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E. E. Holmes, L. W. Fritz, A. E. York, and K. Sweeney. 2007. Age-structured modeling reveals long-term declines in the natality of western Steller sea lions. *Ecological Applications* 17:2214-2232.

Appendix A. Raw data tables.

[Table A1.](#) Central Gulf of Alaska.

[Table A2.](#) Western Gulf of Alaska.

[Table A3.](#) Eastern Aleutian Islands.

Table A1. The raw data used for the central Gulf of Alaska. [Back to top](#)

Year	Non-pup count	Pup count ¹	<i>J/T</i> metric ⁶	Sample size for <i>J/T</i> metric # of measurements (# of haul-outs)
1976	24678 ²	no data	no data	n.a.
1977	no data	no data	no data	n.a.
1978	27155 ⁷	17835	no data	n.a.
1979	28460 ⁷	19886	no data	n.a.
1980	no data	no data	no data	n.a.
1981	no data	no data	no data	n.a.
1982	no data	no data	no data	n.a.
1983	no data	no data	no data	n.a.
1984	no data	15019	no data	n.a.
1985	19002 ²	13309 ⁸	0.3788	7182 (13)
1986	no data	11598	no data	n.a.
1987	no data	no data	no data	n.a.
1988	no data	no data	no data	n.a.
1989	8552 ²	6394	0.4843	3039 (11)
1990	7050 ²	4648	0.5025	2752 (16)

1991	6273 ²	4057	0.4801	2468 (16)
1992	5721 ²	3646	0.5255	2409 (19)
1993	no data	3176	no data	n.a.
1994	4520 ³	2831	0.3706	2536 (19)
1995	no data	no data	no data	n.a.
1996	3915 ³	no data	0.3698	1971 (17)
1997	3352 ³	2056	0.4007	1924 (15)
1998	3467 ⁴	1876	0.4095	2090 (16)
1999	no data	no data	no data	n.a.
2000	3180 ⁴	1675	0.4769	2489 (17)
2001	no data	1540	no data	n.a.
2002	3366 ⁴	1608	0.4483	2237 (18)
2003	no data	no data	no data	n.a.
2004	3055 ⁵	1578	no data	n.a.

1. Based on the sum of the Marmot, Sugarloaf, Chowiet, Chirokof, and Outer Island rookery pup counts. Table 8 in Fritz, L. W. and C. Stinchcomb. 2005. Aerial and ship-based surveys of Steller sea lions (*Eumetopias jubatus*) in the western stock in Alaska, June and July 2003 and 2004. U.S. Department of Commerce., NOAA Tech. Memo. NMFS-AFSC-153, 56 p. and Sease, J. L., J. P. Lewis, D. C. McAllister, R. L. Merrick and S. M. Mello. 1993. Aerial and ship-based surveys of Steller sea lions (*Eumetopias jubatus*) in Southeast Alaska, the Gulf of Alaska, and Aleutian Islands during June and July 1992. U.S. Department of Commerce., NOAA Tech. Memo. NMFS-AFSC-17, per interpolation discussed in supplementary methods. The 1978 Outer Island, pup count was interpolated (interpolated value = 843) since the actual count was a rough estimate from a boat rather than a ground count.

2. The nonpup count used in our analysis is the nonpup count for trend rookeries and haulouts. Table 4 in the Sease et al (1993) citations given in footnote 1 (above).

3. Table 4 in Sease, J. L., and T. R. Loughlin. 1999. Aerial and ship-based surveys of Steller sea lions (*Eumetopias jubatus*) in Alaska, June and July 1997 and 1998. U.S. Department of Commerce.,

NOAA Tech. Memo. NMFS-AFSC-100.

4. Table 3 in Sease, J. L., and C. J. Gudmundson. 2002. Aerial and ship-based surveys of Steller sea lions (*Eumetopias jubatus*) from the western stock in Alaska, June and July 2001 and 2002. U.S. Department of Commerce., NOAA Tech. Memo. NMFS-AFSC-100.

5. Table 4 in Fritz, L. W. and C. Stinchcomb. 2005. Aerial and ship-based surveys of Steller sea lions (*Eumetopias jubatus*) in the western stock in Alaska, June and July 2003 and 2004. U.S. Department of Commerce., NOAA Tech. Memo. NMFS-AFSC-153. This is the count adjusted for the increased accuracy of the new medium-format photography which replaced the 35mm photographs used previously. This adjustment is based on a cross-validation discussed in Fritz and Stinchcomb (2005). The unadjusted count was 2944.

6. The *J/T* measurement method was initially presented in Holmes and York (2003). The measurements listed here do not exactly match those in Holmes and York (2003) since more haul-out measurements were taken to supplement those used in that paper.

7. Interpolated based on rookery only counts these years.

8. Interpolated from 1984 and 1986 data. There were no pup counts in 1985, however all rookeries were surveyed in both 1984 and 1986. This value is based on the interpolated values for each rookery.

Table A2. The raw data used for the western Gulf of Alaska. Footnote references are the same as for [Table A1](#) except where supplemental information is added below table. [Back to top](#)

Year	Non-pup count	Pup count ¹	<i>J/T</i> metric ⁶	Sample size for <i>J/T</i> metric # of measurements (# of haul-outs)
1976	8311 ²	no data	no data	n.a.
1977	no data	no data	no data	n.a.
1978	15229 ⁷	no data	no data	n.a.
1979	12128 ⁷	9351	no data	n.a.
1980	no data	no data	no data	n.a.
1981	no data	no data	no data	n.a.

1982	no data	no data	no data	n.a.
1983	no data	no data	no data	n.a.
1984	no data	5700	no data	n.a.
1985	6275 ²	4985	0.3997	3225 (7)
1986	no data	no data	no data	n.a.
1987	no data	no data	no data	n.a.
1988	no data	no data	no data	n.a.
1989	3908 ²	2771	0.4356	808 (6)
1990	3915 ²	2271	0.4673	1130 (6)
1991	3734 ²	2036	0.4608	1569 (10)
1992	3720 ²	1879	0.5015	1960 (13)
1993	no data	1857	no data	n.a.
1994	3982 ³	1662	no data	n.a.
1995	no data	no data	no data	n.a.
1996	3741 ³	1605	0.4247	3567 (17)
1997	3633 ³	no data	0.4337	3525 (15)
1998	3361 ⁴	1493	0.3927	2865 (16)
1999	no data	no data	no data	n.a.
2000	2840 ⁴	1451	0.4443	1908 (17)
2001	no data	1466	no data	n.a.
2002	3221 ⁴	1487	0.4273	1898 (18)
2003	no data	1432	no data	n.a.
2004	3456 ⁵	1593	no data	n.a.

1. Pup count is the sum of counts on the Atkins, Chernabura, Clubbing Rocks and Pinnacle Rocks rookeries.

Table A3. The raw data for the eastern Aleutian Islands. Footnote references are the same as for [Table A1](#) except where supplemental information is added below table. [Back to top](#)

Year	Non-pup count	Pup count ¹	<i>J/T</i> metric ⁶	Sample size for <i>J/T</i> metric # of measurements (# of haul-outs)
1975	19769 ²	no data	no data	n.a.
1976	19743	no data	no data	n.a.
1977	19195	no data	no data	n.a.
1978	no data	no data	no data	n.a.
1979	no data	no data	no data	n.a.
1980	no data	no data	no data	n.a.
1981	no data	no data	no data	n.a.
1982	no data	no data	no data	n.a.
1983	no data	no data	no data	n.a.
1984	no data	no data	no data	n.a.
1985	7505 ²	4778	0.4758	2717 (12)
1986	no data	no data	no data	n.a.
1987	no data	no data	no data	n.a.
1988	no data	no data	no data	n.a.
1989	3032 ²	no data	0.3674	215 (4)
1990	3801 ²	2075	0.5169	563 (3)
1991	4231 ²	2119	0.4687	879 (11)
1992	4839 ²	no data	0.4789	1564 (14)
1993	no data	1879	no data	n.a.
1994	4421 ³	1756	no data	n.a.
1995	no data	no data	no data	n.a.
1996	4716 ³	no data	0.4232	1635 (16)
1997	no data	no data	0.4709	2064 (15)
1998	3847 ⁴	1474	0.4769	2661 (14)
1999	no data	no data	no data	n.a.
2000	3840 ⁴	1516	0.4995	1996 (14)

2001	no data	no data	no data	n.a.
2002	3956 ⁴	1525	0.4400	2234 (19)
2003	no data	no data	no data	n.a.
2004	4707 ⁵	1744	no data	n.a.

1. Pup count is a sum of pup counts on the Adugak, Akun, Akutan, Bogoslof, and Ugamak rookeries.

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