Virginia Herpetological Society NEWSLETTER

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Catesbeiana Editor
Steve Roble

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Lori Williams

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IN THE NEWS . . .

Study of Amphibian Decline to Begin on National Reserves

Sources: USFWS; http://www.cbsnews.com

Last month the US Fish and Wildlife Service (USFWS) announced the beginning of a nation-wide study of amphibian declines, deformations, and malformations. The study will take place on 43 wildlife refuges in 31 states. Although a combination of factors may be responsible for the phenomenon (e.g., habitat loss, diseases, toxicants, depleting ozone layer, etc.), the refuge study will concentrate on the effect of chemical pollutants.

Biologists will focus particularly on pesticides and the role they may play in amphibian malformations. Because amphibians breathe at least partly through their skin, they are extremely vulnerable to chemical pollutants in aquatic environments as well as on land. Data gathered from studying frogs, toads, salamanders, and amphibian eggs will be added to existing data from other agencies and prior research. As a result, the USFWS hopes to create a comprehensive map of "hot spots" nation-wide. Management guidelines will then be developed to help individual refuges and state agencies deal with pollutant problems.

Patuxent Research Refuge, where crucial research was done in the 1960s to link DDT with eggshell thinning, will be the first site studied. Other refuges in the mid-Atlantic area to be included in the research are Eastern Neck National Wildlife Refuge in Maryland and Eastern Shore National Wildlife Refuge in Virginia.

What can Virginians do to help with the problem of chemical pollutants and their effect on amphibians? According to the USFWS,

homeowners use up to 10 times more pesticides per acre on their land than farmers do. Minimizing fertilizer and pesticide use and choosing non-chemical weed controls could help not only amphibians but also the health of the entire watershed.

For more information, consult the USFWS's "Homeowner's Guide to Protecting Frogs—Lawn and Garden Care." The guide as well as more information on the nation-wide study can be found at http://www.usfws.gov.

CARA Update

SOURCES: http://www.teaming.com; USFWS

On July 25, 2000, the Conservation and Reinvestment Act (CARA) passed a milestone in the US Senate. The Senate Energy and Natural Resources Committee voted in favor (13 to 7) of presenting the bill to the full Senate for consideration.

CARA is landmark legislation that would provide the largest amount of federal conservation funds in history, over $40 billion in the next 15 years ($2.8 billion annually). The revenue will come from offshore oil and gas leases and will be dedicated to conservation programs protecting wildlife, coastlines, parks, and historic resources. This bipartisan bill passed easily in the House of Representatives in May 2000.

The majority of funding under CARA falls under three main categories:

- Title I - $805 million for State Coastal Impact Assistance and Stewardship
- Title II - $900 million for Land and Water Conservation Fund
- Title III - $350 million for State-Level Wildlife Conservation and Restoration Fund.

Currently, nongame wildlife conservation programs lack long-term, permanent funding in most states and operate under a fraction of the total budget for state wildlife agencies. Title III of CARA will change that.

Title III will particularly affect a variety of nongame species, including reptiles and amphibians, and will place emphasis on preventing species from becoming endangered. In 1989 the US Fish and Wildlife Service (USFWS) reported 554 species listed as threatened or endangered. In 1995 the list

contained 914 species, including 35% of all amphibian species.

Funds from Title III will be crucial for reptile and amphibian conservation, especially in light of the growing numbers of amphibian declines and malformations. The USFWS has documented over a dozen amphibian species with malformations including many native to Virginia: N. leopard frog, wood frog, bullfrog, green frog, gray treefrog, spring peeper, American toad, long-toed salamander, tiger salamander, and spotted salamander.

Clearly, the need for nongame wildlife and habitat conservation is greater than ever. For more details about CARA and to find out what you can do to support this legislation, log onto the "Teaming With Wildlife" website at: **http://www.teaming.com**.

Wetland Restoration and CREP

SOURCES: USDA; NRCS; USGS

On March 8, 2000, Virginia's Conservation and Reserve Enhancement Program (CREP) was announced as a new $91million initiative under the current Conservation Reserve Program (CRP). CRP works with landowners to restore and protect wetlands, riparian zones, and stream banks. CREP enhances the incentives of the traditional CRP by providing the landowner with 75% (50% from USDA and 25% from the Commonwealth of Virginia) of the cost, materials, and labor needed to restore a wetland or riparian area, taking it out of pasture or cropland production. For land within the Chesapeake Bay watershed, the Chesapeake Bay Foundation and Ducks Unlimited will provide an additional 25%, thus providing zero cost to the landowner. CREP also gives the landowner an annual rental payment. This rent translates to a maximum of $100/acre for lands in the Chesapeake Bay and $90/acre for lands in the Southern Rivers watershed.

Lands eligible for CREP assistance include pasture and cropland adjacent to streams, wetlands, ponds, and cropland next to sinkholes, degraded or drained wetland pastures, and former wetlands that have been converted to cropland. Landowners choose to commit their land for either 10 or 15 years.

Wetland and riparian restoration improves water quality, decreases erosion and sedimentation, and decreases nutrient run-off from the land. Restoration also stabilizes

HERP *HAPPENINGS*

VHS Spring Business Meeting - The 2000 spring business meeting was held on May 19, 2000, at the Lancaster County YMCA. Business items discussed included extending executive committee terms to two years, possible nominations for executive offices to be included in membership newsletters, and the pros/cons of past teacher workshops and locations. Ideas and suggestions offered at the business meeting included adding the newsletter and *Catesbeiana* on-line, placing VHS fliers in high schools and other community buildings, and discussing potential locations for the fall 2000 meeting and symposium. The treasurer and secretary's report was given along with reports from the editors of the newsletter, *Catesbeiana*, and the VHS website. Members were asked to volunteer for anuran monitoring routes. Upcoming publications of interest are the VDGIF brochure highlighting native snakes of Virginia and the current article in the June issue of *Wildlife Conservation* on anuran monitoring in Virginia (see Literature Review page for full citation). Minutes of the business meeting will appear in the next *Catesbeiana*.

VHS Spring Survey - The 2000 spring survey occurred on May 20, 2000, at Westmoreland State Park in Lancaster County. Herp species found included marbled salamander, mud salamander, green treefrog, Fowler's toad, Eastern spadefoot, Cope's gray treefrog, Eastern cricket frog, Eastern narrow-mouthed toad, and American toad.

Virginia Anuran Calling Survey – Out of 50 possible routes in Virginia, 33 were surveyed over the spring and summer. Volunteers drove routes, stopping along the road at designated spots to listen and identify frog and toad species according to their calls. For more information or to find out how to volunteer next spring, contact Don Schwab at (757) 253-7072 or at dschwab@dgif.state.va.us. .

Wild for Wildlife Days – On June 23-25, 2000, VDGIF biologists conducted the first annual "Wild for Wildlife Days" weekend event at the 4-H Center in Front Royal, VA. The public enjoyed educational classes, workshops, and demonstrations on a variety of nongame wildlife management techniques, conservation topics, and life histories and habitats of nongame and T/E species. The most popular class of the weekend was Mike Pinder and Don Schwab's reptile and amphibian workshop (a.k.a. "Snakes, Turtles, and Creepy Crawlies"). Live specimens included a feisty canebrake rattlesnake, "Bob" the tiger salamander, a red-eared slider, a spotted turtle, and several red-spotted newts.

Bog Turtle Survey – In the spring and summer of 2000, VDGIF officials from the Wildlife Diversity Division in Blacksburg, VA, and other biologists conducted bog turtle surveys in southwest Virginia and have discovered at least three new sites where bog turtles exist. Among the new sites found is the most northern one known in the state. Biologists also recorded the largest known female and male ever found in the state according to VDGIF data.

VIRGINIA NATIVE

Spotted Turtle

Clemmys guttata

Photo Credit: John White; http://www.erols.com/reptiles/

Status: Nongame - Protected

Characteristics

The spotted turtle, also known as the "polka-dot turtle" or the "speckled tortoise," is a small freshwater species. This turtle grows to approximately 9-11.5 cm in length and has a variable number of small yellow dots on the carapace and neck area. Usually, hatchlings are born with one spot on each scute and a large, irregular-shaped blotch in the middle of the plastron, while adults may have a total of 100 or more spots. The smooth carapace is black and the plastron is yellow with black blotches. The head, neck, and front of the limbs are black to dark gray, and the underside of the limbs ranges from red to yellow. Males have a dark pigmented chin, brown eyes, and a concave plastron. Females have yellow chins, a flat plastron, and orange eyes. The cloaca in males is found beyond the carapace edge, while the cloaca in females is found even with or before the carapace edge. Maximum known longevity is 19 years.

Habitat

Highly aquatic turtles, this species lives in a variety of shallow water habitats including wetlands,

ponds, creeks, ditches, and marshy or flooded fields. Wooded areas or forests adjacent to aquatic habitats are preferred. Spring is the most active season for spotted turtles and a likely time to see them basking on woody debris or grass tussocks. Winter is spent in underwater hibernation in mud, muskrat holes, or under creek banks.

Food

Primarily carnivores, spotted turtles eat worms, slugs, insects, crayfish, snails, spiders, and millipedes. Occasionally, plant material is also eaten.

Distribution

In Virginia these turtles are found east of the Blue Ridge Mountains. Exceptions include Page and Augusta Counties in the Shenandoah Valley. National distribution includes the coastal plains of the northeastern states down to northern Florida.

Reproduction

Spotted turtles mate in shallow water in the spring and lay 3-4 eggs in early summer. Eggs hatch in late summer; hatchlings spend the winter in their nest. Sometimes males get aggressive during mating season and bite each other and occasionally females as well. Population densities and reproductive characteristics of this species have not been thoroughly studied in Virginia.

Threats

Natural predators include raccoons, snapping turtles, skunks, and foxes. Dogs also kill spotted turtles, and each year vehicles on roads are responsible for an unknown amount of spotted turtle mortality. Other concerns include loss of habitat, especially wetland and aquatic habitat, due to development and agriculture and illegal collection of this species for the pet trade. Protected against collection and sale, spotted turtles seen in the wild should be left alone and their location reported to a state biologist. If these turtles are seen in Virginia pet stores or seen advertised for sale in other places in Virginia (e.g., websites), biologists and the proper wildlife

law enforcement officials should be notified.

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VIRGINIA HERPETOLOGICAL SOCIETY NEWSLETTER
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Literature Review

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

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