

become "hooked" on the game, playing it to win, rather than as a learning medium. This presents no significant problem and is easily corrected.

The educational units presented are an improved method for environmental education and are presently in use. Used in conjunction with other similar computer-based educational units, Hunt I and II can become modules in a complex and interactive educational program for total natural system management.

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LAW ENFORCEMENT SESSION

SOME DANGERS OF ENDANGERED SPECIES PROGRAMS

by

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Fossil remains in the earth's crust reveal that plant and animal communities have undergone gradual changes throughout the ages. Species or individuals which were unable to adapt to environmental changes were lost and replaced by those more adaptable. In prehistoric times, such losses were part of a natural series of events; however, whenever man arrived on the scene these events become more complex. As man advanced in numbers and wisdom he gradually dominated other living forms and the effects of his presence became more and more acute. In fact, the point may be nearing when man's activities will not only be a threat to the survival of other living things, but to his own existence as well.

Considerable attention has been focused on the extinction of species in historic times and the extinction rate is no doubt increasing with the increase in human population and technology. Approximately 120 species of mammals and 162 species of birds have become extinct since 1600, and about 290 forms of mammals, 300 birds, and 210 reptiles and amphibians are presently considered in danger of extinction. Of these, 71 species of mammals, 65 birds, and 19 reptiles are regarded as critically endangered and survival is doubtful unless strong protective measures are taken. The loss of invertebrate species during this period was no doubt many times greater than vertebrate forms.

The rapid decline of certain species and the increasing numbers becoming extinct are a concern of conservationists around the world. Because of this concern, two important pieces of legislation have been enacted by the U. S. Congress in recent years in an effort to provide added protection to species in danger of extinction. These were the Endangered Species Conservation Act of 1969 and the Endangered Species Act of 1973. Other legislation enacted which afford added protection to endangered species were the National Environmental Policy Act of 1970 and the Marine Mammal Protection Act of 1972.

The basic reasons listed by the U. S. Senate Committee on Commerce (91st Congress) for the rising extermination rate of species are destruction of habitat, pollution of air and water, and indiscriminate killing and capture of fish and wildlife for commercial and sporting purposes.

The purposes of the Endangered Species Conservation Act of 1969 were to assist on an international level with bans on importation of species threatened with extinction; to amend existing laws making it a violation of federal law to place in interstate or foreign commerce amphibians, reptiles, mollusks, and crustaceans, when taken in violation of federal, state, or foreign laws; and to purchase the land necessary to protect species listed as endangered.

The Endangered Species Act of 1973 provides further protection and deals with species threatened with extinction as well as those that are in danger of extinction. This act provides for federal financial assistance in developing programs to conserve endangered or threatened fish, wildlife, or plants in the United States.

The provision for an additional category, "threatened", was a big improvement over the 1969 act which simply grouped all species in two categories, those endangered and those not endangered. The three-category approach is still far from adequate and deserves more consideration. The animals listed as endangered show wide variation in their population status. This variation is found not only within a species from one area to another, but also among species, and attempts to blanket all under an endangered listing is far from adequate.

A single-celled approach may actually work to the detriment of species critically endangered and in need of urgent help. Such a situation is evident in southwestern Louisiana where two species classified as endangered, the American alligator and the red wolf (*Canis rufus*), occur side by side. The alligator population numbers in the tens-of-thousands in this area but the red wolf has declined to only a few individuals. Local residents know very little about the secretive red wolf but are very familiar with the alligator. The endangered status of the red wolf has no special meaning, since the alligator shares the same status; consequently, little concern is shown locally for the wolf.

The newly enacted federal legislation has proven very valuable as an aid to law enforcement when dealing with commercially valuable species such as the American alligator (*Alligator mississippiensis*). The provisions against interstate shipment of illegally taken skins closed important loop-holes to illegal operators. However, the passage of laws to close certain doors to one group, often opens doors to another group which may seek to capitalize on newly created advantages afforded by the law. The purpose of this paper is to present several problems created by the passage of endangered species legislation.

Passage of the Endangered Species Conservation Act by the U. S. Congress strengthened state and local protectionist groups which are opposed to any killing of wild animals for sporting or commercial purposes. Soon after the bill was enacted, various states and municipalities passed laws regarding species listed as endangered, and the laws in many instances were much more restrictive than the federal laws and mostly unwarranted. Few of the individuals working for passage were trained in resource management or realized the hidden damaging effects of such laws. Many people caught in the grasps of the "ecology movement" saw this as an opportunity to help wildlife and were lead by emotions into a situation which may eventually prove more damaging than beneficial. Repeal of such local legislation, should the listed species recover, will be an almost impossible task.

Exploitation by commercial and sporting interests have been listed as major reasons for the drastic decline of certain species. One problem is that the exploitation does not stop once a species is listed as endangered, and certain groups of people will then capitalize on the endangered status. If man is so ruthless that he would kill a species to near extinction, certainly he would not hesitate then to exploit the endangered status of a species to accomplish hidden objectives and would even work to maintain a species on the list after recovery is evident.

The National Environmental Policy Act requires an environmental impact statement on large projects which have federal involvement. The impact on endangered species in a project area must be given careful consideration in a statement and may actually delay or cause cancellation of a project. Therefore, certain people opposed to a particular project and desiring that a federal permit not be issued often use endangered species in an attempt to achieve this objective. One individual actually opposed a request for removal of the American alligator from the endangered species list because of the weight this status carried in blocking a particular project. The alligator was very abundant in the project area, as in many other areas throughout its range, still its endangered listing carried special meaning.

The manufacturers of picture cards and souvenir items very often feature endangered species. These items serve an educational purpose and help focus attention on endangered species. However,

reports were circulated that one distributor opposed attempts to de-list the American alligator simply because he had a large supply of cards on hand featuring this species.

Fund raising organizations attempt to attract public sympathy and thereby stimulate a mood for giving. Stories and pictures of endangered species apparently have a strong motivating force as indicated by the large number of organizations now using this theme. While many of the organizations do make sizable efforts to the conservation of endangered species, many others use this as a gimmick and contribute very little to this cause.

Tourist bureaus in certain areas have found that the name "endangered" adds novelty and is an important factor in attracting visitors to view animals in this class. In fact, the endangered status has been so valuable that certain individuals have strongly opposed status revision for the American alligator because of the advantage gained by the endangered listing.

Precautions must be taken not to let an endangered species program at any level of government become an arm of protectionist groups. Certain individuals opposed to killing wild animals for commercial and sporting purposes have attempted to enforce their wishes by having a species declared as endangered, even when the species was quite abundant.

Notification that a species is to be listed as endangered may actually work to the detriment of the species by focusing attention on its status and attracting collectors who strive for the unusual. Collectors realize that once a species is classified as endangered, normal collecting activities will cease. In certain instances, collectors have received word that a particular species was to be listed and rushed to its remaining strongholds to take specimens while collecting was still permitted.

Commercial and sporting uses of wild animals have traditionally been the reward paid to trappers and hunters for maintaining habitat and building high wildlife populations. However, it could be disastrous to classify a species as endangered and prevent the harvest of the species in one area, where good protection and habitat preservation have maintained a high population, simply because poor protection or deteriorated habitat have kept populations down in other areas. Supporters of a good program should not be punished simply because other areas have permitted populations to decline because of negligence in enforcement and management.

An endangered listing for a species should be based strictly on the population status of the species according to the best scientific knowledge available. Using an endangered listing for political reasons or to accomplish hidden objectives may result in public distrust of all conservation programs. Falsely classifying a species as "endangered" for political reasons may result in public resentment and weaken the overall effectiveness of an endangered species program and thereby jeopardize the welfare of species which are urgently in need of help.

SUMMARY AND CONCLUSIONS

As human populations and technology increase in the future, more and more wildlife habitat will be lost, habitat quality will decline, and increased pressure will be placed on wildlife populations. Less adaptable species will be placed under severe stress and survival for many will depend upon a carefully planned, sincere, and realistic management program.

The U. S. has assumed the leadership among nations in establishing programs to safeguard existing wildlife populations and rebuilding those which have declined to unsafe levels. In spite of these efforts, many problems still exist and must be overcome before recovery programs for endangered species can become truly effective and complete public support obtained. Different philosophies exist in regard to wildlife programs and vary from the complete protectionist attitude to the total disregard approach. Such extremism can be very damaging and unless a realistic approach is taken, conservation programs will stall and endangered species will suffer in the long run.

Decisions regarding endangered species must be made along sound biological lines, and although political decisions may at times seem in the best interest of the overall program, public confidence will be quickly lost by wrong decisions. Endangered species conservation is serious business and unless the programs are administered so as to gain public confidence much stands to be lost.