MARK YOUR CALENDAR: JOINT MEETING WITH Md.HS 19 December 1970 (Sat)
DRUID HILL PARK, BALTIMORE ZOO Reptile House
BALTIMORE, MARYLAND

VIRGINIA HERPETOLOGICAL SOCIETY BULLETIN NUMBER 65 (10/70)

AN OPEN LETTER TO BIOLOGY AND SCIENCE TEACHERS IN VA. SECONDARY SCHOOLS:

October 1970

VHS is a "natural" for a biology (science) teacher in a Virginia high school whether herpetology is your particular personal preferred field or not.

The VIRGINIA HERPETOLOGICAL SURVEY seeks your aid (as a biologist) and that of biology students in the high schools of each of the state's 96 counties and its independent political sub-divisions.

Over a dozen years' of the VHS BULLETIN issues have demonstrated that it is a good medium of exchange of information on Virginian herpetology.

The Virginia Herpetological Survey program is a statewide activity which is showing fine results.

If you have students who are interested in the lower vertebrates (amphibians and reptiles) please tell them about the Virginia Herpetological Survey and suggest that they participate in this statewide program.

Please send the names and addresses of unusually interested students to VHS and sample copies of VHS BULLETIN will be sent to them without delay.

HOW VHS ASSISTS TEACHERS:

(1) VHS BULLETIN suggests projects to alert students which will require your minimum supervision.

(2) It provides a ready reference source on the amphibians and reptiles of the state of Virginia.

(3) It is an activity requiring little expenditure of money - built for a department with a small budget, or little leeway.

(4) VHS is a way to help interested students who seek information. Try VHS.

NOTE: VHS is bringing its address list up to date.. PLEASE fill out the form enclosed -- by listing:

(1) permanent home addresses
(2) temporary address (at college)
(3) regular summer address, if not AT (1).

All addresses, starting with group (1) will be put on stencils for direct printing on envelopes when an issue of VHS-B is to be mailed. This move will reduce time and labor in distributing VHS BULLETIN.

In mid-spring, group (3) will go onto stencils; a major part of this group will be: summer camp naturalists, State Park naturalists, and Field Biological Stations, etc.

YOUR EARLY ATTENTION TO THIS REQUEST APPRECIATED!

USE FORM AT BOTTOM OF PAGE TWO (on back).

BUOYANCY CONTROL IN SEMIAQUATIC TURTLES

Freshwater turtles (the Red-eared Turtle) despite their heavy shells manage at one moment to float at the surface or at another to rest on the bottom No clear experimental demonstration of control, nor adequate description of the mechanism of control has been provided.

The investigator studied the specific gravity of these turtles and, using weights or floats, checked on ability of the turtles to compensate (regain proper balance). Sizable shifts in lung air and stored body water occurs despite a relatively constant body volume; i.e., no swelling or bloating.

To check a theory that some turtles use water in special cloacal storage sites to control buoyancy two sets of turtles were used in the experiments: one set with soft rubber plugs tied securely into the cloaca. It is known that (some) turtles can move water into or out of the cloaca, presumably to or from the cloacal bursae a pair of sacs which open on the dorsolateral wall of the cloaca. In the cloaca-occluded turtles this water exchange was prevented. The function of the cloacal sacs and the urinary bladder is believed to be roughly akin to that of ballast tanks in a submarine. Cloacal sacs are found in the semiaquatic freshwater turtles (Chrysemys) but not in bottom-dwelling soft-shelled turtles or shallow-water musk or mud turtles (Trionyx, Sternothaerus, or Kinosternon), nor in the land-roving box turtles (Terrepene).

Results indicate a control based on reciprocal shift of lung air and stored water to maintain desired buoyancy.

The author noted that substantial variations in body volume (other than for breathing) are not tolerated because of the adverse effect on internal pressure. This volume or pressure maintenance may explain why starved muskturtles maintain constant weight as long as they are kept in water. Establishment of the sacs' use in buoyancy control, causes one to ask why the sacs are missing in the sea-turtles (Chelonidae). How do they control buoyancy ? What mechanism do marine turtles use to control buoyancy ?

"BUOYANCY CONTROL IN THE FRESHWATER TURTLE, (Chrysemys scripta elegans)," SCIENCE magazine (AAAS). 29 December 1969 (Vol.166, No.3913, pp.1649-1651.)

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"HOW DO WE REACH BIOLOGY, SCIENCE STUDENTS WHO ARE INTERESTED IN THE HERPETOLOGY OF VIRGINIA?"

LTJG Glen Engeling, USNR, who was stationed at the Naval Weapons Station at Yorktown, Va., has made a suggestion in response to this question. In making a survey of the reptiles and amphibians of Hampton-Newport News, he was assisted by a number of the interested students at Peninsula Junior Nature Museum, Newport News, Va. (See VHS BULLETIN No.62.)

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" I think that one way to accomplish this would be to distribute the VHS BULLETINS more widely, not just to high schools, but to junior high school science teachers, also.

Certainly, if the science and biology teachers encourage their interested students to undertake an animal identification and collection project, this would give the students a good impetus for learning more about reptiles and amphibians. And, if a student has an article in the VHS BULLETIN he (or she) may gain a feeling of having accomplished something worthwhile."

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VHS will try out this suggestion and will write to the Va. State Board of Education for a new list of Virginia Junior and Senior High Science & Biology teachers.

DEAR READER: VHS needs your assistance in keeping a finger on the "true pulse" of Va. herpetology. Send in items; any that come to your attention. We will add these, where useful, to the letters, ideas, communications to the VHS-B for the benefit of all readers. . . .

Among the things we'd like to see are clippings from local newspapers in spring, summer, and fall on anything of interest to Va. herpetology. Also, magazine articles of interest which come to your attention. Your co-operation will be appreciated by others, and will save production time between BULLETIN issues.

Participants in this activity will be given credit in future issues.

The editor receives and reviews: SCIENCE NEWS, NATURAL HISTORY magazine, SMITHSONIAN magazine, the NATIONAL GEOGRAPHIC, and a few others of similar content. We are hoping that the offer of one of the college biologists to review COPEIA, HERPETOLOGICA, and JOURNAL of HERPETOLOGY, will result in regular contributions to VHS-B from that source.

We would appreciate it if an interested high school biology teacher would be willing to alert VHS-B to herpetology articles in BIO-SCIENCE magazine and TURTOX NEWS.
(Communications to VHS-B)

WANTED: COLLECTING DATA from several counties in Virginia where collecting has been extremely thin, or not attempted. See VHSB #38, and VHS-B #58, these are county-by-county records for the Snakes of Virginia, and Turtles of Virginia, in two "special bulletins."

"Lizards of Virginia", in preparation as VHS #68, will provide distribution data on lizards as known to date. Future issues will publish new county records so that these data may be brought up-to-date on an annual basis, as records accrue.

A record is not a specimen of unusual size. It is an identifiable, and well-preserved example of a species or subspecies--reptile or amphibian from a Virginia locality. See "Collecting Data Slips"--at bottom of VHS-B pages.

Adopt a species of amphibian or reptile, or give some thought to adopting a county where little collecting has been done. Either way brings good results before too long. A review of recent issues (VHS-B #62, 63, and #64) will show how it is done. See VHS-B #48 and #61 for useful background, and .. the "Collecting Notes"...

OPENING A CAN OF WORM SNAKES?

One never knows when the specimens, gathered in an effort to "fill in gaps" in Virginian herpetology, will prove useful to a scientist many miles away who is working on a more technical study of a related subspecies.

Dr. Donald R. Clark, Jr., Dept. of Zoology, Univ. of Kansas (Lawrence, Kansas. 66044), has written a short paper on the status of the western worm snake Carphophis amoenus vermis (Kennicott) HERPETOLOGICA Vol.24, No.2, pp.104-112).

On first reading, the article appears to have no bearing upon the Virginia Herpetological Survey, or so it seems--until p. 109. Clark writes about snakes that are "intermediates" between the midwestern worm snake (C.a. helenae) and the eastern worm snake (C. a. amoenus).

The specimens Clark noted particularly, were those found outside the normal contact (intergradation) area. Dr. Clark found two intermediates in the U.S. National Museum collection from Virginia taken by the writer -- one from ARLINGTON County and the other from SOUTHAMPTON County (taken with Wayne Willis of Annandale, Va.)

Additional material used for comparison, taken by VHS members, included a specimen from MADISON Co. and another from LOUDOUN County. The latter was collected by William H. Martin, III, Leesburg, Va.

(Editor's Note: Intergradation between these two subspecies -helenae & amoenus occurs in eastern Kentucky and Tennessee, and influences of helenae have been found by W. L. Burger, a VHS co-founder, in two LEE County specimens taken on the SE side of Wallen Ridge, 3mi. S. of Jonesville, Va.) FJT

Members with specimens of Carphophis should check them for fused internasal and prefrontal plates. A good strong magnifying lens will be needed. The plates in question are on the fore part of the head in front of the shield-like frontal plate. In helenae, the midwest worm snake, these are fused: a single internasal-prefrontal on the right and on the left sides. (See Roger Conant (1958) "Field Guide to Reptiles and Amphibians" p. 144, Fig. 31).

How widespread are these so-called "intermediate" individuals ? - - - - Please check. - -(Your comments are solicited --original to the author, carbon to: Editor, VHSB.)

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DINOSAURS IN OLD VIRGINIA

We are looking for some additional facts on the occurrence of dinosaurs within the area now known as Virginia.

"B.C.", "ALLEY OOP" and other comics to one side, man was not around to put the dinosaurs on any prehistoric endangered wildlife list. Somehow, as creatures go . . ! There is little doubt that they were victims of a sudden change in environment.

Footprints in Triassic red shale at Aldie, LOUDOUN County, and elsewhere, indicate a pretty lively scene. Cretaceous beaches in the Washington, D.C. area have yielded dinosaur bone fragments.

If you have information along these lines . . . please gather it, write a note about it, and send it to the VHS BULLETIN ! We will work the contributions into a feature.

Specific information is desired on the kinds and sizes of dinosaurs which are likely to have lived in what is now Virginia.

SNAKE IN THE CLASS GIVES PUPIL A LESSON

By: Sue Cronk
Washington Post Staff

Leroy Hawkins, 14, has decided that he doesn't want to handle snakes anymore.

"But maybe I'll change my mind in the future," he said, as he examined his right thumb.

That's where a 10½-inch greenish-brown Diamond-backed Water snake+ bit him during 9th Grade biology class at Jefferson Junior High School (D.C.).

Leroy, and some of his classmates, were planning to clean out the terrarium where the Diamondback, a common banded water snake,++ three turtles, and a newt live.

"I took the common banded out first," Leroy said. "Then, as I was taking the Diamondback out, he bit me. It hurt while he was on me, but I quickly threw him off and he landed back in the terrarium, and then it didn't hurt anymore. There was just a little bit of blood on my right thumb."

Leroy insisted afterwards that he knew all along the Diamondback wasn't poisonous and that he wasn't very excited. Nevertheless, his bite caused a lot of activity.

The school nurse, Reine Perkins, called Childrens Hospital. The hospital called the Metropolitan Police to take the snake to the National Zoo.

The police dispatched Pvt. Virgil Miller of District 1 to the school at 8th and H Streets S.W. but Officer Miller didn't take the snake to the zoo. "I didn't want to get bitten myself," Pvt. Miller said.

Mr. Lee D. Schmeltz, of the Zoo's Reptile House, said, "It's common procedure in cases like this for the police or the rescue squad to shuttle the snake to us." "But policemen are human, too" he added, "and some are afraid of snakes." So Schmeltz drove to the school and verified that the Diamondback was non-poisonous. The youth returned to his classes.

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+Natrix r. rhombifera, a Mississippi River Basin variety of watersnake.

++Probably Natrix s. sipedon, the local Northern Water Snake.

(NOTE: The story above has an interesting point: Why an "unknown" watersnake in a 9th Grade biology classroom ? Acquaintance with local varieties and exact identification of any out-of-area snakes is advised.)

AMPHIBIANS AND REPTILES A COURSE FOR AGES 6 TO 9

Exploration of the fascinating world of amphibians and reptiles with emphasis on those which live in the woods, fields, and waterways of the D.C. area. Live animals and slides will be used to illustrate, and students will learn some of the basic principles, natural history, and behavior of these animals.

CLASSES: Ages 6-7 at 9:45 a.m. for 45 minutes; ages 8-9 at 11:00 a.m., 1 hour Smithsonian Associates members $20; non-members: $25. The instructor is Mr. Robert G. Tuck, Jr.* VHS member and President of the Md. Herpetological Society and member of the Smithsonian Staff, Div.of Reptiles and Amphibians.

Classes begin Saturday, October 10, 1970, at the U.S. National Museum, the Natural History Building, West wing corridor.

ASSATEAGUE FAUNAL SURVEY:

Dr. Charles O. Handley, Jr. and Mrs. Darelyn Handley, of the U.S. National Museum are cataloging the fauna and flora of Assateague Island, ACCOMACK County, Va. The Handleys would like to hear from anyone who could contribute data or information on reptile or amphibian life of the island. (Through USNM or Editor, VHS-B, c/o Tuck.*)