

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

### Introduction to the Special Issue: Why Southern Sea Otters?

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Many casual environmentalists, wildlife enthusiasts, and animal lovers view the sea otter (*Enhydra lutris*) as the precise type of animal that the Endangered Species Act (ESA) was designed to protect: a highly charismatic, cute mammal that is easy to observe. Additionally, many conservation advocates view the sea otter as a flagship species around which to rally support for protection of the marine environment, for the ESA, and for other regulations that limit environmentally harmful or risky practices. Those designing and implementing sea otter conservation management plans must address the complex biological needs of a species, while planning and implementing complex regulations that seek to balance the interests of the otter, of people advocating different levels of preservation, and of people who see their jobs and industries threatened.

We chose to focus this Special Issue of the Endangered Species UPDATE on the southern sea otter for a number of reasons. A large amount of information exists on southern sea otters, especially compared to other marine organisms, making the sea otter a good species for which to examine management concerns. The southern sea otter population, while currently listed under the ESA, is growing. Therefore, we can expect that the population will be delisted under the ESA, making other laws such as the Marine Mammal Protection Act (MMPA) and state laws applicable to future sea otter management. Finally, as with many other species, conservation of sea otter populations necessitates managing conflicts between species protection and industry. Our hope in putting together this issue is to provide a broad base of the best knowledge we have on southern sea otters to help facilitate future conservation management.

#### The southern sea otter

Sea otters are one of twelve species of otters worldwide and belong to one of four groups of marine mammals. They are members of the mustelid family, which includes other species such as weasels, minks, and skunks. Two subspecies of sea otters have been commonly recognized, the Asian (*Enhydra lutris gracilis*) and Alaskan (*Enhydra lutris lutris*) sea otters, and some biologists consider the southern sea otter (*Enhydra lutris nereis*) to be a third subspecies (see Anderson et al., this issue).

Alaskan and Asian sea otters are widely distributed across the North Pacific from Washington State to the Kuril Islands and Kamchatka Peninsula in Russia, with a total population estimated at over 100,000 (U. S. Fish and Wildlife Service 1996). Southern sea otters live along a stretch of less than 400 kilometers (250 miles) of the California coast around Monterey Bay. This population, of roughly 2,400 individuals, is believed to be increasing at approximately 5 to 7 percent per year (U. S. Fish and Wildlife Service 1996). A translocated population of roughly 20 individuals is located at San Nicolas Island, which is located about 110 kilometers (70 miles) west of Los Angeles (see Benz, Attempts to Reintroduce, this issue).

Sea otters are found along rocky, sandy, and mixed shores, but are most common along rocky shores and prefer habitat with kelp (see DeMaster et al., this issue). They generally remain close to shore in areas where the water depth is 20 meters (65 feet) or less, which facilitates their foraging along the ocean floor. Sea otters eat a variety of marine invertebrates, including such items as crabs, mussels, clams, abalones, and sea stars. They also will catch and eat fish and marine birds on occasion (Riedman and Estes 1990). Otters are believed to have a significant effect on their marine environment by reducing prey populations that feed on kelp (U.S. Fish and Wildlife Service 1996). Their effect on local fisheries has been a contentious issue in California (see Wendell, this issue).

Female sea otters typically give birth to a single pup each year. Females are believed to reach sexual maturity after three years, and males after five years. In California most births occur between late

February and April, although births do occur throughout the year. Otters live between 12-20 years, and chief causes of mortality have not been determined (see Thomas and Cole, this issue).

### **Sea otter protection**

Sea otters have been classified as threatened under the ESA, depleted under the MMPA, and as a "fully protected mammal" under California state law. Each of these levels of protection is significant for different reasons. Protection under California state law, which preceded federal protection under the MMPA or ESA, involves balancing the needs of otter conservation with economic interests, especially fisheries along the California coast. Protection under the ESA is of special interest at this time because the ESA is up for reauthorization in Congress and has been the subject of contentious debate. Protection under the MMPA is currently superseded by the listing under the ESA. The MMPA listing will become relevant only after the southern sea otters' population and range expands to the point that it is delisted under ESA (see Baur; VanBlaricom, this issue).

For a number of reasons the southern sea otter is an excellent species for exploring policy issues under each of these laws and jurisdictions. The sea otter is well studied and relatively well understood, especially compared to other marine species. Its population history, of being hunted to near extinction for its fur and then rediscovered in California, is well known and documented. Consequently, we have a lot of information necessary to help determine whether the southern sea otter is a separate subspecies (see Anderson et al., this issue). This question of subspecies is representative of similar debates under the ESA, which currently protects threatened subspecies of animals that have unthreatened populations elsewhere (for example, the bald eagle, rare and protected in much of the contiguous United States but common in parts of Alaska). Additionally, issues of habitat protection have been especially troublesome in the ESA debate, and our knowledge of southern sea otters provides valuable insights into protecting marine habitats.

Sea otters are charismatic and a favored target for protection, yet their protection has created large conflicts with two major industries, oil transportation and fishing. How we deal with conflicts between conservation and industry is, of course, an ongoing debate, and is the subject of several papers in this issue (e.g., Bonnell; Saunders; Wendell).

Finally, the otter is a good subject for study because its population is recovering and we can expect it to be delisted under ESA in the foreseeable future. The need for management of the population will not end, however, with the delisting under ESA. Issues of conflict will remain in managing the population as it grows and protection shifts to MMPA and then possibly to California state law. Indeed, preparing for the future management of the otter as an unlisted species is critical in order to be able to successfully manage the population throughout the future.

### **Special Issue format**

The Sea Otter Special Issue is divided into four sections. The first focuses on the biology and status of the otter. Articles in this section look at the distribution of the otter through its entire range; how the California population relates to other populations; methods for monitoring these populations; the otter as an indicator of pollutants in the marine community; and risks of disease that wild populations face.

The second section focuses on the recovery of the sea otter under the ESA. The first article in this section provides background on the ESA, with subsequent articles examining Recovery Plans and attempts to implement a translocation as recommended by the first Recovery Plan; the threat of oil spills to the otter's recovery; the history of the National Marine Sanctuary that encompasses much of the otter's habitat; and the role of non-governmental organizations in the listing and protection of the otter.

Treatment and rehabilitation of sea otters have played a prominent role in conservation, and the third section looks at these efforts. Questions addressed include the efficacy of rehabilitation efforts, and the role of captive otters in the larger sea otter conservation plans.

The final section is based on an assumption that the otter will continue its recovery and eventually be delisted under the ESA, making the MMPA the relevant statute for future otter conservation plans. This section provides background on the MMPA, examines the critical issue under MMPA of estimating the carrying capacity of the habitat off the California coast, and looks at the concept of zonal management as a possible basis for management in the future. The concluding article looks to the future of otter conservation efforts.

## **Conclusion**

Conservation planning must be based on the best science available, and our goal in putting together this issue is to compile a broad base of the best knowledge we have on sea otters today. Undoubtedly there are readers who will disagree with some of the points made, who would have preferred to see some issues left out or others highlighted. These questions and possible disagreements reflect the reality of managing for the conservation of a complex species: there are no easy answers, and the problems will remain contentious even as conservation planning and implementation moves forward. We hope, however, that in publishing this issue we provide a strong basis for future thought on sea otter conservation, and also that we provide a model for looking at other species that must be managed for conservation.

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Riedman, M.L. and J.A. Estes. 1990. The sea otter (*Enhydra lutris*): behavior, ecology, and natural history. U.S. Department of the Interior, Fish and Wildlife Service. Biological Report 90(14). Washington, D.C. 126 pp.

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

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