and the theoretically calculated proportional annual growth (PAG).

Age (years)	WA (mm)	PLG (mm)	PL (mm)	PAG (%)
0	4.40	20.88	20.88	—
1	5.35	25.39	46.27	121.6
2	3.80	18.03	64.30	38.9
3	4.10	19.46	83.76	30.3
4	4.90	23.25	107.00	27.8
5	3.70	17.56	124.50	16.4
6	3.25	15.42	139.99	12.4

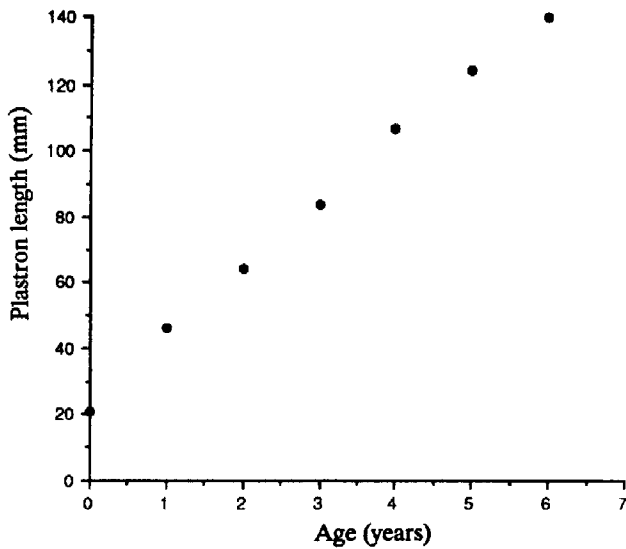


Figure 1. Theoretically calculated plastron growth of *Emys orbicularis* (number 13), based on the widths of the annuli.

carapace length larger than 140 mm, which corresponds to a weight of 400–500 g (see Figure 3).

The exceptional growth could be explained by exceptionally favorable life circumstances, such as climate, and an abundant high-quality food supply like dead fish.

This supposition fits in with studies done on *Trachemys scripta* in the U.S. The examined populations mainly contained animals of exceptional sizes. So, among a population living in the cooling water of a nuclear power plant, Gibbons (1970) found no influence of the increased water temperature on the growth of *Trachemys s. scripta*, but he thinks that a diet rich in fish carrion, insects and molluscs, had a positive influence on the growth. Among other populations, Gibbons et al. (1979) found that not only a rich diet but

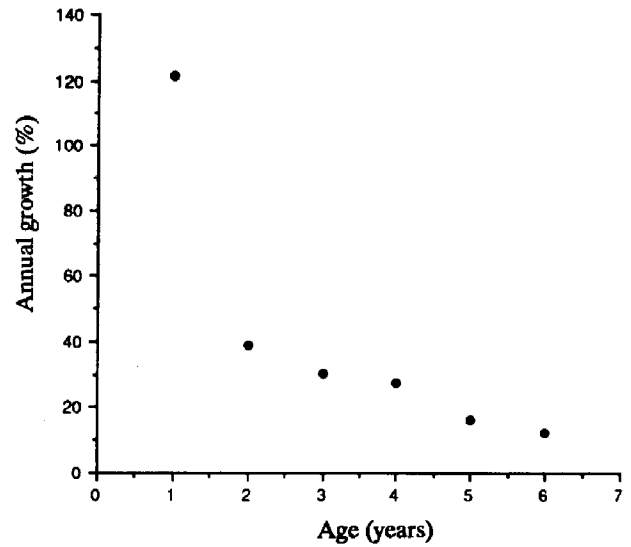


Figure 2. Theoretically calculated proportional annual plastron growth of *Emys orbicularis* (number 13).

also increased water temperature had a positive influence on the exceptional growth of the animals.

Finally, Parmentier (1980), while studying *Trachemys s. scripta*, supposes that elevated water temperatures increase the food intake which makes the animals absorb a quantity of protein twice as much as usual, which in turn results in an increased growing speed.

Figure 1 shows that the explosive growth of animal 13 is not yet finished. Indeed, the curve still appears linear. As the maximum length is approached, the curve should level off. Therefore, we can conclude that the measured animal will reach an exceptionally large size.

We measured the cloacal temperature of 11 animals. As

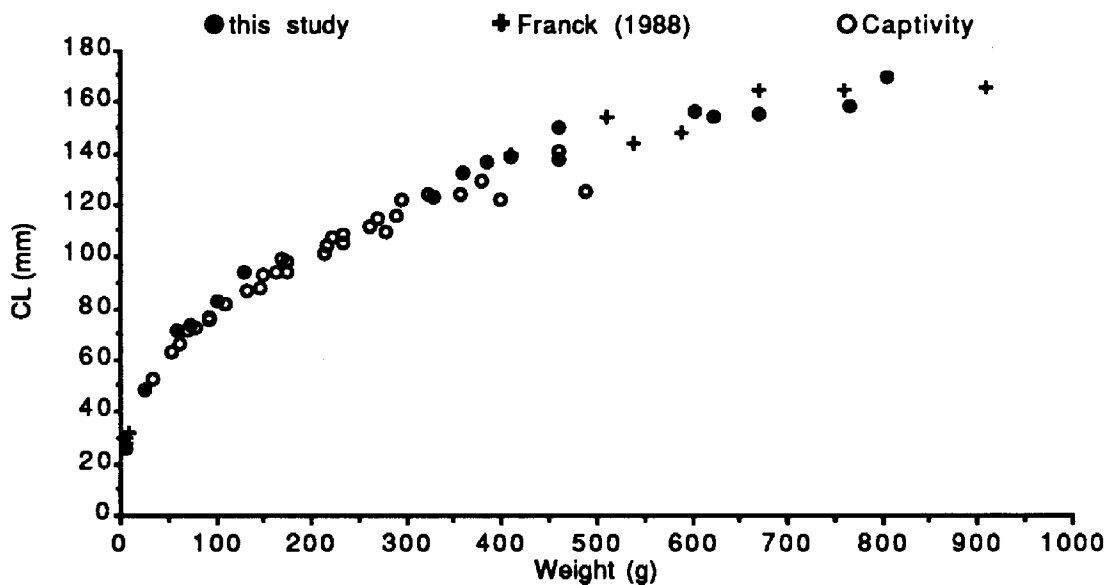


Figure 3. Carapace length (CL) as a function of weight in *Emys orbicularis* in nature and captivity.

Table 1 shows, the temperatures vary between 20.7 and 28.0°C. These values are rather relative and do not tell us much about the so-called preferred voluntary body temperature, since only the three animals from étang des Vigneaux were caught while they were basking. All the other turtles were startled ones which, by the time they were caught, had already been in the water for a more or less long period of time. A striking fact is that the cloacal temperature of several animals was lower than the water temperature of the pool. This might be explained by the fact that the water temperature was only measured at one particular place and depth, and could easily differ at other places and depths.

#### Other amphibians and reptiles

Apart from *Emys orbicularis*, we also noticed the following reptiles and amphibians in the region:

#### Amphibia

##### Anura:

*Rana ridibunda*  
*Rana esculenta*  
*Rana dalmatina*  
*Rana temporaria*  
*Alytes obstetricans*  
*Bufo bufo*  
*Bombina variegata*  
*Hyla arborea*

##### Urodela:

*Salamandra salamandra terrestris*  
*Triturus helveticus*  
*Triturus cristatus*  
*Triturus cristatus* x *Triturus marmoratus*  
 (= *Triturus blasii*)

#### Reptilia

##### Serpentes:

*Elaphe longissima*  
*Coluber viridiflavus*  
*Vipera berus*  
*Vipera aspis*  
*Coronella austriaca*  
*Natrix natrix*  
*Natrix maura*

##### Sauria:

*Lacerta viridis*  
*Podarcis muralis*  
*Anguis fragilis*

#### Acknowledgements

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**Book Review: *The Biology and Evolution of Australian Lizards* by Allen E. Greer  
1989. Surrey Beatty and Sons Pty Ltd. Chipping Norton, NSW. 264 pp., 92 figs. A\$60  
[Available through the CHS Book Service]**

**Reviewed by:  
John C. Murphy**

Australians have been prolific producers of herpetology books. Dry, sterile checklists with synonymies, illustrated continental checklists, regional checklists with natural history notes, and colorful portfolios of the island continent's herpetofauna can be found in my bookcases. Now we have another Australian herpetology book. Allen Greer, Senior Scientist in the Herpetology Section of the Australian Museum, states that the purpose of his most recent volume is "...to summarize the biology of Australian lizards against the background of their evolutionary relationships."

The introduction contains some unexpected praise for amateur herpetologists and their publications, along with the disheartening news that amateur herpetology in Australia is threatened with extinction. It seems that government regulations are so restrictive that observation and photography by amateurs are difficult, if not impossible, to accomplish without breaking the law. There is also a discussion of how the evolutionary history of a group of animals is inferred, and some suggestions for making the book easier to follow. A "Materials and Methods" section and a discussion of variation in the Australian climate wrap up the introduction.

Chapter 1 is a brief, seven-page discussion of phylogenetic relationships and geographical origins of Australian lizards. This includes some well deserved criticisms (in this reviewer's opinion) of the way in which herpetologists, and zoologists in general, interpret historical zoogeography. Greer finds that zoogeography is sloppy: frequently not using hard data; evoking competition between faunal groups at a time when ecologists are questioning whether competition exists even between closely related species; often assuming that present-day centers of species abundance are past centers for evolution; hypothesizing dispersal corridors without considering the validity of current taxonomy; and speculating using current geography, instead of paleogeography.

The Australian lizard fauna is rich, comprising 475 species in about 74 genera and five families (Agamidae, Gekkonidae, Pygopodidae, Scincidae and Varanidae). Chapters 2 through 6 each deal with one of these families. Chapter 7 is short, five pages, covering a different group of lizards, "Carnivorous Legless Lizards—Snakes." The discussion in the last chapter centers around primitive and derived characteristics of snakes, and snake origins. Well done line illustrations, excellent color photographs and a series of tables at the end of each chapter add to the excellent text, making this a landmark book in herpetology.

Skinks are spectacular in their diversity. One thousand species occur almost worldwide and 27% of them occur in Australia, where they compose 57% of the continent's saurian fauna. There are skinks with relatively stocky bodies, others with elongated bodies; skinks with four legs, two legs and no

legs; skinks with smooth, keeled, granular and spiny scales; skinks that lay eggs, skinks that have live birth, and skinks that do both; skinks with a clutch or litter size as low as one and as high as 53. A mosaic of osteoderms, tiny dermal bones, underlies the scales of skinks to provide a flexible, bony, body armor. This flexible shell is undoubtedly at least partially responsible for skink success. Skinks are closely associated with the soil and leaf litter, and Greer suggests that armor plates serve as protection from the chelicerae and teeth of the fossorial fauna.

Greer has spent much of his career working with skinks, and he has produced a superb narrative in chapter 5 (in no way do I mean to detract from the excellent job he has done with the other chapters). Each chapter is structured with a discussion of the family's biology that focuses on primitive characteristics shared by all members. The second portion of each chapter deals with lineages within the family found in Australia and focuses on the derived characteristics within each of the lineages. Thus, in the chapter on skinks, after the discussion of primitive skink traits (all Australian skinks belong to the subfamily Lygosominae), Greer follows up with a discussion of each of the species groups (the *Sphenomorphus* group, the *Mabuia* groups and the *Eugongylus* group). Tables containing data on morphometrics, derived character states, sexual dimorphism, references to feeding habits, habitats, age at sexual maturity, modes of reproduction, relative clutch mass and thermal data follow the text.

Numerous suggestions for filling gaps in current knowledge are scattered throughout the text, providing one of its major strengths. There are enough suggestions here to keep a small army of graduate students and amateurs busy for a long time to come. For example, Greer states, "What exactly passes between mother and developing young is unclear, presumably water, gases and perhaps other small molecules, if better-studied overseas species are any clue. The fact that developing *Eulamprus quoyii* can be raised to term outside the mother's body in tissue culture suggests that at least most if not all the nutrients necessary for development are already available in the yolk... It is interesting to note that much of what we know of the anatomy of the maternal/foetal membranes in ovoviviparous lizards and snakes goes back to the works of H. Claire Weekes working on Australian forms over 50 years ago... Regrettably this interesting work has never been taken up and continued in Australia—despite abundant interesting material."

There are many aspects to this richly informative book. The story of Richard Owen's antics in confusing the fossils of the largest known monitor lizard, *Megalania*, with those of a horned turtle, and then deciding that the composite creature, with a varanid body and turtle head, was closely related to the extant agamid *Moloch horridus* (the thorny devil) is one



of the more humorous. But its overall interest to the general reader resides in the array of adaptations that have been produced by the interaction of the Australian environment and lizard genetic material. The text is highly readable for any advanced amateur or professional herpetologist, despite the

author's caution that a reader of this volume should possess a knowledge of anatomy, physiology, ecology and behavior. This reviewer sincerely hopes that this book signals a trend for similar works on other segments of the world's herpetofauna.

*Bull. Chicago Herp. Soc.* 26(3):55, 1991

## CHS Herpetological Grants A New Program to Support Herpetological Research, Education and Conservation

The Chicago Herpetological Society is proud to announce the establishment of a program to award financial support for herpetological research, education and conservation. *CHS Herpetological Grants* complements the SSAR Grants in Herpetology program to provide more funds for herpetological research. Interested parties may apply for a grant in any one of the following categories, but may submit only one application per category per year. Not all categories may receive awards each year. Individual awards will not exceed \$500.

1) Herpetology in Illinois. Proposals may address any aspect of herpetology in Illinois.

2) Graduate Student Research in Herpetology.

3) Undergraduate Student Research in Herpetology. Undergraduate and high school student research projects in herpetology for course credit, extra credit, science fairs and the like should be submitted in this category.

4) Field Studies in Herpetology. Proposals involving travel expenses, survey collections and other fieldwork should be submitted here.

5) Conservation. Proposals involving threatened herpetological species or environments, declining populations, and similar problems are appropriate here.

6) Captive Management, Husbandry and Propagation.

7) Miscellaneous. This category is for proposals that do not fit nicely into the other categories.

Applicants must be dues-paying members of the CHS. The committee reserves the right to reassign the category under which a given proposal is submitted. Recipients of SSAR grants will not be eligible for CHS grants in the same calendar year. In the event that applications of sufficient merit are lacking, awards in a given category may be withheld and allocated funds may be reassigned to another cate-

gory. Recipients of grants are required to submit results of their subsidized work in writing within a reasonable amount of time for publication in the *CHS Bulletin* or elsewhere.

Applications will be similar in format to those for SSAR grants. Each must include:

- 1) Background and objectives of the proposal.
- 2) Materials and methods for carrying out the project.
- 3) Budget, not to exceed \$500.
- 4) Brief resume of the applicant.
- 5) A letter of support from the most appropriate sponsoring party, such as faculty advisor or committee chairperson, course instructor or the president of a sponsoring herpetological society.

The application must be typed, double spaced, and must not exceed five pages, excluding resume and budget. Failure to follow this format may result in an application being rejected. All applications must be submitted in duplicate and received no later than 31 August 1991. Awards will be announced by 30 November 1991.

Submit applications or questions to:

Stephen L. Barten, D.V.M.  
CHS Herpetological Grants  
Vernon Hills Animal Hospital  
1260 Butterfield Drive  
Mundelein IL 60060  
(708) 367-4070  
(708) 367-0374 FAX

CHS Herpetological Grants are primarily funded by proceeds from book sales. Your tax deductible donation to support this program would increase the amount of awards available while supporting valuable herpetological research.

## HerPET-POURRI

by Ellin Beltz

### Catch 22, Release None

The state of Colorado considers the rattlesnake a small-game animal. There is no restricted season, but a hunter must have a license and may not have more than six live snakes at any time. There is no limit to the number of dead rattlers a hunter may possess. (*Daily Sentinel*, Grand Junction, CO, November 22, 1990, contributed by Larry Valentine)

### A New "Specie" of Frog

The new two dollar coin struck by the British Royal Mint for the government of Bermuda shows a tree frog on a leafy twig. The frogs were originally imported into Bermuda via a shipment of imported orchids in about 1880. The other side of the coin features Queen Elizabeth II. For more information, contact the B.R.M., P.O. Box 2570, Woodside, NY 11377. (*Ribbit, Ribbit*, the newsletter of the Frog Collectors' Club, January/February, 1991, contributed by Merelaine Haskett)

### Frog Shortage Prompts Action

What would France be without frogs? Even a popular television puppet show features a bright-green politician, "Kermittand." And Gaulish gourmets are famous for their love of frogs. Perhaps, however, they've loved too much. A serious frog shortage began about 30 years ago. In a typical year, about 8 tons of frogs (more than 3 million animals) were being removed from the environment for table use. At the same time, development and industrialization were having their typical impacts. By 1977, the French government banned all sales of native frogs. But demand for frog legs continued to soar, with worldwide consumption now estimated at 100 tons of live frogs per year. Overharvesting and development are apparently wiping out much of the amphibian fauna in both the First and Third Worlds. Mosquitos love it. Malaria cases among humans are increasing. But help is on the way. Pierre Darre, director of the Centre Jean Rostand in western France, has 30,000 farm-raised frogs getting plump in man-made ponds. Darre attributes his success to feeding the frogs a special diet. Darre's three French frog farms have released several million frogs back into wet spots all over the country. They hope to develop stable populations, able to tolerate tightly regulated harvesting, within 10 years. All this is private effort; no government funds are involved. (*Wall Street Journal*, November 29, 1990)

### Frog Shortage, Part Two

Patrick David, a CHS member from France, wrote me about the situation described above: "I am not fond of this dish... Most edible frogs are imported [into France] from Yugoslavia, Albania, Egypt or perhaps Turkey... Frozen frog legs are imported from Southeast Asia and are readily available, and cheap, in any frozen products store. I don't think that the shortage is there. It is true that large populations of green frogs are less and less numerous in France, but I think that most restaurants use imported legs. In my opinion, I would rather suggest that this shortage just helps restaurant

owners, who can offer frog's legs 'made in France'... at the highest price."

### Frog Shortages Elsewhere

Is the apparent decline, or outright absence of cricket frogs in northern Illinois a case of *Acris de-crepitans*? (Contributed by Eloise Beltz-Decker)

### The Sound of Frogs Quietly Weeping

Downtown Memphis, Tennessee, recently lost several million residents overnight when the 51-year-old Selph's Cricket Ranch moved to Mineral Wells, Mississippi. Some of the ranch's former neighbors were sorry to see them leave, apparently not being as accustomed to crickets on the loose as are most of us. (*Commercial Appeal* [Memphis, TN], January 9, 1991, contributed by William Burnett)

### No Frog Calls, Please...

The CHS now has a recorded announcement giving information about upcoming events: (312) 238-1800. Please use it if you need to know the who, what, when, how and why of any CHS event.

A joint project of the Chicago Public Library and the Chicago Veterinary Medical Association is their informative "(312) DIAL-PET" message system. Callers tell the operator the number of the tape they'd like to hear. Tapes are five to seven minutes long. Herpetile titles include: #106-Care of Lizards, #135-Myths about Snakes, #136-Poisonous and Nonpoisonous Snakes, and #137-Snakes as Pets. You may also find interesting #105-Care of Mice and Rats, and #134-Terrariums and Vivariums. (*Pet Patrol*, Winter, 1990, contributed by Robert J. Keough, D.V.M.)

You can call the New York Turtle and Tortoise Society at (212) 459-4803 if you think that the sale of any turtles you see advertised may be illegal. The Society will determine whether or not the turtles are being sold illegally and if they are, will contact the appropriate authorities.

### Or Perhaps, No Frogs at all

The golden toad, *Bufo periglenes*, was first described in 1963 from the Monteverde Cloud Forest Reserve in Costa Rica. In 1990, it was reported to have become extinct. Just a few years ago, thousands of these two-inch amphibians clogged mountain-top rain puddles in a frantic six-week breeding extravaganza. None emerged this year. The forest has been protected since 1972 and appears pristine. (*Tropicus*, Conservation International, Fall, 1990)

### Bugs Bite Back

The *New York Times*, December 27, 1990, reports new warnings about *Salmonella* in turtle eggs. Dr. J. Y. D'Aoust, of Health and Welfare Canada, and colleagues, sampled 28 lots of turtle eggs imported from four turtle farms in 1988. Six lots (approximately 40,000 eggs) were infected with 37 differ-

ent species of *Salmonella*. Thirty of those were resistant to gentamicin, an antibiotic used by the turtle farmers in an effort to produce *Salmonella*-free turtles. The U.S. domestic sale and distribution of turtles with shells less than four inches long was banned in 1975 by the Food and Drug Administration, based on reports that 15 percent of human salmonellosis in the States was attributable to tiny turtles. The export of millions of baby turtles and turtle eggs for hatching has never stopped. (Contributed by P. L. Beltz)

#### Escaped Snake Returned

A 7-foot Burmese python was recovered by its owner one month after it had slithered its coop. It apparently escaped through a toilet after being left to exercise in the bathroom of the appropriately named "Wet Pets" in Alexandria, Louisiana. (*Daily Sentinel*, Grand Junction, CO, September 16, 1990, contributed by Larry Valentine)

#### Members' News

Vincent Congro, owner of VJ's Wholesale Reptiles, was featured in the "About New York" column in the *New York Times* (January 12, 1991). The reporter who visited his Brooklyn headquarters wrote: [He] "is devoted to his thousands of reptiles. In July, he gave up a well-paying job as a plating-company executive in Queens to open the store and squirm for his dream."

Former board member Bernie Kean is known to CHS members as a wonderful leader of snake programs at libraries and nature centers. Most recently he presented "Snakes Alive" for children ages 8 and up at the Niles Public Library. Several Chicagoland papers had nifty stories and,

even better, pictures of Bernie, snakes and quite fearless children.

The Gainesville [FL] Herpetological Society (a CHS Exchange Member) wants our help! The Herpetology Department of the Florida Museum of Natural History is so underfunded that they can't even buy all the current books and subscriptions they need, and are raising funds toward an endowment to enable the Department to survive and prosper. This is not only a worthy cause, loyal readers, but a book-worm's responsibility. Even if you can only afford a couple of bucks, send your tax-deductible donations to Dr. Walter Auffenberg, Herp Division - FMNH, University of Florida, Gainesville, FL 32611.

A studbook for *Shinisaurus crocodilurus* is being maintained by Andy Snider, Reptile Department, Audubon Park and Zoological Garden, P.O. Box 4327, New Orleans, LA 70178.

Darrel Frost, Curator of Herpetology at the American Museum of Natural History, in New York City, was quoted on the topic of roach-eating geckos, "If you really have a roach problem, they will work OK, but you need to keep them warm. I don't really recommend the practice. Big pythons are natural predators of rats, but I wouldn't recommend that people buy pythons." I wonder if the reporter, when he titled the article "Lizard of Ahs," knew that Darrel was from Kansas? (*New York Times News Service*, November 15, 1990, contributed by William Burnett)

#### How to contribute:

Send clippings, letters, notes, etc. to me in care of the CHS or to my home address as given in your members' directory.

*Bull. Chicago Herp. Soc.* 26(3):57, 1991

### Erratum: Zaworski, J. P. *A Range Extension and New County Record for the Prairie Kingsnake, Lampropeltis calligaster calligaster, in Illinois*

The voucher specimen of a prairie kingsnake from Knox County, Illinois, reported by James P. Zaworski in the January 1991 *Bulletin* (26[1]:10-11), was mistakenly assigned to Southern Illinois University, although the catalog number


was given correctly. The specimen (catalog number A14120) actually resides in the vertebrate collection of Western Illinois University in Macomb.

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## HerpWatch

by David Lawrence

**Pass the proteroglyph, please.** Diners in the British colony of Hong Kong will soon find these words excluded from customary dinner conversation. Hong Kong is planning a new law that will remove a popular winter delicacy—cobra—from the banquet table. According to a *Reuters* news service wire, legislation is being prepared in accordance with the Convention on International Trade in Endangered Species that will protect the king cobra, *Ophiophagus hannah*, the Asiatic cobra, *Naja naja* ssp., and an unnamed species of oriental rat snake. Thousands of Asian cobras are slaughtered annually for their skins but there is also an enormous demand for them at the dinner table in Hong Kong. During the peak snake-eating season from mid-October to mid-February, as many as 2,000 snakes a day, many of them cobras, are butchered and served in various concoctions. Hong Kong Chinese believe that a cobra's blood and the contents of its gall bladder are useful medicinal agents in the treatment of impotency, rheumatism and various ophthalmic disorders. Cobra cocktails are the standard means of obtaining one's daily measure of cobra blood. You'll probably never see a photo layout in *Gourmet* magazine, so let me describe this spirituous experience for you. The customer is allowed to choose a live cobra from among the crates and cages. Once an animal has been selected it is restrained and a scalpel is used to slit open the belly of the snake from throat to vent. The bartender then carefully selects the portal vein (which carries blood from the digestive organs and spleen to the liver) and nicks it with a scalpel so that the blood will flow into a glass. Still with me? The gall bladder is then punctured and the bile it contains is also allowed to flow into the glass. A shot of brandy is blended in and then it's bottoms up. Sounds great doesn't it? Did Tom Cruise cover this one in *Cocktail*? Meanwhile, the skin is peeled off of the still writhing snake and it is finally, mercifully, decapitated. The skin will be used in the production of leather products and the meat will more than likely be used in the making of cobra soup. Cobra soup is a popular menu item and is believed to warm the blood. Forgive me Whit Gibbons, my blood runs cold.

**Praise the Lord, pass that solenoglyph.** It's a practice that has been outlawed in every state except West Virginia, yet it is still widely practiced throughout southern Appalachia and in some parts of Ohio, Michigan, and Indiana: the handling of venomous snakes as a test of Christian faith. Religious snake-handlers have been practicing their unique faith for more than eight decades. This brand of religious snake-handling started in the summer of 1909 in Grasshopper Valley, Tennessee, at George Hensley's "The Dolley Pond Church of God with Signs Following." Quite a mouthful, isn't it? Hensley selected two verses from the 16th chapter of Mark, verses 17 and 18, and interpreted them literally as a test of his faith. Taken from the *New King James Version—Study Edition* the verses read as follows: 17 - "And these signs will follow those who believe: In my name they will cast out demons; they will speak with new tongues"; 18 - "They will take up serpents; and if they drink anything

deadly, it will by no means hurt them; they will lay hands on the sick, and they will recover." In addition to handling venomous snakes, members of this faith drink mixtures of strychnine and water, and subject themselves to trial by fire. A fascinating article on one such congregation appeared in the December 30, 1990, *Roanoke Times & World News*.

It's a cold wintry Saturday night in Jolo, West Virginia. The narrow roads are icy and slick leading into this town. Sounds like the perfect evening to spend curled up by the fire with a good book. But in Jolo the creatures are stirring and the unlit dirt parking lot outside of the Church of the Lord Jesus is full. Inside things are hot. The congregation is rocking and swaying to the sound of electric guitars, drums, and tambourines. People are shouting and weeping and speaking in tongues. "Praise Jesus!" shouts Dewey Chafin. "I've got the joy!" Not only does Dewey have the joy, he also has four rattlesnakes in hand. Dewey knows he will be protected, God's word tells him so. The congregation praises the Lord and reaches out to take the slithering serpents from Chafin. Chafin and several other members of the congregation then take swigs of a strychnine solution that is contained in a Kraft Sandwich Spread jar. A cloth sticking out of a Coke bottle containing kerosene is ignited and worshipers hold their hands over the flame for extended periods of time. The faithful are rewarded in Jolo tonight. All survive to live another day. This is not always the case.

Dewey Chafin is a 56-year-old disabled coal miner and a veteran of the Korean War. Chafin has been handling snakes for over 30 years. He says he has been bitten by venomous snakes 106 times. Chafin was introduced to the snake-handling faith by his mother, Barbara, 72, who has handled serpents for over 50 years and has survived 17 venomous snake bites. All members of this faith are not so fortunate. In 1962, Dewey's sister, Columbia, was bitten by a rattlesnake, refused medical treatment and died four days later. Columbia was 22. She is the only fatality at the Jolo church. There are 11 documented fatalities resulting from religious snake-handling in West Virginia. Dewey and his mother believe it was God's will for Columbia to die and their faith in their religion is unswerving. "You don't pick up a snake till you're anointed," says Dewey. "When you're anointed, the spirit of God is moving inside of you and it is taking control of you. That's when you know you're saved. If you get bit and you're anointed, you know in your heart and mind that you're going to be alright, even if you die... her death didn't make me question my faith."

Chafin lives with his wife Geneva, a Catholic, just up the road from the church. Although Geneva doesn't subscribe to the same religious beliefs as her husband, his unorthodox views haven't been a problem for her. "It doesn't bother me," she says. "We never argue about it. It's his religion." Chafin keeps and cares for most of the snakes used in the Jolo church services in a small building behind his house. He catches many of these rattlesnakes and copperheads in the surrounding countryside and says he enjoys caring for them.

In fact he says he loves snakes. Maybe there is some hope for this man, or maybe there is some hope for me. You just never know about these things. The doorway to the building housing the snakes is marked with a skull and crossbones and painted with the warning "Danger Poison Snakes." The boxes used to hold the snakes are decorated with crosses and biblical verses. Chafin picked up a rattler to show the reporter and said, "Now this one'll strike at you. I don't think I'll take him to church. Because once you handle them and get victory over them, it just takes the life out of them." One wonders just what kind of life these captive creatures must lead. Do they receive food or water? The article doesn't say.

Chafin has been bitten on the hands, the arms, and the face. He has never received medical treatment for any of his 106 bites and feels that he has been close to death on several occasions. Why does he continue to take up the deadly serpent? "I am not ashamed of what I do," says Chafin. "I'm proud. God tells me to handle deadly snakes, so I've got to." Academics theorize that people adopt deadly religious practices such as handling venomous snakes as manifestations of everything from inhibited sexuality to a fatalism inherent in Appalachia. For anyone interested in learning more about this homegrown, death-defying cult two references are recommended. *Venomous Reptiles* by Sherman and Madge Minton contains an interesting chapter on the subject, entitled "Snake Handlers of the Bible Belt." And for insight into the psychology of the cult, see *They Shall Take Up Serpents* by Weston La Barre.

**Scats from the past.** Karen Chin, a geology graduate student from the University of California, Santa Barbara, is digging (albeit gingerly) for answers to a question that has puzzled paleontologists for some time. Whatever happened to the feces from the huge plant-eating dinosaurs? Specimens of fossilized dinosaur excrement (coprolites, as they are called in the scientific community) are plentiful for the meat-eating dinosaurs but scarce for the vegetarians. Chin thinks she may have uncovered the droppings of *Maiasaura*, a duck-billed herbivorous dinosaur. The poop on Chin's findings is contained in *Science News*, (October 27, 1990). While studying irregular blocks of black rock containing fossilized plant material Chin noticed that most of the plant fragments were less than 3 cm long and their edges were rough and angular as if they had been cut or chewed into pieces. The black blocks, with widths up to 30 cm, came from a geologic formation in Montana that has yielded many bones of *Maiasaura*. Chin suspects the plant fragments are droppings from *Maiasaura*. She has rejected the notion that the blocks could be fossilized peat rather than coprolites for several reasons: the semiarid environment of the region at that time was not conducive to peat formation and the blocks occurred in isolated groups rather than in expansive peat-like deposits. If Chin is correct, her findings could shed some light on what *Maiasaura* ate. Some of the fossilized plant material is identifiable as coming from cypress-like conifer trees that lived at the time. Why have coprolites from herbivores previously been so difficult to detect? The excrement from meat-eating animals has a characteristic spindle shape much different from the fecal material of an herbivore. Chin noted that the scat of mammalian herbivores assumes a blocky shape after it dries and

cracks. Herbivore coprolites have probably been there all along; it's like not seeing the forest for the trees. Chin plans to test her assumptions by checking the specimens for sterol compounds and the presence of feces-inhabiting microorganisms. A positive test will confirm that the plant material passed through an animal's digestive tract.

Paleoparasitology is in its infancy in North America. South American researchers have made many advances in this field, but until recently scientists on our continent haven't had much to add. According to Karl J. Reinhard, a researcher from the University of Nebraska-Lincoln, that may soon change. Reinhard has spent the last two years examining the fossilized excrement of prehistoric alligators. The aforementioned issue of *Science News* credits Reinhard with being the first to identify parasitic eggs in specimens of North American coprolites. Reinhard found parasite eggs in 12 of the 28 specimens of 10,000-year-old south Florida dung that he examined. Identified eggs represented five or six species of parasites, including a type of nematode and several species of flukes.

**Rare salamander find halts timber sale.** A two-week search in the Jemez Mountains of New Mexico yielded 32 specimens of the endangered Jemez Mountains salamander, *Plethodon neomexicanus*, and put the brakes on an advertised timber sale by the U.S. Forest Service. Bill McKinney, wildlife biologist for the Santa Fe National Forest, said the salamanders were found in four areas proposed for timber harvesting in what the Forest Service calls the Bonito Diversity Unit. Salamanders were not found in eight other units surveyed and an additional five units have yet to be surveyed. Two of the units where the salamanders were found were determined by a 1988 state Game and Fish Department report NOT to be salamander habitat. *Plethodon neomexicanus* is found only in the Jemez Mountains and has been recommended to the U.S. Fish and Wildlife Service for listing under the federal Endangered Species Act. It is already listed as endangered by the state of New Mexico. (*New Mexican Staff*, no date given)

**The Illinois Non-game Wildlife Conservation Fund** will foot the bill for a year-long study of some of the state's rarer herps and for surveys of selected herpetological areas. The study, headed by Ron Brandon, zoology professor at Southern Illinois University-Carbondale, will focus on the Fults Hill Prairie/Kidd Marsh natural area, the Prairie du Rocher Herpetological Area, and the Renault Herpetological Area. These areas are all in western Illinois, south of St. Louis, Missouri. Researchers will survey each area to determine what species of reptiles and amphibians live there and the status of their populations. Less intensive surveying is planned for the Green River Conservation Area in Lee County. *Outdoor Highlights* (January 7, 1991) states that Brandon will conduct statewide inventories of three threatened species: the coach-whip snake, *Masticophis f. flagellum*, the Great Plains rat snake, *Elaphe guttata emoryi*, and the dusty hognose snake, *Heterodon nasicus gloydi*, and two species that are considered rare, the copperbelly water snake, *Nerodia erythrogaster neglecta*, and the four-toed salamander, *Hemidactylum scutatum*. Researchers will check locations where the species historically have been reported and they will survey new areas where habitat conditions are favorable. Based on information garnered from the \$17,500 study, the implementation of

management techniques such as the installation of culverts to allow safe passage for migrating snakes will be considered.

**Toad teed off in Ireland?** The largest breeding area for the natterjack toad, *Bufo calamita*, has come under threat in Ireland. *New Scientist* (January 19, 1991) reported that the Berne Convention on the Conservation of European Wildlife and Natural Habitats had received word a week earlier that a nine-hole golf course was being built within the toads's range of sand dunes and freshwater lagoons in the Castlegregory peninsula in County Kerry. The natterjack toad and its breeding sites are protected under Irish law, but a status change of land use from agriculture to leisure, such as a golf course, requires no formal approval. There is speculation that a second 18-hole course is being planned nearby by Japanese investors. Environmental pressures may force the natterjack to add the cry of FORE! to its vocabulary. Or is that foul?

**The beat goes on ...** Exploitation and destruction of our planet continue and sometimes we learn something along the way. In the December 1990 *Bulletin of the Maryland Herpetological Society*, Janis A. Roze and Nelson Jorge da Silva describe a new species of coral snake, *Micrurus rondonianus*, from Brazil. This snake was discovered during a rescue operation at the Hydroelectric Power Plant of Samuel. The rescue operation lasted from November 14, 1988, through March 23, 1989. During the rescue operation about 16,000 animals were saved from the area being inundated by the project. This included 3,500 reptiles and 2,000 amphibians. Actually just a drop in the bucket so to speak, but I guess some effort to salvage the wildlife is better than none at all. The inundated area is or was tropical rain forest covering an area of 216 square miles. About 51,536 acres of the project's land was designated as a protected area and many of the rescued animals were released there. This area is supposed to be afforded permanent protection and serve as a study area for national and international researchers interested in the local flora and fauna. As rapid expansion of agricultural and gold-mining activities takes the place of the tropical rain forest in the region we are faced with the realization that what little is protected may be all that is left in the near future.

**Rare terrapins hatch at the Bronx Zoo.** Six giant Asian river terrapins, *Batagur baska*, hatched after an incubation period of 80-87 days, in April of 1990, at the Bronx Zoo's Reptile House. This is the first captive breeding of this endangered species. The common batagur or tuntong, is found in Sumatra, the Malay Peninsula, and north through Thailand to the Irrawaddy River in Burma. The female parent is a 64-pound, 30-year captive, on loan from the Columbus Zoo. Her mate was one of seven, four-year-old male batagurs received as gifts in May 1985 from the Department of Wildlife and National Parks, Peninsula Malaysia. The Malay name "tuntong" is derived from a sound made by nesting females. These females may be quite large and reach a maximum length of 23 inches. After the female deposits her eggs in a nest dug along a sandy river bank, she scrapes sand over them with her legs. She then compacts the sand by repeatedly dropping her body on it. The "tun tonk" sound produced as her shell pounds the sand gives this terrapin its common name. The Bronx Zoo has nine tuntongs on display in the gharial exhib-

it in JungleWorld. If you get the chance, this impressive exhibit is worth seeing.

Something else worth seeing is the newsletter where I got the info on the batagurs. *Tortoises & Turtles* is the newsletter of the IUCN Tortoise and Freshwater Turtle Specialist Group. This note was in No. 5, October 1990. This is the first issue I've seen of this publication, but it won't be the last. It contains 20 pages of excellent material on the conservation and biology of turtles and tortoises. The topics covered are varied, the authors are worldwide in flavor, and are some of the most respected people in the field today. Oddly, there are no price or subscription details in the issue I have, but I'm assuming that this fine publication is not meant to be kept a secret. So for further information contact: Peter C. H. Pritchard, Editor, Florida Audubon Society, 1101 Audubon Way, Maitland, FL 32751.

#### Current events/future events

**April 8-9, 1991. THE CARE AND USE OF AMPHIBIANS, REPTILES AND FISH IN RESEARCH**, a conference co-sponsored by The Scientists Center for Animal Welfare and the Louisiana State University School of Veterinary Medicine. The conference will be held at the Double Tree Hotel, 300 Canal Street, New Orleans, Louisiana 70130, (504) 581-1300. Topics will include: Regulations and Guidelines; Housing, Handling and Nutrition of Salamanders and Frogs; Medicine and Diseases of Amphibians; Anesthesia, Analgesia and Euthanasia of Amphibians and Reptiles; Field Research (Tagging, Capture/Recapture, Monitoring Evaluation); Housing, Handling and Nutrition of Crocodylians, Snakes, Lizards and Turtles; Medicine and Diseases of Reptiles; Pain and Stress Assessment. Similar topics will be covered for fish. Preregistration is required and space is limited. Fees: \$325 for first registrant; \$300 for other registrants from the same organization. Registration for full time students (12 semester hours) is \$75. Checks should be mailed to: Scientists Center for Animal Welfare, 4805 St. Elmo Avenue, Bethesda, Maryland 20814. Deadline for registration: March 29. Deadline for room reservation: March 17.

My synopsis may be a bit jumbled but the program and the faculty all look first rate. The organizers are pitching this to "researchers, members of Animal Care and Use Committees, administrators, veterinarians, and others interested in these species..."

**April 27, 1991, Saturday, 10:00 A.M. to 4:00 P.M. BOG TURTLE SYMPOSIUM** at Moravian College, Bethlehem, Pennsylvania. Organized by the Lehigh Valley Herp Society, this event will be hosted by John Behler, Curator of Reptiles and Amphibians at the Bronx Zoo, and Mike Klemens, Program Director for Turtle Conservation at the American Museum of Natural History. There will be a registration fee. Contact: Pete Schmelzer, (215) 395-1315 or write L.V.H.S., P.O. Box 9171, Allentown, PA 18105.

The sounds of *Hyla crucifer* have begun to pierce the winter stillness in Virginia. The chorus of the spring peeper is always a welcome sound. February is almost behind me and I'm happy. See you next month.

## Herpetology 1991

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 published during the year. It is an attempt to increase the reader's awareness of what professional herpetologists have been doing and publishing. The editors assume full responsibility for any errors or misleading statements regarding the results of the abstracted research. JCM

### A FRUIT-EATING, SEED DISPERSING FROG

H. R. da Silva et al. [1989, *Copeia* (3):781-783] report that the neotropical treefrog *Hyla truncata*, which is usually found in the leaf axils of the terrestrial bromeliad *Neoregelia cruenta*, will eat fruit and act as an agent of seed dispersal. The stomachs of 81 frogs were examined: 53% were empty, 27% had only arthropods, 14% had only fruits, and 6% had fruits and arthropods. Ten captive frogs were kept in terraria and offered fruits; 47% of the fruits were eaten and no insects were present in the cages. Two specimens of the frog were kept in captivity for four months on a diet exclusively of fruits of *Anthurium harrisii* (Araceae) and survived. Seeds obtained from the feces of captive frogs germinated.

### HIBERNATION SITES OF MUHLENBERG'S TURTLE

C. H. Ernst et al. [1989, *Copeia* (3):761-764] describe the hibernation sites and thermal relations of Muhlenberg's turtle, *Clemmys muhlenbergii*. Hibernation sites include: the soft bottoms of waterways; muskrat burrows, *Carex* clumps; submerged at the base of a stump; and meadow vole burrows. The dormant turtles were found under 5-55 cm of water and mud. Cloacal temperatures of hibernating turtles were highly correlated with environmental temperatures. The authors suggest that the turtle may be able to behaviorally regulate body temperature by selecting favorable hibernacula or moving vertically within the substrate in response to changes in environmental temperatures.

### INTRODUCED SALMONID FISHES AND FROGS: A TALE OF EXTINCTION

D. F. Bradford [1989, *Copeia* (3):775-778] examines data for 67 lakes in the Tablelands and Ansel/Blossom lakes areas of Sequoia National Park and Kings Canyon National Park in California for the presence and absence of fish and frogs. The lakes are at elevations of 2910-3430 m, have areas from 0.004 to 7 ha, and vary in depth from 0.3 to 37 m. Rainbow trout, brook charr and possibly golden trout have been introduced into some of the lakes in this area. Each lake was surveyed for the presence of fish and tadpoles during the summer of 1978 or 1979. The fish and tadpoles [of *Rana muscosa* and *Pseudacris* (= *Hyla*) *regilla*] were allotopically distributed among the lakes studied. Fish and tadpoles did not coexist in any of the lakes surveyed, yet 49 lakes contained either fish or tadpoles. In the 40 lakes deeper than 1.5 m, fish and tadpoles showed significantly non-overlapping distributions. The introduction of fish into high altitude Sierra Nevada lakes has apparently decimated the native frog populations by predation. Lakes deeper than 1.5 m that lack fish have abundant populations of *Rana muscosa*.

### TEXAS HORNED LIZARDS AND ANT VENOM

P. J. Schmidt et al. [1989, *Copeia* (3):603-607] report that the Texas horned lizard, *Phrynosoma cornutum* has a factor in its blood plasma that will detoxify the venom of the harvester ant, *Pogonomyrmex maricopa*. In a series of experiments the authors demonstrated that *P. cornutum* has evolved a specific mechanism for neutralizing the venom produced by its prey, the harvester ant. Other reptiles injected with venom died, but mice injected with 2.5 times the lethal (LD<sub>50</sub>) mouse dose and different quantities of Texas horned lizard plasma survived. These lizards also engulf the ants with large quantities of mucus in their digestive system. This is the first known instance of vertebrate ability to resist the venom of an arthropod.

### MUDPUPPY POPULATION DAMAGED BY LAMPRICIDE

T. O. Matson [1990, *Kirtlandia* 45:33-39] assesses the impact of the lampricide (chemical agents used to control the marine lamprey) 3, trifluormethyl-4-nitrophenol (TFM), on the mudpuppy, *Necturus maculosus* in the Grand River, Lake County, Ohio. Before the river was treated with TFM the mudpuppy population was estimated to be 556-1118 animals per km of river in 1987. A census after treatment in 1988 estimated the mudpuppy population to be 280-397 per km. Thus there was a minimum 29% decrease in population size. Individuals within the range of total lengths examined appear to exhibit equal sensitivity to TFM. This is contrary to a previous study that suggested that mortality was restricted to animals with a total length less than 50 mm. Intensive seining and manually turning rock slabs were effective methods for capturing mudpuppies, while trapping and electroshock proved to be ineffective.

### CARBON DIOXIDE ANAESTHESIA USEFUL IN VENOM EXTRACTION

F. F. Leinz et al. [1990, *Mem. Inst. Butantan* 52(1):17-23] perform a controlled experiment extracting venom from the pit viper *Bothrops jararaca* under carbon dioxide anaesthesia. The death rate, weight of dry venom individually produced in relation to the weight of the snake, dry venom rate in relation to sex, and dry venom yield in relation to the length of captivity of both experimental and control snake groups were analyzed. The results show that carbon dioxide is efficient and practical as an aid in venom extraction, reducing the risk of accidents without affecting survival of the snakes and venom production. The rate of dry venom obtained from the females was higher than from the males and the yield of dry venom in relation to the liquid was 22%.

## Letters to the Editor

On behalf of the Society for the Study of Amphibians and Reptiles, I am pleased to congratulate the Chicago Herpetological Society on its 25th anniversary.

This is an important milestone in any organization's history, but few have achieved the success that the CHS has in so short a period. Your monthly *Bulletin*, book service, educational activities, regular meetings, and other programs are a real service to the herpetological community far and wide.

America is blessed with numerous regional societies and SSAR, indeed, has not forgotten its own origins. We believe that the herpetological community at large is best served by cooperation of all societies to promote research, conservation, and education relating to amphibians and reptiles. In the past, we have come to value the friendly cooperation of the CHS and look forward to continued participation for the good of our discipline.

We salute you and wish CHS every success for its Silver

Anniversary Year and the future.

Sincerely yours, **Linda R. Maxson, President, Society for the Study of Amphibians and Reptiles.**

I understood the raise in dues at the time—the club needed the money! I just feel that Individual should be less than \$2.50 less than Family; \$15 seems a bit more in line. But the club has gotten far too materialistic and greedy with its success to change. It *used* to care about the members.

Now, tee shirts are sold to members for the same price as the public and we only get a \$2 to \$4 break on books—so the club can sock away money for what?

At least use the money for something educational or helpful to the benefit of herps and the public. In my opinion education should be number one.

**THE CLUB IS FAR TOO GREEDY NOW.**

**Janice I. Kucera, 3079 N. Davlin Court, Chicago IL 60618.**

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Bull. Chicago Herp. Soc. 26(3):62, 1991

## Two Herpers I Have Known

**Robert J. Hilger  
3441 W. 62nd Street  
Chicago, IL 60629**

My love for herpetology has been with me ever since I was about six years old. From that time till the present I have shared that hobby with many people, groups, libraries and schools.

However, it was through my sharing of a love for herpetology (namely snakes), that two people became very close to me: my dad and little David Rice.

It is interesting to note that my dad, never fond of snakes, always allowed me to have coffee cans, squirming with plains garter snakes, in the home. Many a time, my dad would loudly scream that he had detected one of my escapees atop his fishing tackle box, or on his tool shelf. Any program or special on snakes heightened my dad's enthusiasm to tell me, "OH BOB, you gotta see this. IT'S ON SNAKES."

In later years, my dad encouraged me to go out and actually perform snake educational programs for children in schools and libraries. I did, and my dad was right there with me, helping out. After fifty shows or more, my dad would get to know the librarians and teachers, providing friendly conversation. He loved watching the expressions on the faces of the children as they held or touched the snakes. I, my dad and the snakes shared a unique bond through those shows. On November 25, 1990, my dad finally succumbed to lung cancer. My snake shows will never be the same.

I met David Rice a few years ago, along with his lovely mother Laurie, on the annual CHS salamander hunt. Sloshing through the woods, little David and I formed a buddy bond as we scouted the leaves, tree bark and ponds for reptiles and amphibians.

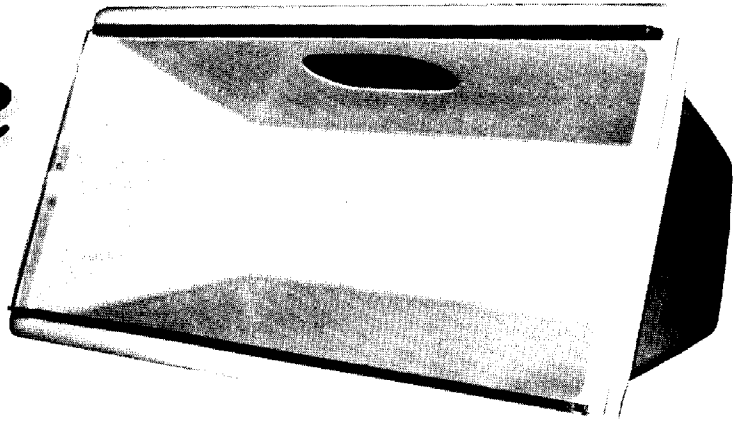
I took David on a few more of the herp salamander hunts. They were great times. I remember the time that David nimbly crept out on a tree limb to snatch up an ailing painted turtle. Later on, nursing it back to health, David returned the turtle back to the wild.

It was not so much the hunting that we both enjoyed, but the hiking, exploring and conversing too. David was always respectful and full of joy, whatever area that I wished to hunt was fine with David. I never really knew the impact that I made on David, but I felt we were great friends. At the meetings David would always look for me, and appeared eager for any new herp info. David was my joyful, fun, little herp brother.

About a week after my dad was buried, David Rice, age 12, was killed in a traffic incident. His loss, compounded with my dad's, has left me very empty. But I am forever grateful to have shared my love for herpetology with two of the most wonderful, loving people I will ever know.



# Reptile Cages



As an added benefit of CHS membership, we are now offering the popular Neodesha plastic reptile cages to members only at prices **below retail**. All prices include shipping to you (cont. 48 states) via UPS. Cages are available with tempered glass doors only (Plexiglas doors are being discontinued). The following choices are available:

<u>Length</u>	<u>List price</u>	<u>Price to CHS members</u>
24"	42.95	36.00
36"	72.45	64.00
48"	177.95	150.00
72"	444.95	P.O.R.

Allow several weeks for shipping. Make check or money order payable to "CHS." Send orders to: Chicago Herpetological Society, Cage Sales, 2001 North Clark Street, Chicago IL 60614.

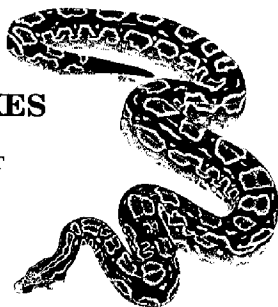
Quantity discounts are available on orders of six or more cages. For more information write or phone Howard Weiner, CHS Director of Sales, 6157 North Sheridan, Apt. 5A, Chicago IL 60660, (312) 262-8556.

SCOTT J. MICHAELS, DVM  
P.O. Box 657  
Island Lake, Illinois 60042-0657  
815-383-0290

## CAPTIVE-BRED SNAKES

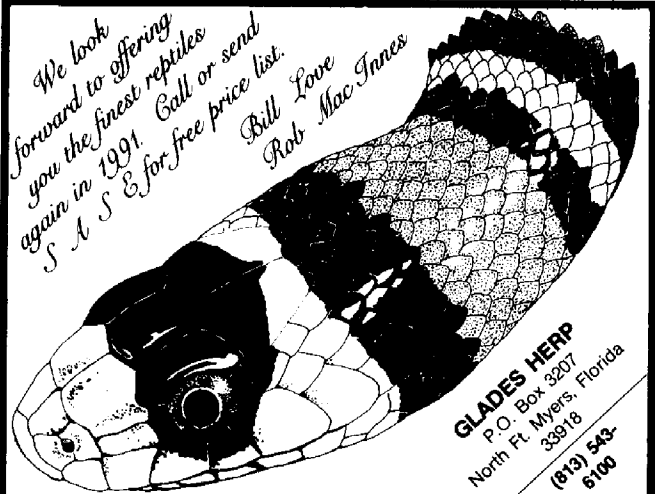
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WHOLESALE & RETAIL  
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*We look forward to offering you the finest reptiles again in 1991. Call or send S.A.S.E. for free price list.*

*Bill Love  
Rob Mac Jones*



**GLADES HERP**  
P.O. Box 3207  
North Ft. Myers, Florida  
33918  
(813) 543-5100

## Advertisements

- For sale: the CHS is selling brand new Neodesha plastic reptile cages to members only for pick-up in downtown Chicago. Three sizes are available: 2', \$36; 3', \$64; and 4', \$150. Ellin Beltz, (312) 642-8290.
- For sale: 3-color CHS-logo patches and decals are available through the mail. Patches are \$4 each; decals are \$1.75 each or three for \$5. Prices are postpaid but you must include a self-addressed envelope or mailing label with your order. Make checks or money orders payable to 'CHS' and send order to: Chicago Herpetological Society, Patches and Decals, 2001 N. Clark Street, Chicago IL 60614.
- For sale: mice, live or fresh frozen, pinkies up to hoppers, 3 for \$1; weanlings, \$.40 each; adults, \$.50 each. Dr. Michael J. Miller, (312) 974-2600.
- For sale: highest quality frozen feeder animals, raised on the best diets available. Seven years in the production and supply of frozen feeders. Specializing in various sizes of mice: 1- to 2-day-old pinkies; 4- to 5-day-old large pinkies; 8- to 10-day-old extra large fuzzies; and adults. Prices start at \$25/100. Also available, pink rats, baby chicks and quail chicks. Write or call for a free price list. Kelly Haller, 4236 S.E. 25th, Topeka KS 66605, (913) 234-3358.
- For sale: live feeder mice, \$.50 each; young rats, live or frozen, \$1 each. Will deliver to CHS meetings. Eric Richter, (708) 863-7418.
- For sale: top quality *fresh* frozen rats, \$1.50 each. Price *includes* packing and dry ice. Freight is collect to you. Our rats are fed the highest quality laboratory formulated diet and are *flash frozen* for maximum nutritional value. Minimum order \$75. *Attm:* 30% discount on standing orders and orders of 300 or more rats. Steve Hammond, c/o Exceptional Exotics, 12319 Steedland, Louisville KY 40229, (502) 955-8705.
- For sale: jumbo rats, 95¢; small rats, 65¢; in lots of 200+. No shipping. Karen Ellett, Box 78, Rt. #1, Greenville NY 12083, (518) 966-8192.
- For sale: *THE GOURMET RODENT*: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, 3496 State Road 346A, Archer FL 32618, (904) 495-9024.
- For sale: live mice, \$.65 ea.; small & med. rats, \$1.00 ea. & \$1.40 ea. Frozen (frozen separately)—Mice: pinkies, \$.25 ea.; fuzzies, \$.30 ea.; weanlings, \$.35 ea.; adults, \$.45 ea. — Rats: pinkies, \$.50 ea.; small, \$.95 ea.; medium, \$1.30 ea. For more information call or write. Jim & Elizabeth, P.O. Box 1742, Fort Collins CO 80522, (303) 221-1675.
- For sale: frozen chicks, five for \$1. Will bring to CHS meetings. Bryant Capiz, (312) 725-4773.
- For sale: rats, small and medium, 75¢; large, \$1.00. Dan, (708) 584-2865, call after 4 P.M.
- For sale: gerbils, hamsters, guinea pigs, bunnies, rats and mice. All are raised with love. We also take in your "no-longer-wanted" pets of the above. Barbara, (312) 463-3609, 12:00 - 7:00 P.M.
- For sale: top quality mice, rats and Chinese dwarf hamsters. All sizes at competitive prices. Gary W. Allison, 919 Wyandotte Street, Bethlehem PA 18015, (215) 974-8975.
- For sale: lab cages for mice, rats. New, indestructible, clear bottom, v-wire top, 5 sizes. Send S.A.S.E. for brochure. Barbara Salamch, Rabbit Habbit Custom Cages, 2920 W. Irving Park Road, Chicago IL 60618, (312) 463-3609.
- For sale: large selection of captive born reptiles and amphibians, books and supplies. Send S.A.S. business-size envelope for complimentary price list or \$5 for a 1 year subscription (bi-monthly), to Twin Cities Reptiles, 540 Winnetka Avenue North, Golden Valley MN 55427, (612) 593-0298.
- For sale: 1991 ANIMAL DIRECTORY—comprehensive listing of wholesale and retail breeders/suppliers of exotic and domestic mammals, birds, reptiles, amphibians, fish and invertebrates. Available February 1991, no charge to be listed with purchase. \$16.50 (first class postage included). Write to: *Fauna Classifieds*, 555 E. Vista Rio Court, Woodbridge CA 95258.
- For sale: books on reptiles & amphibians. Send for free catalog of over 2300 titles. Herpetological Search Service & Exchange, 117 E. Santa Barbara Road, Lindenhurst NY 11757.
- For sale: the finest quality reptile cages built in this country. Custom made from over 25 years experience—we've worked out all the bugs! All the best features have been incorporated into one design, a finely honed performance cage which is better than the old "plywood box" design. All cages are stackable, front opening, extremely functional, durable and lightweight, while retaining an enjoyable simplicity. Call Paul Edwards at Creative Caging Systems, (402) 330-4381, for prices and for photos. [NE]
- For sale: Ziegler High Calcium Cricket Meal, excellent for nutrient loading crickets prior to feeding, \$2/16 oz.; Ziegler Iguana Meal High Quality Diet, mix with greens, veggies and vitamins, 30 lbs., make offer (can sell in smaller quantities); four 6" Neodesha stacker cages with shelf unit, brand new, \$35; Comfort Plus ceramic furnace, great for providing additional heat for herp rooms, like new, \$40. Can deliver to CHS meetings. Rob Carmichael, (708) 615-4388, leave message any time.
- For sale: a complete line of flawless captive born reptiles and amphibians, herpetology literature and related supplies. The Herp House has moved. The new address and phone number are: The Herp House, 1750 Haines Road, Orwell OH 44076, (216) 685-4615. A new list will be available soon. Please call or write to receive a free copy.
- For sale: the following quality, captive bred boids are gravid and hatchlings will be available April–June this year: albino Burmese pythons, heterozygous Burmese, normal phase Burmese, Colombian boas, reticulated pythons and ball pythons. Discounts will be available on the albino Burmese in any quantity—even pairs. Snakes from different clutches will be available. Inquire about yearling albinos. All the above snakes are captive bred and born—no wild caught animals are sold or used as breeders. For a free pricelist contact Kelly Haller, 4236 S.E. 25th Street, Topeka KS 66605, (913) 234-3358.
- For sale: male yellow rat snake, 5 years old, \$15; amelanistic male red rat snakes, 3 & 4 years old, \$35 each; banded California kingsnakes, \$40. Pick-up at my home only. John Cebula, (708) 858-3767 after 4 P.M. [DuPage]
- For sale: one male and one female hatchling albino Sonoran gopher snakes, \$125 each. Transport to Chicago available. Roger Carter, (317) 873-6561, evenings. [Indianapolis]
- For sale: 3' female Colombian boa, \$160; two female gray-banded kings, 20" & 24", fuzzy eaters, \$200 each; 3' male blond trans-Pecos rat snake, c.h. '89, fantastic! \$260; 1' female rosy rat, c.h. '90, \$35; one male and one female Baja kings, c.h. '89, \$300/pair. Aaron, (217) 362-0031. III.]
- For sale: 4' female boa, light colored, feeding well and very healthy, best offer. Jacques Michel, (708) 872-1000 work, or (708) 872-4768 after 5 P.M.

## Advertisements (cont'd.)

For sale: large adult male gray-banded kingsnake (Blair's phase), feeding on mice, \$175; 6' + male trans-Pecos rat snake, Langtry origin, irregular feeder, \$75; 4' carpet python, olive and tan, \$150; female northern pine snake, c.b. '90, \$60. Bill Smith, (919) 768-7600, after 5 P.M. eastern time. [NC]

For sale: double heterozygous Burmese pythons due to hatch 3/13/91! They will be the first available this year. The advantages of obtaining hatchlings born early are obvious. Reserve yours now! Snakes Alive! Star Route, Davis Creek CA 96108, (916) 233-LIVE (owners Joe and Lavina Pierce).

For sale: baby Colombian boa constrictors. Most are second generation captive bred. All were produced by me. I'm a breeder not a dealer and can supply detailed info on all offspring. Unrelated pairs available. No redundant hype, just beautiful babies with pink, orange, gold or tan ground colors. References available. Let me know what you prefer, I might have it. \$120-150 each. Average babies, \$115 each; ten or more, \$100 each. All will be feeding on their own. Mice: adults, \$.25 each; weanlings, \$.17 each. Minimum order 2000 count. Rodents and boas shipped air freight collect. All orders must be prepaid. Orders over \$1000, I'll pay the freight. No deposits accepted. Babies available Feb.-June. Jeff Ronne, (612) 431-6813.

For sale: snakes alive! Large variety of captive bred exotic red tailed boas, pythons and colubrids. Free 1991 price list available. Snakes Alive! Star Route, Davis Creek CA 96108, (916) 233-LIVE (owners Joe and Lavina Pierce).

For sale: one albino male Burmese python and three heterozygous female Burmese, c.b. '90, all hand picked, doing very well, \$2000 for the lot; two male D'Alberts pythons, c.b. '90, also doing well, \$325 each or \$600 for both. Scott Telzer, 21359 Tulane, #104, Farmington MI 48336, (313) 476-2513, evenings.

For sale: adult gopher snakes. *Pituophis catenifer* subspecies — one male and one female *sayi*, \$30/pair; two male and two female *catenifer*, \$30/pair; one male and one female *deserticola*, \$30/pair. Two male and one female adult northern pine snakes, \$275/trio; one male and two female *Boa c. constrictor*, \$300/trio. Coming soon, S. African house snakes, \$25. Jim Brumley, (314) 892-6605 or (314) 845-2038.

For sale: 1990 captive hatched savannah monitor, approx. 10-12", feeding on a variety of foods, in excellent health and tame, \$80 or best offer. Bob, (708) 636-6148.

For sale: *Morelia* spp. Captive bred 1991 potential offspring: New Guinea carpets, \$250/pair; Australian "commons," \$250/pair; "red desert phase" carpets (the babies often get mistaken for red phase Amazons), \$500/pair; Queensland "jungle phase" carpets, \$500/pair; diamond-jungle carpet crosses (1/4-3/4, 1/2-1/2, 3/4-1/4), \$500-650/pair; pure diamonds, \$5000/pair. Photos available of all. Other boids should also be available. Rubin Slyper, (305) 722-0560. [FL]

For sale: 1990 c.b. juveniles. Albino Sonoran gophers, \$400/trio; albino black rats, \$150/pair; albino Cal kings, \$150/pair; Honduran milks, \$100; Mexican milks, \$60; Cal mountain kings (*zonata-pulchra*), \$500/trio; Sonoran black king (*nigrita*), \$150/pair. Also available, c.b. holdovers: adult male albino Cal kings, \$125; adult male albino black rats, \$125. Call Kit after 5 P.M. eastern time, (201) 564-6386, or leave message. [NJ]

For sale: anerythristic Colombian common boas, *Boa constrictor imperator*, M/F pairs, \$700 to \$1000; single males, \$300 to \$500 each; single females, \$500 to \$600 each. Many c.b. reptiles available March thru November. Call or send for price list. Glen, I.R.R.P.R.E.L. Manufacturing & Design, P.O. Box 5726, Whittier CA 90607, (213) 944-6719. Leave name, address, phone number and message if no answer.

For sale: now, for Chicago area pick up, to herp society members only, one c.b. '90 corn snake, heterozygous for amelanism, feeding well on dead fuzzy mice, \$25. Also, Cranwell's horned frogs, feeding well on almost dead hoppers, \$25-35; Argentine horned frogs, feeding on dead mice (fuzzies to adults) or chicks, \$35-45. Call Janice, 11 A.M. to 10 P.M., (312) 736-9781, and leave a message.

For sale: one male Amazon tree boa, \$175; three 4-month-old garter snakes, \$10 each. Marco, (312) 465-3749.

For sale: one male and one female pancake tortoises, *Malacochersus tornieri*, \$225/pair; one 1990 hatchling Mexican black kingsnake (*nigrita*), \$50; one 1990 hatchling Mexican rosy boa (*trivirgata trivirgata*), \$125; one male and one female 1990 hatchling Honduran milksnakes, tangerine phase, \$225/pair. Kenneth Farrow, 2400 Riverfront Drive, Box 632, Little Rock AR 72202, (501) 664-3785.

For sale: pine, bull and gopher snakes. Reservations now being taken for 1991 hatchlings. Most subspecies available with exact geographic locality data. Albinos also available. Guaranteed top of the line quality. Eric Richter, 3801 S. 60th Court, Cicero IL 60650, (708) 863-7418.

For sale: various juvenile colubrids are now being offered for sale to make room for this year's babies and new acquisitions. Send 29¢ stamp for list. Michael Jacobi, P.O. Box 6082, Wauconda IL 60084.

For sale: deposits now being accepted for Brazilian rainbow boas from bright red or orange parents. Unrelated bloodlines available, \$225-275 each. Also, Dumeril's boas from parents with extraordinary pink and orange highlighting, \$400 each; Argentine boas, *Boa constrictor occidentalis*, from jet black parents with clean white markings, \$550 each. Tom Burke, (516) 586-2515, or Mike Burke, (516) 243-2463. [NY]

For sale: five c.b. *Clemmys guttata* juveniles, \$35 each [permit required for possession in Illinois and many other states]; four male and six female *Pelusios subniger*, \$200 for breeding group; fifteen c.b. *P. subniger* hatchlings, \$15 each; eight c.b. *Emydura subglobosa* hatchlings, \$35 each. Sales ONLY to responsible adult hobbyists or professionals. Dr. Harold Wahlquist, 1346 Arlene Court, Lilburn GA 30247, (404) 921-5686, after 7 P.M. EST weeknights or any time weekends.

For sale: one male and two female desert sand boas, *Eryx miliaris*, well-acclimated adults, \$375 for the trio; one male and one female Tartar sand boas, *Eryx tataricus*, 10" & 12", \$200 for the pair; one male and one female yearling Mexican black kingsnakes, *Lampropeltis getula nigrita*, unrelated, very black, \$175 for the pair; two female *L. g. nigrita*, c.b. '90, some pattern, \$40-\$50. Ray Guese, (303) 722-6058, after 8 P.M. MST best, or leave message. [CO]

For sale or trade: various reptiles. I am located in 'W' Florida area. Tony Picheo, 11080 Lillian Hiway 98, Pensacola FL 32506, (904) 453-8133.

For trade: one female *Cordylus warrenii* for one female *Cordylus cataphractus*. George Block, 108 Howe Street, Hot Springs AR 71901, (501) 623-8750.

Opening soon: R & R Breeding, breeder of rats, mice, hamsters, gerbils and guinea pigs. All colors, all sizes. Why buy wholesale, when you can buy direct from the breeder? To be on our mailing list, please send name, address, phone and approximate monthly quantity requirements to R & R Breeding, P.O. Box 067791, Chicago IL 60661-7791. Free delivery to the Chicagoland area.

Wanted: chameleons and chameleon enthusiasts. Looking for (preferably) c.b. animals. I may have c.b. offspring available later this year. Also, a chameleon enthusiasts' information network is forming. To have your name included on the list, call or write to John, P.O. Box 1391, Simi Valley CA 93062, (805) 527-2866.

## Advertisements (cont'd.)

Wanted: used 55-gallon or larger glass aquarium, filtration system and hood a plus. Dave Rossell, (708) 492-9408.

Wanted: CHS member Carla Abrams is looking for adventurous souls to accompany her and her friend Philip Tymon on a three-week trip to Madagascar in the summer of 1991. The trip is expected to cost \$3000-4000 per person, mostly in airfare. Carla and Phil also went to Madagascar in 1990, so they know the ropes. Carla is busy driving a van full of snakes and lizards around the U.S. (she conducts educational programs for schools and such), so if you'd like to get more details, or just chat, call or write: Philip Tymon, 10998 Peaks Pike, Sebastopol CA 95472, (707) 823-1208.

Wanted: I am looking for any individuals who would be willing to sell or give away any turtle shells that they may have. I have a friend on the Hopi Indian Reservation who uses them in their ceremonies. They need to be between 3 to 5 inches in size. If you can help, please call me at (708) 720-2153.

Wanted: from herpers in the New York area only—breeding size snakes of the following types: male *Elaphe obsoleta spiloides*, male *Pituophis melanoleucus sayi*, female *Elaphe guttata guttata*. Leave message for Andrew, (914) 948-5961. [NY]

Wanted: information on ball pythons, *Python regius*. I am compiling information on this species and would like contact with anyone having experience with them. Greg Greer, Chattahoochee Nature Center, 9135 Willeo Road, Roswell GA 30075, (404) 992-2055 or (404) 952-3737.

Wanted: *Snake Keeper Magazine*. I will buy issues or copies of articles on ball pythons from the magazine. I know of at least six issues that carried ball python articles and I need them to complete my reference search for the species. Greg Greer, Chattahoochee Nature Center, 9135 Willeo Road, Roswell GA 30075, (404) 992-2055 or (404) 952-3737.

Wanted: marbled newts, *Triturus marmoratus*; emerald geckos, *Gekko smaragdinus*; panther chameleons, *Chamaeleo pardalis*. Shannon Moore, 5245 Civitania Road, SE, Mableton GA 30059.

Wanted: *Sanzinia madagascariensis*, *Boa constrictor occidentalis*, *Elaphe* (= *Senticolis*) *triaspis inermidia*, *Lampropeltis mexicana alterna* (black - no red Blair's). Willing to buy or trade anerythristic *Boa constrictor imperator*. Glen, I.R.R.P.R.E.L. Manufacturing & Design, P.O. Box 5726, Whittier CA 90607, (213) 944-6719. Leave name, address, phone number and message if no answer.

Wanted: *Pseudaspis cana*, any size. Jim Brumley, (314) 892-6605 or (314) 845-2038.

Wanted: *Varanus acanthurus*; *V. timorensis*; *V. storri*; adult *Morelia*; 4' or larger Dumeril's boas. Rubin Slyper, (305) 722-0560. [FL]

Wanted: contact with people in the U.S. and overseas (especially Germany) who are working with and breeding Mexican bullsnakes, *Pituophis d. depei* and *P. d. jani*, or Central American bullsnakes, *P. l. lineaticollis* and *P. l. gibsoni*. Eric Richter, 3801 S. 60th Court, Cicero IL 60650, (708) 863-7418.

Wanted: would like to purchase or trade for the following: juvenile or adult Argentine boas, *Boa constrictor occidentalis*; adult Dumeril's boas; adult female Brazilian rainbow boas; any age Bismark ringed pythons or *Sanzinia*. Tom Burke, (516) 586-2515, or Mike Burke, (516) 243-2463. [NY]

Wanted: will provide good home for any unwanted common boa constrictors. Will pick up anywhere in Chicago area. Eric Richter, 3801 S. 60th Court, Cicero IL 60650, (708) 863-7418.

Wanted: Australian White's treefrogs, *Litoria caerulea*; Asian horned frogs, *Megophrys nasuta*; African bullfrogs, *Pyxicephalus adspersus*. Antonio Gualtieri, (312) 622-2762.

Wanted: info, either personal or published, on *Ailuronyx*, *Anarbylus swiaki*, *Blaesodactylus*, *Ebenevia*, *Geckolepis*, *Homopholis*, *Lygodactylus*, *Milloisaurus*, *Paragehyra*, *Uroplatus* and others. Also wish to buy uncommon lizards. Ray Tripp III, P.O. Box 4732, Lincoln NE 68504, (402) 464-8515.

Wanted: two female ball pythons for breeding. Must be healthy and between 2½ - 4½ years old. Will pay \$100 for both plus shipping charges. Rob, (203) 254-0822, any time after 6 P.M. [CT]

Wanted: albino or melanistic garter snakes. John Mackenbach, 21W092 Shelley Drive, Itasca IL 60143, (708) 773-3885.

Wanted: book—*Biomedical and Surgical Aspects of Captive Reptile Husbandry* by Fredric L. Frye. John Mackenbach, 21W092 Shelley Drive, Itasca IL 60143, (708) 773-3885.

Wanted: pictures of herps caught in urban trash, i.e., pop tops, plastic rings etc. Need not be original pictures. Needed for environmental project. Holly Carter, 625 Lakeview Drive, Zionsville IN 46077.

Wanted: Subscribers, writers, photographers, advertisers—for new bi-monthly publication, *Reptile and Amphibian Magazine*. \$12/yr, \$22/2 yrs, sample \$4. Norman Frank, D.V.M., R.D. 3, Box 3709, Pottsville PA 17901, (717) 622-1098.

Wanted: the CHS Book Service is always in need of styrofoam "peanuts" for packaging shipments. Don't discard them; recycle by bringing them to Joan Moore at any monthly meeting. Hearty thanks to all who have done so.

Line ads in this publication are run free for CHS members - \$2 per line for non-members.  
Any ad may be refused at the discretion of the Editor.  
Submit ads to: Michael Dloogatch, 6048 N. Lawndale Ave., Chicago IL 60659, (312) 588-0728.

## Minutes of the Special CHS Board Meeting, January 30, 1991

This special Board meeting was called to order by President Jack Schoenfelder at 9:30 P.M. All Board members were present except Ken Mierzwa and Ralph Shepstone.

Ron moved to appropriate \$1180.76 for the purchase of CHS 25th Anniversary commemorative tee shirts with the provision

that future committee chairs be more precise as to where funds for special projects/programs are to be spent. Phil seconded and the motion passed 5:4 with Joan, Gery, Mike and John voting against and Ellin, Ron, Phil, Stacy and Scott voting in favor.

## Unofficial Minutes of the CHS Board Meeting, February 8, 1991

The meeting was called to order by President Jack Schoenfelder at 8:25 p.m. All Board members were in attendance except Phil Drajeste, Gery Herrmann and Ralph Shepstone. The minutes of the December Board meeting were read and approved as corrected.

The April CHS Board meeting was set for April 19, 1991.

Joan Moore reported a balance of \$46,702.48 in the CHS Treasury as of January 31, 1991; \$20,000 has been transferred from checking to a 6-month CD.

Ellin Beltz reported 1583 CHS Members as of February 8, 1991. Ellin reported that the Soviet Academy of Sciences in Moscow was made an exchange member retroactive to 1986. Ellin voiced thanks to Neil Trais for typesetting new membership flyers.

### Standing Committee Reports:

**Shows:** Jack presented Sally Hajek's review of shows held in 1990. Sally will provide brochures to Chicagoland Malls.

**Grants in Herpetology:** Feedback regarding the proposed guidelines was given to Mike Miller.

**Merchandising:** Howard Weiner has two volunteers to help sell merchandise. He wishes to receive all merchandise by April 15 for inventory. Howard reported an apparent theft of Vita-lites worth \$250. Mike Dloogatch pointed out that this has been an ongoing problem and that our books show a net loss from Vita-lite sales of \$715.11 over the period 1986-90 (less approximately \$300 worth of current inventory). Howard requested that if safe storage is not secured by the Feb. Membership meeting the lights be taken to someone's residence and sales be suspended until a secure place is obtained. Ron will approach the CAS about such arrangements. Jack will lay out an inventory control system.

**Turtle Group:** Jill Horwich reported the January 25 meeting with Karen Furnweger's presentation on tagging sea turtles was most informative.

**Lizard Group:** Stacy Miller reported that the Lizard Group has not met since the last CHS Board meeting.

**Snake Group:** Tony Janowski reported the next meeting will be on February 21 at Tony's home in Chicago.

**XYZ:** Representative absent.

### Ad Hoc Committee Reports:

**Affiliate Group Committee:** Report deferred.

**Birthday/Anniversary Party:** Ellin reported a need for table covers, serving utensils, etc. Ellin asked for volunteers for the day of the party. Ron Humbert has secured a \$1M insurance policy for \$133.

**Picnic:** The annual picnic will be held at Volo Bog State Natural Area in Ingleside, Illinois. Stacy will organize the event.

### Old Business:

**Audit:** The audit committee of Jack, Ron, Joan and Gery is

scheduled to meet with Ken Pardue on Feb. 9 at Ron's home.

**Meeting sites:** John Murphy reported the Field Museum has a room seating 150 people available for \$15, which may be suitable for Board meetings. Another Field Museum room seating 900 people is available for \$200. Jack reported that Lolain Dobbs has promised the small room at the North Park Village Admin. Bldg. to be available by March. If it is not available then, Jack wishes to relocate. Joan will approach the Chicago Academy of Sciences, Ron will look into possibilities at Brookfield Zoo. Other sites were also discussed.

**Calendar:** Jill Horwich will have a presentation for the March 8 Board meeting.

**I.D.O.C. interpretation:** Ken has met with IDOC Division of Natural Heritage division chief and staff regarding the interpretation of the Threatened and Endangered (T&E) Species laws. They will support listing the Great Plains rat snake (corn snake) at the subspecies level and the law will apply only to *Elaphe guttata emoryi* pending action by their board. Other species will be addressed on a species by species basis. An Endangered Species Program Manager may be present to give a presentation on the T&E Species laws in Illinois at the April CHS Board meeting. Mike voiced continuing concerns about the law covering Illinois T&E species that are not protected at the federal level. Further discussion was deferred until the April 19 meeting.

**Care Sheets:** Mike Miller will pursue writing a care sheet for Old World chameleons. He asked for information to be forwarded to him.

**Confiscated Animals:** discussion deferred.

**Chelonian newsletter:** discussion deferred.

**Care in Captivity Publications:** The 100-200 CIC's requested by Dr. Bob Eyerman to be distributed at the Vets of the Midwest meeting in Toronto will be provided to him.

**Commemorative Posters:** Mike D. reported a cost of \$0.56 each for mailing tubes (for a minimum 1000 tube order), \$275-290 to prepare the bulk mailing and take it to the Post Office, and about \$125/thousand for postage at the new non-profit bulk mailing rates. He will seek other quotes.

### New Business:

**Membership dues and costs:** Due to increasing costs of postage and other expenses, the possible need for increased dues was discussed. Ron moved to increase individual membership dues from \$17.50 to \$20.00, beginning in 1992. John Murphy seconded. Discussion followed. Jack asked for a committee to look into the relationship of dues to benefits and costs. Ellin and Hannah were appointed. Ron withdrew the motion. Mike moved to freeze dues through 1991. Ellin seconded. The motion passed 8:1 with Joan opposing.

Stacy read the minutes of a special Board meeting held on January 30, 1991. The minutes were approved as read.

Jack stated that future motions for financial expenditures should include an itemized breakdown of the requested budget. Stacy made a motion to reflect Jack's statement and

Ron seconded. After much discussion Stacy withdrew the motion. Board members were urged to provide an itemized breakdown of budget for such future expenditures.

Endangered Species Federation Ltd.: The company was discussed and it was decided to postpone further action until more could be learned about the company.

Chronicle of Philanthropy: Ellin moved to allocate \$57 for renewal of our subscription to the *Chronicle of Philanthropy*. Mike seconded and the motion passed unanimously.

Jack read a letter requesting videotapes of the general meeting for sale or rent. John Christianson will look into the feasibility of producing tapes. Jack will forward the letter to Phil Drajeske.

General Meeting Attendance: Attendance at the January 30

meeting was approximately 165 as counted by Gery Herrmann.

Ken reported that the Wisconsin Herpetological Working Group is sponsoring a seminar entitled "The Conservation of Wisconsin's Cold Blooded Animals".

Ron read a letter from Lance Binkley informing the CHS that a Nebraska State Legislative Bill is on the table prohibiting trade within the state in ALL Nebraskan amphibians and reptiles. Ellin will contact a representative of the Nebraska Herp Society to see if they are aware of the bill and what their position is.

Ron moved to adjourn, John seconded and the meeting ended at 11:01 p.m.

*Respectfully submitted, Stacy L. Miller, Recording Secretary*

## Thirteenth Annual Salamander Safari

On Sunday, April 7, 1991, the CHS will sponsor a field trip to the Palos Forest Preserves in southwestern Cook County to search for salamanders and other early spring amphibians. We will meet at 9:00 A.M. in the parking lot at Country Lane Woods, which is located on 95th Street west of U.S. Rt. 45 (LaGrange Road). A brief presentation will be given at 9:30 in the picnic shelter; topics to be discussed include local amphibians, general ecology of the Palos region, and ongoing restoration efforts. Local amphibians, and possibly a few out of state animals, will be available for photography.



Salamander "safaris" are always fun for the participants, but this year's trip is practical as well. A volunteer network organized by The Nature Conservancy and the Cook County Forest Preserve District is in the early stages of restoring parts of the 14,000 acre Palos Preserves to their presettlement condition. We will visit Spears Woods, one of the areas being restored.

In 1821, Government Land Office surveyors described the Spears Woods area as "black and white oak timber... land much broken...rolling..."; the Palos region at that time was a mix of prairie, oak savanna, forest, and wetlands. This incredible habitat diversity helps explain the variety and relative abundance of herpetofauna at Palos. The prairies and park-like savannas, with scattered wide-crowned oaks, have largely grown in from lack of fire. Brush clearing and controlled burning will restore these communities which are important to many amphibians and reptiles.

Data gathered on past CHS trips have already contributed to the restoration effort. This year we will place greater emphasis on wetlands within areas to be managed, so that future changes in species composition and abundance can be monitored.



Dress appropriately for the weather. Pond margins are usually muddy, so sturdy waterproof or water-resistant boots or shoes are recommended. Those who plan to stay for the entire day may wish to pack a lunch. The CHS will provide coffee in the morning.

All animals will be released after the group has had an opportunity to observe and photograph them. No collecting is allowed on Forest Preserve District property; this policy will be strictly enforced.

## UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, March 27, at the Chicago Academy of Sciences, 2001 North Clark Street, Chicago IL 60614. Our guest lecturer will be Dr. Michael Morris, an expert on Illinois herpetofauna who has in the past been associated with Southern Illinois University and the Illinois Natural History Survey. Dr. Morris will speak on "Herpetological Conservation Needs in Illinois."

The April speaker will be Dr. Greg Mengden of the University of Texas at San Antonio, Department of Biology. He will speak on South Pacific herpetology, with emphasis on New Guinea.

### Lizard Group

The next Lizard Group meeting will be held on Tuesday, April 9, at the home of Bryant Capiz, 4147 W. Fletcher, Chicago IL, (312) 725-4773, at 7:30 P.M.

### Turtle Club

The next Chicago Turtle Club meeting will be held on Sunday, March 24, 1:00-3:30 P.M., at the Emmerson Park Fieldhouse, 1820 W. Granville Avenue, Chicago. Steve Spitzer will give a presentation on the South American wood turtle and on turtle breeding in general.

### Snake Group

The April Snake Group rendezvous will take place at 7 P.M., Thursday, April 18, at the home of Chuck Fletter, 2605 W. Coyle, Chicago IL, (312) 262-2257. Tom Anton will give a presentation on venomous snakes.

### XYZ Club

The next meeting of the XYZ (eXceptional Young Zoologists) Club will be held on Saturday, April 20, 1991. Call Eloise Beltz-Decker at (312) 642-8290 for time and location.

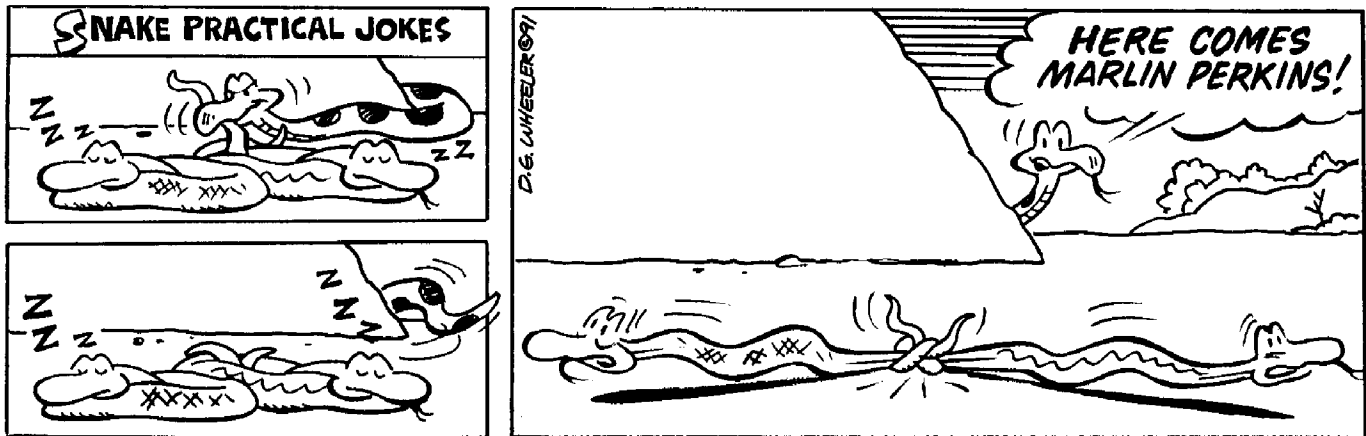
## ARTICLE AND GRAPHICS CONTEST TO BE REPEATED IN 1991

The CHS will again this year hold a competition for the best articles and graphics to appear in the *Bulletin*. The prizes will again be \$1000 for the best article of the year; \$500 for the second place article; and \$250 for the third place article. There will also be a prize of \$250 awarded for the best photograph or drawing.

The editors wish to encourage authors and artists to continue to submit material on a variety of topics of interest to herpetologists. Photos must be submitted in black and white and in a 5x7 inch format to be considered for the competition.

Results of the 1991 competition will be published in the February 1992 *Bulletin*.

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