

# THE TRANSLOCATION OF SEA OTTERS TO SAN NICOLAS ISLAND: AN UPDATE

BRIAN B. HATFIELD

*USGS-BRD-Western Ecological Research Center, Piedras Blancas Office, Santa Cruz Field Station,  
P.O. Box 70, San Simeon, CA 93452; brian\_hatfield@usgs.gov*

**ABSTRACT**—Since 1998 the number of southern sea otters, *Enhydra lutris nerries*, counted at San Nicolas Island (SNI), California, has increased each year, with 38 being counted in 2003. More than 80 pups have been born at the island since 1987. Some of the sea otters that dispersed from SNI swam to San Miguel Island (SMI) and to Purisima Point, many of which persisted at these locations for several years and were seen with pups. Although initial results of the sea otter translocation were discouraging, barring physical removal of individuals it is possible that a population will persist and increase in numbers at SNI. It is also possible that the translocation would have resulted in an additional population at SMI and it is likely that it enhanced expansion of the breeding range southward along the mainland coast.

*Keywords: Enhydra lutris, Purisima Point, San Miguel Island, San Nicolas Island, sea otters, translocation*

## INTRODUCTION

The southern sea otter, *Enhydra lutris nerries*, was listed as threatened in 1977 under the Endangered Species Act primarily because of its small population size, reduced range, and the risk from oil spills. One of the main goals cited in the recovery plan (USFWS 1982), was the establishment of at least one additional breeding colony outside the present range. San Nicolas Island (SNI) was selected as the preferred reintroduction site (USFWS 1987). Between August 1987 and July 1990, 140 sea otters (32 males, 108 females) were captured along the mainland coast of California between Monterey and Morro Bay and released at the island. Although most of the sea otters released at SNI either returned to the mainland coast or disappeared, some stayed at the island where their numbers hovered around 15 adult animals from 1990 to 1998 (Rathbun et al. 2000). This update provides the most recent information concerning the population of sea otters at SNI.

## METHODS

Monitoring of the small sea otter colony translocated to SNI has continued to the present. Since the last status report (Rathbun et al. 2000), which covered the period from 1987 through 1998,

sea otter surveys have been conducted four times per year. Surveys were made over a two to three day period by one to three observers from shore with the aid of spotting scopes and binoculars, using methods described in Rathbun et al. (2000). The number and distribution of independent sea otters (defined here as non-pups) and pups, and the relative ages of pups (based on size, pelage, and behavior), were recorded. The highest number of otters observed during any of the four surveys in a calendar year was used as that year's high count. The minimum number of pups born each year was based on when pups were first seen and assumes small pups seen on one trip to the island were the same as the medium or large pups seen during the subsequent one to two trips. Since surveys were infrequent and because early pup loss would likely go unnoticed, the minimum number of pups born is certainly biased low. A review of the sea otters originally released at SNI, but later re-sighted or re-captured at San Miguel Island (SMI) and Purisima Point, was undertaken to better understand this unintended consequence of translocating sea otters.

## RESULTS AND DISCUSSION

The number of sea otters counted at SNI has increased each year since 1998, with 33 indepen-

dent otters and five pups being counted in the spring of 2003 (Fig. 1). The finite rate of growth during this period has been 14.7%. The minimum number of pups born at the island through 2003 is 83 and the average number of documented pups born each year increased from 5.0 for the period 1990 to 1998, to 6.6 for the period 1998 to 2003.

The carcass of an aged adult female was recovered at SMI in 2001. It was identified as an otter originally released at SNI in 1987 and last seen there in December of that year. She was likely seen alive at SMI in 1998 (based on an incomplete tag sighting) and probably had been there since 1988. She is among 10 sea otters that were translocated to SNI and subsequently dispersed to SMI. Six of these 10 were females and many of them were seen or captured with pups. (Most of the sea otters at SMI were removed in the early 1990s, as required under zonal management [Public Law 99-625]). All of the female sea otters seen and/or captured at SMI were last seen at SNI in 1989 or earlier. When these females were captured, last seen, or died at SMI, most, based on known reproductive potential, had probably given birth to at least one pup and some likely had given birth many times. The 15 otters removed from SMI were either from SNI (7), their pups (3), or were young enough to have been born at SMI (5). The high count of sea otters at SMI (nine independent sea otters and one pup), in May 1991, is higher than some of the single counts at SNI in the early 1990s. This leads to speculation that, given the observed and predicted reproduction and barring containment and unusual mortality, the translocation of sea otters to SNI would have resulted in an additional colony at SMI.

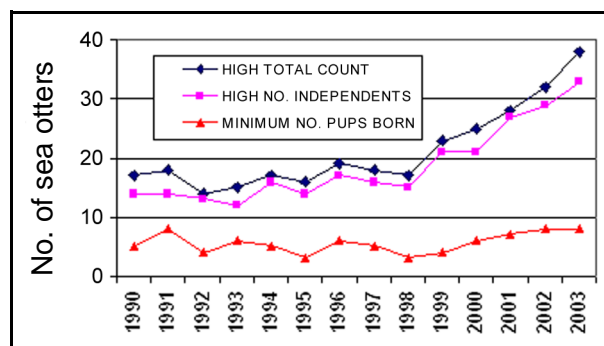


Figure 1. Yearly high counts of sea otters and minimum number of pups born at San Nicolas Island, 1990 - 2003 (see text for definitions).

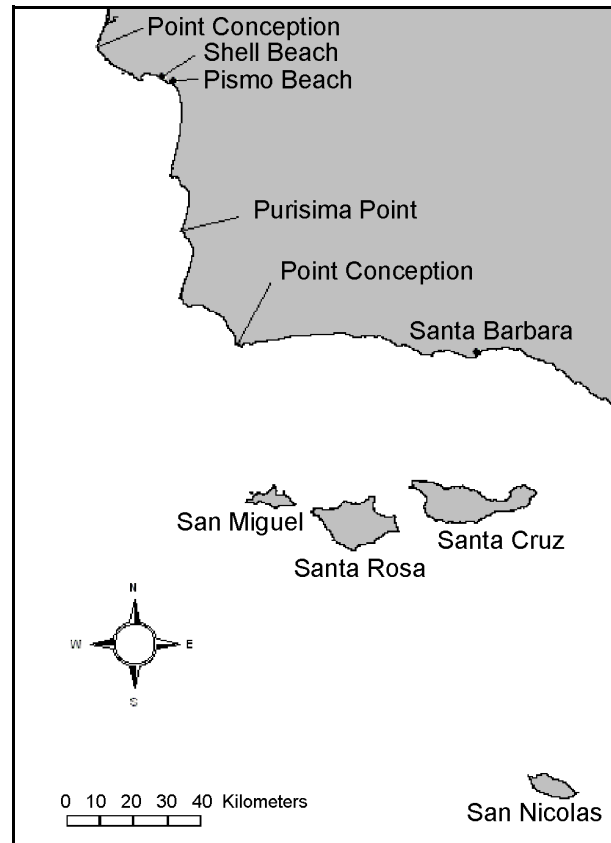


Figure 2. Central coastal California showing the sea otter translocation site (San Nicolas Island) and dispersal areas.

For several years prior to 1988, an occasional sea otter was seen in kelp just east of Purisima Point. In the mid-1980s, the nearest sea otter breeding area was approximately 50 km to the north at Shell Beach (Fig. 2). In May of 1988 an otter with a green tag was seen during an aerial survey and, in January 1991, a group of four, including the first pup, was seen at Purisima Point. During the next two years a minimum of five otters from SNI were identified at Purisima Point. All five were determined to be from SNI by flipper tags and/or by characteristic tag holes or tears in the flippers caused by the tagging process (Hatfield and Rathbun 1996). These sightings included one otter with a green tag (likely the same one seen there in 1988) and one that was re-captured and identified. Four of these were females and the fifth was probably a female. Three of these females were seen at this location over a two-year period (one for more than four years) and four pups were observed with these females between January 1991 and October 1993 during sporadic observations.

These females may have been returning (homing) to areas closer to their original capture locations within the coastal mainland range of sea otters, but “settled” in this area – perhaps after encountering a territorial male otter(s).

#### *Conclusions/Future Actions*

Initial results of the translocation of sea otters to SNI were discouraging. However, if the growth documented over the last several years continues, a population will become established at SNI. It is likely that the translocation would have inadvertently resulted in an additional population at San Miguel Island, and it is likely that it enhanced expansion of the mainland breeding range to the Purisima Point area. It almost certainly resulted in sea otters breeding at these sites for the first time since the end of the fur trade. These results should be taken into account if sea otter translocations are ever used as an enhancement or management tool elsewhere in the future.

Current plans call for quarterly sea otter surveys to continue at SNI. In addition, a new study, involving the capture and tagging of sea otters at SNI has begun. This more intensive effort will provide valuable data on foraging habits, reproduction, activity budgets, movements, and mortality to compare with similar data that have been previously and are currently being collected on the mainland population in order to help understand why recovery of that population has stalled in recent years. The new study may also help identify reasons for the lack of growth, until recently, at San Nicolas Island.

## ACKNOWLEDGMENTS

I would like to thank those folks that assisted me with sea otter counts at SNI over the last 5 years: P. Adams, J. Ames, G. Bentall, L. Carswell, J. Bodkin, G. Esslinger, J. Estes, K. Hanni, M. Harris, K. Miller, M. Ramirez, M. Roest, G. Sanders, and M. Staedler. The reporting of a dead tagged sea otter at San Miguel Island by B. DeLong was appreciated. The support of the United States Navy, and especially G. Smith in the Environmental Planning and Management Department, was crucial.

## REFERENCES

- Hatfield, B.B. and G.B. Rathbun. 1996. Evaluation of a flipper-mounted transmitter on sea otters. *Wildlife Society Bulletin* 24:551-554.
- Rathbun, G.B., B.B. Hatfield and T.G. Murphey. 2000. Status of translocated sea otters at San Nicolas Island, California. *The Southwestern Naturalist* 45:322-328.
- USFWS (United States Fish and Wildlife Service). 1982. *Southern Sea Otter Recovery Plan*. USFWS, Portland, Oregon.
- USFWS (United States Fish and Wildlife Service). 1987. *Final environmental impact statement – translocation of southern sea otters, Vol. I-III*. USFWS, Portland, Oregon.