

PRELIMINARY PROGRAM FOR THE
JOINT VHS - PHS MEETING,

46-Roster

SATURDAY, JANUARY 8, 1966

Members in good standing (holding current membership cards) of the Philadelphia Herpetological Society and Virginia Herpetological Society are invited to attend a meeting in Washington, D.C. sponsored by the two societies.

The meeting will be held under the auspices of Division of Reptiles and Amphibians of the US National Museum, the natural history section of the Smithsonian Institution. Dr. James A. Peters will be host. See preliminary program below:

DATE: Saturday, January 8, 1966
PLACE: U.S. NATIONAL MUSEUM

TIME: 9:30 to 10:00 A.M. EST
Registration

Enter through 10th and Constitution Avenue door (north). Follow VHS-PHS signs to registration desk for badge, map of the museum, and final program.

10:00 A.M. to NOON OPEN HOUSE

Tour of new offices for Division of Reptiles and Amphibians preserved collection, work areas and library; explanation of cataloguing by Dr. Peters and staff. Coffee & doughnuts. Tour of (unfinished) Hall of Cold-blooded Vertebrates (#29).

NOONTIME: Luncheon (dutch) (Cost about \$1.00).

Lunch at New Museum of History and Technology restaurant. (Constitution Ave. NW between 12th and 14th Streets NW.) We will try to hold a table for officers of VHS & PHS.

2:00 P.M. EST REPORTS & FILMS

to 5:00 P.M.
Reassemble at USNM or designated meeting room (see desk). Reports and films to be announced in final program.

- Purposes of PHS by an officer of PHS
- " " NYHS by an officer of NYHS
- " " Md.HS by officer or representative of the new Maryland Herp. Soc.
- " " VHS by VHS officer (5 min. each).

Guest speakers: Short, interesting reports on herpetology.

FILMS: Short films on topic of interest to groups. A 16 mm sound motion picture projector and a 2" X 2" slide projector will be on hand for this section.

5:30 P.M. Last minutes for care meeting

NEWER PATHS IN TAXONOMY

Taxonomy, the science of classifying living things, has been modernized, according to Dr. John O. Corliss, associate professor of zoology. University of Illinois.

Today, the emphasis in taxonomy is on populations rather than upon individuals; on subspecies and biogeographical races rather than species.

External "looks" --morphology-- in the past was often the key source of distinguishing characteristics studied and a single specimen might have been enough to represent an entire species.

Ecological, behavioral and genetic factors are now what usually concerns modern taxonomists. And, Dr. Corliss observed, their concept of a species is a dynamic one represented by many types.

Dr. Corliss quoted Dr. G.G. Simpson, who has summarized the new role of taxonomy as "the most elementary and most inclusive part of zoology, most elementary because animals cannot be discussed or treated in a scientific way until some taxonomy has been achieved, and most inclusive because taxonomy in its various guises and branches gathers together, uses, summarizes and works with everything that is known about animals, whether morphological, physiological, psychological, or ecological."

Even the alpha stage of taxonomy--the identification and naming of new kinds (species) of plants and animals -- has changed.

The analytical taxonomist today approaches his material as a biologist rather than as a cataloguer engrossed in the restricted and routine task of essentially re-shuffling or merely adding to his collection of static type specimens, Dr. Corliss said.

An almost baffling flood of new characters is today available to the perceptive taxonomist. This is a mixed blessing, of course, and it hardly makes his job any easier, but often, more interesting!

The beta stage of taxonomy, constructing natural schemes of classification, has also been improved by new approaches. New working hypotheses are being proposed that take advantage of advances in evolution and phylogeny, or the study of "race" history and the relationship of ancestors and descendants.

Population genetics has contributed greatly to the gamma, or "dynamic evolutionary stage" of taxonomy, Dr. Corliss said.

Hybridization, behavioral characteristics, biogeographical ranges, blood factors, mimicry, gene-frequency distributions throughout populations -- detailed investigations of these have nota-

NOTE: This is extracted from the fifth in a series of articles reporting the status and extent of present

knowledge in the biological sciences as discussed by eminent biologists in Forum lectures broadcast by Voice of America.

From a release by the American Institute of Biological Sciences.

NEWER PATHS IN TAXONOMY

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bly increased our knowledge in the difficult area of answering "What is a biological species?" Dr. Corliss said.

Advances in the three major, overlapping areas of modern taxonomy are resulting in the recognition

of the true importance of the science as an independent discipline which cuts across all other biological sciences, Dr. Corliss concluded. They also point to the need for training more young biologists in the procedures and philosophy of taxonomy.

A NOTE ON THE CONCEPT OF SUBSPECIES

by Dr. James A. Peters
U.S. National Museum

In the course of collecting reptiles and amphibians in Virginia and elsewhere, any collector is likely to find within the range of one subspecies individuals that answer the description of a different subspecies. On the basis of such individuals there is a strong inclination to add the different subspecies to the faunal list of a state; to alter the described range of the subspecies; or to decide that the two subspecies are not truly different. Actually, none of these alternatives can be considered valid unless some additional investigations are made. This is a result of the basic methods used by the original describer in defining the subspecies.

First and foremost in the mind of the describer is the fact that he is working with populations, that is, groups of individual specimens. He makes an effort to examine as many specimens as he can obtain from personal collecting and from museums, with the hope of seeing material from all parts of the species range. He tabulates a large number of characteristics, and then compares

sample with sample, often using statistical methods to determine whether they come from the same or different populations, or from the same or different subspecies.

When a scientist discovers that two groups of populations have a large number of characteristics in common, but differ from each other in one or more additional characteristics, he will quite often distinguish between these two groups of populations by assigning each a subspecific name. The differences need not be absolute (as, for example, one group all red and the other group all green), but often are only a matter of degree (as when one subspecies of snake has 131 to 141 ventrals, another 140 to 150). Even when absolute, the differences may not be exclusive. Thus, 8 out of 10 individuals in subspecies "A" might be red, with the rest green, while 8 out of ten in subspecies "B" are green with the rest red. Some scientists have accepted what is known as the 75 percent rule, which can be interpreted to say that only 75 percent of subspecies "A" need to be distinguishable from 75 percent of

A NOTE ON THE CONCEPT OF SUBSPECIES (continued):

subspecies "B" for the subspecies to be recognized as validly different. In such a case, it should be clear that about 1 in 4 individuals collected in the range of one subspecies may look just like the members of the other subspecies. The occurrence, then, of individuals found in a local area but appearing to belong to a foreign subspecies is not grounds, by itself, for any change in the status of the names in that area.

Scientists, of course, are not infallible, and they can make errors in the definitions of subspecies. Or, more properly, insufficient material from all parts of the range of the species makes it very difficult to be sure that the range of each subspecies is clearly delimited, that all valid subspecies have been recognized, or that all differences utilized will survive the test of larger sample size. To challenge any of these things, however, the challenger must recheck the original material as well as any new population samples accumulated since the revision was published. If he does not wish to do this, he must accept the earlier decisions of the investigator who did do it.

It would be highly unscientific to question a subspecies definition, or the range limits ascribed to that subspecies, on the basis of a single individual or sample drawn from cursory collecting. This can be done only after a thorough review of the pertinent literature and available collections.

In addition, the biological basis of the subspecies should always be taken into consideration. To use the term "subspecies" is to imply that the populations involved are all part of a single species, and thus have common access to a continuous gene pool. This communality of genes, accompanied by the assumption or demonstration of interfertility and gene flow, means that the similarities between subspecies will be much more numerous than the differences. Occasionally just by chance, individuals within one population might be expected to have gene combinations that produce characteristics of a related subspecies. This is, in fact, predictable, if the concept of subspecies is valid.

Finally, it should be mentioned that there are a number of biologists who feel that the subspecies concept tends to obscure more knowledge of the biology of the species than it reveals, and would advocate dispensing with the category entirely. While their ideas and arguments have not yet persuaded or perhaps even reached the majority of zoologists working with subspecies, the very existence of such ideas should be in itself a cautionary reminder to the collector who views subspecies as clear-cut, well-defined entities unchallenged and unchallengeable.

(Dr.) James A. Peters
U.S. National
Museum

The notes were prepared especially for VHS Bulletin to answer several questions raised by VHS members. ft

STATEWIDE MEETING, 1965 -- "SUCCESSFUL MEETING, INTERESTING PROGRAM"

The VHS STATEWIDE MEETING, held at Camp MONOCAN, BSA, near Nellysford in Nelson County, Virginia, on September 25-26, was a success!

Each member was introduced and had an opportunity to tell about his interests or current projects.

Among those present were:

Dr. Harry G.M. Jopson, vertebrate zoologist, Bridgewater College, Va.; Colonel Robert P. Carroll, head of the biology department at Virginia Military Institute, Lexington, Va. Dr. Robert L. Guillaudeu & family of McLean, Va., medical adviser to VHS. Mr. Richard E. Goetz & sons of Hampton, Va. Mr. Eugene Ramsey of Stuart's Draft, Va. Mr. Larry Agnew, Richmond, Va.; Mr. & Mrs. Warren T. Cloud, Charlottesville, Va.; Mr. Robert J. Gagnon and son of Mechanicsville, Va. and Mr. R. Sanderson of Richmond, Va., and a host of others from many localities.

Our hosts were the PIEDMONT AREA COUNCIL, Boy Scouts of America, -- headquartered at Lynchburg, Va. Representing the camp were: Mr. & Mrs. Ottinger, Nellysford, Va. Mr. Eugene Ramsey of Stuart's Draft Va., and SW-VHS regional chairman Mr. Costello M. Craig of Bedford, Va. who brought his three sons as usual. We missed Mrs. Craig this year and we hope she is better.

The officers and members wish to thank all those who contributed to the success of the meeting: films slides, coaching, encouragement, advice, arrangements of facilities and enthusiastic hospitality. FJT

MEMBERS ATTENDING THE STATEWIDE MEETING CAME FROM THESE COMMUNITIES:

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| Arlington, Va. | Glen Allen, Va. | Mechanicsville, Va. |
| Bedford, Va. | Hampton, Va. | Norfolk, Va. |
| Charlottesville, Va. | Herndon, Va. | Richmond, Va. |
| Chester, Va. | McLean, Va. | Stuart's Draft, Va. |

HONORABLE MENTION for exhibits must go to Mr. Jim Martin of OceanView Park's famous serpentarium. Jim brought along a fine collection of mammals in his van truck. Also, Mr. Mike Bishop of the National Zoological Park, Washington, D.C. had an unusual exhibit of reptiles and amphibians which balanced the indoor exhibit at the camp messhall. We were delighted that Mrs. Martin and Mrs. Bishop were able to be present. Mrs. Bishop was the lady closely followed by a tiny peccary.

DON'T FORGET THE JOINT VHS-PHS MEETING IN WASHINGTON, D.C.

Saturday, January 8, 1966...

..at the U. S. NATIONAL MUSEUM

YOUR ADMISSION TICKET IS YOUR

