COLLECTING WITH A CAMERA! by: Mr. George Brewster Arlington, VA

Introduction:

VaHS asked Mr. George Brewster of Arlington, Va., to write an article on nature photography. There is an alternative to the establishment of a small collection of preserved specimens. Some of the smaller colleges and any high school may prefer to go the route Mr. Brewster recommends. It is one that should save a number of reptiles and amphibians for the gene pool -and keep them out of the formaldehyde jars.

The answer is a collection of 2" X 2" color slides made from specimens caught in the area recorded on film, and released where they were first collected. This may be a boon to the small college whose budget is already overtaxed or that simply lacks the necessary laboratory room. Also, slides are more adaptable for class use.

Part I of a two-part article begins in the next column. Part II will be carried in VaHS BULLETIN No. 73

I have heard a distinguished mineralogist discuss a single tiny crystal that had come into her possession. The precise composition of this rarity could not be established without destroying the specimen. Which is better: to preserve the crystal and not be sure what you have? or to destroy it and know what you had had?

Herpetologists face a similar problem. A number of species are better represented in museums than in their native habitats. Some species can be checked confidently only by "destroying" them i.e., by preserving them in formaldehyde solution. Even then, museum specimens have a way of changing their labels with each new monograph). it better to have a perfect record of a species supported by specimens, or to have the living population ? Better to have a breeding colony, perhaps unnamed, in a known location, or to be able to demonstrate that a definite species once lived there ?

This isn't the place to answer these questions, nor is there any likelihood that professionals or habitual collectors will change their ways; but I suggest that an amateur who starts or maintains his own collection is serving herpetology less than his own glorification. Collection for established museums is something else -- defensible when there is a positive reason why a specimen will be of greater value in a museum jar than alive.

is not the Collection only, or even principal reason for decline in living populations. growth in the ranks of amateur herpetologists, however, with a concomitant increase in the number of collectors, is a real threat. I have followed woodland trails for miles and seen the marks of a careless collector's activities. Even in public parks where collecting is prohibited, I have seen hundreds of yards of upturned rocks and rolled logs with no thought to replacement. The collector not only lifted individuals out of the gene pool but disrupted the habitat as well! The farmer who kills every snake thinks he is doing God's work; the hunter who kills for sport feels that is what men were created for; but,

COLLECTING WITH A CAMERA: (continued)

the collector who wantonly destroys habitats is simply a vandal, and unforgivable.

A collection of color photographs can serve many of the purposes of a specimen collection and can help much more in educating the human community to the beauty of both reptiles and amphibians and the value of conserving and learning about Many people who would be repelled by dead specimens in bottles will pictures, through them, might learn to appreciate the living animals. In place of the biology laboratory collection of preserved dead specimens, we are recommending a file of 2" X 2" color slides. These are easier to maintain and are useful for educational purposes for the highschool or small college.

GETTING ASSISTANCE

Photographing living animals well doesn't come without effort. It also requires some investment in equipment. Organized groups might find it advisable to trust to one specialists. or. two Practically every organization devoted to any branch of natural history has at least one or two They'll be camera bugs. more than glad to photograph all the specimens

you can bring them. So will any camera enthusiast you know, even if he does not share your interest in herpetology. College or high school biology clubs should find it as easy as it is desirable to enlist the cooperation of camera club members. Even if you plan, eventually, to make your own pictures, it will pay you to cultivate the acquaintance of one or two of the camera nuts.

Not every amateur photographer, of course, highly skilled; and some that are may not have the special experience or specialized equipment needed for biological work. But almost all of them are looking for new worlds to conquer and are compulsive collectors of equipment. So your photographer friend's will increase as his knowledge increases and his equipment improves. At the least, he can help you in the selection and use of your own equipment.

You'll have to supervise these jokers, however.

They'll give you pictures but, their pictorial training may not be suited to your scientific needs. For example, most of them will be horrified at the thought of including a scale in the scene. But if you insist on what

you need and let the photographer make other pictures in his own way, you'll both profit. There is room for scientific and pictorial pictures; and now and then a slide will satisfy both the artist and the scientist.

EQUIPMENT

Any camera will make pictures of specimens. The trick is to make good pictures, which, at least for a beginning, means pictures that show clearly and in an adequate scale what you want to whether a whole show, animal or group, or a detail such as the neck ornamentation of a turtle or the arrangement of the scales on a snake's head.

The first requirement for your camera is that it be able to make sharp pictures at close range. This rules out the otherwise excellent Instamatic and their counterparts under other brand names.

Not too long ago it would have ruled out most of the cameras intended for amateur's use. Today, most cameras are well-suited to close-up work, or can be readily adapted. It is probably safe to assume that the herpetologist will prefer a 35mm camera, unless he already owns a fine camera of another design. There is

COLLECTING WITH A CAMERA: (continued)

plenty of reason for another choice (this writer is addicyed to the big 4 X 5) but for most, the advantages of the 35mm are overwhelming.

Reversal film which produces positive color transparencies (slides)is preferable to color negative film used for direct color prints. There are several brands of film available. It is wise to experiment until you find one which gives results you like. None can be said to reproduce color with very great accuracy. Some work better under certain types of lighting others in other circumstances. Some give acceptable results under a wide range of conditions; others give excellent results under ideal conditions. Having found a film that suits you, it is best to stay with it (although the writer confesses to carrying two cameras loaded with different films for different conditions).

Nature photographers have found the single lens reflex (SLR) the most satisfactory 35mm camera. In these cameras the lens that takes the picture also forms the image in the viewfinder. This is especially important in close-up work, where a small difference between the viewfinder lens and the taking lens can lead

so lets you see just how the picture will look with different taking lenses, and is generally easier to focus for close up shots than other types.

In spite of certain inherent weaknesses in the design, most 35's today are SLR's. This seems to reflect imreased interest in close-up photography and especially in nature photography. Practically all these cameras provide for a large number of interchangeable lenses, and are well suited to the needs of herpetologists.

The simplest way to focus at unusually close range is to use supplementary lenses. These are obtainable to fit most lens mounts in a variety of strengths. They can be used in combination to bring the subject into focus with the lens very close to the subject. Experienced photographers avoid this system, however, largely because better images are to be had with other equipment.

Most of today's SLR's can be fitted with what is called a macro lens --one that is especially designed for close-ups. These give sharper and better images than supplementary lenses, and are more versatile and easier to use. They are less than ideal only because they require working too close to the

another system. Some manufacturers have begun making macro lenses of longer than average focal length. These permit working at greater distances, but are not yet generally available.

Another device is a set of extension rings. These are inserted singly or in combinations between the lens and the camera body. They suffer from the same disadvantage of having to work too close to the subject, and are more trouble to use than the supplementary lenses.

The best system is based on the principle of the old, now neglected view camera, in which focusing was accomplished by means of a bellows which was extended or contracted by a rack and pinion. Bellows attachments are now available for practically all SLR's.

TECHNIQUES

It is not practical to publish here the treatise it would require to teach a beginner how to use a 35mm camera with bellows attachment, but some notes will be useful to those who are already familiar with the operation of a fine camera.

(Continued on page 4.)

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COLLECTING WITH A CAMERA: (continued)

If the normal (about 50mm) lens is put on the end of a bellows, you will find that the only pictures you can make are extreme close-ups -- images three quarters natural size and larger, up to direct magnification on the film. This is of little practical use to the ordinary amateur.

So, special lenses -- short mount or short-barrellenses -- are made for use with the bellows. These are usually of about 100 to 150mm focal length, the bigger ones usually of telephoto design. They lack focusing mounts, and are focused by extending or contracting the bellows. Without the focusing mount these lenses are much cheaper than focusing lenses of the same size; they are also usually better than focusing lenses, and since they don't have to be very fast, both quality and price can be improved still further.

Most bellows attachments are adapted to a particular lens, which is at infinity focus with the bellows complete contrac-With the bellows ted. completely expanded, the image is usually about three-fourths natural size. Greater magnifications are obtained using shorter lenses; the normal lens will start at about the magnification the Energial where

The big lens on its bellows permits working at more convenient distances from the subject than any of the other systems available. My preference is for the 135mm lens; but the lens should be one designed for the particular bellows it is to be used with. The lenses most often used are about 105mm. The 150mm and larger lenses are sometimes convenient, but usually don't make use of the full capacity of the bellows.

Two things should be noted in connection with this rig. First, as with any close-up device, depth of field goes down with closer approach to the subject. To increase the depth it is necessary to stop down: to f:16 or an even smaller aperture if available. It follows that unless you are working with flash, exposures will be long. A tripod is a must. In fact, even with flash, it is advisable to try to work without a tripod. For some cameras it is possible to obtain a bellows which will preserve the automatic features (if any) of your lens. These things, however, are uncommon, expensive, and not recommended. And, since you can't see much with the lens stopped down, you have to focus with the lens open. Only a tripod will insure your staying in forms often and atam

The other thing is that exposure increases with incressing extension. you are using a If through-the-lens meter available this makes no difference. Otherwise, you must allow for it. Most bellows attachments have a scale showing the exposure factor for certain extensions for the lens for which the bellows is intended, and sometimes for more than one lens. The factor is the amount by which measured or calculated exposure is to be multiplied. For a 1:1 magnification, the exposure is 4X; the aperture is opened up two stops, or the exposure time is multiplied by 4, or the main light is moved twice as close to the subject. Usually, the simplest way to make the computation is to divide the film speed by the exposure factor.

If the bellows does not have an exposure-factor scale, tables and charts are available for determining the factor for any size of image.

To Be Continued:

The second half of the present article will be carried in the next issue of the VaHS BULLETIN. In it, Mr. George Brewster discusses the use of artificial lighting, taking the picture, and the

ESTABLISHMENT OF THE VCU HERPETOLOGICAL COLLECTION

by Joseph C. Mitchell,
Virginia Commonwealth
University, Richmond

The Department of Biology of Virginia Commonwealth University has established a permanent collection of amphibians and reptiles under the direction of Dr. Charles R. Blem. The VCU vertebrate collection emphasizes the species found in Virginia. The total collection now comprises some 500 birds, 500 mammals, and about 10,000 fishes. With only 100 specimens in the collection of amphibians and reptiles, that portion of collection seems meager compared to the other classes of vertebrates. However, it is hoped that contributions to the collection will be made by those who are interested in Virginian herpetology. Of course, the collection is not limited to only Virginian species -- species from other geographic regions are also welcome.

The initial foundation of the "herp" collection was based on specimens which were already located at VCU (but uncataloged) and donations from three people:

Mrs. Dale Brittle, VaHS, Bowling Green, VA -- the Caroline County collection (gratefully acknowledged); Dr. Charles R. Blem - Richmond, VA --personal collection; and, Mr. Joseph C. Mitchell, VaHS, Richmond, VA -personal collection. The following information is needed for a specimen to be deposited in the VCU collection: State, county, direction and distance to nearest town, date of capture, collector, and a short description of the capture site. To date, the collection houses not a few county records from the state of Virginia. (A copy of list on request.) The university welcomes inquiries concerning the collection. These can be made through Dr. C.R.Blem, Dep't of Biology, VCU, 816 Park Avenue, Richmond, VA 23220 . ------------

YES! VIRGINIA, THERE ARE TWO GRAY TREEFROG SPECIES

Dr. Richard G. Zweifel, Dep't of Herpetology, American Museum of Natural History, New York, has prodded VaHS into a long-delayed, necessary decision on the treatment to be accorded the "Gray Treefrog Complex." For those who were not aware of it (and lots of us were not, or wished that we had not) there are two gray treefrogs!

One is the Northern Gray Treefrog (Hyla v. versicolor) that we have long known and loved. The look-alike is the Coastal Plain Gray Treefrog (Hyla chrysoscelis). If you have access to copies of CHESAPEAKE SCIENCE, the June 1970 issue, pages 94 to 97, carries an article "Distribution and Mating Call of the Treefrog H. chrysoscelis at the Northeastern Edge of its Range."

They look alike. It is virtually impossible to distinguish one from the other, morphologically, (i.e., by structure) but they can be distinguished by their call.

Separation by voice requires voice taping and production of a voice-print for comparison.

Three NORTHUMBERLAND Co., VA specimens have been voice-taped and are posted on VaHS distribution maps. Are there others?

All data are most welcome: c/o VaHS BULLETIN P.O. Box #1376 (Main P.O.) LEESBURG, VA 22075

LETTERS, IDEAS, COMMENTS:

BLACK HOG-NOSED SNAKES

4 April 1973

While preparing the account of the hog-nosed snake (Heterodon platy-rhinos) for a forthcoming publication, "The Herpetology of the Shenandoah National Park," I came across some comments on black or melanistic specimens.

Dr. Richard A. Edgren, in 1957, reported that 9.3% of the 879 snakes studied were black. It is not a matter of sex: 43 were males and 39 females. In certain areas, black individuals are more common than the patterned (not in Virginia, as of 1957). It appeared to be a matter of age. Edgren stated that the results seemed to indicate that, genetically, black individuals (assuming character to be controlled genetically) show the (checkerboard) NORMAL pattern at birth, and become melanistic as they increase in size and age. The trait seems to be expressed first on the forward part of the body. Patterned young develop into melanistic adults by the gradual deposition of black pigment (melanin) in the dermis beginning at the forward part and progressing toward the

tail. He suggested that

the trait is the result

of certain physiological

conditions, such as sexual maturity, the onset of which is correlated with age. Unfortunately, no broods are available from melanistic females. "Certainly, breeding studies of black hog-nosed snakes are desired," Dr. Edgren said.

It would be interesting to see juveniles or hatchling black hog-nosed snakes. I believe that I have seen hatchling black hog-nosed snakes around the Washington, D.C. area

Does anyone know of later studies, or of melanistic Heterodon, particularly, from Virginia ?

(Mr.) William L. Witt 1412 Patrick Henry Dr. (#124) Arlington, VA 22205

July-August 1973

In VaHS B#71, at page 10, was information about the Herpetological Information Search Systems (HISS). However, the address of Dr. Herndon G. Dowling was cut off. What is it?

/s/ (Several Writers)

Editor's note: Sorry!

Dr. Herndon G. Dowling, Herpetology (HISS) AMER. MUS. of NAT.HIST. New York City, NY 10024 "I am pleased that the data I furnished are of use in filling in gaps in the VaHS maps. I admire your society for carrying on this project in such a useful scientific way and for making the results of your work available. I'll keep you in mind if I pick up any more (VA.) specimens that would add anything to your maps..."

(Dr.) Richard G. Zweifel Department of Herpetology American Museum of

Natural History, N.Y.C. New York 10024

SPECIAL 1973 DISTRIBUTION OF VAHS'"LIZARDS OF VA."

. Copies of the special Vals BULLETIN on "LIZARDS VIRGINIA" (#67-68) (mailed to members in June 1972) were mailed to 1973 (new) members in copy was mid-July. A sent to interested AUDU-BON NATURALIST SOCIETY members, as well as to VIRGINIA WILDLIFE readers who had requested a copy. These special bulletins were mailed to nearly 70 Camp and Park Naturalists in Virginia, including virtually all of the Federal, and State, Park Naturalists, and Nature Directors at Scout Camps in Virginia. Your support of VaHS made this possible. or in to

FALL MEETING 1973 VaHS:

All VaHS members and friends are invited to attend the Fall, 1973, meeting of VaHS in Richmond, Virginia.

PLACE: Virginia Commonwealth University RICHMOND, VIRGINIA

DATE: 20 OCTOBER 1973 SATURDAY

ROOM # 115 SCIENCE BLDG. at 816 Park Avenue between Laurel and Shafer Streets in the vicinity of Monroe Park (downtown).

The program is sponsored by the Department of Biology of Virginia Commonwealth University, host: Dr. Charles R. Blem; and the VCU Biology Club, Mr. Joseph C. Mitchell is Vice President of the VCU Biology Club

TENTATIVE PROGRAM:

12:00 to 1:00 p.m.
Refreshments (social)
(bring box lunch)

1:00 to 2:30 Introduction Organizational comments Presentations not requiring visual aids.

2:30-3:30 Afternoon break Several snack bars within walking distance.

3:30-6:00 Presentations requiring audio-visual equipment (16mm motion picture, or 2"X 2" projector for slides).

Bring some prepared comments on your project for discussion during the VCU meeting. Bring slides or film and facts for use during the sessions.

All audio-visual equipment, except special equipment, will be furnished by VCU.

ACCOMMODATIONS: There are several hotels or motels within easy distance of VCU. Please make own reservations.

PARKING: The location of the university -- in downtown Richmond -necessitates the use of street parking. Since meeting is on Saturday there should be little problem. The Mosque parking lot (pay) is 2 blocks from the Science Building and meeting.

REFRESHMENTS: The Dep't of Biology will furnish coffee and cookies. Coke machines are located in the Science Building and in the Hibbs Bldg. at 900 Park Avenue.

INQUIRIES: Dr. C.R. BLEM, or Mr. Joe Mitchell, VCU Biology Department, 816 Park Avenue, Richmond.VA.

ADDRESS CHANGE FOR Vals. BULLETIN AND EDITOR

The editor of the VaHS BULLETIN has moved from 4706 Tallahassee Avenue, ROCKVILLE, MD 20853 to LOUDOUN COUNTY, VIRGINIA.

A Post Office Box (#1376) has been opened for the society's bulletin in the Main Post Office at Leesburg, VA 22075. All mail going to the old address will be forwarded for the present. Please address all future mail to:

Editor, VaHS BULLETIN
P.O. Box #1376 (Main P.O.)
LEESBURG, VA 22075

MEMBERSHIP CARDS (VaHS)

Your updated membership card will be enclosed in the next VaHS BULLETIN.

Those not receiving a new card with VaHS B#73 may write to the Secretary if an error has been made or to the Treasurer if support has not been given to VaHS in the past two years or more: \$2 will get most off the hook; if out-of-state, \$3 will accomplish the same thing.

SEE YOU IN RICHMOND, VA on 20 OCTOBER 1973 ...

VIA: TIA DENTETOLOGICAL		19/3-19/4	BOTTEL	INS 70 through 80
Useful information on Vi (sample enclosed) in whi may place items or brief	ch biology or	science teachers an	nd their	advanced students
A special VaHS BULLETIN	in June 1972. a "key" to Va	of VIRGINIA" wa It contains descr . species, and maps the ten Virginian s	iptions, covering	illustrations,
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TO:				
VaHS TREASURER 2623 Military Rd. Arlington, Va. 22207	the VaHS] Mailed to	check or money order program for 1973 - I any address in Va. any adress outside	1974. (incl. A	PO, FPO) \$2.
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(title) Dr. Mrs. Mr. Ms. (occupation)	*	C'y/Treas. notes: Rec'd \$ Card sent with VaHS-B # s side for VaHS fill	es -	KEEP WITH TAX RECORDS INCLUDE WITH CONTRI- BUTIONS TO SOCIETIES Science-Education non-profit group.
(age) under 18 over (strike one)	,			

Useful information on Virginia's reptiles and amphibians. Mimeographed newsletter (sample enclosed) in which biology or science teachers and their advanced students may place items or brief articles which relate to some aspect of Va. herpetology.

A special VaHS BULLETIN

-- "LIZARDS of VIRGINIA" -- was mailed to VaHS members in June 1972. It contains descriptions, illustrations, a "key" to Va. species, and maps covering known range in the state of the ten Virginian species.

New members will receive "LIZARDS of VIRGINIA" and all of the 1973 issues. USE THE DETACHABLE FORM BELOW:

In preparation:

"REPTILES of VIRGINIA" (Turtles, 1968; Snakes, 1964; and Lizards, 1972 updated and revised, with maps, keys, and illustrations of Virginian species).
"FROGS, TREEFROGS, and TOADS of VIRGINIA"
"SALAMANDERS of VIRGINIA" and "LIST of VA. HERPETOFAUNA".

If you have not started, now would be a good time to begin a three-ring binder for VaHS BULLETINS. Regular issues on long sheets can be trimmed to $8\frac{1}{2}$ " X 11" and perforated on left margin.

THE VAHS BULLETIN for your own, or class, reference FILL OUT THE FORM BELOW and mail. We welcome your comments and support.



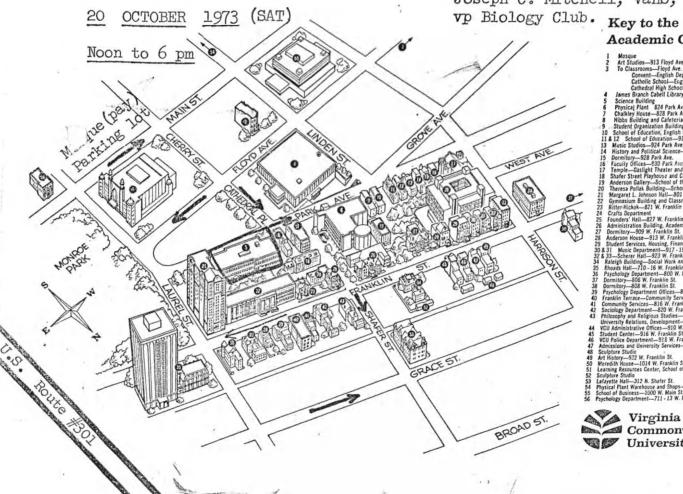
VCU Science Bldg. Place: 816 Park Avenue

RICHMOND, VA

Exit 13 of the Richmond-Petersburg

Toll Road

Meeting sponsored by the Department of Biology, VCU and the VCU Biology Club: Dr. Charles R. Blem, Faculty; Joseph C. Mitchell, VaHS,



Academic Center

Virginia Commonwealth University

Arrows indicate ONE WAY streets

MEETING: EASTERN SEABOARD HERPETOLOGICAL LEAGUE (ESHL)

SPONSORED BY THE PHILADELPHIA HERPETOLOGICAL SOCIETY

OPEN TO ALL AMATEUR AND PROFESSIONAL HERPETOLOGISTS, THEIR FAMILIES AND GUESTS

DATE: SATURDAY, OCTOBER 27, 1973

PLACE: PHILADELPHIA ZOO ED. & AD. BLDG. AUDITORIUM

TIME: 12:30 P.M. TO 6:00 P.M.

PROGRAM:

12:30/1:30 P.M. REGISTRATION & REFRESHMENTS

1:00/5:00 P.M. GREETINGS FROM OFFICERS & DIGNITARIES

TOPICAL ADDRESSES

If there are any speakers who would like to be added to the program, please let the coordinator know.

5:00/6:00 P.M. TOUR OF NEW REPTILE HOUSE
MEETING OF DESIGNATED REPRESENTATIVES
OF CONSTITUENT SOCIETIES

DIRECTIONS TO PHILADELPHIA ZOO:

- 1. BY TRAIN: Take Penn Central and get off at 30th Street Station. Take a cab from there. It is only a little over a mile away. (34th Street & Girard Avenue)
- 2. BY CAR: From North: Come down 1-95 to Walt Whitman Bridge. Follow signs to 676 North (Schuylkill Expressway North) and get off at Girard Avenue (Route 30 W). You will be at 34th & Girard, right across from the zoo.

From South: Come up 1-95 (you will be detoured to 291 N past the Philadelphia Airport and over Penrose Avenue Bridge.) From there, follow signs to 676 North as above.

The Ed. & Ad. Building is on 34th Street below Girard Avenue. It is a new building with its own parking lot. If you come in that way, you will be admitted free.

WE NEED A SPONSOR FOR THE MARCH, 1974 MEETING.

Malvin L. Skaroff, Coordinator 1025 Lakeside Avenue Philadelphia, Pa. 19126