

ecosystem including the function of physical factors, the nature of communities, of populations, reproduction, heredity, food production of plants, food chains, behavior, prey and predators, etc. We may or may not include cells and their relations to biological processes, but we are certain we will not

mention biochemical processes. We hope that by creating a framework of ideas that relate observable organisms with each other and with the earth, the air, and the sun, the more detailed analysis in later years of processes within individual organisms will be more meaningful.

The Swamp Stompers

- E. J. Cranston, Eau Gallie High School, Eau Gallie, Florida

Although the Swamp Stompers program was developed for junior and senior high school students, it would also be appropriate for students in the upper elementary grades, and, with some modifications, for those in the lower grades as well. The author formerly taught at New London High School, New London, Ohio and read this paper at the AAAS-NABT-ANSS meeting in Cleveland.

The Swamp Stompers began, over five years ago, with five or ten of my better sophomore biology students who accompanied me one Saturday on a trip into the field. The students were quite enthusiastic and asked when we were going out and stomp the swamps again. It was from this question that the group took its name. Since that Saturday, the program has grown to over 40 students.

At about this time, I met George Linn, a graduate geologist, teaching earth science at another of the county schools. After discussing the program with him and finding that our objectives concerning students were similar, we decided to expand the Swamp Stomper program to include not only the bios of the area but also the geos. Thus, we felt, a more complete understanding of the relationship of the organism to its environment might be made available to the students. The following year, George Linn joined the New London staff, and the program started to pick up in earnest.

After spending the Fall Saturdays in the field, we spent most of our spare time that winter formulating our objectives, preparing

field guides and keys, and also planning the sequence of the areas to be visited. We also felt that some of the other local teachers might like to participate along with some of their students, and invitations to them were sent out. Our county superintendent suggested making this program available to elementary teachers. At an evening meeting, we explained the program and objectives to the elementary teachers, and then held a very successful teacher Stomp.

At first, our response from county schools was practically nil. Fortunately, those who did come were impressed enough to mention the program to others. Slowly, others have joined, so that now it is necessary to travel caravan style, with identifying streamers flying from car aerials, to make it easier for the trailing cars to keep contact with those ahead.

Linn and I have written a book, "A Field Manual for Swamp Stompers," including the type of information needed by teachers who may want to direct similar programs. The manual contains methods of identifying rocks and how they came to be, identification keys for insects, frogs, toads, trees, and

snakes. Included also are methods of collection and preservation, a list of references, and a map of the area we traverse, complete with numbered stops used currently and those we intend investigating in the future.

Our program has been further augmented by the Visiting Scientist Program of the Ohio Academy of Science and by volunteers who give their time and services. It should be mentioned that the organization has meetings during the winter months. These offer an opportunity for those who have written papers to present them. We have had a speaker, on occasion; however, with or without a speaker, the meetings afford an opportunity for students to get to know one another better and to exchange ideas.

The Swamp Stompers is primarily for and of the student. The prime requisite is that the student be interested in nature and the relationships that exist in nature. The students range from seventh graders, who are enthusiastic about everything they see to the more sophisticated twelfth graders, who, by this time, are specializing in some particular facet of nature, such as geology, paleontology, mineralogy, entomology, or herpetology. There are two categories of Swamp Stompers; the first may go along on at least an occasional Stomp; the second is the Senior Stomper who has been along on at least one Spring and one Fall Stomp and has picked his specialty. After meeting the requisite Stomps, the student must do his own research and present a paper, with bibliography, at one of our winter meetings. If,

after presenting his paper, we feel that the work is truly his, the student is presented with his blazer emblem or sleeve patch. He is now a Senior Stomper, and as such is entitled to go on all Stomps. He is available to younger Stompers to answer questions. He also helps keep order (although this is a minor item on most Stomps). If his specialty fits the area, the Senior Stomper may be called on to give a short talk on what the group can expect to see in the area. Just before lunch, one of the Senior Stompers gives a short lecture on the importance of picking up all the litter before the group moves on.

We feel we have come a long way with this program. One of our Senior Stompers has published in one of the herpetological journals (he extended the range of the ring-necked snake); another is majoring in entomology in college; still another has become interested enough in ecological relationships to prepare himself for a career in oceanography. However, our purpose is not primarily to train students for a career in science. Rather it is to open the eyes of the students with whom we come in contact, so that they may see that there is a balance and meaning to nature, that all too often when man makes his presence known, he upsets this balance. Through our program, we hope the student will come to know and appreciate his surroundings and the fact that, unless precautions are taken, those who come after may not have the same opportunity to observe nature in this way.

Wildlife Area Saved

The Nature Conservancy, dedicated to the preservation of wildlife areas and to the development of an awareness of conservation in America, has recently purchased Murphey's Pond near Mayfield, Kentucky. Murphey's Pond is one of the most northern cypress swamps in the U.S. and is the last cypress swamp in Kentucky. Memberships in the organization are available at \$5.00 per year. The address is: The Nature Conservancy, 1522 K Street N.W., Washington, D.C. 20005.

Attention Conchologists and Malacologists

The good news for conchologists malacologists, and other persons who just like to collect sea shells is that shelling has never been better than it is now in the Naples section of southwest Florida. Storms last autumn in the Gulf of Mexico deposited millions of shells on the beaches, among which are many types highly prized by amateur and professional collectors. One of the rare specimens that has been found on the beach is a left-handed *Junonia*, believed to be the only one of its type in existence.