

Endangered Species Updated - December 1996 - Vol. 13, No 12

The Law Governing Sea Otter Conservation

Donald C. Baur, Allison M. Meade, and Lisa M. Rotterman

The sea otter has the distinction of being one of the first animals protected under federal law. In 1911, the United States joined Great Britain, Japan, and Russia to execute the Convention for the Preservation and Protection of Fur Seals, a treaty prohibiting pelagic sealing and the taking of sea otters on the high seas. The United States implemented this Convention, and imposed a prohibition on high seas sea otter taking, by the Fur Seal Act of 1912 (Chap. 373, 37 Stat. 499, 1912).

At the time it was imposed, this protection was of little value for sea otters. The once prolific species, which had occupied a range from Japan, across the Pacific rim, down the Pacific coast of North America, and into Mexico was on the brink of extinction. Its numbers ravaged by the fur trade of the 18th and 19th centuries, the sea otter survived, not because of the 1911 treaty or its implementing U.S. law, but because the animals were simply too scarce to justify the cost of searching them out and killing them for their skins. In addition, the prohibition on take applied only on the high seas (beyond three miles), a delineation that was insufficient to protect a mostly near-shore species such as the sea otter.

This pattern of legal protection-after-it-was-almost-too-late is not uncommon for many marine mammals and other protected species. Until the early 1970s and the enactment of the Marine Mammal Protection Act in 1972 and the Endangered Species Act amendments of 1973, sea otters and other wildlife species at risk from human activities had little or no legal protection. As Congress observed in 1971 when it took up the MMPA for consideration:

Recent history indicates that man's impact upon marine mammals has ranged from what might be termed malign neglect to virtual genocide. These animals, including whales, porpoises, seals, sea otters, polar bears, manatees and others, have only rarely benefited from our interest; they have been shot, blown up, clubbed to death, run down by boats, poisoned, and exposed to a multitude of other indignities, all in the interest of profit or recreation, with little or no consideration of the potential impact of these activities on the animal populations involved (H.R. Rep. No. 707, 92d Cong., 1st Sess. 11-12, 1971).

As a result of the resulting legal protection, the status of the sea otter has significantly improved. Sea otters now occupy a number of areas within their historic range: Alaska, British Columbia, Washington, and California. The population of animals in California is currently designated as a separate subspecies (see Anderson et al., this issue). Each of these populations is subject to varying degrees of legal protection. As a result, separate policy and management issues arise in connection with each.

The two major federal laws governing sea otters are the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). Marine mammal populations listed either as endangered or threatened under ESA are by default categorized as depleted under MMPA. Removal from lists defined by ESA also automatically removes the depleted designation as defined by MMPA. An approved petition is required for populations not listed under ESA to be listed as depleted under MMPA. The provisions of the ESA are discussed elsewhere in this issue (see Clark, this issue), and this paper will summarize the Marine Mammal Protection Act and discuss the resulting conservation issues associated with sea otters in California.

The Marine Mammal Protection Act

Having found that "certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities" (16 U.S.C. § 1361(1)), Congress set forth in the MMPA a mandate that marine mammals "should be protected and encouraged to develop to the greatest

extent feasible commensurate with sound policies of resource management and that the primary objective of their management should be to maintain the health and stability of the marine ecosystem" (Id. § 1361(6)). Federal agencies thus were directed that "such species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, and, consistent with this major objective, they should not be permitted to diminish below their optimum sustainable population" (Id. § 1361(2)).

Pursuant to the MMPA, jurisdiction over the sea otter is vested in the Secretary of the Interior and administered by the U.S. Fish and Wildlife Service (FWS). Oversight is provided by the Marine Mammal Commission and the Committee of Scientific Advisors on Marine Mammals (Id. § 1402).

The MMPA established four innovative concepts of wildlife protection and management that are relevant to the sea otter: (1) preemption of state control over marine mammals; (2) imposition of a moratorium on the taking and importation of marine mammals; (3) establishment of the species and population stock recovery goal of reaching and maintaining optimum sustainable population (OSP) levels; and (4) recognition of marine mammals as vital components of the overall marine ecosystem and establishment of ecosystem health and stability as the primary goal of marine mammal management.

State control of marine mammals

Having removed states from direct control over the taking of marine mammals, Congress also set forth in the MMPA mechanisms whereby states could regain some or all of that authority.

In 1974, California invoked this procedure and filed a request for a waiver of the moratorium and a transfer of management for sea otters. Pursuant to that request, the state sought to establish a management regime that would have restricted sea otters to their then current range along the central California coast. By mid-1976, however, the California Department of Fish and Game (CDFG) recognized that many of the goals it sought to achieve pursuant to a management transfer, including testing of the effectiveness of translocation as a method of regulating sea otter distribution, could be accomplished under an MMPA scientific research permit. Consequently, the waiver request was withdrawn and a research permit application filed.

Described as "an experimental management plan," the research permit was requested in order to "provide an adequate number of sea otters for maintenance of a healthy self-sustaining population" and to "restrict the distribution of the sea otter to protect the State's remaining recreational and commercial shellfish fisheries and to enable possible development of marine aquaculture in coastal waters." The FWS issued a two-year permit on August 26, 1977 (42 Federal Register 44,314, Sept. 2, 1977). As issued, the permit authorized CDFG to capture, tag, weigh, measure, and blood sample up to 100 animals from the northern end of the sea otter range. It also authorized the translocation of up to 40 sea otters from southern to the northern end of the range. As federal efforts to achieve zonal management intensified, the state declined to further pursue the research effort, and a return of management was not pursued again.

Moratorium on taking

In conjunction with the preemption of state authority, Congress imposed a moratorium on the taking and importation of all marine mammals (16 U.S.C. § 1371(a)(1)). The expansive scope of this moratorium is established by the definition of "take," which means "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal" (Id. § 1362(13); 50 C.F.R. § 18.3). The prohibition on taking, unless subject to an MMPA exception, is absolute, and takings that are incidental to otherwise lawful activities are prohibited to the same degree as intentional takes.

The Act, as amended over the years, sets forth several exceptions to the moratorium. These exceptions are for: (1) scientific research; (2) public display; (3) photography for educational or commercial purposes;

(4) enhancing species survival or recovery; (5) incidental take in commercial fishing operations; and (6) incidental take of small numbers of marine mammals in non-commercial fishing activities.

In addition to these exceptions, the moratorium does not apply to nonwasteful takes by Alaskan Natives for subsistence or handicraft purposes (Id. § 1371(b)). This exception is limited to any Indian, Aleut, or Eskimo who resides in Alaska and dwells on the coast of the North Pacific Ocean or the Arctic Ocean. In the 1994 Amendments, Congress gave greater recognition to the need to promote a cooperative approach with Alaska Natives by authorizing the federal agencies to enter into "co-management agreements" with Alaska Native organizations for the purpose of undertaking research, management and conservation efforts on a joint basis (Id. § 1388).

Addressing Native take outside of Alaska under the 1994 MMPA amendments, Congress clarified that nothing in those amendments was intended to impinge on pre-existing Indian treaty rights (Pub. Law No. 103-238, § 14). In those amendments, however, Congress did not extend this nonabrogation clause to the pre-existing provisions of the MMPA. Thus, the take prohibition would override any pre-existing treaty rights that might exist to hunt sea otters.

An especially important aspect of the MMPA protections applying to sea otters is the take prohibition as it applies to commercial fishing. During the early 1980s, it was discovered that southern sea otters were dying in high numbers in California set net fisheries. This incidental take was causing the population, which had only recently begun to recover, to once again decline. Under the MMPA as it existed at that time, all incidental take of depleted marine mammals (including the southern sea otter) was prohibited and could not be authorized. Because of this prohibition, the state of California imposed a series of fishery closures throughout the sea otter range (discussed below). These closures were essential to eliminating this take and putting the southern sea otter back on the track of recovery.

Optimum sustainable population

Linked to the application of the moratorium are the concepts of OSP and depletion. The MMPA defines OSP to mean:

[W]ith respect to any population stock, the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element (Id. § 1362(8)).

Any species or population stock that has been listed as endangered or threatened under the ESA or determined to be below its OSP level is defined as "depleted" (Id. § 1362(1)). If a species or stock is below OSP and thus, by definition depleted, it is effectively precluded from being made subject to a waiver of the moratorium, cannot be taken under a state management program, and cannot be taken under permit except for scientific research, species enhancement, or photographic purposes. Limitations also apply to incidental take of depleted species, although after the 1994 MMPA amendments such take under most commercial fishing is no longer prohibited and exemptions also exist for some non-fisheries' incidental take.

For purposes of implementing the OSP concept, in 1976 NMFS promulgated the following "interpretative" definition:

"Optimum sustainable population" is a population size which falls within a range from the population of a given species or stock which is the largest supportable within the ecosystem to the population level that results in maximum net productivity. Maximum net productivity is the greatest annual increment in population numbers or biomass resulting from additions to the population due to reproduction and/or growth less losses due to natural mortality (50 C.F.R. § 216.3).

Because the maximum net productivity level (MNPL) is the lower end of the OSP range, it has been the focal point of conservation efforts under the MMPA. MNPL is defined as "the greatest net annual increment in population numbers or biomass resulting from additions to the population due to reproduction and/or growth less losses due to natural mortality" (16 U.S.C. § 1362(9)). As applied in numerous rulemaking proceedings, MNPL has been generally accepted to mean a population size that represents 60 percent of the species' or stock's carrying capacity (e.g., 42 Federal Register 64,548 (1977); 45 Federal Register 72,178 (1980)).

To date, there has been no formal determination of OSP for sea otters. The FWS 1995 stock assessment for sea otters in Alaska asserts that the population is believed to be within its OSP range, but this conclusion is based on the highly questionable assumption that there is a single population stock in Alaska (U.S. Fish and Wildlife Service 1995). No OSP finding has been made for the southern sea otter. Although the depleted status of the southern sea otter is formally derived from its ESA classification (50 C.F.R. § 17.11(h)), there is no question that the southern sea otter also is well below its MNPL. Determination of the MNPL for the southern sea otter is likely to be particularly difficult based upon present knowledge due to the uncertainty of the pre-exploitation population size, the fact that the sea otter is recovering from harvests that took place before reliable records were kept, the lack of a clear understanding of the relationship between sea otters and the near-shore marine community, and the fact that at least portions of the formerly occupied range are no longer suitable as sea otter habitat.

In 1988 and 1994, Congress amended the MMPA to provide more flexibility in authorizing incidental take of marine mammals in commercial fisheries. Congress passed this amendment in reaction to the decision in Kokechik Fishermen's Association v. Secretary of Commerce (839 F.2d 795, 802, D.C. Cir. 1988), which held that no permit could be issued under the MMPA to take a depleted species and that if a proposed fishery would take depleted as well as nondepleted species, the fishery itself could not be authorized. Fearing that this rule would shut down many fisheries in the United States, Congress established a new regime for authorizing incidental take that allowed depleted species to be taken.

Congress recognized, however, that the southern sea otter was a special case. Because the sea otter is especially vulnerable to incidental take, in recognition of the link between the MMPA absolute ban on taking depleted species and the state's closures, and in an effort to maintain the status quo under the sea otter translocation law (discussed below), which established two stringent "no take" zones for sea otters, Congress exempted southern sea otters from these new provisions that allowed for incidental take of depleted species (16 U.S.C. § 1387(a)(4)). Thus, of all the species subject to the MMPA, only the southern sea otter still has the benefit of the strong legal protections enacted by Congress in 1972 prohibiting incidental take of depleted marine mammals.

Marine ecosystem protection

In enacting the MMPA, Congress made maintenance of the health and stability of the marine ecosystem the primary objective (16 U.S.C. § 1361(6)). OSP is to be achieved when consistent with this goal. Because sea otters are often recognized as a "keystone species" which indicates ecosystem health, it is clear that promoting population and range expansion of this species advances this underlying goal of the MMPA.

Without referring specifically to habitat protection or other measures, section 112 authorizes the Secretary to "prescribe such regulations as are necessary and appropriate to carry out the purposes of the MMPA" (Id. § 1382(a)). This authority can be used to promulgate regulations to protect habitat areas. In the legislative history of the 1994 Amendments, Congress made it clear that section 112 includes such authority. As stated by the House Merchant Marine and Fisheries Committee in its legislative history for amendments to section 2(2), by adding the phrase "essential habitats," "[t]he Committee believes that the Secretary currently has the authority to protect marine mammals and their habitats under the general rulemaking authority of section 112 of the MMPA" (H.R. Rep. No. 439, 103d Cong., 2d Sess. 29 (1994)). The Committee expressly noted, as an example, that this authority would apply "to protect polar bear

denning, feeding, and migration routes" (Id.). Thus, this authority also could be used to protect sea otter habitat by, for example, prohibiting or restricting human activities that pose threats to sea otters (Baur 1996).

The second important federal law governing sea otter conservation is the ESA. The provisions of the ESA are discussed in detail elsewhere in this issue (see Clark, this issue). By way of summary, several aspects of the ESA are of special significance to the sea otter. Section 4 defines the criteria and procedures for listing species under the ESA (16 U.S.C. § 1373). Distinct populations are subject to listing (61 Federal Register 4722, 1996). Under section 4, the southern sea otter is designated as a threatened species. The small population in Washington (about 350 animals) might also qualify for listing.

Once listed, a species is subject to the ESA's take prohibition (16 U.S.C. § 1358 (a)(1); 50 C.F.R. § 17.21). This prohibition is broader than that under the MMPA because it also prohibits "harm" to a species, which includes habitat degradation (50 C.F.R. § 17.3; Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 115 S. Ct. 2407, 1995). The ESA also prohibits the federal government from taking any action that is likely to jeopardize the continued existence of the species in the wild (Id § 1536 (a)(2)). The goal of the ESA is to achieve recovery of listed species (Id. §§ 1531, 1532 (3)). To accomplish this goal, section 4(f) of the ESA requires that recovery plans be issued by FWS for most listed species (Id. § 1533 (f)).

The FWS issued its original recovery plan for the southern sea otter on February 2, 1982. The Recovery Plan addresses necessary actions to achieve both delisting under the ESA and attainment of OSP under the MMPA. With regard to prospects for species recovery under the ESA, the Recovery Plan states that "delisting should be considered when the southern sea otter population is stable or increasing at sustainable rates in a large enough area of their original habitat that only a small proportion would be decimated by any single natural or man-caused catastrophe" (U.S. Fish and Wildlife Service 1982). For purposes of achieving this objective, the Recovery Plan indicates that it is necessary to accomplish all of the following:

- (1) minimize the risk of oil spills;
- (2) minimize the possible effects of oil spills;
- (3) minimize vandalism, harassment, and incidental take of sea otters;
- (4) monitor recovery progress of the existing population and any new colonies; and
- (5) integrate the recovery plan into development and management plans of local coastal governments (Id. at 40).

The establishment of one or more colonies has been identified as the most important task to be accomplished for bringing about recovery of the subspecies (Id. at 34).

The 1982 southern sea otter recovery plan remains in effect. It is currently being revised through a process which has now been underway for several years (see Benz, Recovery Plan, this issue). This revision process began in 1989, in part as a result of the *Exxon Valdez* oil spill in Alaska. The size of this spill and its impact on sea otters demonstrated that the entire southern sea otter population would be at risk from such an event. This information called into question some of the key assumptions in the 1982 Recovery Plan.

Upon publication of this article, the revised recovery plan was undergoing its second public review period. The draft revised recovery plan focuses almost exclusively on oil spill risk and does not address other

threats, including new threats that did not exist in 1977. It also does not address OSP under the MMPA (U.S. Fish and Wildlife Service 1996). These and other aspects of the draft revised recovery plan have been the subject of debate and controversy (see Faurot-Daniels and Baur, this issue).

The translocation law

The 1982 recovery plan identified the establishment of a new colony of sea otters, apart from the mainland population, as the most important step in ensuring that a single oil spill or similar catastrophe could not endanger the entire population (Id. at 34). The recovery plan adopted the idea of zonal management earlier put forward by the Marine Mammal Commission to deal with conflicts between range expansion of the sea otter and human activities, especially commercial and recreational fisheries (U.S. Fish and Wildlife Service 1982; Marine Mammal Commission 1996; see Wendell, this issue). Early planning for a relocation effort was, however, hampered by the opposition of commercial interests and questions about whether the FWS could relocate sea otters in the face of MMPA "no-take" prohibitions.

The matter was settled in 1986 with enactment of Pub. Law No. 99-625, 100 Stat. 3500 (1986), in which Congress adopted the zonal management concept and specifically authorized the FWS to carry out one or more relocations outside the southern sea otters' mainland range (see Benz, Attempts to Reintroduce, this issue). Subsequently, the FWS decided on San Nicolas Island, and established a translocation zone around San Nicolas, and, outside of that, a management zone including all waters south of Point Conception (see Wendell, this issue). Sea otters found in either zone are presumed by the law to be members of the translocated population. Inside the translocation zone, sea otters are accorded full ESA protections, with one partial exception: section 7 federal agency consultations are required only for non-defense related actions occurring inside the translocation zone, rather than for all federal actions that may affect the population (Pub. Law No. 99-625, § 1(c)). In the management zone, on the other hand, sea otters are accorded only the status of species proposed to be listed under the Act (requiring only the informal conference procedure). Incidental taking of sea otters in the management zone may not be treated as violations of the ESA or the MMPA (Pub. Law 99-625, § 1(c)).

The FWS released 139 sea otters between 1987 and 1990. Counts between 1993 and 1995 have shown a stable population of 12 to 15 adults and continued pupping (six pups were known to have been born on the island in 1995; Marine Mammal Commission 1996). According to the plan, the population can be considered "established" when the population (1) numbers 150 sea otters, with little or no migration to management zone and (2) recruits (i.e., successfully pups) 20 sea otters a year for a three to five year period or maintains a population close to the island's carrying capacity. At present, the San Nicolas population has no legal significance with regard to the status of southern sea otters as a whole under the ESA and MMPA. However, if the population becomes established it will be taken into account for future consideration of delisting the sea otter under the ESA or removing its designation as "depleted" under the MMPA (50 C.F.R. § 17.84(d)). The FWS regulations also define criteria for determining the translocation a failure, which would require the sea otters at San Nicolas to be captured and returned to the range of the parent population and termination of the management zone (Id. § 17.84(d)(8)). Even if any one of these criteria are met, the FWS has discretion to continue the translocation if reasonable measures can be implemented to address the identified problems (Id. § 17.84(d)(8)(v)).

Protected areas

Sea otters and sea otter habitat also benefit as a result of protective federal land and water area designation. National parks, such as the Channel Islands in California and Olympic in Washington, national wildlife refuges, such as Alaska Maritime, and marine sanctuaries, such as Monterey Bay and Olympic Coast, provide such protection by prohibiting habitat modifications and activities that could harm sea otters (Baur 1991). In the Monterey Bay Sanctuary, regulations promulgated by the National Marine Fisheries Service to restrict jet skis, which were placing sea otters and other protected species at risk, were upheld against a legal challenge by an industry trade association ([Personal Watercraft Industry](#)

Association v. Department of Commerce, 48 F.3d 540, 545, D.C. Cir. 1995; see Saunders, this issue).

State Laws

In addition to the federal statutes described above, various state laws are significant to the recovery and management of sea otters. Although laws directly governing sea otters are preempted by the MMPA, a number of state laws intended to protect a variety of species provide benefits to sea otters.

Most significant are California restrictions that have been imposed on trammel and gill net fisheries since the early- and mid-1980s, when the State Legislature recognized that these net fisheries were causing significant incidental take of sea otters as well as other marine mammals and sea birds (California Fish & Game Code § 8609). In 1982, legislation was passed prohibiting use of these nets in certain shallow (10 to 15 fathoms deep or less) coastal waters (*Id.* at § 8664.5). Subsequently, these fishing prohibitions were extended to cover deeper and deeper waters, and the Director of the California Department of Fish and Game was authorized to close any area to all net-setting upon a finding that such fishing is causing an "adverse impact on any population of any species of sea bird, marine mammal, or fish" (*Id.* at §§ 8664.5, 8664.8). In 1990, a popular referendum, the California "Marine Resources Protection Act of 1990," further extended the gill and trammel net prohibitions (*Id.* §§ 8610.1-15). Trammel and gill nets are now prohibited for at least 30 to 40 fathoms off of most coastal areas inhabited by sea otters (*Id.* §§ 8610.1-15, 8618.0-8618.2, 8664).

California has also listed the southern sea otter as a "fully protected mammal" under state law, meaning that it "may not be taken or possessed at any time" except pursuant to permits issued for scientific research (*Id.* at § 4700). (Consistent with the translocation law, however, incidental take of sea otters south of Point Conception but outside of the San Nicolas translocation zone is not to be considered a violation of the California law (*Id.* at § 8664.2; see Wendell, this issue)).

Finally, in 1990, California enacted legislation requiring that a network of rescue and rehabilitation centers be established to deal with sea birds, sea otters, and other marine mammals in the event of oil spills (California Government Code § 8670.37.5; see Jessup et al., this issue).

Conservation issues

In California, the principal conservation issues arise from the effort to direct the sea otter recovery program in a manner that will truly result in recovery of the species. There are several complex issues presented by this question.

(1) Can sea otter recovery be defined simply in terms of attaining a given population level, without reference to other standards, such as range expansion, distribution, measures to avoid oil spill, analysis of infectious disease and other threats, etc.?

(2) Is the proposed number for delisting (2,650 maintained over three years) sufficient considering unresolved threats to the species and when the historic population size for this species is 14,000 or greater?

(3) Can delisting be predicated upon merely a current assessment of the threats posed in 1977, or must new threats also be considered?

(4) Should zonal management be abandoned? If so, how will the requirements for maintenance of the translocation and management zones of the translocation law be addressed?

(5) Should the translocation be declared a failure? If so, will this result in new resource management

conflicts for the species? If not, does the maintenance of a management zone conflict with current species recovery goals?

(6) What degree of public involvement and consensus should be achieved in developing the prescription for sea otter recovery?

(7) What is the OSP level for this population? What is the geographic boundary of the population for determining carrying capacity and OSP? If this population is delisted under the ESA, should it be formally designated as depleted under the MMPA, and if so what is the significance of this classification for future conservation efforts?

(8) If the population continues to grow in numbers and expand in size, what should be done to reduce conflicts with shellfish fisheries and other resource users?

(9) Do sea otters promote a healthy marine ecosystem? If so, should sea otters be reestablished to promote this MMPA goal regardless of whatever population level may be required to achieve ESA delisting or OSP?

In the opinion of these authors, the southern sea otter remains at considerable risk of endangerment, if not extinction. Not enough has been done to reduce the oil spill risk, and other threats underlying the original listing remain. The new threat of a high rate of infectious disease (40% of retrieved dead sea otters) has emerged (see Thomas and Cole, this issue). The current population size is just a fraction of historic size, and it is far from a level that would support recovery. The species range has expanded very little in recent years, and it is clear that oil spill threats remain significant and require much greater distribution of the species, as well as a larger population size.

Under both the MMPA and the ESA, legal protection is given to population stocks. Because the southern sea otter has been determined to be a distinct subspecies, the meaning of the discrete population standard as applied to this species has not yet been tested. The discrete population standard issue will become increasingly important, however, as the sea otter populations in California, Washington, and Alaska continue to grow.

The question of what constitutes a separate sea otter population is most likely to be confronted first in Alaska, where groups of sea otters are currently found in several different locations. The MMPA defines a "population stock" as "a group of marine mammals of the same species or smaller taxa in a common spatial arrangement, that interbreed when mature" (16 U.S.C. § 1362(11)). The FWS has suggested that sea otters in Alaska are a single population stock (U.S. Fish and Wildlife Service 1995).

Data collected on the movements of radio-instrumented sea otters in several parts of the range in Alaska provide no support for the idea that sea otters captured at locations distant from one another tend to inhabit a common space at any time during their lives. For example, of hundreds of wild-caught radio-instrumented sea otters monitored in Prince William Sound between 1984 and 1992, none moved to adjacent habitat in the Kenai Peninsula (e.g., Monnett and Rotterman 1992). Since such data do not demonstrate movements of sea otters between very distant localities throughout the Alaska range, they also provide no indication that sea otters from such distant localities are interbreeding.

Data from genetic studies also provide no support for the idea that sea otters from at least certain distant parts of Alaska intermingle spatially (Cronin et al. 1996; Rotterman 1992). Further, genetic data indicate that sea otters captured from at least three localities in Alaska do not interbreed when mature (Rotterman 1992).

In previous MMPA proceedings for the issuance of incidental take permits where the population stock definition has been applied, it has been found that populations of other marine mammals in which there is

interspersing of animals and even some interbreeding do not constitute a common stock because there is an insufficient "common spatial arrangement" (e.g., 52 Federal Register 7912, 1987, Dall's porpoise permit). Under this test, there appears to be no valid basis upon which to support the legal finding of a single Alaska sea otter stock. This then raises the question of how many separate stocks exist, whether any of them are depleted and, if so, what regulatory measures are necessary. The answers to these questions will have application to other sea otter populations, with resulting management consequences.

Conclusion

The effort to recover sea otters from the brink of extinction has made notable progress. Nevertheless, important conservation issues are yet to be resolved. If the FWS and other involved parties make this necessary commitment of resources to carry forward past conservation initiatives, the sea otter recovery program can stand as one of the crowning achievements of the ESA and MMPA. The challenge that lies ahead is to ensure that the conservation ethic underlying the MMPA and ESA, not political expediency or the desire to avoid controversy, is the guiding principle for sea otter management.

Literature Cited

Baur, D. 1991. Federally protected areas. In *Natural Resources Law Handbook*. Government Institutes, Inc. Rockville, Maryland. 363 pp.

Baur, D. 1996. Reconciling polar bear protection under United States laws and the International Agreement for the Conservation of Polar Bears. *Northwestern School of Law of Lewis and Clark College, Animal Law 2*.

Cronin, M.A., J. Bodkin, B. Ballachey, J. Estes, and J.C. Patton. 1996. Mitochondrial-DNA variation among subspecies and populations of sea otters (*Enhydra lutris*). *Journal of Mammalogy 77:546-557*.

Marine Mammal Commission. 1996. 1995 Annual Report to Congress. 235 pp.

Monnett, C. and L. Rotterman. 1992. Movements of weaning and adult female sea otters in Prince William Sound, Alaska, after the T/V Exxon Valdez oil spill. Report. 33 pp.

Rotterman, L. 1992. Patterns of genetic variability in sea otters after severe population subdivision and reduction. Ph.D dissertation. University of Minnesota, Minneapolis, Minnesota. 228 pp.

U.S. Fish and Wildlife Service. 1982. Southern sea otter recovery plan, approved. Washington, D.C. 66 pp.

U.S. Fish and Wildlife Service. 1995. Stock assessment sea otter, Alaska Stock.

U.S. Fish and Wildlife Service. 1996. Southern sea otter recovery plan, 1996 draft. Ventura, California. 41 pp.

Don Baur is a partner with the law firm of Perkins Coie. He has served as General Counsel of the Marine Mammal Commission and an attorney in the Solicitor's Office of the Department of the Interior. Allison Meade is a third-year student at Yale Law School. She has clerked for Perkins Coie and the Sierra Club Legal Defense Fund. Lisa Rotterman is an ecologist and geneticist who has studied sea otters since 1984.

[back to index](#)