THE BIOLOGIST AND CONSERVATION EDUCATION

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"Much effort is required for a man to learn the truth - but it is twice as difficult for him to learn how to make it known to his fellowmen." PLATO

My remarks today will be limited to two areas; (1) conservation education in the schools, and (2) hunter education. I feel qualified as an observer regarding these areas as I have had experience as a research field biologist, agency Information and Education officer, and lately as a public school teacher.

The aspect of conservation education that should be of concern to the wildlife biologist is that dealing with wild animals. It is at this point that we face a problem, "How do you teach an urban population about wildlife?"

I have been able to examine much of the conservation education materials dealing with animals and have found many of them to be ineffective. The reasons, I feel, are that they are too broad and generalized in content, and the written material is poorly designed and illustrated. The vocabulary is often too technical and a preservation viewpoint is usually promoted.

The most effective and well received materials that I have found, deal with basic life history information. I feel that this approach is the best and suggest that more of our conservation education efforts be directed to this area. Example of good basic natural history materials can be found in the California Fish and Game Department's booklet, "Furbearers" by George Seymour. It is well written and illustrated. The vocabulary is simple so that anyone from the 6th grade to adults can read and benefit from reading it. Other booklets of the same series should be revised to eliminate the technical language and reduce the wordiness.

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The excellent natural history films of the Missouri Conservation Commission are examples of well presented materials without using technical terms. I have seen the Mourning Dove film used effectively from the second grade through college age groups. We need more of these films dealing with our local species. Our California agency has good footage in present films that could be revised and updated to provide more effective utilization.

Another effective means of teaching about wildlife that is often neglected is the slide series or film strip. I would like to see a good series of film strips prepared on our local big game, small mammals, game birds, song birds and fishes. These should be made available, accompanied by a well written script, from the state agency free of charge.

I have emphasized the need for basic life history information because it has been my experience that once the students learn about the plants and animals themselves, management concepts follow naturally and are understood. Much of the material produced today is, unfortunately, concerned with broad concepts that are too complicated or generalized to be understood or retained.

After working with all age groups in the schools, I have come to the conclusion that the most effective age group to work with is the 12 - 13 year olds (seventh grade). This level is very receptive towards natural history, most of them can read, and they are not preoccupied with the multitude of social pressures found in the high school. Written material prepared for this reading level can easily be used for higher grades and even at lower levels with the aid of the teacher. Since the national reading level is near the eighth grade and national news media and publications are written at this level, we will find that natural history materials also will be readily understood by the general public.

Once we have good materials, the biggest problem is now facing us"How do we get these materials into the already crowded curriculum
of the schools?" Mailed written information sheets and notices
will be of little assistance as the school personnel are swamped
by mail from supply houses, publishers, etc., and they find little
time in their hectic day to carefully analyze materials. I feel
that personal contact is the answer and this is where the concerned
biologist can be of invaluable assistance. By contacting the school
personnel, especially the teacher, he can show them the materials
and how he can assist them in their jobs. The biologist can also
offer his services to assist with the materials in the classroom.

Much of our knowledge about plants and animals will fit in with their various science units. You will almost always find a welcome atmosphere for your offer; after all, who knows more about animals than the wildlife biologist.

Although I have found the seventh grade level very receptive, high school and junior college biology classes offer additional means of presenting natural history materials. I have been giving a wild mammal slide lecture to college biology classes for several years now which has been well received by both students and instructors. Many of you have adequate slides and could do the same.

I feel that the wildlife biologist should be concerned about getting effective and factual material prepared and into the hands of educators. We who study and manage natural resources will find that our jobs in management and promoting new programs will be greatly assisted when the public has a background of knowledge about the animals and plants.

The following comments concerning hunter education and hunting come from my personal observations and I'm afraid that I don't have any sure cure answers for a complex situation. I am concerned that hunting is being ridiculed and being subjected to a poor press that concerns itself with fatalities, outdoor vandalism and the anti-gun publicity. Although the hunter will continue to be a smaller percentage of the total population as we become an urban society, I do not like to see hunting loosing its popularity due to poor publicity.

Hunting and firearms are an important part of our American heritage; hunting and guns were an accepted way of life and hunting seasons were a method of calculating and remembering time. Hunting is a valuable outdoor recreational activity; it provides exercise, it is fun, requires skill and affords satisfaction when conducted correctly. The loss of prestige surrounding recreational hunting is due to the poor press and also to the so-called hunters themselves. In many cases we are developing a larger percentage of "shooters" and fewer hunters. These "shooters" are causing much of the bad public relations concerning recreational hunting. We must begin to counteract this if we wish to preserve recreational hunting.

Why should the wildlife biologist be concerned with encouraging recreational hunting? First, many of our salaries and management programs are directly financed by hunting license fees and taxes on firearms and ammunition. The sport hunters started the wildlife conservation movement and have financed it long before the recent popular trend towards conservation. Duck stamps and licenses contributed 71.5 million dollars for wildlife management in 1964. Pittman-Robertson Act funds have provided over 300 million dollars alone since 1937. The non-hunting public should be reminded of these facts, especially those critics who use our wildlife management areas and do nothing to pay for their purchase or management.

The biologist should support quality recreational hunting and should encourage promotion of quality hunting. Too often the biologist is content to deal only with numbers of animals harvested and licenses and management area permits sold. There is more to hunting than statistics. Quality hunting includes sportsmanship, ethics, traditions, correct use and choice of equipment, knowledge of the animals and care of the harvested game. We criticize the sky busters on the waterfowl areas, the "shoot-anything" hunter and unsportsman activities as a whole. But what have we done to correct this unfortunate situation? I feel that most of these "shooters" behave the way they do because they don't know any better!

Now we face a great problem, how do you teach quality hunting to the urban sportsman who may never have seen a quail, duck or deer (let alone a buck) prior to going out in the field?

There are several opportunities for the biologist to help promote quality hunting. The Hunter Safety program has proven its value in the field and the law enforcement branch should be complimented for carrying the biggest burden. I feel that every wildlife biologist should be a Hunter Safety instructor in our state program Provisions are made in the set up of the course for extra sessions to include game identification and sportsmanship. Here is a wonderful opportunity.

The training of hunters, not shooters, is not a new idea. Massachusetts and New York are conducting waterfowl hunting courses on federal refuges for young hunters. They learn about decoys, bird identification, retrievers, etc. The Province of Alberta (and other prairie provinces) are hiring capable waterfowl hunters to teach duck hunting classes during the winter months. These courses have greatly reduced poor sportsmanship conduct on many of their hunting areas. Could we not do likewise on our areas?

We also face the fact that increasing numbers of wildlife graduates have not been exposed to quality hunting, or some, to even any hunting experience. I feel that our training institutions should at least have a seminar course dealing with recreational hunting and fishing techniques. Such a familiarization course is currently required of wildlife students at Oregon State University. As a profession, we should encourage such courses in all the colleges training wildlife biologists.

In conclusion, I believe that the wildlife biologist as a person and a professional should become more actively engaged in the conservation education movement in regard to wildlife. We should urge the preparation of factual and effective materials for use in our schools and by personal contact, see that they are utilized. The biologist has a big stake in continued recreational hunting and should be actively engaged in promoting quality hunting as a valuable recreational activity.

There is much evidence that life long attitudes and habits are formed in the early years - while in school. Some of you say that you cannot afford to take time for conservation education activities - I say you can't afford not to!