

# MOUNTAIN LAKE

## ECHOES



Radial section: *Pinus strobus* - White Pine

volume 27

1964

MOUNTAIN LAKE ECHOES

1964

Editors: First Term Mrs. Marvin W. Scott  
Second Term Mrs. Harold Heatwole

Cover: Susan C. Smith

Administrative Staff

Director: Dr. J.J. Murray, Jr.

Business Manager: Malcolm Levin

Secretary Paige Mendicino

Dieticians: Miss Edith Rowland  
Miss Irene Rowland

Librarians:  
First Term Lee Scott  
Second Term Audry Heatwole

## A MESSAGE FROM THE DIRECTOR

The 1964 session at Mountain Lake was marked by a new departure in administration. Dr. Riopel and I set out on our cooperative venture as alternating directors. We like the result and hope you will approve. This means, of course, that Dr. Riopel will be the Director for the next session, bringing you his complementary experience in botany and experimental morphogenesis.

Physical changes at Mountain Lake continue to appear from time to time. Chilly mornings this summer were relieved by the new heating system; and the new all-weather laboratory facilities are nearing completion. We hope that you who began research problems in the summer may take advantage of the new opportunity for winter study. You can now have self-contained living and working facilities at the Station at any time of year.

You will all be receiving the Bulletin early in the new year. We hope that you will pass it around to your friends and associates. More people mean more interest and more opportunities for everyone at the Station.

This issue of Echoes is designed to bring back to you memories of the summer at Mountain Lake. Keep in touch and come back soon.

Sincerely yours,

J.J. Murray  
Director

SPECIAL ANNOUNCEMENT

At the meeting of the Board of Visitors of the University of Virginia which was held on 16 October 1964, the following resolution which will be of concern to all Mountain Lakers was adopted:

RESOLVED by the Board of Visitors of The Rector and Visitors of the University of Virginia that the main building housing the laboratories at Mountain Lake Biological Station be and it is hereby named Ivey F. Lewis Hall.

We feel that it is most fitting that our laboratory building should bear the name of one who gave so much of his time and interest to Mountain Lake.

SENIOR INVESTIGATORS

Dr. Bryan Clarke - Lecturer in Zoology, University of Edinburgh, West Mains Road, Edinburgh 1, Scotland  
With Dr. J.J. Murray, Jr., Director of the Station in 1964.

"I am working with Dr. Murray on the material we collected on the island of Moorea (random samples of the polymorphic snail Partula). We are dissecting the ovoviviparous parent snails, and comparing the phenotypes (color and coil) of parents with the phenotypes of their offspring--hoping to obtain information, not only on the genetics of the population, but also on its breeding structures.

"We are also studying introgression between species of Partula, and believe that we may have found the smallest ring species in the world (five miles long !). We are trying, in various ways, to relate the distribution of phenotypes and genotypes in Partula to selective forces in the environment. So far, we have not been successful. We live in hope."

Dr. L.R. Cleveland - Research Professor of Zoology, Department of Zoology, University of Georgia, Athens, Georgia. Assisted by Bruce T. Cleveland, Department of Physics, Johns Hopkins University, Baltimore, Maryland, and Susan C. Smith, Department of Zoology, University of Georgia, Athens, Georgia.

Biophysics of Cell Reproduction and Locomotion.

Dr. Harold Heatwole - Associate Professor, Department of Biology, University of Puerto Rico, Rio Piedras, Puerto Rico.

Relation of Feeding Thresholds to Motivation in Toads.

Dr. Harry L. Holloway, Jr. - Professor and Chairman, Department of Biology, Roanoke College, Salem, Virginia. Assisted by Thomas A. Capraro.

A Taxonomic Study of the Helminths of Mountain Lake Mammals.

Dr. Roger W. Pease, Jr. - Research Staff Biologist, Yale University, New Haven, Connecticut.

Genetics, evolution and biology of the superspecies Utetheisa ornatrix L. (Lepidoptera:Arctiidae)

particularly in relation to the origin of populations such as stretchii on Puerto Rico and saint-croixensis on Saint Croix through hybridization and genetic drift. My interest extends to other organisms with island differentiated forms over a narrow geographic range.

Lucile Walton - Danville, Virginia.

Galls on Red Spruce and Nettle and the Insects Which Cause Them.

Margaret Walton - Danville, Virginia.

Continuing work on Ostracods that live in Crayfish.

#### JUNIOR INVESTIGATORS

Fred Marland - Virginia Polytechnic Institute, Blacksburg, Virginia.

Ecology of the Benthic fauna of Mountain Lake with particular reference to the ostracod Candona sp.

Robert K. Rose - Department of Biology, Whitewater State University, Whitewater, Wisconsin.

Aggressive mimicry; especially the possibilities of brood parasitism in Polistes species.

ANIMAL CONFUSION

By James Lynk

Representative Labs:

The Sylvan intelligence test (or the Great Frog Safari) where comparisons of evasive behavior in the field showed that the innate intelligence of Rana catesbiana falls somewhere above the combined scores of a horde of students and below that of a professor.

Watching tourists watching students watching fish watching each other suspiciously.

Watching inebriated isopods weave around a checkerboard.

Educating earthworms.

Giving false directions to passing ants, and starting racial riots between red and black ants.

Making children think that we are too stupid to properly hide a penny.

Class Schedule

Besides the regular classes and labs, a special 2 A.M. lab report section meets nightly behind various coffeecups.

The course is terminated when all students are bitten by Luciferus toxicus fuflunkii.

HERPETOLOGY

By Howard Houchins

Often seen slithering through the impenetrable jungles and glades of Salt Pond Mountain during the

early summer of 1964 were the "Herps" led by Dr. Harry G.M. Jopson. Usually somewhere in the rear but not far behind came the three "Grubs."

Snake hunting all over the mountains proved much less profitable than simply hanging out laundry, or chasing butterflies in the immediate vicinity of the lab for here it was that the sinister Crotalus horridus horridus was lurking. Ironic as it may seem, all the efforts to find snakes in what should have been their natural habitats, were fruitless but thanks to the Animal Behavior Class and "Buck" we were able to secure some nice rattlesnakes.

It will be hard to forget the night when the cry, "Fangs against the World!" rang out. As those who were present well remember the Herp class, alias The Fangs, challenged the world to a volleyball game to the death. Alas, the Fangs ran out of venom and were subjected to ignominious defeat at the hands of butterfly-catchers, snail-pursuers and bird-watchers.

The Herp class was composed of Homer "the genius" Mumaw, Anne "the auditor" Palmer, Richard "the earlybird" Mayo, tree-climbing nocturnal Larry Neff, Dick "the number one grub" Engel, Carolyn "the cricket" Brewster, Frank "the chowhound" Thompson, Louise "the honorary grub" Walsh, and wonderful, lovable, personable, Howard Houchins.

### PTERIDOLOGY

By Mary Anne Bowman

Five weeks, 179 popsicles, 83 bottles of pop, and 12 steaks later ... "All right, people, do we have the field press, plastic bags, cytological bottles, snake bite kit, butterfly net? Let's go!" ... Have you ever seen a blacksnake that rattled? ... Wonder if this Lycopodium is obscurum or dendroideum? ... and our favorite cytologist .. "this is my one hundredth and fifth slide for today and you've brought me forty more bottles of Athyrium?" ... "Stop, don't move, there's a butterfly!" ... "Judy, the idea is to catch the butterfly, not the bush!"

These are a few cries heard by the Pteridology



class led by Dr. W.H. Wagner. Class members were Bill Heepe, Swat Nicharat, Dan Kalk, Dr. Dean Whittier, Judy Giles, Sue Stephenson, Carol Copeland, and Mary Anne Bowman.

### ECOLOGICAL GENETICS

By Paul Holman

Leaping from the back of a covered Jeep truck like a landing party of marines (except for the butterfly nets), the ecological genetics course taught by Dr. David West studied mimicry in the Lepidoptera of places such as Goodwin's Ferry and John's Creek Valley. Larry Neff bagged a yellow female Papilio glaucus which was sent to Liverpool, by jet.

The mark-recapture technique showed a population of about 30 Sulfur butterflies atop Butt Mountain, although there was some recruitment. Bill Baker was almost recruited by a 4-foot rattlesnake.

A significantly higher frequency of blueberries than of blackberries was found on Butt Mountain, although apostatic selection (B. Clarke, 1962) may be favoring the latter.

Ultraviolet light was used to attract moths one night on a memorable collecting trip into West Virginia. Our theme song for the trip was "He who would an alehouse keep."

Our class made the first extensive study in this country of a polymorphism in clover plants. Albert Samuel, affectionately known as "Cyanide Sam", uttered a classic statement that will go down in the literature beside "ontogeny recapitulates phylogeny" when he said "Pass the glucoside, please."

### LIMNOLOGY

By Carolyn Brewster

The Limnology course was taught by Dr. Robert J.

Muncy, Professor of Wildlife Management at Louisiana State University. This class consisted of two undergraduate students: Jim Lynk and Carolyn Brewster.

The class made extensive studies of local aquatic habitats with regard to the biological, physical and chemical principles operative in fresh waters. Ponds, lakes and streams of as many possible varied types were sought for study. Mountain Lake itself was especially stressed due to its accessibility.

An overnight trip was made to Claytor Lake. The class was accompanied by Mrs. Muncy and Carol, daughter of Dr. and Mrs. Muncy, and Fred Marland, a graduate student in limnology from V.P.I. also went along.

In addition to learning standard limnological procedures, and the use of radioactive tagging in aquaria, there were many diversionary activities such as: daily swims (however cold and muddy the water), water skiing, boat rides, skipping rocks across the water, and collecting animals suitable for pets (for Jim Lynk).

All in all, the class covered a lot of material and became familiar with many new techniques and procedures and generally had a good time.

#### MAMMALOGY

By Howard Houchins

At 5:30 A.M. who needs mice!??? This was the universal cry of the Mammalogy students who were ably led by Dr. Charles C. Handley, Jr. during the last five week session at Mountain Lake during the recent summer of 1964.

The Mammalogy students were bright-eyed and bushy-tailed four mornings per week and checked around one hundred traps per team. Some of the sounds most often heard were: "Watch out! That crazy mouse isn't dead yet !" or "Don't rebait those traps. Dr. Handley'll never know!" or "Snap!! Cuch! Dammit!"

One would have to see Big Bob Dubos lead "Wild Bill

Heepe" out of the woods after a good hike in order to savor the wonderful feeling it provides other trappers who pursued a "water level route" trapline.

Elaine Shetler and Lloyd McFarland made up quite a compatible trapping team and I must say Lloyd never once complained about having to carry Elaine back from all the trap-setting activities.

I really enjoyed working with Frank "Scrooge" Thompson as a teammate--once we entered the woods, I never saw him again until all the traps were baited and set, then he would invariably show up and ask if there was anything he could do ...

For those people who have never experienced an introductory Mammalogy class, let me say that unless you like to roll dry oatmeal in your mouth, get up at the crack of dawn, break bats necks, or enjoy being speared by giant mole traps, maybe you shouldn't attempt this class.

Seriously though, it was a wonderful experience and Dr. Handley is a great sport and a very able instructor.

#### Thursday Night Seminars

- |           |  |
|-----------|--|
| June 18   | "Role of Behavior in Water Economy of Some Puerto Rican Frogs", Dr. Harold Heatwole. |
| June 25   | "Killer Algae", Dr. G.W. Prescott.   |
| July 2    | "Predicting Unknown Plants", Dr. Warren H. Wagner, Jr.                               |
| July 9    | "Altitudinal Distribution of the Appalachian Avifauna", Dr. J.J. Murray, Sr.         |
| July 23   | "Netting Bats in Tropical America", Dr. C.C. Handley, Jr.                            |
| July 30   | "Evolution and Hybridization in <u>Utetheisa</u> ", Dr. Roger Pease.                 |
| August 6  | "Worms of Mammals", Dr. H.L. Holloway.   |
| August 13 | "Cycling of Radioactive Nutrients", Dr. Robert J. Muncy.                             |

Sunday Night Talks

- June 14 "Slides of East African Visit"  
Dr. Harry G.M. Jopson
- June 21 "Life in the Society Islands"  
Mrs. J.J. Murray, Jr.
- June 28 "The Possum"  
Dr. Robert Burns
- July 5 "Arizona Travelogue"  
Dr. Harry G.M. Jopson
- July 19 "Collecting Mammals in Tropical America"  
Dr. Charles C. Handley, Jr.
- July 26 "The Darien Gap"  
Dr. Harold Heatwole
- August 2 "Lebanon and the Crusaders"  
Dr. David A. West
- August 9 No lecture
- August 16 Slides and films on Whales and Porpoises  
Dr. Charles C. Handley, Jr.

Entertainment - Saturday Nights

- June 13 Bowling (Audubon)
- June 20 Scavenger Hunt (Stephen-Elliott)
- June 27 Bingo and Bridge Party (Shanty Town)
- July 4 Movies: Historic Virginia, Shenandoah,  
Natural Wonders (Michaux and Gattinger)
- July 11 Travelogue: The Himalayas (Dr. J.J. Murray,  
Jr.)
- July 18 Film: "The Lady was a Sergeant"
- July 25 Slides on Germany and Southeastern Europe,  
Dr. Paul Koch and Film: "Money, Women  
and Guns"

August 1      Film: "Surrender Hell"

News Notes

Mr. and Mrs. Bill Mathis and son, John Alan, born January 23, 1964, are residing in Stillwater, Oklahoma. Bill is continuing his work toward his doctorate at Oklahoma State University.

Wedding bells rang for Bruce Cleveland and Alice Bonita Cleney on August 29, 1964.

Among the visitors at the Station this summer were Dr. and Mrs. John Davis from the University of Florida. They will be spending the coming year in Formosa.

Other visitors included Dr. Horton Hobbs, Dr. and Mrs. John Woodard, Mrs. Bruce Reynolds, Bill Campbell, Mrs. Capehart, Mrs. Norther, Mary Lou Wood and Sally DeMott.

Several visits were made by Dr. James Riopel, Co-Director of the Station

Hot water heaters and showers in all the cabins have been a boon to all!

DIRECTORY, SUMMER 1964

- Samuel Albert, Department of Biology, Oberlin College, Ohio.  
William Baker, Box 301, Due West, South Carolina.  
Milo Barone, 32<sup>nd</sup> Dunmore Street, Throop, Pennsylvania.  
Mary Anne Bowman, Route 2, Box 131, Harrisonburg,  
Virginia.  
Carolyn Brewster, 7512 Mayland Drive, Richmond, Virginia.  
Dr. Bryan C. Clarke, Department of Zoology, University of  
Edinburgh, West Mains Road, Edinburgh, Scotland.  
Dr. Robert K. Burns, Bridgewater College, Bridgewater,  
Virginia.  
Evelyn T. Burr, 7 Church Street, Christiansted, St.  
Croix, Virgin Islands.  
Dr. L.R. Cleveland, Department of Zoology, University of  
Georgia, Athens, Georgia.  
Bruce Cleveland, Department of Physics, Johns Hopkins  
University, Baltimore, Maryland.  
Carol Copeland, Graduate School, University of Tennessee,  
Knoxville, Tennessee.  
Bob Dubos, 609 Sylvan Avenue, Bridgeport, Connecticut.  
R.L. Engel, P.O. Box 201, Fork Union, Virginia.  
Carl J. Freeman, Jr., 603 North Adair Street, Clinton,  
South Carolina.  
J. Bryant Fugate, Mountain Lake Biological Station,  
Pembroke, Virginia.  
Dorothy L. Fuller, P.O. Box 418, DeLand, Florida.  
Judy Giles, Mary Munford Hall, University of Virginia,  
Charlottesville, Virginia.  
Charles O. Handley, 123 Woodlawn Avenue, Falls Church,  
Virginia.  
James W. Hardin, Department of Botany, North Carolina  
State College, Raleigh, North Carolina.  
Dr. Harold Heatwole, Box 21596, University Station,  
San Juan 31, Puerto Rico.  
William Heepe, 2006 Meadowbrook Road, Charlottesville,  
Virginia.  
Dr. Harry L. Holloway, Jr., 433 Market Street, Salem,  
Virginia.  
Paul D. Holman, 312 Kirkwood Lane, Camden, South  
Carolina.  
Betty Hood, 2408 Cahaba Road, Birmingham, Alabama.  
Howard D. Houchins, Department of Biology, Martinsville  
High School, Martinsville, Virginia.  
Dr. Harry Jopson, Bridgewater College, Bridgewater, Virginia.  
Daniel S. Kalk, 114 S. Ward Street, Elkhart, Indiana.  
Joseph Keller, 120 Pine Street, Lewisburg, Pennsylvania.  
Malcolm P. Levin, 17 Raleigh Court Apartments, Univer-  
sity Circle, Charlottesville, Virginia.  
James Lynk, Apartment 2, 402 14th Street, Charlottesville,  
Virginia.  
Lloyd H. McFarland, 2415 W. Woodlawn, San Antonio, Texas.

- Fred Marland, Department of Biology, Virginia Polytechnic Institute, Blacksburg, Virginia.
- Mrs. Nancy V. Martin, Mt. Lake Canyon, Pembroke 1, Virginia.
- Richard Mayo, 2033 Wynmere Drive, Roanoke, Virginia.
- John I. Melone, Apartment 10, 411 13th Street, Charlottesville, Virginia.
- William Monroe, 1957 Page Street, Charlottesville, Virginia.
- Homer Mumaw, 1130 Shenandoah Street, Harrisonburg, Virginia.
- Robert J. Muncy, School of Forestry and Wildlife Management, Louisiana State University, Baton Rouge, Louisiana.
- Dr. J.J. Murray, Jr., Department of Biology, University of Virginia, Charlottesville, Virginia.
- Larry E. Neff, Department of Biology, Virginia Military Institute, Lexington, Virginia.
- Swat Nicharat, EWC Box 1259, University of Hawaii, Honolulu, Hawaii.
- Anne B. Palmer, 303 Piez Avenue, Newport News, Virginia.
- Dr. Roger Pease, 36 Lincoln Street, New Britain, Connecticut.
- Dr. G.W. Prescott, 352 Marshall, East Lansing, Michigan.
- Robert K. Rose, Department of Biology, Whitewater, Wisconsin.
- Misses Irene and Edith Rowland, 434 Brandon Avenue, Charlottesville, Virginia.
- Marvin W. Scott, 106 Airport Road, Blacksburg, Virginia.
- Mrs. Stanwyn Shetler, 4161 Southern Avenue, S.E., Apartment 203, Washington, D.C.
- Susan C. Smith, 297 Woodlawn Avenue, Athens, Georgia.
- Sue Stephenson, Carleton College, Northfield, Minnesota.
- Frank E. Thompson, 4520 Newport Drive, Richmond, Virginia.
- Dr. Arnold Van Pelt, Department of Biology, Greensboro College, Greensboro, North Carolina.
- Dr. Warren H. Wagner, Jr., 721 Mt. Pleasant, Ann Arbor, Michigan.
- H.T. Walls, Rural Route 3, Nashville, Indiana.
- Louise Walsh, Department of Biology, University of Virginia, Charlottesville, Virginia.
- Lucile and Margaret Walton, 1116 Richmond Blvd., Danville, Virginia.
- Linda Webb, Westhampton College, University of Richmond, Richmond, Virginia.
- David A. West, Department of Biology, Virginia Polytechnic Institute, Blacksburg, Virginia.
- Dr. Dean Whittier, Biological Laboratories, Harvard University, Cambridge, Massachusetts.