Virginia Herpetological Society

NEWSLETTER

Volume 4, Number 2 July 1994

North American Box Turtles
A Continuing Concern

Submitted by George Zug, Division of Mammals and Reptiles, National Museum of Natural History, Washington, D.C. 20560

Warwick's report, **The Decline of North American Box Turtles**, in January's Newsletter provides only the beginning of a depressing story and underscores the horrific impact experienced by any species that becomes a pet-trade favorite. Warwick noted that the 1984 ban on the importation of European tortoises (*Testudo*) into Great Britain resulted in a dramatic increase in the importation of *Terrapene*, and he had data only through the first quarter of 1986. A recent report (Smart and Bride, 1993) prepared by the Durrell Institute of Conservation and Ecology (**DICE**), Canterbury, England, offers a more current view of amphibian and reptile imports from North America and elsewhere.

The DICE report summarizes the British importation data from 1980 through 1990. I offer you a glimpse of these data to alert you to the continuing depredation of our native turtle populations by the pet trade. First, reconsider the magnitude of the trade's depletion of the various European tortoise populations -- 150,000 tortoises for UK pet hobbyists for 1980-1984. A reasonably undisturbed population of the Mediterranean or spur-thighed tortoises (*Testudo graeca*) has a population density of about 2-5 tortoises per hectare (Spain; Andreu *in* Stubbs, 1989). Thus for the British pet-trade alone, the equivalent of 30,000 hectares (300 km^2) lost their tortoises in five years. If that seems insignificant, it represents only the tortoises removed for the pet-trade in a single European nation.

The demand for pet-turtles in the UK was and is still great, so it is of no great surprise that banning one group of turtles transfers the harvest to other species. This time, the pet-trade's attention focused on our box turtles but not to the exclusion of other species. With the European tortoise ban, importation of *Testudo* dropped sharply (Figure 1). Tortoises from Africa and Asia were one of the substitutes, although an insignificant one relative to the original volume of European tortoises. The figures speak for themselves, and we can only be thankful that *Terrapene* was not the sole replacement turtle. Many other species entered the trade in significant numbers, i.e., importation of more than 500 individuals per species during 1986-1990. Figure 2 shows the import numbers for seven species. A sampling of the other species exported in significant numbers includes three species of mud turtles (*Kinosternon*), six species of softshells (*Apalone, Trionyx*, etc.), big-headed turtles (*Platysternon*), snail-eating turtles (*Malayemys*), and map turtles (*Graptemys*). No

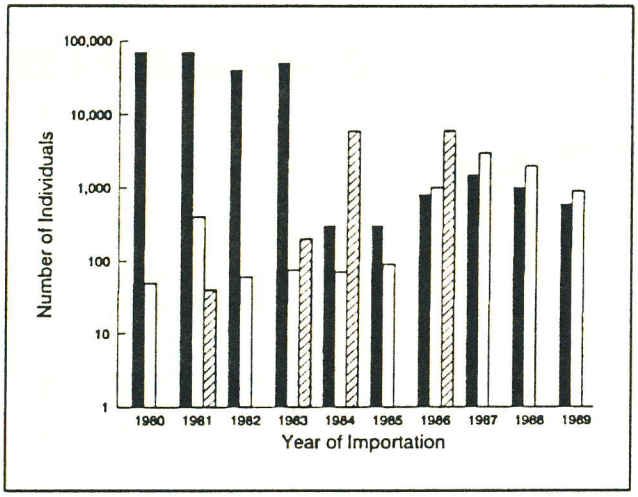

Figure 1

Levels of tortoise and turtle importation in to the United Kingdom from 1980 through 1989. The bars represent, from left to right: *Testudo* (solid black bars), predominantly *graeca* although *hermanni*, *horsfieldi*, and *kleinmanni* are included in the annual totals; other tortoises (open bars), substitute tortoises, mainly *Geochelone* and *Kinixys* but most of the other tortoise genera were represented; *Terrapene* (diagonal line bars), mainly *carolina* (no annual totals for 1980, 1985, and 1987-1989. [Data from Smart & Bride, fig. pp. 19-21]

other species or genus had the high import numbers of *Terrapene*, but their combined import numbers exceeded 200,000 individuals for the five year period of 1986-1990.

Is a common pet-trade turtle missing from the preceding discussion? Yes, the red-eared slider (*Trachemys scripta elegans*) is exempt from UK control and regulation and is exported in high numbers (approx. 200,000 from 1985-1990). What is the fate of these turtles and, for that matter, any amphibian and reptile brought into the pet-trade? One author has speculated that 80-90% of the red-eared sliders die during their first year in captivity. And in the UK, as here in Virginia, many survivors become unwelcome pets and are released into the wild. Red-ears now appear to be residents in some English lakes and streams.

While our concern might be directly toward the survival of our Virginian turtle populations, we must be concerned about the survival of natural populations everywhere. Certainly destruction of natural habitats is a major factor in the decline of amphibian and reptile populations throughout the world. Commercial exploitation for meat and leather decimates populations of many larger species, and for small species, the pet-trade now has become a major decimator.

We, as amphibian and reptilian pet-keepers, must assume responsibility for the decline of populations and species. We cannot consider our activities -- no matter how knowledgeable or well-intended -- as conservation. Our purchases provide a continual demand for more and new species and support the collectors and dealers during the periods of low interest by the public in such pets. Nor should we fool ourselves that our captive breeding activities are conservation activities. Yes, captive breeding does reduce the demand on wild-caught individuals for the few species that breed in captivity, but it fuels the demand for more exotic animals and ones that can be obtained only be taking individuals from wild populations.

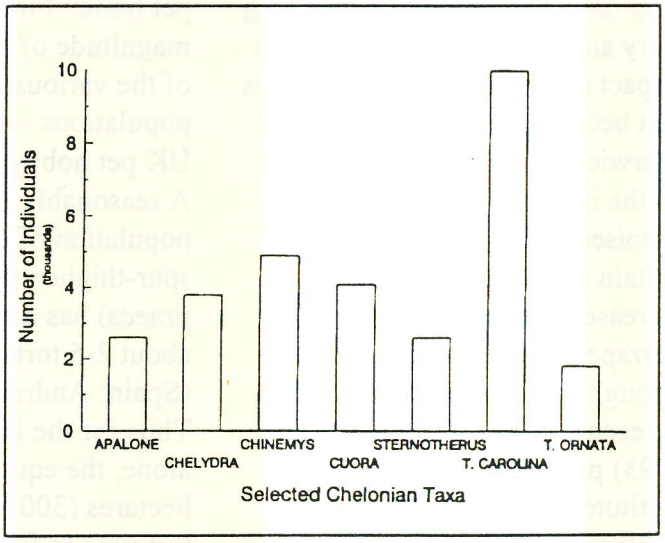

Figure 2

Total UK importation for selected turtle species from 1986-1990. The species represented are (left to right); spiny softshell turtle (SE USA), snapping turtle (E USA); Asian three-keeled pond turtle (China); Malayan box turtle (SE Asia); stinkpot (E USA); common and ornate box turtles (USA). [Data from Smart & Bride, pp. 22-23]

REFERENCES

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Stubbs, D. 1989. Testudo graeca *spur-thighed tortoise. pp. 31-33.* In *I.R. Swingland & M.W. Klemens (eds.), The Conservation Biology of Tortoises. Occas. Pap. IUCN SSC, no. 5.*

The ENDANGERED SPECIES ACT

Excerpts from an article presented by the Endangered Species Coalition, 666 Pennyslvania Ave., S.E., Washington, D.C. 20003

The Endangered Species Act provides for the conservation of threatened and endangered plants and animals, and over its 20-year history, it has emerged as one of America's preeminent environmental laws. The Act provides a flexible framework for saving endangered species and their habitat. Once a species is listed as endangered, it becomes illegal to trade them, and in the case of animals, to kill, hunt, collect, or injure them or their habitat.

The Endangered Species Act has brought numerous species back from the brink of extinction. Species such as the brown pelican, black-footed ferret, American alligator, and many other species of fish, reptiles, invertebrates, and plants have all improved markedly under the Act. Unfortunately, the survival for many endangered species is uncertain. Many species that desperately need protection are not receiving it. And the longer we wait, the more difficult and expensive it becomes to recover them.

Critics of the Act argue that economic interests should always come before the needs of endangered species. They claim that economic development is stopped when the Act swings into action. They could not be further from the truth. The goal of the Act is not to stop development but to ensure that development proceeds with the needs of the endangered species in mind. No conflicts with development occur in the vast majority of cases.

The original Endangered Species Act specified that Congress should periodically examine and reauthorize the Act. The Act is now up for its fourth reauthorization. In the House of Representatives, Congressman Studds and Dingell have introduced HR 2043, a re-authorization bill which would strengthen the Endangered Species Act. As a companion to this bill, Senators Baucus and Chafee have introduced S 921. These bills would strengthen the Act by:

- Preventing species from becoming endangered in the first place.
- Planning for all the species that depend on an ecosystem, instead of focusing on one species.
- Encouraging public cooperation and discourage lawbreakers.

However, there are those who want to gut the Endangered Species Act. Representative Tausin and Fields, along with Senators Shelby and Gorton have introduced HR 1490 and S 1521, reauthorization bills which would effectively destroy the Act.

Individuals interested in strengthening the Endangered Species Act are encouraged to write letters to urge their Representative to cosponsor HR 2043, and Senators to cosponsor S 921. When writing your elected officials, be sure to identify the bill and issue, ask for specific action (i.e., co-sponsoring a bill or supporting an amendment), and ask for a response (without sounding demanding).

Remember, the fate of the Endangered Species Act is in all our hands. By getting involved, you can make a tremendous effort to reauthorize the Act.

The Address for your Elected Official is:

The Honorable _____
U.S. House of Representatives
Washington, D.C. 20515

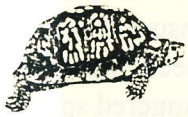
The Honorable_____
U.S. Senate
Washington, D.C. 20510

CITES Regulation Sought

Excerpts from an article presented by the New York Turtle and Tortoise Society, 163 Amsterdam Ave., Suite 365, New York, NY 10023.

To help control the loss of box turtles, concerned wildlife officials and conservationists are seeking regulations through CITES, the Convention of International Trade in Endangered Species of Wild Fauna and Flora. CITES is an international agreement that was signed in Washington, D.C. in 1973 and came into force in 1975. Over 115 countries are party to the Convention; it is the largest wildlife conservation agreement in existence. Because international trade is a major threat to many species' survival, CITES regulates trade through a system of permits and controls. In this way the Convention provides varying degrees of protection to wild animal and plant species depending on their biological status and the effect international trade has on them. Appendix 1, for example, includes those species in danger of extinction that are or may be affected by trade. Such species cannot be traded among member countries except under special circumstances. Appendix II includes species that may become endangered if trade in them is not controlled and requires an export permit from the country of origin. A mechanism is thereby created to monitor the trade in Appendix II species. If it is clearly determined that the collection of an animal is not sustainable, trade in that species will be halted.

The U.S. Fish and Wildlife Service has submitted to the CITES Secretariat the proposal to list all species of North American Box Turtles (*Terrapene* sp.) on Appendix II, while *T. coahuila*, Mexico's Coahuilan Box Turtle, would retain its Appendix I status. This proposal will be considered by the Parties of Cities at the Tenth Meeting of the Conference of the Parties to be held November 7-18, 1994, in Ft. Lauderdale, Florida. If two-thirds of the Parties present and voting support the proposal, the listing will become effective 90 days after the last day of the November meeting. Because international trade in *Terrapene* is so extensive, the listing of box turtles on Appendix II will be a critical step to stem the widespread decline to their population.



Letters of Support are Needed!

The Government must act now to control the trade in box turtles before untold damage is done. Please write to:

The U.S. Fish and Wildlife Service, making the following points:

1) You agree with the proposed listing of the genus *Terrapene* on Appendix II of CITES.

2) Urge an immediate listing of American box turtles on Appendix III-an action the U.S. Government can take by itself before November. An interim Appendix III listing will not only facilitate immediate control over the box turtle trade, but will also give the USFWS the authority to enforce the International Association of Transport Airlines (IATA) shipping regulations for box turtles, which no government agency currently has the authority to do.

Ms. Mollie Beattie, Director
Division of Fish and Wildlife
Department of the Interior
18th and "C" Street, N.W.
Washington, D.C. 20240

To your United States Senators. Senator Jeffords of Vermont currently is circulating a letter among the members of the Senate in support of the listing of North American box turtles on both Appendix II and Appendix III. Please urge the Senators from your state to sign on the Senator Jefford's letter!

..... Herp Happenings

Spring Meeting

The VHS Spring Meeting was held in April at the Kingsport Holiday Inn, Tennessee. Topics discussed were the Copper Creek survey, the VHS snake poster, new herp regulations, and the Reptiles of Virginia book. A certificate of appreciation was awarded *in absentia* to Sue Bruenderman for her work as Newsletter Editor. Mike Pinder was selected as the new Newsletter Editor, and Scott Carney will serve as Assistant Newsletter Editor. Finally, Liberty University was selected as the location for the Fall VHS Meeting. Further details of this meeting will be in the next issue of Catesbeiana.

Copper Creek Survey

Thanks to everyone who participated to make the VHS Copper Creek survey a huge success. Because of the large turn-out, we were able to thoroughly cover the bottom and upland area of the Copper Creek watershed. We collected four species of anuran, ten species of salamander, six species of turtle, three species of snake, and one species of lizard. The most impressive find was three live black kingsnakes (*Lampropeltis getula nigra*), a species previously only known in Virginia from road-kill specimens. A detailed list of all species will be presented in the next issue of Catesbeiana.

Sea Turtle/Marine Mammal Recovery Plan

The sea turtle/marine mammal conservation committee, which includes individuals from federal, state, and academic organizations, met in April to develop a recovery plan for sea turtles and marine mammals that utilize Virginia's waters. At present, very little is known about the status, trends and life history, or possible threats to Virginia's sea turtles and marine mammals. Karen Terwilliger, Nongame and Endangered Species Coordinator for the Virginia Department of Game and Inland Fisheries (VDGIF), currently is reviewing information presented at the April meeting and will hopefully have a draft recovery plan by mid-July.

Snake Poster

There is good news and bad news concerning the snake poster. First, the good news! The photographs for the "Snakes of Virginia" poster have been selected. Now, the bad news! Because of budget constraints, the poster will be on hold until appropriate funding can be found. More information concerning the status of snake poster will be discussed at our fall meeting.

Canebrake Rattlesnake

The recovery plan for the state-endangered canebrake rattlesnake (*Crotalus horridus atricandatus*) is now official. On behalf of the VDGIF, we would like to thank team members Sue Bruenderman, Joe Mitchell, Steve Roble, Don Schwab, Allan and Barbara Savitsky, and Gary Williamson for their efforts in developing the first recovery plan for Virginia's threatened and endangered species.

Herp Happenings

Congratulations

Sue Bruenderman, VHS member and Newsletter Editor, recently accepted a fishery biologist position with the Missouri Department of Conservation. Sue's primary duty will be to survey streams previously sampled by Bill Pflieger in order to update his book, The Fishes of Missouri. On behalf of the VHS, we wish Sue the best of luck with her new job and thank her for her tireless effort as Newsletter Editor.

VHS President Ron Southwick has recently been promoted to Assistant Chief of the Fisheries Division of the VDGIF. In addition to his work with hatcheries, Ron will be heading the aquatic nongame program of the VDGIF. Congratulations Ron and good luck in Richmond.

Reptile Show

On June 18, 1994, VHS members Scott Carney and Mike Pinder represented the VHS and the VDGIF at a Reptile Expo for the Science Museum of Western Virginia in Roanoke. VHS member Brian Horne was instrumental in organizing the exhibit. Over the course of the day, a great deal of interest was generated about Virginia's herps, VDGIF's nongame program, and the Herp Society.

Needed for Fall VHS Meeting
PRESENTATIONS

The Virginia Herpetological Society currently is accepting presentations for our October 8th fall meeting. Topics covered should be relevant to Virginia's herps or at least very interesting. All titles should be submitted by September 15, 1994. For more in-formation contact Paul Sattler at:

Liberty University
Biology Department
Box 2000
Lynchburg, VA 24506-8001
(804) 582-2209

HERPS in Hand

Lampropeltis getulus getulus

The Eastern Kingsnake, sometimes called the "Chain Kingsnake" due to the distinctive pattern of light crossbands on a dark ground color, is the largest of the kingsnake family to be found in Virginia. Their natural range is from southern New Jersey to northern Florida, west to the Appalachians and southeastern Alabama. This snake is most often found from Virginia to Georgia. Both states protect the Eastern King, but many are still collected in the wild in North and South Carolina. Their habitat preferences include woods, meadows, the borders of creeks and other aquatic edge habitats. The diet includes rodents, small mammals, birds, amphibians and other reptiles and their eggs. These snakes are immune to the venom of native American pit vipers and they may include the Copperhead, *Agkistrodon contortrix*, or a Rattlesnake in their diet. Eastern Kingsnakes dispatch their prey through constriction or by pressing it against a hard surface.

The record length for the Eastern Kingsnake is 82 inches. It is probably the longest kingsnake found in America, but will generally average between 4 and 6 feet as adults. Captive specimens can be expected to live from 10 to 15 years under the best husbandry conditions, but some have lived for up to 23 years.

The Eastern Kingsnake will sometimes intergrade with the Florida Kingsnake, *L. g. floridana* in northern and central Florida. Under captive conditions, this snake should be propagated for the pure blood-lines and intergrades are to be discouraged.

Breeding takes place during the spring to early summer months. The females will deposit a clutch of between 3 and 24 eggs, averaging approximately 16 eggs, in a nest 4 to 12 weeks after copulation. Clutch sizes will vary according to the size and condition of the female. Many of these animals will double-clutch during a season in the wild. Those of large size and in very good health could be "seasoned" and bred for two clutches in captivity as well. The incubation period will last around 65 days under optimum conditions. The neonates will be from 8 to 13 inches long.

When housing an Eastern Kingsnake, one should offer it ample space. A neonate to juvenile may be housed in a 10-gallon aquarium or similar sized container. The adult should be provided with more space and a 15 to 20-gallon long aquarium should be used. An adequate size water container and a hiding place should be provided. Substrate choices are up to the keeper, but newspaper,

This is the second of three articles by Doug Eggleston on the life history and captive care of snake species native to Virginia that can be propagated and sold with the proper permit. As mentioned in the last newsletter, Doug currently is the Chair for the Captive Breeder's Committee, which was established to bridge gaps between hobbyists and professional biologists within the Society. Persons interested in joining the Captive Breeder's Committee should contact Doug at 804/376-5229, P.O. Box 727, Brookneal, Virginia 24528.

astro-turf, or other easy to clean substrates are recommended. Because these are strong snakes, make sure a lock-down screen top is placed on any aquarium used. Temperature gradients should range from 77 to 86 degrees Fahrenheit, but the nighttime temperature can be allowed to drop to the mid-70's degrees Fahrenheit. Heat can be provided through an incandescent light outside the cage and can be combined with an under tank heating pad on part of the enclosure. Do NOT use a "Hot Rock" as a heater, unless a thermostatic control is in use with this devise. These heaters can cause burns!!!

In captivity, this kingsnake can be offered various size rodents to meet their dietary needs. "Pinkie" mice or rats for neonates to juveniles and up to large rats for good sized adults should be fed on a regular schedule. Once to twice a week feedings, offering as much food as the snake will readily consume, is recommended. Feeding freshly killed or thawed-frozen rodents is the safest and smartest choices.

The generally docile nature of this subspecies and the attractive color and pattern make this a snake worthy of Virginia herpetoculturists interest. From a commercial standpoint, one should not expect to strike it rich breeding Eastern Kings. They cannot be considered a high dollar specimen in the trade. However, captive propagation of this snake is encouraged to provide an alternative to the wild-caught specimens now seen in many of the U.S. pet shops.

The Eastern Kingsnake is a very attractive and interesting snake worthy of more captive work. In Virginia, habitat destruction is the major cause of the decline of this subspecies in the wild. Commercial collecting of this snake is illegal, but they can be captive propagated with the proper permit and the offspring may be sold through permitted dealers.

Publications

There is a lot of printed material available through pet shops, book dealers, and probably your local library on the Common Kingsnakes. Each of them will offer some information on the Eastern Kingsnake. As with any herp one takes into collection, the more one knows about the animal, the better the creature and the keeper will be for utilizing available literature. Two excellent and inexpensive books on Kingsnakes are available through most pet shops and herp book dealers. They are:

Kingsnakes and Milksnakes, by Donald G. Markel, TFH Publications, Inc., 1990, 144 pages.

The General Care and Maintenance of Common Kingsnakes, by David Perlowin, Advanced Vivarium Systems, 1992, 71 pages.

CALENDAR OF EVENTS

August 28, 1994 Richmond All Captive-Bred Herpetological Exhibition, Richmond, VA. For additional information call (804) 482-1541.

September 16-18, 1994 NOAH'S 20th Anniversary Symposium, Cleveland, Ohio, Contact: Steve Frantz, (614) 745-1262.

September 17-18, 1994 The Mid-Atlantic Reptile Show, sponsored by the Maryland Herpetological Society will be held at the Maryland State Fair Grounds in Timonium, MD. For more information and vendor registration, contact Tim Hoen, c/o Maryland Herp Society, 2643 North Charles St., Baltimore, MD 21218 (410) 235-6116 (Wed. 9-5 only) or (410) 557-6879 (anytime). SHOW PROCEEDS WILL PURCHASE RAINFOREST THROUGH THE ECOSYSTEM SURVIVAL PLAN!

September 30 - October 2, 1994 1st Canadian National Hertepological Symposium on Captive Propagation and Husbandry, Drumheller, Alberta. For more information, write to Reptile World, P.O. Box 1087, Drumheller, Alberta. Canada TOJ OYO, or call (403) 823-8623.

LITERATURE REVIEW

The purpose of this column is to inform members of recent herpetological research which is pertinent to Virginia or of special interest to the Society's membership. Papers or notes from professional journals, new books, "grey literature" reports, and popular magazine articles are acceptable for inclusion in the column. Members are encouraged to send ***recently*** *published items of interest to the editor. Submissions will be accepted subject to the approval of the editor.*

Blaustein, Andrew R. 1994. Chicken Little or Nero's fiddle? A perspective on declining amphibian populations. Herpetologica 50:85-97.

Brown, William S. 1993. Biology, status and management of the timber rattlesnake (*Crotalus horridus*): A Guide for Conservation. Herpetologica 22:78.

Constantz, G. 1994. Hollows, peepers, and highlanders: an Appalachian Mountain ecology. Missoula, MT: Mountain Press. 267 pp.

Elking, J.A.S. 1993. Techniques and principles of herptile photography. British Herpetological Society Bulletin Winter:19-24.

Ernst, Carl H., and George R. Zug. 1994. Observations on the spotted turtle, *Clemmys guttata*, in southeastern Pennsylvania. Journal of Herpetology 28:99-101.

Heinen, Joel T. 1994. The significance of color change in newly metamorphosed American toads. Journal of Herpetology 28:87-116.

Heyer, W. Ronald; Donnelly, Maureen A.; McDiarmid, Roy W.; Hayek, Lee-Ann C.; Foster, Mercedes S., editors. 1994. Measuring and monitoring biological diversity: standard methods for amphibians. Washington, D.C.: Smithsonian Institution Press. 320 pp.

King, Richard B., and Scott Hauft, and John B. Phillips. 1994. Physiological color change in the green treefrog responses the background brightness and temperature. Copeia 2:422-431.

Krenze, John D., and David E. Scott. 1994. Terrestral courtship affects mating location in *Ambystoma opacum*.. Herpetologica 50:46-50.

Lawson, Peggy A. 1994. Orientation abilities and mechanisms in nonmigratory populations of garter snakes. Copeia 2:263-273.

McCray, Earl D. 1994. "Amphibian decline" a scientific dilemma in more ways than one. Herpetologica 50:98-103.

Muegal, Linda A., and Dennis Claussen. 1994. Effects of slope on voluntary locomotor performance in turtle, *Terrapene carolina carolina*. Journal of Herpetology 28:6-11.

Pechmann, Joseph H.K., and Henry M. Wilbur. 1994. Putting declining amphibian populations in perspective: Natural Fluctuations and Human Impacts. Herpetologica 50:65-84.

Plummer, Michael V., and Justin D. Congdar. 1994. Radio-telemetric study of activity and movements of racers associated with Carolina Bay in South Carolina. Copeia 1:20-26.

Smith, Ellen M., and Harvey Pough. 1994. Intergeneric aggression among salamanders. Journal of Herpetology 28:41-45.

Travis, Joseph. 1994. Celebrating our expectations in studying amphibian populations. Herpetologica 50:104-108.

Zani, Peter A., and Dennis L. Claussen. 1994. Voluntary and forced terrestrial locomotion in juvenile and adult painted turtles, *Chrysemys picta*. Copeia 2:466-471.

Zug, George R. 1993. Herpetology: an introductory biology of amphibians and reptiles. Washington, DC: Academic Press. 527 pp.

Fungus and Rays Devastating Amphibians

An unprecedented decline in the populations of many frogs, toads and salamanders, recently linked to increased solar radiation leaking through a depleted ozone layer, may in fact have more to do with a rampant amphibian-killing fungus, according to the March 7 issue of New York Times.

Populations of many amphibian species have dropped precipitously world-wide, leading many scientists to consider a global cause. The ozone theory emerged from a National Academy of Sciences study that showed how UV-light damaged frog and toad eggs. But that would account for only the portion of species that lay their eggs in shallow open waters accessible to radiation.

Now, an Oregon scientist has identified the fungus, Saprolegnia, which has in recent years infested much of the world's waters, as another leading cause of mortality though other factors may be involved.

Excerpts from Land Letter, March 23, 1994.

Those Extra Dots along the Virginia-North Carolina Border Explained

Before George Washington was born, Colonel William Byrd II was travelling from False Cape to the Virginia Highlands for the North Carolina-Virginia Boundary Survey Commission. Over the course of his travel, Colonel Byrd described the country covered each day, especially where the going was rough. His accounts also tells of any unusual events or animals encountered *en route*. On several occasions, his survey team encountered "rattlesnakes". This is confirmed by Byrd's reports that the men "cut the rattyls off" and excludes the possibility that the reported snakes were just vibrating their tails in dry leaves.

Because Byrd measured the distance he travelled each day, his trip can be followed on present day topographic maps. In this way, locations of the rattlesnakes Byrd encountered can be found and overlayed with present day rattlesnake distributions. Of the three possible rattlesnake species (and subspecies), the Eastern Diamondback (*Crotalus adamanteus*) occurs much farther south, and the Timber Rattlesnake (*C. horridus horridus*) prefers drier ground unless swimming a lake to reach talus slopes. Therefore, the rattlesnake most likely encountered by Byrd was the Canebrake (*C. horridus atricaudatus*).

Excerpts from an article by Frank Tobey which explains the three western-most occurrences of Canebrake Rattlesnake in his 1985 publication Virginia's Amphibians and Reptiles: A Distributional Survey.

DISCOUNT FOR VHS MEMBERS

Reptiles of Virginia

by Joseph C. Mitchell

The Virginia Herpetogical Society is accepting orders for Joe Mitchell's long awaited book, The Reptiles of Virginia. All VHS members who prepay will receive a 20% discount on the listed price of this book (List price $40.00).

Beginning with Captain John Smith's observations of the region's reptilian fauna in 1607, this book offers the first complete catalog of the reptiles of Virginia, from the sea turtles of the Atlantic Coast to the snakes, turtles, and lizards of the Piedmont and Blue Ridge Mountains.

Including full-color illustrations of numerous habitats and thirty-two of the species, distribution maps for each species, and easy-to-use keys for quick identification (with a separate key for young snakes), The Reptiles of Virginia is a practical resource and an essential overview of this faunal groups and its habitats. The book is based on data derived from examination of some 10,000 Virginia specimens, yielding a wealth of new information on the ecology, life histories, and biogeography of reptiles in the state. Each of the sixty-two individual species accounts provides local common names, the historical context for scientific names, present habitat affinities, and information about geographic variation in color, pattern, and morphology, as well as reproduction, predators, and prey. The book also explores the human impact on Virginia's natural habitats and species' distribution patterns, presenting a historical perspective on the conservation of these animals. A separate chapter provides a summary of snakebite epidemiology and suggestions for preventing snakebites.

The Reptiles of Virginia is an informative tool for amateur and professional herpetologists, naturalists, and science teachers. It is also a key resource for wildlife managers and environmental consultants trying to locate high-diversity habitats and identify wildlife populations needing protection in the mid-Atlantic region.

Joseph C. Mitchell is an adjunct professor of environmental biology and conservation biology at the University of Richmond and a long-standing member of the V.H.S.

Order Form

Quantity _____ Price $32.00 ea. + $2.25 postage & handling, $1.00 for each additional book

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