

Inter-stock Movement Patterns of Steller Sea Lions in Alaska

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Steller sea lions have been permanently marked (branded) in Alaska, allowing recognition of individuals throughout their lives. Observations of branded animals allow us to track movements of known-age individuals over time. Of particular interest are movements across the geographic boundary of 144°W, delineating the western (endangered) and eastern (threatened) populations.

Of nearly 2,000 pups marked at eastern population rookeries from 2001-2005, 99 individuals have traveled to the western population; only two of the animals traveling west females. One female returned to her natal rookery at breeding age and the other was seen once in the west, at 11 months of age, and not seen again. Because males branded in 2001-2005 were not yet of breeding age, we evaluated photo-confirmed sightings of the 799 animals branded at the Forrester rookery in 1994-1995. Twelve of those animals, all males, traveled west of the population boundary. Ten of the 12 males later returned to rookeries in the eastern population during the breeding season and most (9) were territorial bulls at either the Forrester or Hazy Islands rookeries.

Seventy-four animals marked at western rookeries in Prince William Sound and near Kodiak have traveled east of the population boundary; 40 males and 34 females. Of the females, all but one were observed in the northern part of the eastern population range and most (0.76) of the reproductive-age females were at either the Graves Rock or White Sisters rookeries during the breeding season. At least seven females born in the western population have pupped at eastern population rookeries; at least one of these has since returned west and pupped at her natal rookery. These results demonstrate asymmetric movement patterns between the eastern and western stocks with east to west movements mostly temporary moves by younger males, while west to east movements are by both sexes and result in some permanent female emigration.



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