

THE MISSING EFT

by Kent Wells  
Springfield, Va.

Over the past two or three years I have had in captivity various adult Red-spotted Newts (*Desmognathus v. viridescens*). I have managed to get an almost complete photographic life history of the newt, beginning with the familiar mating dance which the male and female perform during the mating season which is from March to May. In this dance the male grasps the female around her body behind her forelegs and rubs the side of his head, where scent-producing hedonic glands are located, against her snout. At the same time, he oscillates his tail -- where more glands are located -- back and forth in the water, seeming to waft some attractive scent toward the female to bring her to an amorous state. When this dance is completed -- and it may go on for hours -- the male deposits a spermatophore in front of the female who picks it up with her cloaca. The eggs are then fertilized internally.

The eggs are laid individually, attached to plant stems under the water. They hatch in 20 to 35 days. The larvae are 7.5 " or 5/16" at hatching. When mature the larvae are light greenish yellow, and show the dark line thru the eye, so noticeable in adults. The larvae transform at about 36 mm or 1-3/8" from July to October. It is here that, until recently, my photos of their life history stopped.

For several years I have searched in vain in the area near my home near Springfield, Va., for the red eft -- the land stage of the newt. The red eft, a small bright red form, is the stage immediately following transformation. In late June, however, I found several of the newt larvae nearing transformation in a small pool near Accotink Creek. These I took home and placed in an aquarium, hoping they would eventually turn into red eft thus completing my photographic record of the newt life cycle. In a couple of weeks -- about July 1 -- the anticipated event occurred. The first newt had transformed: To my astonishment, however, the newt was not a bright red eft, but a 35 mm long replica of the adult! The dorsal color was olive with the characteristic red spots on either side. The venter was a light yellow with tiny black dots. There was a distinct line through the eye. The tail was somewhat keeled having lost its broad swimming fin but was not as rounded as that of the typical red eft. Since transformation, this young newt, which resembles the aquatic stage, has been living on land although water was available. This was not too astonishing since adult newts are perfectly capable of living on the land as well as in the water. In fact, I have never found a newt in the water after May, for they are often forced to leave their aquatic haunts by the drying up of the pools.

continued on next page

The Missing Eft, continued

The unexpected absence of the red eft stage in my young newt aroused my curiosity. I began checking some books. Several stated, as I had always believed, that the larvae always transformed into red efts. However, Sherman Bishop in HANDBOOK OF SALAMANDERS (Cornell, 1947, Hafner 1962, p.102), states that in some Coastal Plain areas the land-dwelling eft stage may not occur. H. Rucker Smith also states this in AMPHIBIANS AND THEIR WAYS (Macmillan, 1962, p.91). Since my area of Fairfax County is near the fall line -- the boundary between the Coastal Plain and the Piedmont -- this explanation is probably the correct one.

Although I cannot say that, as a general rule, all the newts in my area transform without the eft stage, it at least appears to be the case from observations I have made. If anyone in the Virginia Herpetological Society has made similar or contrary observations along the fall line of this, or adjacent states, but particularly in Fairfax County, I would greatly appreciate seeing a communication on it in a future issue of the VHS Bulletin.

(July 11, 1966) Kent Wells, VHS  
Springfield, Va.

(Editor's note:  
See recent letter on Editor's  
page from Kent Wells at Duke.)

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GENUINE INTEREST IN VIRGINIAN HERPETOLOGY

... What appealed to me most was that here was an area of science in which new explorations and discoveries were waiting to be made. In Virginia, herpetology somehow does offer a frontier and adventure. It offers you the unusual satisfaction of obtaining a better understanding of an area of nature study about which there is little current popular understanding. This makes whatever work you do fun. It gets you out-of-doors. The fact is almost every aspect of herpetology

can be interesting. There's fun in doing things that are new and different. And there's also the satisfaction of being completely absorbed in what you're doing. It calls for people who have a real interest in the lower vertebrates and a scientific curiosity. It calls for individuals who can observe facts without emotionalism and draw useful conclusions. It offers a chance to make genuine contributions to the knowledge of Va. reptiles and amphibians.

"A VHS SUPPORTER"

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Newts are being used by investigators at the Nature Conservancy's Experimental Station, Abbots Ripon,

England, where a five-year study is underway aimed at determining the effect of pesticides on life.

(MEDICAL TRIBUNE, page 27,  
Wed., March 1, 1967.)

VIRGINIA HERPETOLOGICAL SURVEY

The Virginia Herpetological Survey launched in Spring, 1965 by VHS, will be continued and expanded in the months and years ahead.

This is believed to be the first statewide effort in this specialized area of vertebrate zoology.

The assistance of biologists and their more advanced students will bring success to this effort.

The VHS Bulletin will supply all necessary information to participants -- both schools and individuals -- in the form of special issues. One on the Snakes of the state of Virginia has been issued and will be revised as new data become available. Additional VHS special bulletins will cover the Turtles, Lizards of Virginia, and the Amphibia: Frogs and Toads and the Salamanders, in that order.

Report forms are to be made available regularly in the bulletin.

This is your invitation to become a part of this historic endeavor. Become a member, or renew your VHS membership. If you are not interested but know someone who may be interested, pass this invitation along.

NOTE special reply form inside the last page of this VHS Bulletin for easy reply by university and college, or senior high school, biology departments.

USE the form, fill in and return it to the Society indicating your degree of cooperation in the Virginia Herpetological Survey.

Beginning with this issue of VHS Bulletin, the Division of Reptiles and Amphibians, United States National Museum (USNM), will acknowledge recent donations of Va. herpetological specimens to the National Collection.

The USNM has received from Bill Hadley, VHS, the following:

Five-lined Skink	Henrico Co.
Broad-headed Skink	Hanover Co.
No. Fence Lizard	Hanover Co.
No. Fence Lizard	Henrico Co.

Eastern Worm Snake	Henrico Co.
Eastern King Snake	Henrico Co.
No. Water Snake	Henrico Co.
No. Brown Snake	Hanover Co.
Eastern Ribbon S.	Henrico Co.

Bill Hadley is a member of VHS from Glen Allen, Henrico Co., Va.

The USNM has received from David Goetz, son of Mr. R. E. Goetz, VHS, of Hampton, Va., the following:

Eastern Mud Salamander  
found in Goochland County, Va.

The above additions to the USNM National Collection were noted by Mr. Robert G. Tuck, Jr. -- charter member of VHS -- who is on the staff of the USNM Division of Reptiles and Amphibians assisting Dr. Doris M. Cochran and Dr. James A. Peters.

Contribution to Norfolk Museum received by past President of VHS Roger H. deRageot, an Eastern Spadefoot from Chesapeake City, presented by Dennie Hollowell.



## COMMUNICATIONS FROM VHS MEMBERS

Durham, N.C.

Chesapeake, Va.

...My mailing address until June is given below. The territory around Duke is ideal for collecting, especially salamanders and snakes. Unfortunately, a heavy schedule will not permit much of that. I have gotten out into the woods twice and each time caught a Slimy Salamander (Plethodon g. glutinosus). One of these is unusual in that it lacks all spots on the dorsal surface and is, instead, pure black. There are a few white spots on the sides. In Handbook of Salamanders, Bishop says that this pattern sometimes occurs in some Southern areas. I was able to bring a few amphibia with me for my room -- two toads, a treefrog, a spotted and marbled salamander. I look forward to seeing the next VHS Bulletin. . .

Kent Wells  
Box 4604  
Duke Station  
Durham, N.C. 27706

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Viet Nam, S.E. Asia

I've been running across all sorts of reptiles here in Viet Nam. The latest is a semi-blind blindsnake-looking a bit like our Eastern Worm Snake. It is heavier in body than Carphophis, about 1 ft. long, and, of course, the eyes that "aren't." I have also seen a few small lizards but, it seems, never have a chance to stop to chase them around. It's frustrating for an avid collector!

Sp/4 Scott Silsby  
RA13765825 Hqs.  
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APO San Francisco,  
California 96490

On January 7, 1967 my friend's father, Mr. Maurice Dennis caught a Black Rat Snake (Elaphe o. obsoleta) in their barn. The temperature that weekend was 68°(F). The snake was exactly 3½ ft. long. I have it now. Since the Dennises like to keep snakes down at their barn, I made a trade with them for my four-foot blacksnake which had a nasty disposition. I believe the January 7 capture may be the first and earliest catch of the year.

Dennie Hollowell  
602 Sterling Pt.  
Chesapeake, Va.

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Parris Island, S.C.

I would like to receive the VHS Bulletins while I'm in the Service. I want to keep up with the Society and its functions -- even though I won't be able to participate in them. I'll keep you posted on all address changes. My "Greetings" to all VHS members!

Joseph C. Mitchell  
2792 S Co., Plt 304  
Bn., M.C.R.D.  
Parris Island, S.C.  
29905

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Lynchburg, Va.

I am from SW Va., Tazewell Co., and already have some specimens in my collection from that area. I also plan to do collecting on a state-wide basis beginning in the Lynchburg area this Spring.

Shirley K. Whitt  
Assistant Professor  
Biology Department  
Lynchburg College  
Lynchburg, Va.

SPECIAL REPLY FORM  
FOR BIOLOGY DEPARTMENT PARTICIPATION  
IN THE VIRGINIA HERPETOLOGICAL  
SURVEY

Biology or Science Departments of Virginia's universities, colleges and high schools are urged to participate in the statewide survey. If membership is desired, fill in the membership application below and mail it, with check for dues. Annual dues are \$1 per member.

IF YOU ARE INTERESTED IN FILLING INFORMATIONAL GAPS IN VA. HERPETOLOGY LET THE SOCIETY KNOW OF YOUR INTEREST. DETACH AND USE FORM.

..... (detach) .....

VIRGINIA HERPETOLOGICAL SURVEY  
c/o Dr. Phoebe H. Knipling  
2623 Military Road  
Arlington, Va. 22207

----- 1967

The Biology Department of \_\_\_\_\_  
located at \_\_\_\_\_ in \_\_\_\_\_  
(street or route) (Post Office)

County of \_\_\_\_\_, Virginia, plans to participate in  
the Virginia Herpetological Survey as a part of its field program.

(Attach names and mailing addresses of interested students.)

Please send the VHS Bulletins, as issued, to me as follows:

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--- (County) ---

..... detach .....

DO YOU HAVE STUDENTS WITH AN ACTIVE INTEREST IN(CURIOSITY ABOUT)

HERPETOLOGY ?

THEY MAY ENJOY KNOWING ABOUT VHS!

We would appreciate your recommendation of exceptional students who may be interested in membership in the Va. Herpetological Society. Here is an outlet for bio-science enthusiasm which you may wish to use as an adjunct to formal classroom or lecture/laboratory studies.

N O T I C E

IN THIS BULLETIN:

Article written by a Member on "The Missing Eft".

Virginia Herpetological Survey -- information.

Letters from Members on VHS or of general herpetological interest.

REPLY FORM: for Virginia's university or college and secondary school biology departments (see inside back cover). Fill out & Mail!

An earlier bulletin on "How to Preserve Specimens" is mailed free to this group of biologists.

A copy of our VHS ROSTER (Bulletin No. 46) will be mailed upon receipt of your reply form.

In this way your biology department (or you) will get on the list to receive future VHS special bulletins.

You will not receive every issue of the VHS Bulletin UNLESS YOU ARE A MEMBER of VHS. Join now! Use membership application or renewal form at bottom of page carrying biology dep't reply form.

(position or title)

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ZIP

... appreciate your recommendation...  
... membership in the VHS...  
... for bio-science enthusiasts...  
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