Virginia Herpetological Society

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NEWSLETTER

July 1999

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VIRGINIA CHIP MILL STUDY

By Nancy Gilliam, 209 Malin Dr., Wytheville, VA 24382

Out of concern, citizens of Virginia have requested that the Virginia General Assembly study the cumulative off site and onsite environmental and economic impacts of the wood chipping industry. The bill mandates a review of existing information on the chip mill industry and its impacts. We are concerned that detailed Virginia-specific data may not exist to adequately understand the long-term impacts of chip mills on all aspects of Virginia's environment and economy. In other southeastern states, chip mills are proliferating and causing unprecedented forest destruction, degrading not only water quality, wildlife, threatened and endangered species and forest health, but also our local economies.

The Southeast is the largest pulp-producing region in the nation. Since 1985, the number of chip mills operating in the southeast has tripled to about 150 mills clearing an estimated 1.2 million acres per year. Industry and government studies both indicate that the current level of cutting cannot be sustained with softwood removals already exceeding growth rates. Removals of hardwoods are predicted to exceed growth rate within the next decade. Despite this evidence of severe over cutting, the industry continues to expand. Researchers from NC State University project that timber harvests in Virginia will increase substantially over the next two decades. We have an opportunity with this chip mill study to better understand the economic and environmental tradeoffs of an expanding wood chipping industry in Virginia. The chip mill study should investigate the following:

Laws: What policies are in place to regulate this expansion and ensure forest ecosystem sustainability in Virginia? We believe that the laws and regulations of today are no match for modern industrial forestry. There is a complete lack of any meaningful regulation at the state and local level to protect overall forest health. Assessment of Best Management Practices compliance is needed. Chipmills and the clearcutting necessary to feed chip mills are one industrial process, yet are not treated as such under existing permit requirements. (We use the term "clearcutting" to include all even-aged management practices, and think that all such practices need to be included in the scope of this study.) Permits need to address <u>cumulative offsite</u> impacts.

- Industry Trends: What are chip mills? Trace the history and reasons for their progression from the Pacific Northwest to the Southeast, exports and subsidies. Where does Virginia fit into the regional trend of increased timber harvests in the Southeast? How will increases in timber harvests in Virginia affect growth to removal ratios, tree species composition and age class distribution? What are the trends in pulpwood production in Virginia over the last 15 years? Are Virginia's hardwood forests being converted to pine plantations and at what rate? How do chip mills encourage clearcutting and discourage select logging?
- Economics: Chip mills cause the most amount of timber to be removed but provide the least number of jobs. A 1997 US Forest Service report states that "the timber industry is exhibiting a declining ability to satisfy the economic hopes of communities in failing to generate increased jobs and higher incomes". What are the economic tradeoffs of an expanding wood chipping industry in Virginia? What are the impacts to the local sawmills, tourism, and recreation? What are the non-market values of Virginia's forests including watershed protection, drought and flood control, air filtration, and scenic and spiritual values?
- Environment: What will the massive additional impacts of cutting for chip mills mean for the natural heritage of Virginia?

Intensive clearcutting devastates wildlife and plant habitat, threatens rare and endangered species, contributes to the fragmentation that renders forest habitat unusable by many wildlife species, and is a major cause of the sedimentation that ruins streams for fish habitat. The Clinch River and others in Virginia are globally recognized for their unique aquatic biodiversity which is already under stress. Conversion of hardwood forests to pine plantations causes a 95% reduction on species diversity. This study should document what species of plants, mammals, birds, reptiles, amphibians, and aquatic species are negatively impacted by clearcutting.

 Community/Social: what are impacts on the communities regarding quality of life, property values, private forest landowner, and economic well-being? What will chip mills mean for the longterm supply for sawmills and related small wood using businesses? For the tourism that depends on scenic landscapes? What will the proximity of chip mills mean in terms of noise and traffic?

The chip mill study should analyze these issues in depth, drawing on the examples of similar studies in North Carolina, Missouri, the Southeast Regional Study, and on the experiences of other southeastern states with chip mills. The Virginia study should result in new regulations, enforcement of existing regulations/laws, mandatory Best Management Practices, landowner education as to options to clearcutting and pine conversion. It should result in recommendations for policies necessary to ensure that the economic and environmental devastation that has accompanied chip mills in other areas do not occur here.

VIRGINIA HERPETOLOGICAL SOCIETY NEWSLETTER

3

Editor's note: During the last VHS spring meeting the membership voted unamniously to pass the following resolution to suspend new chip mills in Virginia. The resolution is being sent to Governor Gilmore.

A RESOLUTION TO THE GOVERNOR OF VIRGINIA REQUESTING THE SUSPENSION OF NEW SATELLITE CHIP MILLS UNTIL THE COMPLETION AND ASSESSMENT OF A STUDY PROPOSED IN HOUSE JOINT RESOLUTION NO. 730

WHEREAS, the forests in Virginia are vital to its citizens because they provide oxygen, filter pollutants from the air and water, stabilize soil, and provide habitat for wildlife and people; and,

WHEREAS, the Southeast contains the greatest amphibian species richness in North America, with 49% (72) of these being salamanders; and,

WHEREAS, most salamander species are present in mature forests of the southeastern United States; and,

WHEREAS, salamanders are an important component of the forest ecosystem comprising the greatest biomass of all vertebrates exceeding mammals and birds; and,

WHEREAS, salamanders are important indicators of environmental degradation and quality of life; and,

WHEREAS, within the Southeast, the forests of Virginia are abundant, covering over 15 million acres, with over three-fourths of this land being owned by private landowners not connected with either government or the forest industry, whose individual goals and stewardship values have the greatest impact on the viability and health of Virginia's forests; and,

WHEREAS, in 1991 the Department of Agriculture and Customer Services predicted that "an increase in competition in the Southeast for low-grade hardwood resources and resulting inflated stumpage prices will inevitably make Virginia's forests more attractive and competitive," and "the abundance of hardwood inventory and excellent deep-water ports make Virginia a prime site for hardwood-chip export market development," providing additional economic incentives and management options to private landowners to harvest this forest land base; and,

WHEREAS, a number of forest products operations, referred to as satellite chip mills, are located in Virginia; and,

WHEREAS, these mills have as their primary purpose the chipping of wood, with the resulting wood chips used in a multitude of such manufactured products as composite wood, paper and related products; and,

WHEREAS, these mills use 10 or 12 times the wood as a normal sawmill resulting in an increase of intensive management and harvesting methods such as large-scale clear-cutting; and,

WHEREAS, salamander diversity and biomass are adversely affected by these management practices; and,

WHEREAS, during the 1999 Virginia General Assembly Session, the House of Delegates and Senate approved House Joint Resolution No. 730 to establish a joint subcommittee to study the impact of satellite chip mills on Virginia's economy and environment; and,

WHEREAS, the creation of new satellite chip mills before the completion and assessment of this study could imperil salamander populations and the environment;

NOW THEREFORE, BE IT RESOLVED that the Virginia Herpetological Society, an organization dedicated to the conservation of the Commonwealth's reptiles and amphibians, hereby urges that the Governor of the Commonwealth of Virginia, or his designee, consent to the suspension of new satellite chip mills until 2001 or the completion and assessment of the study proposed by HJR 730.

VIRGINIA HERPETOLOGICAL SOCIETY NEWSLETTER

VHS ELECTIONS

4

Are you interested in determining the direction of one of the oldest nonprofit, regional societies focusing on the study of amphibians and reptiles? If so, then how about becoming an officer of the Virginia Herpetological Society. Chartered in 1958, the society is dedicated to the conservation, research, and understanding of reptiles and amphibians. Nominations and elections for VHS officers will be conducted at the Fall '99 meeting. Positions will be President Elect and Secretary/Treasurer. Responsibilities and terms as written in the VHS constitution are as follows:

President Elect shall fulfill the duties of the President when the latter is absent. He:She shall assume the Presidency should that office become vacant during a term. He/she shall select the meeting sites for the Society. The President-Elect shall assume the Presidency for a two year term upon expiration of the current President's term.

President shall preside at meetings of the Society and its officers; shall be nominal head of the Society; shall rule on questions of procedure that may arise; shall appoint ad hoc committees at his/her discretion; the President or his/her designee shall be the VHS representative to the Eastern Seaboard Herpetological League voting board.

Secretary/Treasurer shall maintain the records of the Society and its offices; shall notify the membership of pertinent business; shall be responsible for all general correspondence of the Society; shall be responsible for keeping the mailing list, accepting and processing applications for membership, and putting out all PR for soliciting members; shall keep records and accounts of the Society including all monies received and disbursed; shall collect the annual dues and maintain the membership roster; and shall be responsible for all financial reports required by the business of the Society. The Secretary/Treasurer shall make a report to the membership at each meeting.

Both officers are part of the executive committee that makes policy and planing decisions for the society. Anyone in good membership standing can become an officer. No one individual may hold two or more elective offices concurrently. If you or a friend is interested in becoming a VHS officer, be sure to attend the fall meeting or email Mike Pinder mpinder@dgif.state.va.us. Remember a society can only survive with an active and interested membership.

2nd ANNUAL VHS PHOTO/ART CONTEST

Announcing the 2nd Annual VHS Herp Photo Contest for all VHS members and their families. There will be two contestant categories, Adult and Youth (12 and under). Photographs submitted under the adult category can be color or black and white. Subjects must be of reptile or amphibian native to Virginia. Only one entry per individual.

Adult category: All photos must be 8" x 10" and dry mounted. Information about the photograph should be provided on the back of the photo mount and include: photographer's name, species common and scientific name, date, location. Photos in the adult category will be judged based on the composition, lighting, focus, exposure, background, and clarity/visibility of species identification characteristics. Photo entries cannot be computer enhanced images. Prizes will be available for first, second, and third place.

Youth category: Entries in the youth category can be black and white or color photographs, drawings, or paintings. There are no size or mounting restrictions in this category; however, the artist's and species name should be printed on the back of the entry. The youth category prizes awarded will be for first place, runner up, and participation.

All contest entries must be submitted to Mike Pinder, President, by 12:00 p.m. on the Saturday of the Fall Meeting. VHS officers and professional photographers will not be allowed to participate. Contest winners will be announced following the symposium. *Contest judges to be announced at the meeting.*



Herp Happenings

- Spring Meeting The VHS spring business meeting was held in Farmville on May 21, 1999. Topics included lifetime achievement award criteria, chip mill resolution, snake brochure, herp atlas and society budget. A committee was formed to coordinate work on the society's homepage. Paul Sattler gave a slide presentation of herps known from Prince Edwards County and surrounding areas. Meeting minutes will be available in the next <u>Catesbeiana</u>
- Spring Survey The society conducted its 1999 spring survey at several sites in and around Prince Edwards County. Over 33 species were collected including notable species such as Northern Copperhead, three-lined salamander, and mole kingsnake. The VHS would like to thank the Boswell family for allowing us unfettered access to the ponds, woods and streams on their property. A survey species list will be available in the next issue of <u>Catesbeiana</u>.
- Homepage Committee A new committee has been formed with the charge to develop and update the society's homepage. Committee members include John White, Whitney Farrell, John Boswell, and Mike Clifford. Shay Garriock has been diligently working on the homepage for years and the formation of this new committee will help ensure the continuation of this popular information source. Anyone interested on participating on this committee should contact Shay Garriock at his email address shayg@mindspring.com.
- VHS Elections During the upcoming fall meeting, the VHS will be looking for candidates for the offices of Secretary/Treasurer and President Elect. Interested individuals should plan to attend the fall meeting. Please see this newsletter for additional details on the duties of each office.
- Wood Turtle Study Tom Akre at George Mason University is currently studying habitat use of the state-threatened wood turtle (*Clemmys insculpta*) in different landuse types including forested, agricultural, and forested/urban. Sites have been selected and turtles are being tracked using radio telemetry equipment. The study will continue for the next 2 years.
- Snake Brochure The brochure to describe Virginia's 30 snake species is putting along. Several photographs have been received by VHS members. During the last meeting, membership voted to donate \$300 to the brochure. This money in addition to that donated by the Society for the Study of Reptile and Amphibians and private individuals totals \$800.
- Herp Atlas The long awaited reptile and amphibian atlas by Dr. Joe Mitchell and Karen Raey is now a reality. The atlas describes vouchered and unvouchered species accounts, species distributions, and county records for Virginia's 74 amphibian and 61 reptile species. See the back of this newsletter about ordering this essential reference for any serious herpetologist.

Anuran Monitoring Program Update – The program to monitor frog and toad populations is finishing its last survey period this year. Data from the 1999 field season should be analyzed by September. Training workshops for volunteers will be conducted in October or November, 1999. Anyone interested in participating in this workshop should contact Don Schwab at <u>dschwab@dgif.state.va.us</u> or call (757) 253-7072.

Lifetime Achievement Award – During the last VHS meeting, the membership voted unanimously to accept criteria for recognizing members for their accomplishments in Virginia's herpetology. The criteria is as follows:

- 1) Candidate must be active in the field of herpetology for at least 20 years.
- 2) Candidate has provided important contributions to the field of Virginia herpetology.
- 3) Candidate has exhibited a positive image to the field of Virginia herpetology.

4) Candidate is not a current executive committee member.

Please send your nomination with the signatures of three current members by August 10, 1999 to Mike Pinder, 2206 S. Main St., Suite C, Blacksburg, VA 24060 or fax (540) 951-8011. Nomination will be determined by a majority vote of the executive committee. Recipient will be awarded at the fall meeting. Award is limited to one individual each year.

Come to the last VHS meeting of the 20th

Century

The Virginia Herpetological Society will be holding its fall business meeting and symposium at the Three Lakes Nature Center at Herinco on October 23, 1999. The meeting will coinside with a reptile and amphibian workshop for teachers, luncheon, paper session and raffle/auction. Dr. Richard Hoffman, Virginia Museum of Natural History, will be the guest speaker. Lunch will be provided with admission price of \$5.00 members and \$6 nonmembers. Members 14 years old and younger are free. Details on agenda and directions will be available in the next issue of <u>Catesbeiana</u>.

Call for Papers

The VHS is currently accepting presentation topics for their fall symposium. Presentations should be 15 minutes long and can cover any aspect of herpetology. Anyone interested in presenting should submit a title by September 17th to Mike Pinder at <u>mpinder@dgif.state.va.us</u>.

VIRGINIA NATIVE

Copperhead *Agkistrodon contortrix*

Status in Virginia: None

Description

Remaining motionless and alert on the forest floor, the copperhead's dull red and tan coloration provides excellent camouflage that blends perfectly amongst the leaf litter. The copperhead gets its name from the reddishbrown color of its broad, triangular-shaped head. In many cases, the head is the only part of the body visible above the leaf litter. The reddish-brown hourglass crossbands are along the back appear as dark triangles from the sides. Like all venomous snakes in Virginia, the copperhead has cat-like vertical pupils and a heat sensory pit between each eye and nostril. The scales of copperheads are keeled.

Juveniles are paler than adults and have a distinct bright yellow tail.

Habitat

Copperheads are found in a wide variety of habitats including forests, old fields, marshes, rock outcrops, and agricultural buildings. They are active both day and night but become more active at night during hot, summer days. Copperheads usually hibernate with other snake species in rocky outcrops during the winter.

Food

Copperheads feed primarily on mice, but also feed on birds, amphibians, lizards, and other snakes. Unlike constrictors that crush their prey, the copperhead injects prey with venom, which causes it to die a short distance away. After a brief period, the copperhead uses its



heat sensory pits to track the dead animal and swallows it whole. In this manner, the snake is able to remain unharmed while securing potentially dangerous animals.

Distribution

The copperhead occurs throughout the eastern portion of the United States from Massachusetts to Florida to s. Texas to Iowa. The species is found statewide in Virginia including the eastern shore.

Breeding Biology

Copperheads mate during the spring and fall with a peak between April and May. Females give birth to 2-14 young between August and September. The young are 8-9 inches long and will mature in 2-3 years.

Current Status and Threats

Nature predators of copperheads include kingsnakes, hawks, black racers, and milksnakes. Humans are by far the greatest threat to their survival. Numerous individuals are killed on roads each year.

Of the three venomous snakes in Virginia, the copperhead is the least venomous. Bites mainly occur when people unknowingly touch or step on unseen snakes. Although the bite is rarely fatal, it is painful and requires immediate medical attention.

People will often kill these snakes whenever they are found, and even snakes slightly resembling copperheads are also killed. People in areas known for copperheads should familiarize themselves with the local snake fauna. Copperheads and all other nongame species native to Virginia are protected and cannot be killed unless being a nuisance or threat to human health.

Protection of open areas with plenty of mice and hiding and basking places is the best assurance that this unique snake will remain part of Virginia's wildlife for years to come. To learn more about Copperheads and other Virginia reptiles, we suggest the following material:

Conant, R. and J.T. Collins. 1991. The Peterson Field Guide Series - A Field Guide to Reptiles and Amphibians of Eastern and Central North America. 3rd edition. Houghton Mifflin Company, Boston. 450 pp.

Martof, B. S., W.M. Palmer, J.R. Bailey, and J.R. Harrison III. 1990. <u>Amphibians and Reptiles of</u> <u>the Carolinas and Virginia</u>. The University of North Carolina Press. Chapel Hill. 264 pp.

Mitchell, J.C. 1994. <u>The Reptiles of Virginia</u>. Smithsonian Institution Press, Washington. 352 pp.

Editor's Note:

This is a draft copy of what will eventually be a fact sheet for the copperhead. Fact sheet was from the description in J. Mitchell (1994) and M. McGregor (In press). Art work contribution was by Lori Parziale. Any suggestions or corrections should be sent to the editor.



http://vhsociety.home.mindspring.com/

Suggestions, comments, and submissions welcome at:

shayg@mindspring.com

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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- Williams, T. 1999. The terrible turtle trade. Audubon 101:44.

VIRGINIA BOG TURTLE SURVEY - 1999 UPDATE

by Tom Thorp, Supervisor, Three Lakes Nature Center and Aquarium

The bog turtle, *Clemmys muhlenbergii*, is a small turtle that prefers high elevation, mountain wetlands. With a maximum carapace length of approximately four inches, this little turtle was once thought to be common. It is extremely habitatspecific, requiring an open bog with freshwater seepage. Speculation as to how these bogs were once maintained is that bison, elk, and beaver played a major role grazing them clear.



The eradication of many of these large mammals and the encroachment of man combined to spell disaster for this diminutive species.

Presently, the bog turtle is being assaulted on two fronts. First, its size and temperament make it attractive to the pet trade and collection, both private and commercial, has reduced the wild population. Secondly, and perhaps most devastating, is habitat destruction. Many wetland sites have been drained for agriculture, business, and roadways. Because of these factors, the bog turtle was placed on the federal endangered species list. The northern population's status is threatened, and receives full protection under the U.S. Endangered Species Act. The southern population is protected due to similarity of appearance only, pending the results of ongoing survey work.

This year, we continued to look for turtles in new areas. In addition, the status of last year's new sites was examined. Weather often plays a major role in the success of fieldwork and this year was no exception. Early May brought unusually cold weather and little rain. For several days temperatures did not get above the 50's until late in the afternoon. Cold weather and lack of rain reduced the bog turtles' activity and made locating them difficult. This created a dilemma for the research team. Validity of sites becomes questionable. Were there no turtles present or had the poor weather conditions made them burrow deep into the wetlands? This often forced a return trip to the same site for reaffirmation. This year, one of our known sites was almost completely dry.

We did locate several new potential sites and visited possible sites located last year. One of the most promising looking areas, much to our chagrin, had fill dirt placed on its springhead. This act, combined with the drought, caused the site to dry up. Although we did not validate any of the potential sites located this year, we did find several new turtles in the sites located last year. More than half of these were new, unmarked turtles (44 of 86). Even in these sites, activity periods were affected by weather conditions.

On the whole, the bog turtle in Virginia is healthy and will remain a viable, yet fragile part of our heritage as long as we take measures to protect them from collection and habitat loss. These factors, alone or in conjunction, could tip the scale in the wrong direction for this unique little turtle.

Atlas of Amphibians and Reptiles in Virginia



The Atlas of Amphibians and Reptiles in Virginia by Joseph C. Mitchell and Karen K. Reay is a new 122-page publication produced by the Virginia Department of Game and Inland Fisheries. The Atlas features point location distribution maps compiled from over 17,200 records for 74 species of amphibians and 61 species of reptiles found in the Commonwealth. Point locations with vouchered museum specimens are distinguished from literature records. A history of herpetofaunal exploration in Virginia, a description of Virginia's environmental features, and a conservation section are highlighted in the text, which includes an extensive literature citation. The spiral bound Atlas is printed on heavy weight paper that will stand up to use in the field. Herp enthusiasts will want a copy of the Atlas to see what has or has not been found in their area! The Atlas will be available in early August 1999. To order a copy, specify your request and send a check for \$7.50 payable to Treasurer of Virginia to:

David Kopf

Wildlife Diversity Division Virginia Department of Game and Inland Fisheries 4010 W. Broad St., Richmond, VA 23230–1104 Phone (804) 367–8999



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