



# University of Hawaii at Manoa

Environmental Center  
Crawford 317 • 2550 Campus Road  
Honolulu, Hawaii 96822  
Telephone (808) 948-7361

Office of the Director

RL:0198

## HR 127 URGING ADOPTION OF FEDERAL LIST OF ENDANGERED PLANT SPECIES

Statement for House Committee on Ecology  
and Environmental Protection,  
Public Hearing, 15 February 1977

by  
Ruth Gay, Botany  
Charles Lamoureaux, Botany  
Hoak C. Cox, Environmental Center

HR 127 urges that the State Department of Land and Natural Resources adopt a list of endangered plant species in Hawaii that has been proposed by the U. S. Department of Interior. This statement on the resolution is being submitted for review to the Legislative Subcommittee of the Environmental Center of the University of Hawaii but does not reflect an institutional position of the University.

State law provides for the protection of endangered plants as well as animals. The law can be effective only if the plants and animals that are in jeopardy are recognized. It is, therefore, critical that an initial list of endangered plants be agreed upon.

The list of endangered plants to which the resolution pertains is a list prepared by botanists who are working or have worked in Hawaii, collated by the Smithsonian Institution, and proposed for adoption by the U. S. Department of the Interior through publication in the Federal Register. This list has not been accepted by the State Department of Land and Natural Resources. DLNR has proposed instead a much shorter list.

Until the distribution of a listed species, and the population of that species, have been determined, the extent of jeopardy to the species cannot be ascertained. Yet, distribution mapping and population estimation cannot proceed with Department of the Interior support until a tentative list has been adopted. It is possible that some of the species and sub-species included as endangered in the Federal Register list will be found not to be in serious jeopardy. It is certain, however, that the number of species that are endangered is far greater than the DLNR list would indicate.

The degree of jeopardy of a species and the degree to which a jeopardized species should be protected should be separate decisions, yet the DLNR reluctance to accept the Smithsonian's list seems to be based on fear that acceptance of the longer list will force the State to make major expenditures or forego major economic benefits in order to provide full protection to all listed species.

Adoption of the Federal Register list, proposed by the Department of the Interior, would appear to be appropriate if the list is recognized as an initial one, subject to later revision based on determinations of the extent of jeopardy of the species and subspecies listed, and to subsequent determination of the value of the species and subspecies and need for their protection.

The Committee should be informed that a few additional Hawaiian plant species, not on either the Federal Register list or the DLNR list, have been proposed for endangered status--species that were until recently considered extinct, but species of which some individuals have now been found.

There are some errors in the resolution as now drafted. If desired, The Center would be pleased to assist in its revision.

Comments on the problem of endangered plant species in a general review of "Conservation Policies" by the Environmental Center, prepared in October 1975, are still pertinent and valid. An excerpt is appended to this statement.

attachment: Appendix A: Endangered Plant Species [Excerpt from "Conservation Policies" Environmental Center Statement by D. C. Cox, H. Baker, A. Berger, R. Gay, C. Lamoureux, and D. Mueller-Dombois, RG:0024, 22 October 1965.]

## APPENDIX A: ENDANGERED PLANT SPECIES

Excerpt from "Conservation Policies" Environmental Center Statement  
by D. C. Cox, H. Baker, A. Berger, R. Gay, C. Lamoureux, and  
D. Mueller-Dombois, RG:0024, 22 October 1976.

### Endangered species and natural areas

...

The jeopardy of species is relative, not absolute. Some sources of jeopardy may be reduceable at little cost, economic or social. Other sources may be reduceable only at considerable cost. No means may be known for reducing still other sources of jeopardy. Some jeopardized species may be harvested with direct economic benefit to man. With others our concern may be primarily ethical. Some may be valuable because they uniquely fill a niche in a web of ecological relationships involving other species that are valuable. Others represent gene plasms of actual or potential value. Still others may be of value in elucidating evolutionary or ecological principles. No endemic species pose such direct or indirect threats to man that their endangerment would be considered beneficial. Yet federal law requires the listing of species with a breakdown only between endangered and threatened species, and makes no provision for differentiating as to the nature of the threat, the amenability of the threat to reduction, or the nature and extent of the value of the species. The U.S. Bureau of Sport Fishereis and Wildlife has appointed six "recovery teams" to study these variables with respect to birds and mammals, but the status with respect to plants is not so satisfactory.

A list of plant species endangered in Hawaii, compiled by the Smithsonian Institution and promulgated by the Interior Department, has been challenged by the State on the basis that it is too comprehensive, including some species not probably endangered. Foresters in the State have proposed a shorter list. Botanists in the state tend to back the Smithsonian and Interior Department, State administrators to back the foresters. The Smithsonian list of endangered plants refers to species and varieties, using conventional botanical terminology. This has been objected to because it does not conform to the original terminology in the Act that refers to species and subspecies as is conventional in zoology. So long as the arguments continue at a semantic level with their present political reinforcement it is unlikely that we will arrive at a reasonable working consensus as to the listing of those kinds of plants and animals that are in some jeopardy and their differentiation as to the nature and extent of jeopardy and the nature of the value of the species.

Yet this differentiated listing is only the first step to designing and implementing a management program to control the jeopardy to whatever degree control is appropriate. The identification and differentiation ought to be considered primarily scientific matters. Politics should be minimized and confined to the questions as to which scientific disciplines and which specialists should be consulted. Broader politics must be involved when it comes to the establishment of a management plan, because it is here that the relative values must be assigned to species and costs of their salvation.

The following statements of position may be helpful:

1. The number of species of both plants and animals that are in jeopardy may be expected to be far larger in Hawaii than in any comparable continental area because significant parts of a unique flora and fauna, developed in isolation over many millenia, still remain here extant in spite of a loss of isolation beginning about eleven centuries ago and accelerating rapidly during the last two centuries.
2. The listing of jeopardized types of plants and animals can begin with "off-the-shelf" information, and should begin with such information even if it is quite incomplete and in some respects uncertain. However, for use in an effective management plan extension of information on jeopardized species, determination of the sources and extent and reduceability of jeopardy and the nature of values of species will be necessary.
3. With some possible exceptions, jeopardized species cannot be protected independently but only through the protection of the ecosystems of which they are parts.
4. The listing of jeopardized types of plants and animals and the determination of the sources and extent of jeopardy are best approached by combinations of specialists in botany, zoology, and ecology that will differ somewhat from group to group.
5. No single agency or institution has, or can be expect to have, internal capabilities appropriate to the task. The DLNR for example, which under the state law has the responsibility for the needed research, lacks adequate botanical capabilities.
6. The most expedient remedy to the inadequacy will probably involve both increasing the staff of DLNR and opening the procedures for listing to involve persons or staffs of other agencies and institutions.
7. The costs of the increases in staff and such consulting arrangements as may be necessary are justified by the minimization of loss of valuable endangered species that can be achieved only by early agreement as to the identification and differentiation.
8. The specialists should be charged with the identification and differentiation responsibilities. They should be encouraged to clarify the tradeoffs that will have to be made in a management plan, but no special weight should be given to their subjective value judgments on the tradeoffs.
9. Federal funds are available to support the listing efforts and the implementation and possibly the development of management plans for the protection of selected endangered species in selected locales, but such funds can be allocated and effectively used only if there is close federal-state coordination.

....