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# INTERORGANIZATIONAL IMPLEMENTATION OF THE ENDANGERED SPECIES ACT: A Hawaiian Case Study 

Richard J. Tobin*

The United States Department of the Interior and its Fish and Wildlife Service (FWS) have primary responsibility for the protection of endangered species of plants and animals in the United States. Under authority granted to the Department in the Endangered Species Preservation Act of $1966^{1}$ and in subsequent statutory revisions, the Interior Department has formally listed more than 900 plants and animals as endangered or threatened species, has developed recovery plans for about half of all such species native to the United States, and has spent millions of dollars for research, to purchase habitats, and to implement recovery effort.

Despite these efforts, the protection of endangered species involves more than a single agency or level of government. Some endangered species are found in every state. Moreover, many birds and mammals are migratory, while other species never leave the oceans and still others divide their time between land and water. Similarly, measures intended to protect endangered species are likely to be conducted with some recognition of hunting, recreational activities, economic development or governmental projects. In short, scores of governmental agencies have at least some interest, albeit diverse, in plants and animals. For a smaller number of agencies, this interest is likely to be quite intense. This is caused by the nature of the species, as many animals serve as targets for hunters; or the nature of the agency's mission, in the development of commercial fisheries; or due to an interest that predates the federal government's involvement, such as a state's concern for resident wildlife.
In drafting laws to protect endangered species, Congress could have put aside all these interests and delegated sole responsibility for implementation to a single agency, such as the Department of the Interior.

[^0]Alternatively, Congress could have divided responsibility and recognized the existence of the diverse interests of several agencies as well as the states. As noted, Congress chose the latter course. Given this choice, what are the consequences for implementation of the national endangered species legislation? Rather than attempt a universal answer to this question, this article focuses on the Department of Interior's relations with the National Marine Fisheries Service (NMFS) and the State of Hawaii regarding the listing of species and the designation of their critical habitats. ${ }^{2}$

## I. Sole Versus Divided Responsibility

Relying on a single agency to implement a policy has at least some readily apparent advantages. On the one hand, the locus of decisionmaking is obviously within a single agency and some economies of scale are likely to occur. One, and not several agencies, develop and maintain the expertise in the policy arena. Such was part of the rationale for the creation of the United States Environmental Protection Agency in 1970. Having a single agency in charge of a program allows that agency to serve as a comprehensive clearinghouse for information and advice. When problems develop, the agency with responsibility and the likely authority to address the problems can be quickly identified. Furthermore, placing responsibility in a single agency allows it to devote its resources to implementation without the need to use resources to develop effective long-term working relations with other agencies.

Also, few administrative agencies, regardless of their goals or mission, like to share responsibility for their key functions. Instead, agencies prefer to have sole responsibility, control over decision-making, and the independent authority to craft rules and regulations, ascertain relative priorities and focus on problems they and their constituents believe are important. As Anthony Downs explains it, administrative agencies are sensitive to intrusions into their interior zone, the area in which they are the major determinants of policy. ${ }^{3}$ In many ways this sensitivity is appropriate. Many studies of the implementation of pub-

[^1]lic policies identify interagency relations as a key explanatory variable. ${ }^{4}$ To the extent that one agency must coordinate its activities with another, the prospects for disagreement increase, even when both agencies are on friendly terms and share the same goals. The establishment of effective working relations is rarely an easy task.

Relations with other agencies may not always be friendly, however, and establishing effective ties is likely to involve bargaining, negotiation and the commitment of scarce organizational resources. For these reasons alone, agencies are frequently reluctant to share their policy responsibilities. In addition, the ability to develop effective interorganizational relations presumes that sister agencies share collective goals or are at least willing to compromise their objectives to accommodate competing interests. From any agency's perspective, the least desirable arrangement includes one in which its sister agencies express indifference or perhaps hostility and when coordination is statutorily mandated. This situation is likely to produce acrimonious relations, ineffective shared responsibility and perhaps even stalemate.

Whatever the supposed advantages of single agency program responsibility, there are advocates of divided responsibility. For example, a favorite administrative strategy employed by President Franklin D. Roosevelt was spreading responsibility for the same tasks among different agencies. He expected to stimulate competition and, thereby, produce more effective public policies. ${ }^{5}$ Competition among agencies can also increase the attention devoted to a problem, stimulate innovation and, perhaps, broaden perspectives so that narrow, parochial interests do not prevail at the expense of the public interest. Other observers contend that redundancy enhances reliability. ${ }^{6}$ The elimination of overlapping jurisdictions reduces a governmental system's effectiveness because the failure of one part could lead to failure in the entire system, or so the argument goes.

However, when viewing the virtues of sole or shared responsibility, one must also remember rational decision-making processes do not provide the best explanation for decisions about jurisdiction. Once an agency has responsibility for a policy area, it is unlikely the agency will relinquish the responsibility voluntarily. To do so risks loss of power, resources, discretion, clientele and control over the development and implementation of policy. With such consequences, opposi-

[^2]tion to a change in jurisdiction is likely to be intense and the burden demonstrating its necessity falls on the advocates of change. This burden will be extraordinarily difficult to achieve if the opponents of change happen to include the states, whose interests are quintessentially represented in Congress. In sum, existing patterns of responsibility are not easily or readily changed. This probably provides the single best explanation for the important role of the states and the National Marine Fisheries Service in the listing of species and designation of their critical habitats.

## II. Interorganizational Actors

The Fish and Wildlife Act of $1956^{7}$ created two organizational entities within the Fish and Wildlife Service, namely the Bureau of Commercial Fisheries and the Bureau of Sport Fisheries. This unhappy bureaucratic marriage eventually led to the transfer of the former to the Department of Commerce in 1970. With the transfer also came a new name. The Bureau of Commercial Fisheries became the National Marine Fisheries Service, which is part of the Commerce Department's National Oceanic and Atmospheric Administration. With reorganization, some decision had to be made about which department, Interior or Commerce, would be given management authority for certain mammals. Under the terms of the separation, the Interior Department retained authority for manatees, walruses, sea otters and polar bears. The Department of Commerce and, in turn, the Fisheries Service received responsibility for seals, whales, dolphins, porpoises and sea lions. When this division was made it had nothing to do with the protection of endangered species. Given the agencies' interests, abilities and preferences, the division was sensible. No doubt, too, an element of compromise was likewise reflected in the division of species responsibility.

This division provided the justification for subsequent congressional policy making. In what was one of its most controversial provisions, the Endangered Species Act of $1973^{8}$ similarly divided responsibility for listing marine species between the two departments. For the species for which the Department of Commerce had responsibility, the 1973 law authorizes the Secretary of Commerce to determine whether any of these species should be listed as endangered or threatened or have their status changed from threatened to endangered. Additionally, the law allows the Secretary of Commerce to rec-

[^3]8. 16 U.S.C. 1362(11) (1982).
ommend the delisting of such species or their reclassification from endangered to the threatened category. The Interior Department retains formal authority to list or delist any of these species but cannot do so without "a prior favorable determination from the Secretary of Commerce." ${ }^{9}$ This arrangement was clearly a compromise between competing interests. Fearing the listing activities of the FWS might adversely affect its policies and objectives, the Commerce Department had once asserted that it should be allowed to veto any listing proposals involving marine species. ${ }^{10}$

The FWS and the NMFS are not the only actors involved with the protection of species. Both agencies must also contend with the preferences and priorities of the states in which endangered and threatened species are located. Since cooperation from the states is usually essential in protecting listed species, it makes sense to incorporate state views into decision-making processes. In addition, however, substantial historical justification exists for the consideration of inputs from the states. For many years before active federal involvement in the management of fish and wildlife, states had responsibility for these species. Indeed, as a result of a series of judicial decisions dating to the 1840 's, ${ }^{11}$ the traditional presumption in the United States was state responsibility for resident wildlife. Many states jealously guarded this prerogative and opposed federal efforts to become involved in the management of resident as opposed to migratory species. Federal laws have gradually eroded the presumption of state primacy, but endangered species laws still recognize the states' interests in resident wildlife, particularly when it comes to listing species as endangered or threatened. In fact, federal laws governing the protection of endangered species specify consultation by the Secretaries of Commerce and Interior with affected states before listing species found within those states. ${ }^{12}$ This consultation is intended to incorporate the states' views into the decision-making processes. Consultation can, however, also lead to negotiation and, occasionally, compromise since states that oppose a species' listing can normally expect to enlist sympathetic congressional involvement and, hence, effective pressure on the FWS. Moreover, state fish and wildlife officials outnumber their federal counterparts, so the latter often find themselves dependent on the cooperation and good graces of the former. Dependence can lead to re-

[^4]sponsiveness, as the FWS' experience with the State of Hawaii suggests.

## III. A Hawaitan Case Study

Among all American states, none has as many species on the edge of extinction as does Hawaii, and no other state can claim as many recent extinctions. ${ }^{13}$ Since the time Europeans first visited the Hawaiian islands, about one third of the state's endemic bird species have disappeared; of the remaining forty-four bird species found only in Hawaii, twenty-nine are officially classified as endangered and one as threatened. The state's only native mammals, the Hawaiian hoary bat and the Hawaiian monk seal, are endangered. Hawaii also has more extinct plant species and more plants in danger of extinction than any other state. As an illustration, when the Smithsonian Institution issued a report in early 1975 on vascular plant species it considered to be endangered, threatened or already possibly extinct in the United States, Puerto Rico and the Virgin Islands, more than forty-five percent of the 3,200 species identified were Hawaiian. ${ }^{14}$ The Fish and Wildlife Service's assessment of the state's plants is similar. In a report published in 1980, the FWS noted that it had enough information either to justify listing or suggest the appropriateness of listing nearly 800 Hawaiian plants. ${ }^{15}$ Of the 800 , about sixteen percent were believed to be extinct. The FWS further identified fifty-one American plants for which it had 'persuasive evidence of extinction." ${ }^{16}$ All but six of these had once been found only in Hawaii. ${ }^{17}$

Not only does Hawaii have a disproportionately large number of species in danger, but it also has a high number of species that are exceptionally close to extinction. Based on its analysis of the relative jeopardy of listed species, the FWS concluded in 1986 that for every five endangered species in Hawaii, three faced "almost certain [extinction] in the immediate future because of a rapid population decline or habitat destruction.' ${ }^{18}$ In short, for many of Hawaii's endemic species, life is a perilous venture.

[^5]While the loss of any species is undesirable, it is particularly so for Hawaii's native species. Many of these species evolved in and became dependent on highly fragile and specialized habitats. The Hawaiian islands are the most geographically isolated land mass in the world and, as one scientist has observed: "Isolation, time, and habitat diversity have produced a most distinctive land biota. More than $97 \%$ of Hawaii's native flowering plants, nonmigratory land birds, insects, and land snails occur naturally nowhere else on earth." ${ }^{19}$ For many species this isolation was an ecological boon. One entomologist has provided a graphic description of the islands' advantage for their species: "No need . . . for an island plant to be poisonous or thorny, no need for the island bird to be eternally vigilant, no need for an island insect to guard against the voracious ant-those were all continental constraints. ${ }^{20}$ Isolation may have provided a strength, but it also created a high vulnerability to disruption. Islands typically offer protection from predators, but when they are introduced, native species are limited in where they can go and how rapidly they can develop defense mechanisms.

When change occurs rapidly, previously isolated species become especially vulnerable. Just such change has threatened many Hawaiian species. In the millions of years prior to human settlement, nature successfully introduced about 250 plant species, about 250 insect species, sixteen different land birds and only two mammals to the islands. Put in other terms, a new plant or insect species was introduced and successfully adapted to the Hawaiian environment on the average of about once every 75,000 years. ${ }^{21}$ For land birds and mammals, successful introductions occurred about once every 1.25 million and 10 million years, respectively. Polynesian and European immigrations over the last 2,000 years brought enormous increases in the number of exotic species and their rates of introduction. The number of wild mammal species is now more than ten times what it was before human settlement. Wild or feral mammals in the state now include dogs, pigs, cats, rabbits, goats and sheep, all of which have destroyed or adversely affected the environment. For example, rats preyed on the nests of many birds; to rid the islands of rats, mongooses were introduced and they too preyed on native birds.

[^6]New introductions were not limited to mammals. It is estimated that nearly two dozen exotic insect species find their way to Hawaii each year-a rate more than 1.5 million times as rapid as nature allowed prior to human settlement. ${ }^{22}$ The number of introduced plant species probably exceeds $4,000 .{ }^{23}$ Nearly all of these introductions severely challenge and sometimes exceed the ability of native species to cope with the consequent changes.

Other human activities had similar detrimental consequences for many of the state's endemic species. Tens of thousands of acres of virgin forest were destroyed in order to plant exotic trees, sugarcane and pineapple. To care for these and other crops, herbicides and pesticides are heavily used. One report from the state's Department of Agriculture noted that in the 1960s Hawaiian agricultural interests applied about ten times the amount per acre of herbicides and pesticides as was used on the mainland. ${ }^{24}$ Local termite exterminators are said to use 500 to 1,000 times as much poison per application as do their counterparts in other states. ${ }^{25}$ All of these activities reveal human activities as the single best explanation for the problems of endangerment in Hawaii.

The plight of Hawaii's species might lead to an expectation that the state would be at the forefront of efforts to preserve its native species, especially because preservation of native Hawaiian values is an important priority in the state. In fact, however, the opposite has occurred. Development may be undesirable from a species' perspective, but development has sustained much of the state's economic growth over the last several decades. ${ }^{26}$ Hawaii's permanent population is one million, but the state's population density and growth rate are more than twice the national average. ${ }^{27}$ Millions of other people visit the islands each year as tourists and the demand for hotels, condominiums, shopping centers, housing developments and recreational opportunities remains high. ${ }^{28}$

Land development has been a high priority in the state since at least the early 1950s, and the political system frequently encouraged and facilitated this development. ${ }^{29}$ Some of the state's public officials be-

[^7]lieve requirements for the protection of endangered species could jeopardize continued economic growth. One manifestation of this situation is that the number of Hawaiian species officially classified as endangered or threatened is far below the expected number given the severity of the threat and the number of species, especially plants and inverterbrates, that are candidates for listing. These candidate species include several hundred plants that the FWS has identified as well as nearly 500 that the Nature Conservancy, a private organization concerned with biological diversity, considers to be endangered in Ha waii. ${ }^{30}$

Of the fifty-two endemic Hawaiian species listed as either endangered or threatened through late 1987, more than half were listed prior to 1971, when the requirements for listing were much less stringent than they are today. The first listing of a Hawaiian plant did not occur until 1978. The pace of plant listings has increased since 1978, but more than a dozen years after the issuance of the Smithsonian Institution's report, only nineteen Hawaiian plants are on the endangered species list, and most of these were listed after $1983 .{ }^{31}$

In several instances, the state has opposed the listing of species even though its objections were not well founded. As an illustration, the Fish and Wildlife Service proposed in 1980 that the 'Ewa Plains 'akoko be listed as endangered. Governor George Ariyoshi opposed the proposal because he believed the plant's listing might interfere with the Army Corps of Engineers' proposed development of a deep draft harbor on Oahu, the state's most populous island. "The listing of this plant," declared the governor, "will have a severe and adverse economic and social impact on Hawaii." ${ }^{32}$ As a second line of attack, the governor pointed out that the owner of the land on which some of the plants were found had transplanted some of them in 1977 and $1978 .{ }^{33}$ Some transplants were still alive in 1980, thus implying that additional plants could be successfully transplanted. ${ }^{34}$ What the governor did not say was that only one percent of the plants had survived the earlier transplant. ${ }^{35}$ The governor's opposition was further under-

[^8]mined when the Corps of Engineers agreed the 'akoko was in real danger, its existence would not affect the deep draft harbor, and the species should be listed immediately. ${ }^{36}$ In regard to the alleged economic impact of the proposed listing, the FWS estimated the cost of the necessary protective measures was unlikely to exceed $\$ 10,000$.

For another plant species the state opposed, Carter's panicgrass, the governor also expressed his confidence in transplantation as an effective alternative to listing. ${ }^{37}$ Again, the characteristics of the plant indicated otherwise. The grass is found in restricted numbers on a single small island off the coast of Oahu. "There is nothing obviously unique about the small habitat in which this species occurs," observed the FWS, "but the fact that it has persisted only in one very small area for at least the past 40 years suggests that it may depend upon some factor, or combination of factors, present in the area but not fully understood at present. ${ }^{\prime 38}$ So susceptible is the species that the FWS believes inadvertent trampling or a single fire could eliminate the entire species. ${ }^{39}$

Both the 'akoko and the panicgrass were eventually listed as endangered, but still other species might have been proposed except for bureaucratic disagreements within Hawaii's Department of Land and Natural Resources (DLNR). According to some of its employees, an intentional effort exists to frustrate or discourage the federal listing of species. ${ }^{40}$ One department employee indicated the state botanist had prepared a list of more than fifty plant species to be recommended to the FWS for listing. After the botanist's superiors reviewed the list, only five species remained on it, and none of these were recommended to the FWS. ${ }^{41}$ In other instances, departmental scientists were aware of the locations of candidate species but were prohibited from telling the FWS' botanist in Honolulu. ${ }^{42}$ The department occasionally received petitions to place plants on the state's endangered species list, but the department's only botanist was not allowed to review the petitions. . . . ${ }^{43}$

[^9]Some DLNR employees believe the reluctance to list species is unrelated to biological considerations. ${ }^{44}$ They point to low levels of political support for their activities, ${ }^{45}$ state politicians' natural reluctance to arouse controversy, ${ }^{46}$ a belief that protecting species may preclude development or limit private landowner use of property, ${ }^{47}$ and district foresters' unwillingness to assume additional management responsibility or to impede private hunters. ${ }^{48}$

This political climate appears to affect what the FWS does as well. Most proposals to list species originate in the FWS' field or regional offices, therefore the distribution of Service personnel provides an important measure of its willingness to list Hawaiian species. Hawaii has more plant species that are candidates for listing than any other state, ${ }^{49}$ but in the 1980s the FWS assigned only one botanist to initiate listings in the state. ${ }^{50}$ Asked about this apparent inconsistency, one scientist at the Office of Endangered Species (OES) headquarters answered that the FWS could easily justify a threefold increase in the number of botanists on its listing staff in Honolulu. ${ }^{51}$ The decision not to be more assertive despite justification for an increase in staff reflects the FWS' perception of and reaction to the political climate in Hawaii. This climate, according to an OES official involved in the listing process, is hostile and "phenomenally antagonistic" to any kind of outside interference. ${ }^{52}$ As this scientist noted, getting species listed in Hawaii is 'like pulling teeth:'" the state government provides either poor or very mixed cooperation and it has "bitterly opposed" many proposals. ${ }^{53}$ In view of this resistance, the FWS' choices may make political rather than biological sense. Listed Hawaiian species are often on public land and are, therefore, noncontroversial. Thus, when the FWS wanted to classify the Cooke's kokio as endangered, the state did not oppose the proposal. Only one individual of the species remains alive, and it is in an arboretum.

Although the kokio provides some evidence about the noncontroversial nature of the species listed in Hawaii, far more compelling evidence exists. As a result of changes made in the Endangered Species
44. Id.
45. Interview with Carolyn Corn, supra note 39.
46. Id.
47. 51 Fed. Reg., supra note 6.
48. Interview with John J. Fay, Staff Biologist, Off. of Endangered Species, Fish \& Wildlife Serv. (Aug., 1986, Honolulu, Haw.).
49. Id.
50. Id.
51. Id.
52. Id.
53. Id.

Act in 1982, when the FWS develops plans to recover a species, the Service is required to identify listed species 'that are, or may be, in conflict with construction or other developmental projects or other forms of economic activity.' ${ }^{54}$ The conflict label is applied after a species is listed, but the likelihood of conflict can often be predicted during the listing process by comments provided at public hearings or received in response to a proposed listing. In other words, the conflict label serves as a surrogate of prelisting controversy. Development projects and other forms of economic activity occur throughout the United States, therefore no reason exists to expect anything other than a random geographic distribution of conflict prone species, unless controversy is a factor that affects the willingness to propose that a species be listed. As the data in Table 1 suggest, there is cause to believe only noncontroversial species have been listed in Hawaii. About $8.7 \%$ of all listed species were given the conflict label in 1983, but none of these were in Hawaii. ${ }^{55}$ Similarly, the FWS concluded in 1986 that almost twenty-three percent of the species for which it had responsibility were prone to conflict. ${ }^{56}$

TABLE 1
The Geographic Location of Conflict-Prone Species, 1983 and 1986

|  | Hawaii |  | All Other States* |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\underline{1983}$ | $\underline{1986}$ | $\underline{1983}$ | $\underline{1986}$ |
| Conflict? |  |  |  |  |
| Yes | $\underline{0.0 \%}$ | $0.0 \%$ | $8.7 \%$ | $26.2 \%$ |
| No | $\underline{100.0}$ | $\underline{100.0}$ | $\underline{91.3}$ | $\underline{73.8}$ |
| Total | $100.0 \%$ | $100.0 \%$ | $100.0 \%$ | $100.0 \%$ |
| (N) | 39 | 51 | 242 | 340 |

* Includes Guam, Puerto Rico, the Virgin and Marianna Islands and the District of Columbia.

Source: Data provided by the Office of Endangered Species, U.S. Fish and Wildlife Service.

Examination of the designation of critical habitats provides still another indication of the lessened protection Hawaii's endangered species receive given their numbers and propensity for extinction.
54. Endangered Species Act of 1973, § 4(f), 16 U.S.C. § 1533 (1982).
55. Off. of Endangered Species, Endangered and Threatened Species Recovery Priority List, (Aug. 27, 1986) (computer printout provided to and updated by the author).
56. Id.

Designation of a critical habitat often provokes controversy, although not necessarily for valid reasons. Many people incorrectly believe the designation of a critical habitat precludes any use of the habitat for all purposes except for the species' well-being. ${ }^{57}$ In fact, however, such designation affects only federal activities and has no effect on private landowners' use of their property. ${ }^{58}$ Nonetheless, the designation of critical habitats by geographic location offers a second measure of the propensity for opposition. When opposition is a possibility, as in Hawaii, where land is limited and where designation is likely to affect many federal activities, the FWS and the National Marine Fisheries Service may be disinclined to propose critical habitats. Once again, a comparison of data from Hawaii and all other states supports this hypothesis. Through early 1988 , about one-fifth of all native threatened and endangered species had critical habitats designated. ${ }^{59}$ In Hawaii, however, only five of fifty-two listed species, or less than ten percent, have the presumed advantage of a critical habitat. Moreover, for the few Hawaiian habitats designated, the time between the proposal and the actual designation is significantly longer-on average, about four months longer-than the time needed to designate habitats in all the other states. ${ }^{60}$

Two examples dramatically illustrate the nature of the controversy surrounding critical habitats in Hawaii. The first of these involves the palila, an endangered forest bird. The second involves the Hawaiian monk seal.

## A. The Bird that Went to Court

The palila is found only one place on earth-the slopes of Mauna Kea mountain on the island of Hawaii. ${ }^{61}$ Not only is this bird geographically limited, but it is also completely dependent on naio and mamane trees, without which it cannot survive. ${ }^{62}$ The trees provide food, shelter and nest sites and the birds' habitat coincides with the location of mature trees. ${ }^{63}$ The chief threat to the species' habitat is

[^10]well known-feral goats and sheep which devour the trees' leaves, stems, seedlings and sprouts. ${ }^{64}$ Eliminating this threat provides the single most effective remedy for the causes of the palila's endangerment. ${ }^{65}$

The threat to the forests of Mauna Kea has been recognized at least since 1921 when the territorial government initiated a plan to kill as many of the sheep as possible. ${ }^{66}$ Over the next twenty-five years, more than 45,000 of the trees were killed. Only about 500 remained in 1950, at which time the territorial government reversed its previous policy and decided to maintain sufficient numbers of feral goats and sheep to provide opportunities for hunters. ${ }^{67}$ Due to pressures from these hunters, the state increased the number of feral animals to an "ideal" hunting population of between 2,000 and 3,000 during the 1960 s. ${ }^{68}$ Occasionally, when the population dropped below these numbers, hunters complained and the state managed the feral animals to increase their numbers. ${ }^{69}$ Hawaii's Division of Fish and Game further demonstrated its responsiveness to the state's hunters in the 1960s when it intentionally introduced mouflon sheep to the Mauna Kea Game Management Area. ${ }^{70}$ Mouflons provide excellent meat and horns of trophy quality. The state was aware the feral animals were destroying the forests of Mauna Kea, but the Division of Fish and Game believed it could simultaneously regenerate the forest and allow the sheep and goats to remain for the hunters' satisfaction. ${ }^{11}$

Hunting is a popular sport in Hawaii and one that the state has long encouraged. The state manages more than one million acres-about one-fourth of the entire state-which are available for public hunting. ${ }^{72}$ The state prefers to make much more land available for hunting and tax incentives are provided to private landowners to induce them to allow hunting on their land. ${ }^{33}$ Hunters have access to many nonnative species, ranging from boars and deer, to feral goats and sheep, to quails, partridge and wild turkeys.
64. Id. at 990 .
65. Id. at 990, n. 13. -
66. Id. at 989, n.9.
67. Id.
68. Id. at 990, note 9 .
69. Id.
70. Id.
71. Id.
72. Haw. Dept. of Land \& Nat. Res., Haw. Wildlife Plan 37 (1984). The plan is an interesting document in regard to hunting. The plan recommends that "all public lands having significant game mammal populations . . . should be opened to controlled public hunting where feasible." Id. at 40. One possible explanation for the DLNR's responsiveness to hunters is the large portion of its budget coming from hunting fees.
73. Id at 40 .

The state's efforts to encourage hunting were successful, but the effects on the palila were devastating. During the 1950s and 1960s, its available habitat continued to shrink and its numbers were reduced significantly. ${ }^{74}$ In response, the palila was one of the first species formally listed as endangered (in 1967). ${ }^{75}$ The FWS also identified the palila as one of its ten priority species in 1975, noting that the service would establish a critical habitat for the species "as rapidly as possible,' which it did in mid-1977. ${ }^{76}$
State officials also began to view the situation from a different perspective. In 1976 some employees of the state's Department of Land and Natural Resources recommended the elimination of feral sheep and goats because of the destruction they caused. ${ }^{17}$ A year later three divisions of the DLNR, its Deputy Director and the Chairman of the department's Governing Board made the same recommendation. ${ }^{78}$ The Board refused to consider any measures to benefit the palila. ${ }^{79}$ The Board said it would authorize construction of a fence around part of the forest comprising some of the palila's habitat but the Board did not do so. In fact, the management plan developed by the Board for the state-owned area in the 1970s perpetuated the hunting. ${ }^{80}$

The FWS might have been expected to persuade the state on the palila's behalf, but it was ill-equipped to do so. On the one hand, the FWS realistically appreciated its dependence on the states, especially Hawaii, which has so many endangered species. The Fish and Wildlife Service prefers that the states have primary responsibility for resident species, so the FWS does not want to preempt state control. As the Director of FWS, Dr. Robert M. White, once explained it, "[w]ithout the help of states, the effectiveness of this [Endangered Species] Act has very little future . . . .’81 Despite several available options, the

[^11]FWS apparently decided not to risk its limited political capital in a confrontation with its most important state.

On the other hand, the FWS had to accept some of the blame for the palila's plight and the continuing destruction of its habitat. For many years the state maintained the mouflon sheep and other feral animals with funds legally provided through one of the FWS' state grant programs, the Federal Aid in Wildlife Restoration Act. ${ }^{82}$ Consequently, when the Sierra Club Legal Defense Fund decided to sue the DLNR on behalf of the palila, the Fund asked the FWS to intervene. ${ }^{83}$ The Service declined. ${ }^{84}$ Its Director, Lynn Greenwalt, noted that he preferred such disagreements to be settled out of the courtroom: 'I am hopeful," he added, "that the state of Hawaii can be persuaded that the protection of the Palila's habitat is of first importance and that the adverse impacts of feral goats and sheep on Mauna Kea must be eliminated." ${ }^{85}$

In its lawsuit in federal district court, the Sierra Club Legal Defense Fund and its co-plantiffs, including the palila itself, claimed the state's actions constituted an illegal "taking" of the palila since the feral animals were destroying the birds' only known habitat. ${ }^{86}$ The state rejected this argument, asserting the number of birds had increased, these numbers could increase still further and no evidence existed demonstrating the palila depended solely on the naio and mamane trees as captive breeding had never been tried. ${ }^{87}$ The court rejected each of the state's assertions and noted the state's 'demonstrated susceptibility" to hunters. ${ }^{88}$ As a result of its conclusion in Palila, ${ }^{89}$ that the feral goats and sheep were having a devastating effect on the forest, the court ordered their complete elimination within two years of its decision in June, 1979.

Rather than accept the verdict and act to protect the palila, the state appealed the district court's decision. A United States court of appeals rejected the appeal in early $1981,{ }^{90}$ but five years later more than 150 feral sheep still roamed the palila's critical habitat. ${ }^{91}$ When additional

[^12]research showed the mouflon sheep were also destroying the mamane trees, the Sierra Club Legal Defense Fund asked that these sheep be removed. ${ }^{92}$ The state refused, so the Fund sued a second time. ${ }^{93}$ The palila was again victorious, despite the state's belief, that through careful management and oversight, it would be "possible both to maintain a viable sport-hunting population of mouflon and to enhance the mamane ecosystem to encourage the survival of the palila. ${ }^{94}$ To enhance its prospects for survival, however, the district court ruled in late 1986 the mouflon too must be eliminated from the palila's critical habitat. ${ }^{95}$

Accommodation and compromise are not limited to the palila. Indeed, Hawaii's experience with another endangered species provides another example of the difficulties in achieving agreement among governmental organizations that often do not share similar goals.

## B. The Seal that Came Up Short ${ }^{96}$

There are only three species of monk seals. ${ }^{97}$ One, the Caribbean monk seal is believed to be extinct. The last confirmed sighting occurred in 1952. The Mediterranean monk seal still survives but is found only occasionally and then only in small numbers on isolated beaches in Europe and North Africa. ${ }^{98}$ Given its few survivors and the level of pollution and human activity in the Mediterranean, the outlook for these seals is not favorable. ${ }^{99}$ The third species, the Hawaiian monk seal, is now found only on the small and remote leeward Hawaiian islands, northwest of Kauai. ${ }^{100}$ See Figure 1. These islands and atolls, from Nihoa to Kure Atoll, extend over 1,100 miles but their total area is less than seven square miles.

[^13]

The seals' habitat provides an important clue to their well-being. The Hawaiian monk seals are literally living fossils. Scientists estimate the seals' isolation has left them virtually unchanged over the last 15 million years. ${ }^{101}$ Largely free from intrusions of all kinds, the seals have not developed defense mechanisms. ${ }^{102}$ Unfortunately for the seals, this complacency works to their disadvantage and threatens their survival. The seals do not flee from humans, so they are easily killed. Thousands of seals were killed in the 1800s and early 1900s. ${ }^{103}$ More importantly, the seals are extraordinarily sensitive to any kind of human intrusions. One seal expert has emphasized "the mere presence of human intruders among the 'tame' seals appears to cause mortality among newborn pups." ${ }^{104}$ Others have concluded the seals "probably cannot coexist with man." ${ }^{10 s}$ The available evidence supports these observations. Although the seals once inhabited the major Hawaiian islands, such as Oahu and Kauai, seals are rarely sighted there. In the northwestern Hawaiian islands scientists noted a considerable reduction in the number of seals between 1960 and 1980. The largest reductions came on those islands with the greatest frequency of human intrusions, such as military activities, occurring on several of the islands. ${ }^{106}$ Precise numbers are not available, but less than 1,000

[^14]monk seals probably remain, making the Hawaiian monk seal one of the most endangered of all species. ${ }^{107}$

Due to the precipitous decline in the number of seals and the increased human activity in their habitat, a government advisory body, the Marine Mammal Commission, recommended listing the species as endangered to the National Marine Fisheries Service in 1975. ${ }^{108}$ According to the Commission, however, merely listing the species would not be enough. ${ }^{109}$ A critical habitat should be designated for the seals, said the Commission, because "protection of habitat, including the island beaches and surrounding near shore water, from all forms of human intrusion may represent the single most important action that can be initiated to protect the species from extinction." ${ }^{110}$

However straightforward this recommendation, it started a series of bitter debates and disagreements that lasted more than ten years. The major contestants have included the FWS, the National Marine Fisheries Service, the Marine Mammal Commission (MMC) and the State of Hawaii. Each has frequently conflicting interests. The FWS has an interest in both the seals and their habitat. The Service manages the Hawaiian Islands National Wildlife Refuge, which President Theodore Roosevelt created in 1909 to protect seabirds from being slaughtered for their feathers. ${ }^{111}$ The refuge includes all the islands from Nihoa to Pearl and Hermes Reef (see Figure 1). The seals use the islands in the refuge for resting and pupping and their offshore waters for feeding and breeding. ${ }^{112}$ The FWS has an interest in protecting the seals, but it also has a statutory obligation to allow some human use of the refuge in order to provide some benefits to the public. ${ }^{113}$

The NMFS has a statutory mandate to encourage the development of commercial fisheries but it also has primary responsibility for protection of the seals as they are marine mammals. ${ }^{114}$ Congress created the Marine Mammal Commission in 1972 as an independent agency with responsibility for reviewing federal activities involving marine mammals, including the NMFS' implementation of the Marine Mammal Protection Act. ${ }^{115}$ The Commission has no regulatory authority

[^15]and normally must rely on the powers of persuasion and the weight of the evidence it can present to sustain its recommendations to other federal agencies. ${ }^{116}$
The last governmental actor, the State of Hawaii, has several interests in its northwestern islands. At the least, it disagrees with the FWS' definition of the boundaries of Hawaiian Islands National Wildlife Refuge. The state insists it owns about $\mathbf{2 5 0 , 0 0 0}$ acres of submerged lands the FWS includes in the refuge. ${ }^{117}$ The disputed jurisdiction means Hawaii is especially sensitive to what it considers to be federal preemption of the state's responsibility. The state government has demonstrated it intends to develop fisheries as a way of diversifying its economy. In 1979, for example, the Department of Land and Natural Resources, which is strongly committed to expanding the fisheries, published a plan designed to stimulate commercial fishing. ${ }^{118}$ This plan and a revised one issued in 1985 identify the northwestern Hawaiian Islands as prime fishing locales. ${ }^{119}$ To accommodate the expected increase in commercial fishing, on-shore support facilities would be necessary, but the FWS has opposed them and commercial fishing remains prohibited within the refuge. ${ }^{120}$

These organizational characteristics are important in understanding the fate of the monk seal. There was no disagreement among government agencies that the seal should be listed as endangered; this was accomplished in late 1976, when the FWS and the NMFS jointly listed the species. ${ }^{121}$ The contentious issue focused on the need for, and appropriate size of, a critical habitat, since disruption of habitat is believed to be the major threat the species faces. The Marine Mammal Commission had recommended a critical habitat be designated and, prior to its listing of the seal, the NMFS' regional office which also

[^16]had jurisdictional responsibility for Hawaii concurred. ${ }^{122}$ This regional office emphasized "uncontrolled commercial fisheries exploitation'" created serious potential problems. ${ }^{123}$ When the seal was listed as endangered, the NMFS stated no critical habitat would be designated at that time because no one had requested it. ${ }^{124}$

Soon thereafter the Marine Mammal Commission again recommended the designation of a critical habitat to the NMFS. In the Commission's view, an ideal critical habitat includes all lagoons and beach areas and waters up to three miles from six of the northwestern islands. ${ }^{125}$ Once the habitat was designated, the Commission said that all human intrusions, including all fishing, should be terminated 'to the greatest extent possible.' ${ }^{126}$ After nearly a year's delay, the NMFS agreed it was essential to establish a critical habitat but suggested, in addition to the beaches and lagoons, its outer limit include ocean waters but only to the depth of ten fathoms. ${ }^{127}$ This is considerably less area than the Commission recommended, but the NMFS accepted the need to place restrictions on the use of fishing gear well beyond the ten-fathom boundary. ${ }^{128}$

Although the NMFS decided a critical habitat was imperative, it took no action to propose one. A third time, in early 1978, the Marine Commission again advocated a three-mile limit but its recommendation had no apparent effect. With increasing frustration and in a belief that the seals were in "grave danger of extinction," the Commission complained its recommendations were ignored and that the NMFS' efforts on behalf of the monk seal were inadequate. ${ }^{129}$

Some movement occurred in February, 1980, when the NMFS issued a draft environmental impact statement, discussing the possible consequences of three alternative critical habitats, including outer limits of ten and twenty fathoms (covering 367 and 2,041 square nautical miles, respectively) and nine miles (covering 794 square nautical miles). The NMFS, while acknowledging designation of a critical habitat was essential, did not express a preference for any of the three

[^17]options. It pointed out, however, that a ten-fathom boundary was insufficient "for the health, well-being and continued viability" of the monk seal. ${ }^{130}$ The Honolulu office of the NMFS expressed its preference when it advocated a twenty-fathom boundary.

After several years of discussion, such a thorough consideration of the alternatives and a specific recommendation from NMFS officials in Hawaii, proposal of a critical habitat would be expected. Such was not the case and the NMFS continued to defer a proposed designation. Noting its experts could not agree on the appropriate boundaries of a critical habitat, the NMFS said it wanted additional data before acting. These experts returned their opinion in 1983. They urgently recommended the designation of a critical habitat and said it ought to extend to the twenty-fathom line.

At this point the NMFS' Honolulu office prepared a draft 'decision memorandum'' including the twenty-fathom boundary. The draft justified the boundary and indicated it encompassed "those land and water areas considered essential to the survival as well as recovery of the Hawaiian monk seal.' ${ }^{131}$ This memorandum was eventually sent to the NMFS' headquarters in Washington, D.C., and the agency's assistant administrator for fisheries concurred with the recommendation in May, 1984. After nearly nine years of discussion and discord, a decision was finally made to propose a critical habitat.

Despite this decision, action was further delayed with the NMFS' release of a supplemental environmental statement, which listed the ten-fathom line as the preferred alternative. Eventually, however, the NMFS proposed on January 9, 1985, the establishment of a critical habitat with a boundary of ten fathoms. The FWS and the Marine Mammal Commission protested the choice and argued for twenty fathoms. In addition, the NMFS' monk seal experts rejected as inadequate the ten-fathom boundary, asserting its inconsistentency with biological data and indefensiblility in terms of the seals' feeding habits and ecological requirements. Even the head of the NMFS' office in Honolulu objected to the choice and several times brought his views to the attention of his superiors. In contrast, the governor and the state Department of Land and Natural Resources remained uncon-

[^18]vinced of the need for the critical habitat. ${ }^{132}$ The data, the state emphasized, simply did not justify any additional protective measures for the seal. ${ }^{133}$

After waiting nearly a year for the final rule to be published, a frustrated Sierra Club Legal Defense Fund and Greenpeace International filed suit against the NMFS in early 1986 in an effort to force action on the habitat. Two months later, on April 30, the NMFS released the final environmental impact statement discussing the three different boundary options for the proposed designation of a critical habitat. ${ }^{134}$ The statement concluded the twenty-fathom boundary was not likely to have any adverse economic impact on state or private activities and the environmental impacts were the same as the impacts associated with the ten-fathom line. Ironically, on the same day the statement was released, the NMFS also published the final rule on the critical habitat, which established a ten-fathom boundary. ${ }^{135}$

The Marine Mammal Commission again protested the choice, labeling it as biologically inappropriate. The Commission asked the Fisheries Service to reconsider its decision, but the Service was completely unresponsive. Greenpeace International and the Sierra Club Legal Defense Fund amended their suit and claimed the ten-fathom designation was inadequate. ${ }^{136}$ Both the plantiffs and NFMS subsequently filed motions for summary judgment, both of which were rejected. The NFMS staved off defeat, but not criticism. At the hearing on the motions, the judge revealed his distaste for the NFMS' position and intransigence. Faced with an unsympathetic judge and the liklihood of its own scientists would testify the ten-fathom boundary was scientifically indefensible, the NFMS capitulated and agreed the critical habitat should be extended to twenty fathoms. ${ }^{137}$

## IV. Lessons

This assessment of interorganizational implementation is instructive in at least several ways. First, the illustrations demonstrate administrative promptness is not a virtue associated with interorganizational

[^19]relations. Once the Marine Mammal Commission recommended the designation of a critical habitat for the monk seal, for example, more than ten years passed before final action was taken. Even then, the initial action was inadequate. In the end, the threat of legal action inspired the NMFS to act sooner than it intended or preferred. The nature of the threat to the palila has been known for decades, yet the threat still exists more than twenty years after the species' existence was declared to be in jeopardy.

In each of these cases, knowing the likely solution but allowing the threat to continue unabated demonstrates the political nature of the decision-making processes. The technology to solve the species' plight is largely available, but the political will to do so is problematic at best. Viewed from another perspective, the situation with the species discussed in this article may not be perceived as problems at all. Organizations selectively choose the lens they wear in perceiving each item on their institutional agenda. How an organization views a situation depends on its perspectives, its goals and on the political environment in which it operates. Problems "are not simply the conditions or external events themselves; there is also a perceptual, interpretive element. ${ }^{138}$ In other words, conditions, such as endangerment, do not become problems until people or organizations define them as such. "Conditions become defined as problems," John W. Kingdon adds, "when we come to believe that we should do something about them. ${ }^{\prime \prime}{ }^{139}$ Conditions are tolerable situations whereas problems are irritants that people seek to remedy. Quite clearly, then, the NMFS' view of the monk seal and Hawaii's view of the palila illustrates perception of a condition rather than recognition of a problem. In this regard, the story of these species is probably typical of many other endangered and threatened species. For these species, delay is deemed acceptable and inexpensive solutions are not applied because endangerment is viewed as a condition not in need of immediate attention.

Second, the species discussed in this article exhibit the conflicting pressures many administrative agencies face. However desirable it may be to protect endangered species, their fate is rarely independent of the agencies having an interest in them. As an illustration, Hawaii's Endangered Species Act mandates consideration of all federally-listed species in the state as endangered under state law. All such species are supposed to be the beneficiaries of "positive actions to enhance their prospects for survival." ${ }^{140}$ At the same time, however, Hawaii's De-

[^20]partment of Land and Natural Resources has a mixed, but not necessarily overlapping, constituency. It includes hunters, conservationists, commercial fishermen and land developers, to list only a few. A natural inclination among bureaucratic organizations is to balance competing demands. The DLNR tried to do this in serving the interests of the palila and of the state's hunters. The state's policy of coexistence attempted to maintain, simultaneously, a huntable population of feral animals and a suitable habitat for the palila. When attempting to balance competing demands, however, government agencies can ill afford to neglect powerful and well-organized constituents. Throughout the years of debate over a critical habitat for the monk seal, the DLNR faced intense pressures from fishing interests, such as the Hawaiian Fishing Council and the Western Pacific Regional Fishing Management Council. This pressure has been so effective at least one close observer of the situation has stressed "that DLNR is so strongly committed to fishery development that it has become a de facto sin-gle-purpose agency on this issue." ${ }^{141}$ It was not unexpected, therefore, when the state complained to the Marine Mammal Commission establishing a critical habitat for the seals would lead to "the possible loss of a potentially large fishing industry. . . ." ${ }^{142}$ The state's major conservation agency might be expected to give the seals the benefit of the doubt, but this was not the case. For many years the state strongly opposed the designation of a critical habitat for the monk seal. And, as an examination of the record reveals, the NMFS' response to this opposition was accommodation in the form of delay. ${ }^{143}$
Accommodation is an option when compromise is a possibility and when different sides in a dispute can be satisfied with less than complete victory. Both accommodation and compromise are at the heart of political decision making. At least one staff member in the Department of Commerce recognized the monk seal decision as just that. Before the NMFS issued the final environmental impact statement on the monk seal's critical habitat, one official in the Office of the Administrator of the National Oceanic and Atmospheric Administration, to which NMFS is subordinate, characterized the debate in this way: '[T] he Governor and the Fishery Management Council don't want

[^21]any critical habitat designation; the Marine Mammal Commission, the [monk seal] Recovery Team, and environmentalists want critical habitat designated out to the 20 fathom line. The 10 fathom line is simply a compromise." ${ }^{144}$ Unfortunately for many endangered species, their needs recommend against such compromise because compromise may spell demise.

Likewise, concern about commercial interests has apparently affected the state's and the FWS' enthusiasm about listing the hundreds of endemic plants believed to be endangered in Hawaii. Among those listed, none causes conflict with developmental activities. This is more than just an anomaly, given the number of species in jeopardy in the state, the number already listed as endangered, and the state's above average growth and population density.

Third, relative passivity best characterizes the FWS' role in several of the interorganizational debates. While appearing to be genuinely concerned about the palila, the Service also demonstrated a sensitivity to Hawaii's DLNR. There is evidence of FWS attempts to persuade Hawaii to be more responsive to the needs of the palila, but the FWS seemingly tailored some of its actions to mollify the state. For example, the FWS appointed a team of experts to make recommendations regarding actions to protect the palila. The team said an ideal critical habitat encompassed the bird's entire historical range. ${ }^{145}$ In deference to the state and its hunters, however, the FWS designated a much smaller habitat. ${ }^{146}$

Similarly, the FWS did not intervene in any of the legal actions involving the palila. In fact, after the initial judicial decision in 1979, in which the court ruled a "taking" of the palila had occurred, through harm to its habitat, ${ }^{147}$ the Department of the Interior proposed a redefinition of harm. ${ }^{148}$ The existing definition, and the one on which the 1979 decision was based, was broad and defined harm in such a way as to include acts significantly disrupting an endangered species' lifestyle or significantly degrading its environment. ${ }^{149}$ The proposed change, which was specifically intended to preclude future decisions similar to the one reached in the palila case, restricted the meaning of harm to require death or injury to individual members of an endan-

[^22]gered species. ${ }^{150}$ The proposal was so unpopular the Interior Department altered its original proposal and provided a definition only marginally different than the existing one. ${ }^{151}$
Last, and perhaps most obvious, as the number of institutional actors increased so also did the number of contested issues and the level of disagreement about what should be done. With the monk seal, the FWS, the NMFS and the Marine Mammal Commission were in agreement that the scientific data justified a critical habitat and that existing levels of protection were inadequate. ${ }^{152}$ The three organizations disagreed about how large the critical habitat should be and when it should be designated. The DLNR took an entirely different position on these issues. It claimed that an insufficient biological basis existed to justify designation. ${ }^{153}$ Moreover, the DLNR argued that existing state regulations already provided suitable protection for the seals. ${ }^{154}$ Similar disagreements about the quality of scientific data have also characterized several efforts to list plant species in the state. In a few instances as well, issues completely unrelated to endangered species have colored reactions. A consistent complaint from the state is the preemption of Hawaii's right to manage its lands and waters by federal actions. ${ }^{155}$

The issue of preemption is important because it places the FWS or the NMFS in the position of directly affecting, or at least attempting to influence what other organizations do. For the FWS and the NMFS, the listing of threatened and endangered species is a statutory obligation. ${ }^{156}$ The agencies are expected to designate critical habitats "to the maximum extent prudent and determinable." ${ }^{157}$ The legislative history of the Endangered Species Act and subsequent judicial interpretation indicate habitats will be designated in all except "rare circumstances." ${ }^{158}$ The exceptions are to be for the benefits of the affected species. As Hawaii's experience illustrates, however, the exercise of these responsibilities is often tempered by other considerations.

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    1. Endangered Species Act of 1973, §§ 3(6), 3(20), 16 U.S.C. § 1532 (1982). An endangered species is one "in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined . . . to constitute a pest whose protection . . . would present an overwhelming and overriding risk to man; a threatened species is any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Id.
[^1]:    2. A critical habitat includes:
    [T]he specific areas within the geographical area occupied by the [endangered or threatened] species, . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and . . . specific areas outside the geographical area occupied by the species at the time it is listed . . . , upon a determination . . . that such areas are essential for the conservation of the species. Endangered Species Act of 1973, § 3(5)(A), 16 U.S.C. § 1532 (1982)
    3. A. Downs, Inside Bureaucracy 213 (1967).
[^2]:    4. D. Mazmanian \& P. Sabatier, Implementation and Public Policy 27 (1983); E. Hargrove, The Missing Link: The Study of the Implementation of Soclal Policy (1975).
    5. A. Schlesinger, Jr., The Coming of the New Deal 527-28 (1959).
    6. Landau, Redundancy, Relationality, and the Problem of Duplication and Overlap, 29 Pub. Admin. Rev. 346-58 (1969).
[^3]:    7. 16 U.S.C. 742 b (c) (1982).
[^4]:    9. Endangered Species Act of 1973, § 4(a)(2)(C), 16 U.S.C. § 1533 (1982).
    10. House Comm. on Merchant Marine \& Fisheries, Report on Endangered Species, H.R. Rep., 92d Cong., 2d Sess. 208 (1972).
    11. Hughes v. Oklahoma, 441 U.S. 322 (1896).
    12. Endangered Species Act of 1973, § 4(b)(1), 16 U.S.C. § 1533 (1982).
[^5]:    13. Berger, Hawaii's Dubious Distinction, 50 Defender's 491 (1975).
    14. House Comm. on Merchant Marine \& Fisheries, Report on Endangered and Threatened Species, H.R. Rep., 92d Cong., 2d Sess. 208 (1972).
    15. 45 Fed. Reg. 82,480-82, 569 (1980).
    16. Id.
    17. Id.
    18. 48 Fed. Reg. 43,104 (1983). The quoted material provides the FWS' definition of high threat. Of the 51 Hawaiian species that the FWS ranked in 1986, 32 (or $62.8 \%$ ) faced such a threat. For native species in all other locations, $56.6 \%$ faced a high threat.
[^6]:    19. Hart, The Onslaught Against Hawaii's Tree Snails, 46 Nat. Hist. 87 (1978). Another author has described Hawaii as "nature's grand experiment in supreme isolation." Gagne, Hawaii's Tragic Dismemberment, 50 Defenders 466 (1975).
    20. Gagne, supra note 19, at 466.
    21. These estimates are based on the calculations of C. Lamoureux, Professor of Botany, University of Hawaii. Dr. Lamoureux has studied species introduction in Hawaii. For more information he can be contacted at the Department of Biology, University of Hawaii.
[^7]:    22. Id.
    23. Id.
    24. Berger, supra note 13 , at 496.
    25. Id.
    26. Lamoureux, supra note 21.
    27. Id.
    28. Berger, supra note 13 , at 496.
    29. See generally G. Cooper \& G. Dawes, Land and Power in Hawail (1985). Cooper and Dawes discuss the relationship of land to power and the resulting influence of economic development on Hawaii's political structure.
[^8]:    30. 50 Fed. Reg. 39,526-84 (1985) and J.O. Yager, An Application of Economic Efficiency Theory to Species Conservation 146 (Ph.D. thesis, University of Maryland, 1986). Using the Nature Conservancy's listing of the species it considers to be endangered, Yager computed the mean number of endangered species per state, which was 61 . Hawaii had 490 endangered species, or more than four standard deviations above the mean for all states.
    31. 50 Fed. Reg., supra note 30.
    32. 47 Fed. Reg. 36,847 (1982).
    33. Id.
    34. Id.
    35. Id.
[^9]:    36. Id.
    37. 48 Fed. Reg. 46,329 (1983).
    38. Id. at 46,330.
    39. Id. at 46,328 .
    40. Interview with Carolyn Com, State Botanist, Haw. Dept. of Land \& Nat. Res., (Aug. 4, 1982, Honolulu, Haw.).
    41. Id.
    42. Id.
    43. Interview with Ron Walker, Chief, Wildlife Div., Haw. Dept. of Land \& Nat. Res., (Aug. 3, 1982, Honolulu, Haw.).
[^10]:    57. 46 Fed. Reg. 46,328-30. Memorandum from E. Kridler, FWS, Honolulu Endangered Species Coordinator to FWS Regional Director, Portland, Or., May 26, 1976.
    58. The Endangered Species Act is clear in its stipulation that only federal agencies and actions they authorize, fund or carry out are potentially affected by designation of critical habitats. Endandered Species Act of 1973 § 7(a)(2), 16 U.S.C. § 1536 (1982).
    59. Some species share the same critical habitat so the total number of critical habitats is less than the number of species actually protected.
    60. Off. of Endangered Species printout, supra note 55.
    61. Palila v Haw. Dept. of Land \& Nat. Res., 471 F. Supp. 985, 988 (D. Haw. 1979).
    62. Id. at 988-989.
    63. Id.
[^11]:    74. Palila, 471 F. Supp. at 990.
    75. Id.
    76. 40 Fed. Reg. 21,501 (1975). The critical habitat was formally designated in August 1977. See 42 Fed. Reg. 40,687 (1977).
    77. Palila, 471 F. Supp. at 990, n.12.
    78. Id at 991, n. 16 .
    79. One first-hand observer, Eugene Kridler from the FWS offered a revealing observation. When he and the chief of the state's fish and game office attempted to explain to the hunters in the mid-1970s the damage the sheep were causing: "[I]t went in one ear and out the other . . . . Some hunters were flatly opposed to any of the mountain being fenced, and that all should be devoted to sheep and hunting, endangered animals and plants notwithstanding." Memorandum from E. Kridler, Fish \& Wildlife Serv., Honolulu Endangered Species Coordinator, to Fish \& Wildlife Serv., Regional Director, Portland, Or., (May 26, 1976).
    80. Palila, 471 F. Supp. at 990, n. 9.
    81. House Comm. on Merchant Marine and Fisheries, Endangered Species Oversight, H.R. Rep. 94th Cong., 1st. Sess., 257 (1975).
[^12]:    82. Berger, supra note 13 at 496.
    83. Letter from L. Greenwalt, Director, FWS, to M.R. Sherwood, Sierra Club Legal Defense Fund (May 18, 1978).
    84. Id.
    85. Id.
    86. Palila, 471 F. Supp. at 985.
    87. Id.
    88. Id. at 989, n.7.
    89. Id.
    90. Palila v. Haw. Dept. of Land \& Nat. Res., 639 F.2d 495 (9th Cir. 1981).
    91. Palila v. Haw. Dept. of Land \& Nat. Res., 649 F. Supp. 1070 (D. Haw. 1979).
[^13]:    92. Id.
    93. Id.
    94. Id. at 1080 .
    95. Id. at 1082
    96. An excellent discussion of the Hawaiian monk seals' status can be found in a memorandum filed by M.R. Sherwood, Staff Attorney, Sierra Club Legal Defense Fund, titled 'Memorandum of Points and Authorities in Support of Motion for Summary Judgment"' (1987). The plaintiffs filed this memorandum in Greenpeace International, Inc., et al. v. Baldridge in the U.S. District Court, of Hawaii. (No cite available.) This document was invaluable in piecing together the account that follows.
    97. Kenyon, No Man Is Benign: The Endangered Monk Seal, 13 Oceans 48, 52 (1980).
    98. Id. at 48.
    99. Id. at 52-53.
    100. Id. at 48.
[^14]:    101. Id.
    102. Id.
    103. Id.
    104. Id.
    105. Id.; see also letter from J.R. Twiss, Jr., Executive Director, Marine Mammal Comm., to R.W. Schoning, Director, Nat. Marine Fisheries Serv. (Dec. 24, 1975).
    106. Kenyon, supra note 97 at 49.
[^15]:    107. Twiss letter to Schoning, supra note 105.
    108. Id.
    109. Id.
    110. Id.
    111. Harrison, A Marine Sanctuary in the Northeastern Haw. Islands: An Idea Whose Time Has Come, 25 Nat. Res. J. 328 (1985).
    112. Id.
    113. 16 U.S.C. 668dd (1982).
    114. Com. Fisheries Res. and Dev. Act of 1964, 16 U.S.C. § 779 (1982).
    115. Marine Mammal Protection Act, 16 U.S.C. § 1402 (1982).
[^16]:    116. Id.
    117. Fish \& Wildlife Serv., Dept of the Interior, Haw. Islands Nat. Wildlife Refuge: Masterplan/Environmental Impact Statement 4.24 (1986).
    118. Haw. Dept. of Land \& Nat. Res., Haw. Fisheries Dev. Plan (1979).
    119. Id.; see also Haw. Dept. of Land \& Nat. Res., Rev. Haw. Fisheries Dev. Plan (1985).
    120. Fish \& Wildlife Serv., supra note 117.
    121. 41 Fed. Reg. 51,611 (1976). The seal had earlier been designated as a depleted species under the provisions of the Marine Mammal Protection Act of 1972. See 41 Fed. Reg. 30,120 (1976). The state's position on the desirability of listing the monk seal is somewhat ambiguous. The governor endorsed the proposal to list the seal in 1976, but the director of the DLNR's Division of Fish and Game later said that the state was "apprehensive about this listing, which we believed was based more on emotionalism than on the actual status of the Hawaiian seal population. . . "' Letter from K. Ego, Director, Haw. Div. of Fish and Game, Dept. of Land \& Nat. Res., to H. Eschwege, U.S. Gen. Accounting Off. (Mar. 4, 1981).
[^17]:    122. Memorandum from E.C. Fullerton, Southwest Regional Director, Nat'l Marine Fisheries Serv., to W.G. Gordon, Assistant Adm'r for Fisheries, Nat'l Marine Fisheries Serv. (May 15, 1984).
    123. Nat'l. Marine Fisheries Serv., Southwest Region, Haw. Monk Seal Management Plan (Sept. 1976).
    124. 41 Fed. Reg. 51,611 (1976).
    125. 53 Fed. Reg. 530-31 (1980).
    126. Twiss letter, supra note 105.
    127. Fullerton memorandum, supra note 122.
    128. 53 Fed. Reg., supra note 125.
    129. Letter from J.R. Twiss, Jr., Executive Director, Marine Mammal Comm., to T.L. Leitzel, Assistant Adm'r for Fisheries, Nat'l. Marine Fisheries Serv. (Apr. 6, 1979).
[^18]:    130. Nat'l Marine Fisheries Serv., Dept of Commerce, Draft Environmental Impact Statement for the Proposed Designation of Critical Habitat for the Haw. Monk Seal 55-56 (1980).
    131. Memorandum from D. Gates, Nat'l Marine Fisheries Serv. Southwest Region Pacific Program Off. Adm'r, to E.C. Fullerton, Director, Southwest Region, Nat'l. Marine Fisheries Serv. (Mar. 30, 1984).
[^19]:    132. Letter from S. Ono, Chair, Haw. Bd. of Land \& Nat. Res. to R.B. Roe, Director of the Off. of Protected Species \& Habitat Conservation, Nat'l. Marine Fisheries Serv. (Feb. 19, 1985).
    133. Id.
    134. Nat'l Marine Fisheries Serv., Dept of Commerce, Final Environmental Impact Statement: Proposed Designation of Critical Habitat for the Haw. Monk Seal in the Northwestern Haw. Islands (1986).
    135. 51 Fed. Reg. 16,047 (1986).
    136. Letter from M.R. Sherwood, Sierra Club Legal Defense Fund to author, (Jan. 19, 1988).
    137. 53 Fed. Reg. 530-33 (1988).
[^20]:    138. Kingdon, Agendas, Alternatives and Public Policies 140 (1980).
    139. Id.
    140. Endangered Species Act of 1975, Haw. Rev. Stat. § 195D-1.
[^21]:    141. Harrison, Marine Sanctuary in the Northwestern Haw. Islands: An Idea Whose Time Has Come, 25 Nat. Res. J. 329 (1985).
    142. Letter from J.P. Craven, Marine Affairs Coordinator, Off. of the Governor, to J.R. Twiss, Jr., Executive Director, Marine Mammal Comm. (Apr. 12, 1978).
    143. For an indication of the state's opposition to designation of critical habitat, see letter from K. Ego, Director, Haw. Div. of Fish and Game, Dept. of Land \& Nat. Res., to G. Smith, Chief, Fisheries Management Div., Southwest Regional Off., Nat'l. Marine Fisheries Serv. (Nov. 27, 1978).
[^22]:    144. Memorandum from D. Cottingham, Off. of the Adm'r, Nat. Oceanic \& Atmospheric Admin., to B. Brumsted, Nat'l. Marine Fisheries Serv. (Aug. 28, 1985).
    145. Palila, supra note 61, at 989.
    146. Id. at 989, n.5.
    147. Id.
    148. 46 Fed. Reg. 29,490 (1981).
    149. Id.
[^23]:    150. Id.
    151. 46 Fed. Reg. 54,748 (1981).
    152. Twiss letter to Lietzel, supra note 129.
    153. 53 Fed. Reg. 530 (1988). Ego letter to Smith supra note 145.
    154. Ego letter to Eschwege supra note 125.
    155. Id.
    156. Endangered Species Act of 1973, 16 U.S.C. § 1533(2)(a) (1982).
    157. Id.
    158. U.S. House Comm. on Merchant Marine \& Fisheries, Endangered Species Act Amendments of 1978, H.R. Rep. 1625, 95th Cong. 2d Sess. 17 (1978); Enos v. Marsh, 769 F.2d 1363, 1371 (9th Cir. 1985).
