ADDENDUM: SPATIAL DISTRIBUTION AND DENSITY OF CETACEANS IN THE EASTERN TROPICAL PACIFIC OCEAN BASED ON SUMMER/FALL RESEARCH VESSEL SURVEYS IN 1986 - 96

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In Ferguson and Barlow (2001), we provided estimates of meso-scale density and abundance of cetaceans in the eastern Pacific Ocean (Figure 1) during the summer and fall from ship-based line-transect surveys conducted between 1986 and 1996. This document is an addendum to that report. Please refer to the original report for methods, results, and discussion.

This document provides tables of estimated density and abundance (# animals per km^2), with their respective coefficients of variation (CVs), for the smallest taxonomic level identified in the field (Tables 1-49). In Ferguson and Barlow (2001), by contrast, we pooled some species or species groups to simplify the presentation of the data. The values contained in this addendum are identical to those used to calculate the pooled estimates of density and abundance presented in Ferguson and Barlow (2001).

We would like to emphasize two points that we made in our original report. First, we assigned abundance and density estimates of zero (and CVs of –1) to geographic strata in which no sightings occurred. Thus, values of zero in the density and abundance fields simply represent our lack of knowledge about a given species' or species group's use of a given stratum; they *should not* be interpreted to mean that the animals are absent in the stratum. Second, for strata in which only one sighting occurred, it is not possible calculate an empirical estimate of the CV; therefore, we assumed that the sightings followed a Poisson distribution, wherein the expected number of sightings equals the expected variance in the sightings, resulting in a *theoretical* CV of 1.0.

Acknowledgements

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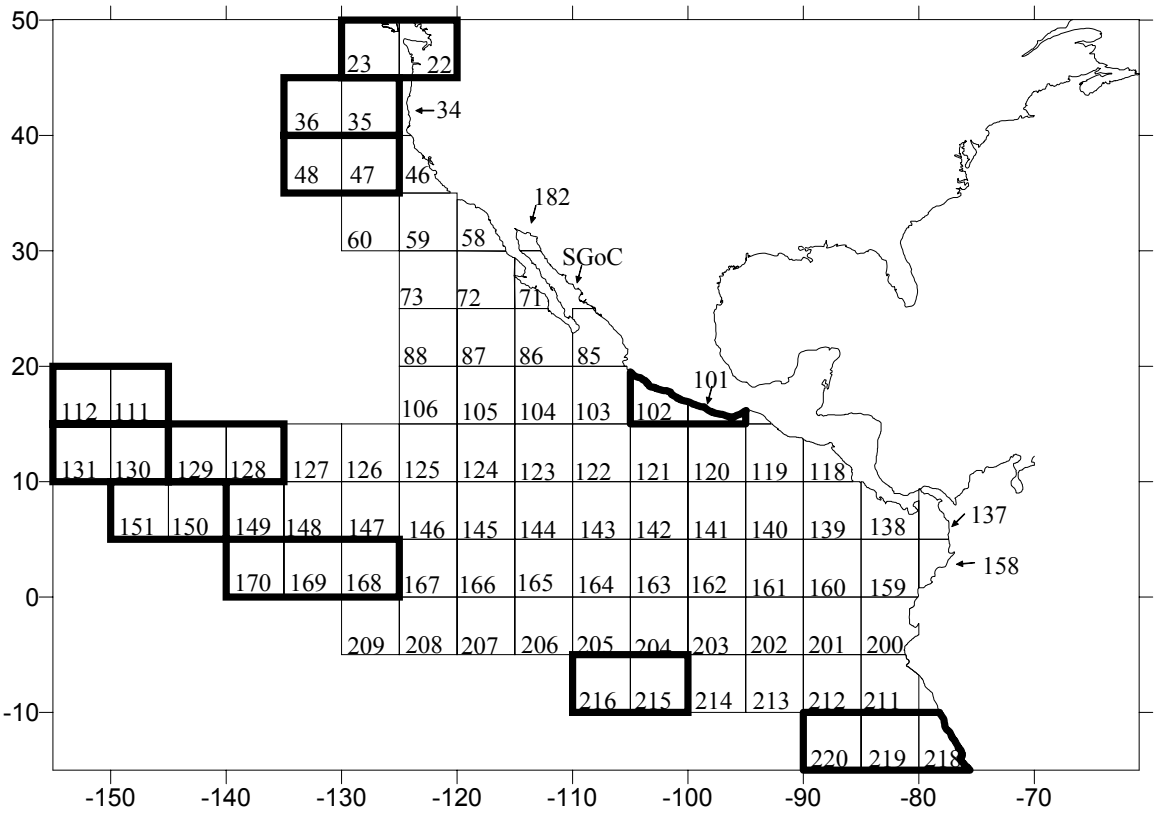

Figure 1. Geographic strata used in the analyses.

Table 1. Estimated density (# individuals per square km), abundance, and CV of *Stenella attenuata* (offshore spotted dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
58			133537.58	2925.48	0	0	0	0	-1
71			68358.856	806.32	0	0	0	0	-1
72			268470.33	4846.67	2	184.17	0.0109	2928	0.71
73			274220.7	1199.11	2	157.92	0.0616	16901	0.71
85			211488.11	2904.44	31	156	0.2389	50532	0.44
86			261079.09	3528.84	3	96.67	0.0118	3077	0.58
87			285654.93	2666.94	10	106.76	0.0574	16410	0.52
88			285654.93	864.14	2	99.42	0.0538	15380	0.71
101	Y	102	65027.192	719.65	56	105.73	0.2738	67367	0.4
102	Y	101	181031.4	2383.79	56	105.73	0.2738	67367	0.4
103			294911.8	2726.38	22	56.4	0.0651	19184	0.31
104			294911.8	4436.66	11	51.52	0.0184	5415	0.38
105			294911.8	2857.59	6	151.46	0.0455	13411	0.49
106			294911.8	1427.29	7	83.32	0.0956	28199	0.6
111	Y	112	294911.8	269.34	0	0	0	0	-1
112	Y	111	291761.17	1378.83	0	0	0	0	-1
118			141140.11	1347.49	1	226.67	0.0394	5556	1
119			273314.08	4770.17	41	118.01	0.2372	64825	0.31
120			301918.79	3571.23	51	97.92	0.3267	98633	0.25
121			301918.79	3152.12	63	90.09	0.4208	127055	0.24
122			301918.79	2836.37	23	82.7	0.1569	47377	0.34
123			301918.79	2562.26	25	111.28	0.2541	76707	0.31
124			301918.79	2791.69	13	141.29	0.1537	46419	0.95
125			301918.79	1850.43	3	147.28	0.0559	16869	0.58
126			301918.79	1953.39	10	73.94	0.0886	26741	0.43
127			301918.79	1519.92	10	51.87	0.0799	24110	0.4
128	Y	129	301918.79	730.39	3	107.68	0.0409	24669	0.58
129	Y	128	301918.79	1119.84	3	107.68	0.0409	24669	0.58
130	Y	131	301918.79	1061.65	5	122.16	0.1092	65944	0.82
131	Y	130	301918.79	247.07	5	122.16	0.1092	65944	0.82
137			104484.84	2300.5	2	75.83	0.0154	1612	0.71
138			208420.01	2863.28	4	712.08	0.2328	48516	0.91
139			306486.61	5374.53	7	131.64	0.0401	12288	0.56
140			306620.94	5165.5	21	118.99	0.1132	34708	0.4
141			306620.94	3107.02	23	128.13	0.2219	68041	0.4
142			306620.94	1871.07	8	221.2	0.2222	68138	0.42
143			306620.94	3248.82	15	69.11	0.0756	23191	274.99
144			306620.94	3651.71	17	120	0.1307	40082	0.98
145			306620.94	2121.32	4	178.89	0.0789	24202	0.48
146			306620.94	2084.39	9	107.69	0.1088	33362	0.54
147			306620.94	1580.33	3	123.39	0.0548	16806	0.58
149			306620.94	1182.79	1	151.11	0.0299	9167	1
150	Y	151	306620.94	1295.96	5	113.04	0.0678	41586	0.44
151	Y	150	306620.94	654.42	5	113.04	0.0678	41586	0.44
158			103515.72	949.85	1	179.78	0.0443	4585	1
159			308359.66	5549.39	2	77.43	0.0065	2013	0.71
160			308981.35	5034.88	15	70.53	0.049	15134	0.45
161			308981.35	4191.84	22	105.96	0.1301	40207	0.36
162			308981.35	4226.43	18	161.59	0.1619	50014	0.4
163			308981.35	2752.83	15	246.58	0.3144	97145	0.37
164			308981.35	3170.56	10	188.97	0.1388	42877	0.57
165			308981.35	4364.3	17	169.57	0.1546	47757	0.38
166			308981.35	3130.92	13	58.21	0.0566	17476	0.35
167			308981.35	1979.39	7	298.02	0.2466	76202	0.68

Table 1 continued. *Stenella attenuata* (offshore spotted dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
168	Y	169, 170	308981.35	419.91	3	134.78	0.119	110340	0.58
169	Y	168, 170	308981.35	12.97	3	134.78	0.119	110340	0.58
170	Y	168, 169	308981.35	361.95	3	134.78	0.119	110340	0.58
179	y	180, 181	17800.713	274.67	5	115	0.057	6007	0.5
180	y	179, 181	5937.887	149.96	5	115	0.057	6007	0.5
181	y	179, 180	81676.926	1133.24	5	115	0.057	6007	0.5
182			27251.951	624.15	0	0	0	0	-1
200			269857.13	1768.98	0	0	0	0	-1
201			308981.35	2983.42	3	117.42	0.0277	8553	0.58
202			308981.35	1784.42	1	98.33	0.013	4006	1
203			308981.35	2107.79	1	98.33	0.0109	3381	1
204			308981.35	2106.21	6	224.92	0.1499	46327	0.6
205			308981.35	2503.85	5	99.56	0.0465	14374	0.55
206			308981.35	2320.99	2	161.45	0.0326	10059	0.71
207			308981.35	1363.56	3	522.26	0.2689	83077	0.58
208			308981.35	1211.61	3	244.22	0.1415	43721	0.58
209			308981.35	1475.38	2	72.01	0.0228	7058	0.71
211			289890.9	1376.09	0	0	0	0	-1
212			306620.94	1537.48	7	209.64	0.2233	68484	0.49
213			306620.94	2207.89	3	152.04	0.0483	14822	0.58
214			306620.94	1563.51	1	82.5	0.0123	3786	1
215	Y	216	306620.94	658.32	3	32.4	0.0161	9855	0.58
216	Y	215	306620.94	750.86	3	32.4	0.0161	9855	0.58
218	Y	219, 220	184319.07	97.9	1	463.75	0.1049	82685	1
219	Y	218, 220	301918.79	507.57	1	463.75	0.1049	82685	1
220	Y	218, 219	301918.79	428.92	1	463.75	0.1049	82685	1

Table 2. Estimated density (# individuals per square km), abundance, and CV of *Stenella longirostris* (spinner dolphin, unidentified subspecies) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.85627	806.32	0	0	0	0	-1
72			268470.3338	4846.67	0	0	0	0	-1
73			274220.6956	1199.11	0	0	0	0	-1
85			211488.1116	2904.44	2	184.77	0.0285	6027	0.71
86			261079.0919	3528.84	0	0	0	0	-1
87			285654.9267	2666.94	0	0	0	0	-1
88			285654.9267	864.14	0	0	0	0	-1
101	Y	102	65027.19224	719.65	0	0	0	0	-1
102	Y	101	181031.4029	2383.79	0	0	0	0	-1
103			294911.8044	2726.38	0	0	0	0	-1
104			294911.8044	4436.66	0	0	0	0	-1
105			294911.8044	2857.59	0	0	0	0	-1
106			294911.8044	1427.29	0	0	0	0	-1
111	Y	112	294911.8044	269.34	0	0	0	0	-1
112	Y	111	291761.1743	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.0832	4770.17	3	317.98	0.0448	12243	0.58
120			301918.7913	3571.23	3	105.77	0.0199	6009	0.58
121			301918.7913	3152.12	2	16.95	0.0024	728	0.71
122			301918.7913	2836.37	1	16	0.0013	382	1
123			301918.7913	2562.26	4	95.25	0.0333	10056	0.98
124			301918.7913	2791.69	2	0	0	0	1
125			301918.7913	1850.43	0	0	0	0	-1
126			301918.7913	1953.39	0	0	0	0	-1
127			301918.7913	1519.92	1	2.27	0.0003	101	1
128	Y	129	301918.7913	730.39	0	0	0	0	-1
129	Y	128	301918.7913	1119.84	0	0	0	0	-1
130	Y	131	301918.7913	1061.65	0	0	0	0	-1
131	Y	130	301918.7913	247.07	0	0	0	0	-1
137			104484.8376	2300.5	0	0	0	0	-1
138			208420.0133	2863.28	0	0	0	0	-1
139			306486.6107	5374.53	1	167	0.007	2133	1
140			306620.9351	5165.5	0	0	0	0	-1
141			306620.9351	3107.02	1	56.83	0.0041	1256	1
142			306620.9351	1871.07	1	12.67	0.0015	465	1
143			306620.9351	3248.82	0	0	0	0	-1
144			306620.9351	3651.71	3	50.88	0.0094	2871	0.71
145			306620.9351	2121.32	1	5	0.0005	162	1
146			306620.9351	2084.39	1	0	0	0	1
147			306620.9351	1580.33	0	0	0	0	-1
148			306620.9351	1415.22	0	0	0	0	-1
149			306620.9351	1182.79	0	0	0	0	-1
150	Y	151	306620.9351	1295.96	0	0	0	0	-1
151	Y	150	306620.9351	654.42	0	0	0	0	-1
158			103515.7168	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.3489	5034.88	3	99.93	0.0133	4121	0.58
161			308981.3489	4191.84	1	12.33	0.0007	204	1
162			308981.3489	4226.43	1	34.67	0.0018	568	1
163			308981.3489	2752.83	0	0	0	0	-1
164			308981.3489	3170.56	1	38.61	0.0027	843	1
165			308981.3489	4364.3	0	0	0	0	-1
166			308981.3489	3130.92	0	0	0	0	-1
167			308981.3489	1979.39	1	1	0.0001	35	1

Table 2 continued. *Stenella longirostris* (spinner dolphin, unidentified subspecies)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
168	Y	169, 170	308981.3489	419.91	0	0	0	0	-1
169	Y	168, 170	308981.3489	12.97	0	0	0	0	-1
170	Y	168, 169	308981.3489	361.95	0	0	0	0	-1
200			269857.1276	1768.98	0	0	0	0	-1
201			308981.3489	2983.42	0	0	0	0	-1
202			308981.3489	1784.42	0	0	0	0	-1
203			308981.3489	2107.79	0	0	0	0	-1
204			308981.3489	2106.21	0	0	0	0	-1
205			308981.3489	2503.85	0	0	0	0	-1
206			308981.3489	2320.99	0	0	0	0	-1
207			308981.3489	1363.56	1	46.44	0.0076	2357	1
208			308981.3489	1211.61	0	0	0	0	-1
209			308981.3489	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.9351	1537.48	0	0	0	0	-1
213			306620.9351	2207.89	1	1.6	0.0002	50	1
214			306620.9351	1563.51	0	0	0	0	-1
215	Y	216	306620.9351	658.32	0	0	0	0	-1
216	Y	215	306620.9351	750.86	0	0	0	0	-1
218	Y	219, 220	184319.0706	97.9	0	0	0	0	-1
219	Y	218, 220	301918.7913	507.57	0	0	0	0	-1
220	Y	218, 219	301918.7913	428.92	0	0	0	0	-1

Table 3. Estimated density (# individuals per square km), abundance, and CV of *Delphinus delphis* (common dolphin, unidentified subspecies) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	0	0	0	0	-1
36	Y	35	227825.029	679.23	0	0	0	0	-1
46			126041.276	3824.05	9	76	0.058	7307	0.52
47	Y	48	245192.991	6799.92	5	78.05	0.0181	8889	0.64
48	Y	47	245192.991	207.89	5	78.05	0.0181	8889	0.64
58			133537.58	2925.48	10	23.06	0.0336	4484	0.46
59			256281.022	8103.33	4	63.75	0.0097	2479	0.802
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	2	234.17	0.1923	13148	0.71
72			268470.334	4846.67	1	126.67	0.0109	2934	1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	2	30.5	0.0064	1665	0.71
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	1	6	0.0008	109	1
119			273314.083	4770.17	1	1	0	10	1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	1	35	0.0021	443	1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	1	375	0.0127	3907	1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1

Table 3 continued. *Delphinus delphis* (common dolphin, unidentified subspecies)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 4. Estimated density (# individuals per square km), abundance, and CV of *Stenella attenuata graffmani* (coastal spotted dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	8	97.96	0.0536	11327	0.64
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	1	18.33	0.0013	394	1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	13	41.79	0.08	11297	0.55
119			273314.083	4770.17	2	10.5	0.0009	239	1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	14	80.4	0.0971	10148	0.48
138			208420.013	2863.28	2	26.67	0.0037	771	0.71
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	2	103.38	0.0432	4473	0.71
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1

Table 4 continued. *Stenella attenuata graffmani* (coastal spotted dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	3	97.97	0.0291	3070	0.58
180	y	179, 181	5937.88703	149.96	3	97.97	0.0291	3070	0.58
181	y	179, 180	81676.9261	1133.24	3	97.97	0.0291	3070	0.58
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 5. Estimated density (# individuals per square km), abundance, and CV of *Stenella longirostris orientalis* (eastern spinner dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	29	157.07	0.3035	64178	0.35
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	39	114.13	0.2775	68289	0.37
102	Y	101	181031.403	2383.79	39	114.13	0.2775	68289	0.37
103			294911.804	2726.38	22	98.04	0.1531	45146	0.4
104			294911.804	4436.66	13	80.71	0.0458	13495	0.39
105			294911.804	2857.59	3	137.25	0.0279	8223	0.58
106			294911.804	1427.29	1	7	0.0009	280	1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	33	195.77	0.2621	71627	0.4
120			301918.791	3571.23	29	85.57	0.1345	40595	0.31
121			301918.791	3152.12	41	87.07	0.2191	66164	0.32
122			301918.791	2836.37	15	175.84	0.1799	54327	0.49
123			301918.791	2562.26	15	62.06	0.0703	21225	0.35
124			301918.791	2791.69	14	170.04	0.165	49817	0.6
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	4	141.6	0.0561	16940	0.69
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	1	91.67	0.0077	806	1
138			208420.013	2863.28	3	77.28	0.0157	3266	0.58
139			306486.611	5374.53	6	167.6	0.0362	11096	0.58
140			306620.935	5165.5	1	21.16	0.0008	243	1
141			306620.935	3107.02	10	107	0.0666	20433	0.46
142			306620.935	1871.07	2	110.22	0.0228	6990	0.71
143			306620.935	3248.82	1	13.5	0.0008	247	1
144			306620.935	3651.71	2	42.21	0.0045	1372	0.71
145			306620.935	2121.32	1	93.33	0.0085	2610	1
146			306620.935	2084.39	1	1	0.0001	28	1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	1	101.2	0.0035	1088	1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	1	199.31	0.0092	2843	1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	1	34.75	0.0021	655	1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1

Table 5 continued. *Stenella longirostris orientalis* (eastern spinner dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 6. Estimated density (# individuals per square km), abundance, and CV of *Stenella longirostris* hybrid (whitebelly spinner dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	1	5.13	0.0005	148	1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	2	40.78	0.0077	2277	0.71
106			294911.804	1427.29	5	161.6	0.1531	45162	0.68
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	2	44.81	0.0095	2856	0.71
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	16	131.06	0.2904	87670	0.58
127			301918.791	1519.92	15	111.98	0.2989	90252	0.42
128	Y	129	301918.791	730.39	5	72.13	0.0527	31837	0.65
129	Y	128	301918.791	1119.84	5	72.13	0.0527	31837	0.65
130	Y	131	301918.791	1061.65	8	128.58	0.2126	128382	0.79
131	Y	130	301918.791	247.07	8	128.58	0.2126	128382	0.79
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	1	37.86	0.0033	1011	1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	6	116.27	0.0581	17810	1.05
144			306620.935	3651.71	6	75.45	0.0335	10282	0.64
145			306620.935	2121.32	1	38.11	0.0049	1490	1
146			306620.935	2084.39	3	38.71	0.0151	4622	0.58
147			306620.935	1580.33	2	57.42	0.0197	6027	0.71
148			306620.935	1415.22	3	68.56	0.0393	12055	0.58
149			306620.935	1182.79	1	382.22	0.0874	26803	1
150	Y	151	306620.935	1295.96	7	169.75	0.1648	101065	0.76
151	Y	150	306620.935	654.42	7	169.75	0.1648	101065	0.76
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	1	3.85	0.0002	58	1
160			308981.349	5034.88	4	235.15	0.0505	15614	0.58
161			308981.349	4191.84	14	113.75	0.1028	31752	0.39
162			308981.349	4226.43	8	151.18	0.0774	23917	0.55
163			308981.349	2752.83	11	98.27	0.1062	32821	0.44
164			308981.349	3170.56	8	119.73	0.0817	25249	0.61
165			308981.349	4364.3	10	72.56	0.045	13896	0.38
166			308981.349	3130.92	3	40.6	0.0105	3252	0.58
167			308981.349	1979.39	3	22.5	0.0092	2850	0.58

Table 6 continued. *Stenella longirostris* hybrid (whitebelly spinner dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
168	Y	169, 170	308981.349	419.91	2	82.17	0.0559	51841	0.71
169	Y	168, 170	308981.349	12.97	2	82.17	0.0559	51841	0.71
170	Y	168, 169	308981.349	361.95	2	82.17	0.0559	51841	0.71
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	1	68.75	0.0088	2726	1
204			308981.349	2106.21	3	220.89	0.0851	26296	0.58
205			308981.349	2503.85	2	200.52	0.0433	13387	0.71
206			308981.349	2320.99	4	113.93	0.0531	16410	0.55
207			308981.349	1363.56	2	298.81	0.1186	36631	0.71
208			308981.349	1211.61	1	230	0.0513	15866	1
209			308981.349	1475.38	3	195.86	0.1077	33285	0.58
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	3	77.5	0.0409	12542	0.58
213			306620.935	2207.89	2	946.67	0.232	71125	0.71
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	1	134.75	0.0258	15792	1
216	Y	215	306620.935	750.86	1	134.75	0.0258	15792	1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 7. Estimated density (# individuals per square km), abundance, and CV of *Stenella coeruleoalba* (striped dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	$ sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	3	14.33	0.0019	886	0.642
36	Y	35	227825.029	679.23	3	14.33	0.0019	886	0.642
46			126041.276	3824.05	2	1.34	0.0005	57	0.74
47	Y	48	245192.991	6799.92	16	27.98	0.0169	8274	0.426
48	Y	47	245192.991	207.89	16	27.98	0.0169	8274	0.426
58			133537.58	2925.48	2	12.15	0.0033	434	0.71
59			256281.022	8103.33	19	48.94	0.0372	9524	0.36
60			260698.374	1923.08	5	74.67	0.0676	17628	0.47
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	14	104.95	0.0891	23929	0.41
73			274220.696	1199.11	4	55.39	0.0543	14897	0.5
85			211488.112	2904.44	21	25.76	0.0548	11579	0.47
86			261079.092	3528.84	27	59.69	0.1343	35053	0.72
87			285654.927	2666.94	13	82.79	0.1186	33891	0.45
88			285654.927	864.14	5	33.12	0.0563	16093	0.39
101	Y	102	65027.1922	719.65	6	28.07	0.016	3925	0.46
102	Y	101	181031.403	2383.79	6	28.07	0.016	3925	0.46
103			294911.804	2726.38	34	46.01	0.1687	49751	0.26
104			294911.804	4436.66	37	37.24	0.0913	26928	0.26
105			294911.804	2857.59	13	27.86	0.0373	10989	0.58
106			294911.804	1427.29	3	17.78	0.011	3240	0.58
111	Y	112	294911.804	269.34	1	25.67	0.0046	2686	1
112	Y	111	291761.174	1378.83	1	25.67	0.0046	2686	1
118			141140.114	1347.49	14	85.42	0.2609	36828	1.06
119			273314.083	4770.17	54	58.95	0.1962	53622	0.29
120			301918.791	3571.23	19	53.69	0.084	25355	0.31
121			301918.791	3152.12	10	49.06	0.0458	13815	0.45
122			301918.791	2836.37	11	27.22	0.031	9371	0.57
123			301918.791	2562.26	15	19.78	0.0341	10281	0.33
124			301918.791	2791.69	8	58.28	0.0491	14825	0.44
125			301918.791	1850.43	3	12.67	0.006	1823	0.58
126			301918.791	1953.39	5	69.29	0.0521	15744	0.45
127			301918.791	1519.92	6	43.87	0.0509	15371	0.55
128	Y	129	301918.791	730.39	4	40.22	0.0256	15438	1.46
129	Y	128	301918.791	1119.84	4	40.22	0.0256	15438	1.46
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	10	47.86	0.0612	6391	1.15
138			208420.013	2863.28	25	54.83	0.1408	29337	0.38
139			306486.611	5374.53	41	64.46	0.1446	44307	0.4
140			306620.935	5165.5	80	55.73	0.2537	77802	0.24
141			306620.935	3107.02	57	47.59	0.2567	78696	0.24
142			306620.935	1871.07	18	50.12	0.1417	43463	0.29
143			306620.935	3248.82	17	38.2	0.0588	18017	0.43
144			306620.935	3651.71	14	53.68	0.0605	18551	0.39
145			306620.935	2121.32	8	60.25	0.0668	20483	0.59
146			306620.935	2084.39	9	91.71	0.1164	35698	0.37
147			306620.935	1580.33	10	68.41	0.1273	39022	0.58
148			306620.935	1415.22	5	64.78	0.0673	20633	0.59
149			306620.935	1182.79	3	33.33	0.0249	7622	0.58
150	Y	151	306620.935	1295.96	4	49.42	0.0298	18272	0.81

Table 7 continued. *Stenella coeruleoalba* (striped dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	$ sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	4	49.42	0.0298	18272	0.81
158			103515.717	949.85	6	51.22	0.0951	9847	0.39
159			308359.665	5549.39	51	50.94	0.1376	42444	0.2
160			308981.349	5034.88	32	53.38	0.0997	30817	0.42
161			308981.349	4191.84	26	53.06	0.0968	29899	0.31
162			308981.349	4226.43	31	69.69	0.1503	46436	0.28
163			308981.349	2752.83	17	41.47	0.0753	23266	0.36
164			308981.349	3170.56	11	44.23	0.0451	13941	0.43
165			308981.349	4364.3	12	79.74	0.0645	19918	0.39
166			308981.349	3130.92	4	24.31	0.0091	2822	0.45
167			308981.349	1979.39	11	62.26	0.1017	31430	0.48
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	10	40.81	0.0678	18305	0.52
201			308981.349	2983.42	34	73.85	0.2474	76456	0.31
202			308981.349	1784.42	12	117.48	0.2323	71765	0.39
203			308981.349	2107.79	28	97.94	0.3825	118186	0.29
204			308981.349	2106.21	16	73.32	0.1638	50597	0.39
205			308981.349	2503.85	20	60.79	0.1428	44109	0.35
206			308981.349	2320.99	8	61.57	0.0624	19278	0.51
207			308981.349	1363.56	1	148.33	0.032	9882	1
208			308981.349	1211.61	6	79.8	0.1162	35898	0.53
209			308981.349	1475.38	4	122.08	0.0973	30067	0.58
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	3	78.92	0.0453	13882	0.58
213			306620.935	2207.89	8	114.71	0.1222	37468	0.42
214			306620.935	1563.51	11	100.09	0.207	63479	0.56
215	Y	216	306620.935	658.32	10	31.59	0.0656	40235	0.38
216	Y	215	306620.935	750.86	10	31.59	0.0656	40235	0.38
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 8. Estimated density (# individuals per square km), abundance, and CV of *Steno bredanensis* (rough-toothed dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	16	7.74	0.024	5068	0.43
86			261079.092	3528.84	3	15.07	0.0072	1879	0.58
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	1	9	0.0059	1672	1
101	Y	102	65027.1922	719.65	16	7.79	0.0226	5555	0.51
102	Y	101	181031.403	2383.79	16	7.79	0.0226	5555	0.51
103			294911.804	2726.38	7	12.04	0.0174	5126	0.58
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	3	16.53	0.0195	5758	0.58
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	1	8	0.0033	471	1
119			273314.083	4770.17	12	8.2	0.0116	3170	0.43
120			301918.791	3571.23	19	6.32	0.0189	5701	0.44
121			301918.791	3152.12	20	10.14	0.0362	10916	0.47
122			301918.791	2836.37	2	10.17	0.004	1216	0.71
123			301918.791	2562.26	3	6.36	0.0042	1264	0.58
124			301918.791	2791.69	2	13.8	0.0056	1678	0.71
125			301918.791	1850.43	3	5.48	0.005	1508	0.58
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	1	7.5	0.0028	837	1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	2	13.99	0.0068	714	0.71
138			208420.013	2863.28	2	15.33	0.006	1255	0.71
139			306486.611	5374.53	4	23.11	0.0097	2962	0.51
140			306620.935	5165.5	9	28.1	0.0275	8436	0.4
141			306620.935	3107.02	1	8.75	0.0016	485	1
142			306620.935	1871.07	1	3.33	0.001	307	1
143			306620.935	3248.82	2	19.67	0.0068	2086	0.71
144			306620.935	3651.71	2	12.54	0.0039	1184	0.71
145			306620.935	2121.32	4	9.57	0.0101	3110	0.66
146			306620.935	2084.39	1	8.5	0.0023	703	1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	1	14.5	0.0042	2562	1
151	Y	150	306620.935	654.42	1	14.5	0.0042	2562	1
158			103515.717	949.85	3	18.96	0.0337	3485	0.58
159			308359.665	5549.39	7	26.74	0.019	5845	0.56
160			308981.349	5034.88	2	47.68	0.0106	3289	0.71
161			308981.349	4191.84	2	25.92	0.0069	2147	0.71
162			308981.349	4226.43	1	15	0.002	616	1
163			308981.349	2752.83	1	1	0.0002	63	1
164			308981.349	3170.56	2	15.44	0.0055	1691	0.71
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	2	12.75	0.0046	1414	0.71
167			308981.349	1979.39	1	6.42	0.0018	563	1

Table 8 continued. *Steno bredanensis* (rough-toothed dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
168	Y	169, 170	308981.349	419.91	1	19.67	0.0139	12890	1
169	Y	168, 170	308981.349	12.97	1	19.67	0.0139	12890	1
170	Y	168, 169	308981.349	361.95	1	19.67	0.0139	12890	1
179	y	180, 181	17800.7129	274.67	1	15	0.0081	854	1
180	y	179, 181	5937.88703	149.96	1	15	0.0081	854	1
181	y	179, 180	81676.9261	1133.24	1	15	0.0081	854	1
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	3	7.86	0.0063	1943	0.58
205			308981.349	2503.85	3	66	0.0444	13732	0.58
206			308981.349	2320.99	2	15.68	0.0076	2345	0.71
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	2	62.14	0.0576	17811	0.71
209			308981.349	1475.38	1	5.2	0.002	612	1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	1	10.33	0.0026	806	1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 9. Estimated density (# individuals per square km), abundance, and CV of *Delphinus delphis* (longbeak common dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	0	0	0	0	-1
36	Y	35	227825.029	679.23	0	0	0	0	-1
46			126041.276	3824.05	2	642.47	0.087	10961	0.71
47	Y	48	245192.991	6799.92	0	0	0	0	-1
48	Y	47	245192.991	207.89	0	0	0	0	-1
58			133537.58	2925.48	11	157.25	0.1676	22377	0.74
59			256281.022	8103.33	3	801.33	0.0783	20056	0.693
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	6	401.38	0.9891	67613	0.66
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	1	17.67	0.0014	295	1
86			261079.092	3528.84	1	917.15	0.0959	25041	1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1

Table 9 continued. *Delphinus delphis* (longbeak common dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	19	227.77	0.6225	65625	0.59
180	y	179, 181	5937.88703	149.96	19	227.77	0.6225	65625	0.59
181	y	179, 180	81676.9261	1133.24	19	227.77	0.6225	65625	0.59
182			27251.9505	624.15	1	480	0.173	4716	1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 10. Estimated density (# individuals per square km), abundance, and CV of *Delphinus delphis* (shortbeak common dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.13	316.69	0	0	0	0	-1
23	Y	22	199809.7	1495.16	0	0	0	0	-1
34			38788.46	702.16	0	0	0	0	-1
35	Y	36	227825	5267.09	5	487.47	0.1078	49105	0.555
36	Y	35	227825	679.23	5	487.47	0.1078	49105	0.555
46			126041.3	3824.05	42	75.41	0.2725	34341	0.39
47	Y	48	245193	6799.92	77	174.22	0.5454	267442	0.28
48	Y	47	245193	207.89	77	174.22	0.5454	267442	0.28
58			133537.6	2925.48	70	197.15	1.309	174801	0.27
59			256281	8103.33	109	93.95	0.3915	100344	0.22
60			260698.4	1923.08	6	65	0.0761	19833	0.45
71			68358.86	806.32	2	310	0.2546	17407	0.71
72			268470.3	4846.67	6	114.95	0.0595	15974	0.56
73			274220.7	1199.11	2	29.63	0.011	3028	0.71
85			211488.1	2904.44	12	117.37	0.111	23483	0.56
86			261079.1	3528.84	19	232.52	0.462	120622	0.48
87			285654.9	2666.94	8	132.58	0.0889	25392	0.56
88			285654.9	864.14	0	0	0	0	-1
101	Y	102	65027.19	719.65	3	132.22333	0.023755	5845	0.655375
102	Y	101	181031.4	2383.79	3	132.22333	0.023755	5845	0.655375
103			294911.8	2726.38	2	26.33	0.0043	1273	0.71
104			294911.8	4436.66	2	30.87	0.0031	919	0.71
105			294911.8	2857.59	1	84	0.006205	1830	1
106			294911.8	1427.29	0	0	0	0	-1
111	Y	112	294911.8	269.34	0	0	0	0	-1
112	Y	111	291761.2	1378.83	0	0	0	0	-1
118			141140.1	1347.49	8	187.33	0.1935	27312	0.57
119			273314.1	4770.17	14	115.24	0.0593	16212	0.48
120			301918.8	3571.23	4	245.21	0.0486	14664	1.69
121			301918.8	3152.12	0	0	0	0	-1
122			301918.8	2836.37	0	0	0	0	-1
123			301918.8	2562.26	1	41.4	0.002935	886	1
124			301918.8	2791.69	3	82.72	0.015042	4542	0.58
125			301918.8	1850.43	3	93.27	0.0265	8012	0.71
126			301918.8	1953.39	2	61.92	0.0111	3359	0.71
127			301918.8	1519.92	0	0	0	0	-1
128	Y	129	301918.8	730.39	0	0	0	0	-1
129	Y	128	301918.8	1119.84	0	0	0	0	-1
130	Y	131	301918.8	1061.65	0	0	0	0	-1
131	Y	130	301918.8	247.07	0	0	0	0	-1
137			104484.8	2300.5	5	183.53	0.0699	7302	0.66
138			208420	2863.28	14	145.76	0.124	25839	0.47
139			306486.6	5374.53	31	203.18	0.2055	62997	0.61
140			306620.9	5165.5	47	324.99	0.519	159124	0.49
141			306620.9	3107.02	9	151.45	0.077	23607	0.58
142			306620.9	1871.07	0	0	0	0	-1
143			306620.9	3248.82	0	0	0	0	-1
144			306620.9	3651.71	0	0	0	0	-1
145			306620.9	2121.32	0	0	0	0	-1
146			306620.9	2084.39	0	0	0	0	-1
147			306620.9	1580.33	0	0	0	0	-1
148			306620.9	1415.22	0	0	0	0	-1
149			306620.9	1182.79	0	0	0	0	-1
150	Y	151	306620.9	1295.96	0	0	0	0	-1

Table 10 continued. *Delphinus delphis* (shortbeak common dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.9	654.42	0	0	0	0	-1
158			103515.7	949.85	3	40.91	0.0228	2357	0.58
159			308359.7	5549.39	2	101.67	0.006142	1894	0.71
160			308981.3	5034.88	1	20.63	0.000644	199	1
161			308981.3	4191.84	5	348.58	0.141662	43771	2.74
162			308981.3	4226.43	1	91	0.007272	2247	1
163			308981.3	2752.83	3	904.58	0.286506	88525	0.58
164			308981.3	3170.56	0	0	0	0	-1
165			308981.3	4364.3	1	19	0.00211	652	1
166			308981.3	3130.92	0	0	0	0	-1
167			308981.3	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.3	419.91	0	0	0	0	-1
169	Y	168, 170	308981.3	12.97	0	0	0	0	-1
170	Y	168, 169	308981.3	361.95	0	0	0	0	-1
179	y	180, 181	17800.71	274.67	2	23.88	0.0063	660	0.71
180	y	179, 181	5937.887	149.96	2	23.88	0.0063	660	0.71
181	y	179, 180	81676.93	1133.24	2	23.88	0.0063	660	0.71
182			27251.95	624.15	0	0	0	0	-1
200			269857.1	1768.98	17	418.69	1.3459	363207	0.4
201			308981.3	2983.42	20	564.84	1.2666	391353	0.4
202			308981.3	1784.42	20	509.77	1.9112	590519	0.51
203			308981.3	2107.79	5	721.5	0.5725	176891	1.01
204			308981.3	2106.21	8	151.46	0.1916	59191	0.82
205			308981.3	2503.85	2	93.58	0.025	7725	0.71
206			308981.3	2320.99	0	0	0	0	-1
207			308981.3	1363.56	0	0	0	0	-1
208			308981.3	1211.61	0	0	0	0	-1
209			308981.3	1475.38	0	0	0	0	-1
211			289890.9	1376.09	2	582.92	0.2825	81897	0.71
212			306620.9	1537.48	5	280.95	0.3056	93710	0.6
213			306620.9	2207.89	0	0	0	0	-1
214			306620.9	1563.51	0	0	0	0	-1
215	Y	216	306620.9	658.32	0	0	0	0	-1
216	Y	215	306620.9	750.86	0	0	0	0	-1
218	Y	219, 220	184319.1	97.9	1	940	0.304	239580	1
219	Y	218, 220	301918.8	507.57	1	940	0.304	239580	1
220	Y	218, 219	301918.8	428.92	1	940	0.304	239580	1

Table 11. Estimated density (# individuals per square km), abundance, and CV of *Tursiops truncatus* (bottlenose dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	1	2.78	0.0001	40	1
36	Y	35	227825.029	679.23	1	2.78	0.0001	40	1
46			126041.276	3824.05	0	0	0	0	-1
47	Y	48	245192.991	6799.92	4	4.84	0.0008	381	0.63
48	Y	47	245192.991	207.89	4	4.84	0.0008	381	0.63
58			133537.58	2925.48	11	5.49	0.006	804	0.51
59			256281.022	8103.33	7	10.93	0.0022	553	0.6
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	3	19.02	0.0031	820	0.71
73			274220.696	1199.11	1	7.2	0.0016	427	1
85			211488.112	2904.44	40	21.26	0.076	16066	0.38
86			261079.092	3528.84	17	23.36	0.0292	7623	0.72
87			285654.927	2666.94	6	30.78	0.018	5133	0.6
88			285654.927	864.14	1	6.58	0.002	564	1
101	Y	102	65027.1922	719.65	15	29.72	0.0373	9172	0.77
102	Y	101	181031.403	2383.79	15	29.72	0.0373	9172	0.77
103			294911.804	2726.38	11	13.85	0.0145	4277	0.49
104			294911.804	4436.66	14	37.97	0.0311	9170	0.54
105			294911.804	2857.59	4	64.33	0.0234	6892	1.05
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	16	16.79	0.0517	7303	0.51
119			273314.083	4770.17	60	24.81	0.081	22132	0.33
120			301918.791	3571.23	19	8.82	0.0122	3677	0.43
121			301918.791	3152.12	14	7.16	0.0083	2492	0.41
122			301918.791	2836.37	7	18.47	0.0118	3571	0.55
123			301918.791	2562.26	3	12.05	0.0037	1105	0.58
124			301918.791	2791.69	1	32	0.003	898	1
125			301918.791	1850.43	3	5.25	0.0022	667	0.58
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	4	17.7	0.0121	3649	0.79
128	Y	129	301918.791	730.39	3	2.08	0.0009	528	0.58
129	Y	128	301918.791	1119.84	3	2.08	0.0009	528	0.58
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	20	23.76	0.0536	5600	0.51
138			208420.013	2863.28	14	7.4	0.0094	1957	0.43
139			306486.611	5374.53	35	26.3	0.0444	13621	0.4
140			306620.935	5165.5	25	24.73	0.0311	9525	0.36
141			306620.935	3107.02	5	12.95	0.0054	1659	0.63
142			306620.935	1871.07	3	17.37	0.0072	2216	0.58
143			306620.935	3248.82	4	10.48	0.0033	1027	0.46
144			306620.935	3651.71	1	18.25	0.0013	398	1
145			306620.935	2121.32	2	13.49	0.0033	1012	0.71
146			306620.935	2084.39	1	9.07	0.0011	346	1
147			306620.935	1580.33	1	2.77	0.0005	140	1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1

Table 11 continued. *Tursiops truncatus* (bottlenose dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	15	8.62	0.006	1864	0.42
160			308981.349	5034.88	6	9.62	0.003	919	0.55
161			308981.349	4191.84	5	30.65	0.0095	2931	0.89
162			308981.349	4226.43	1	56.22	0.0035	1067	1
163			308981.349	2752.83	2	7.13	0.0013	415	0.71
164			308981.349	3170.56	1	6	0.0005	152	1
165			308981.349	4364.3	2	8.15	0.001	299	0.71
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	1	5	0.0007	203	1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	35	24.07	0.3097	32647	0.4
180	y	179, 181	5937.88703	149.96	35	24.07	0.3097	32647	0.4
181	y	179, 180	81676.9261	1133.24	35	24.07	0.3097	32647	0.4
182			27251.9505	624.15	5	11.8	0.0544	1481	0.49
200			269857.128	1768.98	8	38.26	0.0449	12117	0.53
201			308981.349	2983.42	6	52.36	0.0273	8443	0.6
202			308981.349	1784.42	3	51.41	0.0224	6930	0.58
203			308981.349	2107.79	3	27.31	0.0101	3116	0.58
204			308981.349	2106.21	6	16.65	0.0123	3802	0.89
205			308981.349	2503.85	1	21	0.0022	672	1
206			308981.349	2320.99	5	10.31	0.0058	1782	0.67
207			308981.349	1363.56	4	6.99	0.0053	1645	0.73
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	9	24	0.0407	11808	0.67
212			306620.935	1537.48	6	18.36	0.0186	5702	0.68
213			306620.935	2207.89	2	14.28	0.0034	1029	0.71
214			306620.935	1563.51	3	13.11	0.0065	2002	0.58
215	Y	216	306620.935	658.32	2	28.96	0.0106	6513	0.71
216	Y	215	306620.935	750.86	2	28.96	0.0106	6513	0.71
218	Y	219, 220	184319.071	97.9	5	46.98	0.0589	46450	0.51
219	Y	218, 220	301918.791	507.57	5	46.98	0.0589	46450	0.51
220	Y	218, 219	301918.791	428.92	5	46.98	0.0589	46450	0.51

Table 12. Estimated density (# individuals per square km), abundance, and CV of *Grampus griseus* (Risso's dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	7	49.34	0.0359	8872	0.52
23	Y	22	199809.686	1495.16	7	49.34	0.0359	8872	0.52
34			38788.4619	702.16	1	25	0.0066	258	1
35	Y	36	227825.029	5267.09	4	13.45	0.0031	1403	0.5
36	Y	35	227825.029	679.23	4	13.45	0.0031	1403	0.5
46			126041.276	3824.05	7	42.52	0.0186	2344	0.56
47	Y	48	245192.991	6799.92	14	19.84	0.0097	4764	0.39
48	Y	47	245192.991	207.89	14	19.84	0.0097	4764	0.39
58			133537.58	2925.48	15	13.51	0.018	2399	0.44
59			256281.022	8103.33	20	11	0.0084	2145	0.49
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	2	12.63	0.0028	740	0.71
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	23	36.62	0.1534	32439	0.52
86			261079.092	3528.84	1	16.67	0.0025	652	1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	2	9	0.011	3148	0.71
101	Y	102	65027.1922	719.65	15	29.75	0.0761	18715	0.58
102	Y	101	181031.403	2383.79	15	29.75	0.0761	18715	0.58
103			294911.804	2726.38	5	13.44	0.013	3846	0.76
104			294911.804	4436.66	13	10.13	0.0157	4633	0.6
105			294911.804	2857.59	1	3	0.0006	164	1
106			294911.804	1427.29	1	6	0.0022	656	1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	3	8.03	0.0095	1334	0.58
119			273314.083	4770.17	11	11.1	0.0135	3701	0.56
120			301918.791	3571.23	8	11.01	0.0131	3941	0.66
121			301918.791	3152.12	8	12.81	0.0172	5194	0.65
122			301918.791	2836.37	4	3.87	0.0029	871	0.58
123			301918.791	2562.26	2	1.59	0.0007	198	0.71
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	1	0	0	0	1
126			301918.791	1953.39	1	12	0.0032	981	1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	4	5	0.0046	481	0.65
138			208420.013	2863.28	12	8.05	0.0178	3719	0.48
139			306486.611	5374.53	5	10.68	0.0053	1611	0.64
140			306620.935	5165.5	6	7.43	0.0046	1399	0.79
141			306620.935	3107.02	4	12.78	0.0087	2668	0.58
142			306620.935	1871.07	1	1	0.0003	87	1
143			306620.935	3248.82	1	8.33	0.0014	416	1
144			306620.935	3651.71	1	9.67	0.0014	429	1
145			306620.935	2121.32	2	11	0.0055	1682	0.71
146			306620.935	2084.39	4	16.63	0.0169	5175	0.9
147			306620.935	1580.33	1	0	0	0	1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	1	7	0.0031	960	1
150	Y	151	306620.935	1295.96	2	7.38	0.004	2453	0.71

Table 12 continued. *Grampus griseus* (Risso's dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	2	7.38	0.004	2453	0.71
158			103515.717	949.85	2	6	0.0067	692	0.71
159			308359.665	5549.39	20	11.83	0.0226	6957	0.51
160			308981.349	5034.88	8	5.85	0.0049	1519	0.61
161			308981.349	4191.84	2	13.49	0.0034	1052	0.71
162			308981.349	4226.43	3	8.83	0.0033	1025	0.58
163			308981.349	2752.83	2	6.75	0.0026	802	0.71
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	1	34.67	0.0042	1298	1
166			308981.349	3130.92	1	3	0.0005	157	1
167			308981.349	1979.39	4	6.14	0.0066	2030	0.72
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	24	33.61	0.3378	35609	0.57
180	y	179, 181	5937.88703	149.96	24	33.61	0.3378	35609	0.57
181	y	179, 180	81676.9261	1133.24	24	33.61	0.3378	35609	0.57
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	1	0	0	0	1
201			308981.349	2983.42	5	7.75	0.0069	2123	0.76
202			308981.349	1784.42	3	5.78	0.0051	1588	0.58
203			308981.349	2107.79	5	4.74	0.0059	1837	0.64
204			308981.349	2106.21	4	8.5	0.0085	2639	0.58
205			308981.349	2503.85	2	7.33	0.0031	957	0.71
206			308981.349	2320.99	1	7	0.0016	493	1
207			308981.349	1363.56	4	12.5	0.0194	5994	1.05
208			308981.349	1211.61	3	5.77	0.0076	2335	0.58
209			308981.349	1475.38	6	7.16	0.0154	4759	0.65
211			289890.902	1376.09	15	17.89	0.1032	29908	0.65
212			306620.935	1537.48	14	7.77	0.0374	11471	0.58
213			306620.935	2207.89	1	11.33	0.0027	833	1
214			306620.935	1563.51	3	4.5	0.0046	1401	1
215	Y	216	306620.935	658.32	1	47.5	0.0178	10887	1
216	Y	215	306620.935	750.86	1	47.5	0.0178	10887	1
218	Y	219, 220	184319.071	97.9	2	6.5	0.0066	5240	0.71
219	Y	218, 220	301918.791	507.57	2	6.5	0.0066	5240	0.71
220	Y	218, 219	301918.791	428.92	2	6.5	0.0066	5240	0.71

Table 13. Estimated density (# individuals per square km), abundance, and CV of *Lagenorhynchus obliquidens* (Pacific white-sided dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	1	9.25	0.0052	1285	1
23	Y	22	199809.686	1495.16	1	9.25	0.0052	1285	1
34			38788.4619	702.16	4	10.43	0.0567	2200	0.541
35	Y	36	227825.029	5267.09	7	74.54	0.0277	12625	0.56
36	Y	35	227825.029	679.23	7	74.54	0.0277	12625	0.56
46			126041.276	3824.05	16	162.5	0.195	24581	0.81
47	Y	48	245192.991	6799.92	1	37.05	0.0014	671	1
48	Y	47	245192.991	207.89	1	37.05	0.0014	671	1
58			133537.58	2925.48	6	43.34	0.033	4411	0.82
59			256281.022	8103.33	2	13.7	0.0017	423	0.757
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	4	145.05	0.2109	14417	0.59
72			268470.334	4846.67	1	30	0.0028	752	1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	1	327.85	0.0245	6404	1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1

Table 13 continued. *Lagenorhynchus obliquidens* (Pacific white-sided dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 14. Estimated density (# individuals per square km), abundance, and CV of *Lagenodelphis hose*i (Fraser's dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	2	419.78	0.0379	11632	0.71
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	1	143.33	0.0113	3479	1
147			306620.935	1580.33	1	533.33	0.0557	17074	1
148			306620.935	1415.22	2	461.23	0.1076	32977	0.71
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	1	171	0.0056	1732	1
161			308981.349	4191.84	1	127.8	0.005	1554	1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	1	263.33	0.0158	4877	1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	3	346.7	0.0393	12150	0.58
166			308981.349	3130.92	1	203.33	0.0107	3311	1
167			308981.349	1979.39	3	609.97	0.1525	47132	0.58

Table 14 continued. *Lagenodelphis hosei* (Fraser's dolphin)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	1	162.5	0.0107	3309	1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	1	86.67	0.0105	3240	1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	4	394.53	0.1765	54531	0.65
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	1	332.8	0.0388	23791	1
216	Y	215	306620.935	750.86	1	332.8	0.0388	23791	1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 15. Estimated density (# individuals per square km), abundance, and CV of *Lissodelphis borealis* (northern right whale dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	3	42.36	0.0299	7401	0.597
23	Y	22	199809.686	1495.16	3	42.36	0.0299	7401	0.597
34			38788.4619	702.16	1	21.95	0.0122	475	1
35	Y	36	227825.029	5267.09	3	11.25	0.0019	881	0.63
36	Y	35	227825.029	679.23	3	11.25	0.0019	881	0.63
46			126041.276	3824.05	12	37.4	0.0334	4214	0.61
47	Y	48	245192.991	6799.92	3	42.11	0.0051	2483	0.787
48	Y	47	245192.991	207.89	3	42.11	0.0051	2483	0.787
58			133537.58	2925.48	5	9.1	0.0168	2248	1.84
59			256281.022	8103.33	6	13.75	0.008	2060	0.54
60			260698.374	1923.08	0	0	0	0	-1

Table 16. Estimated density (# individuals per square km), abundance, and CV of *Peponocephala electra* (Melon-headed whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	1	315	0.0143	4082	1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	3	242.88	0.0383	4004	0.58
138			208420.013	2863.28	1	255	0.0108	2246	1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	1	20	0.0007	228	1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	1	195.02	0.0167	5113	1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	2	226.37	0.0577	5970	1
159			308359.665	5549.39	1	241.67	0.0053	1625	1
160			308981.349	5034.88	2	193.82	0.0093	2878	0.71
161			308981.349	4191.84	1	298.2	0.0086	2660	1
162			308981.349	4226.43	1	350	0.01	3096	1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1

Table 16 continued. *Peponocephala electra* (Melon-headed whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
167			308981.349	1979.39	1	11.75	0.0007	222	1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	1	183.36	0.015	4646	1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 17. Estimated density (# individuals per square km), abundance, and CV of *Feresa attenuata* (pygmy killer whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	1	16	0.0021	606	1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	6	18.11	0.0124	3045	0.53
102	Y	101	181031.403	2383.79	6	18.11	0.0124	3045	0.53
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	1	133	0.0099	2694	1
120			301918.791	3571.23	2	26.5	0.0052	1584	0.71
121			301918.791	3152.12	6	22.94	0.0154	4660	0.44
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	1	19	0.0023	489	1
139			306486.611	5374.53	1	19	0.0012	383	1
140			306620.935	5165.5	2	26.58	0.0036	1116	0.71
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	1	34.17	0.0033	1014	1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	1	28	0.0018	550	1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	1	29.33	0.0038	1164	1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	1	12	0.0014	419	1

Table 17 continued. *Feresa attenuata* (pygmy killer whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
167			308981.349	1979.39	1	35.33	0.0063	1950	1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	2	14.5	0.0041	1265	0.71
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	1	53.33	0.0156	4808	1
209			308981.349	1475.38	3	20.11	0.0145	4467	0.58
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 18. Estimated density (# individuals per square km), abundance, and CV of *Pseudorca crassidens* (false killer whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	2	15.86	0.0038	1022	0.71
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	1	11.33	0.0015	438	1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	1	15.49	0.0025	762	1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	1	18.8	0.0043	1288	1
124			301918.791	2791.69	1	2	0.0004	126	1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	1	2	0.0008	231	1
128	Y	129	301918.791	730.39	4	11.67	0.0147	8859	0.96
129	Y	128	301918.791	1119.84	4	11.67	0.0147	8859	0.96
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	1	11	0.0021	631	1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	2	17.17	0.0096	2937	0.71
147			306620.935	1580.33	3	12.19	0.0135	4125	0.58
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	2	9	0.0021	642	0.71
161			308981.349	4191.84	3	0	0	0	1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	1	15.33	0.0028	869	1
165			308981.349	4364.3	1	13	0.0017	535	1
166			308981.349	3130.92	3	3.75	0.0021	646	0.58
167			308981.349	1979.39	0	0	0	0	-1

Table 18 continued. Pseudorca crassidens (false killer whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
168	Y	169, 170	308981.349	419.91	1	6	0.0044	4069	1
169	Y	168, 170	308981.349	12.97	1	6	0.0044	4069	1
170	Y	168, 169	308981.349	361.95	1	6	0.0044	4069	1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	1	15.96	0.0044	1360	1
204			308981.349	2106.21	3	14.99	0.0124	3835	0.71
205			308981.349	2503.85	3	9.11	0.0063	1961	0.58
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	1	6.54	0.0026	796	1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 19. Estimated density (# individuals per square km), abundance, and CV of *Globicephala* spp. (pilot whale, unidentified species) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	0	0	0	0	-1
36	Y	35	227825.029	679.23	0	0	0	0	-1
47	Y	48	245192.991	6799.92	0	0	0	0	-1
48	Y	47	245192.991	207.89	0	0	0	0	-1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1

Table 19 continued. Globicephala spp. (pilot whale, unidentified species)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	9	13.29	0.0183	4935	0.44
201			308981.349	2983.42	7	26.9	0.0171	5275	0.71
202			308981.349	1784.42	9	15.58	0.0213	6568	0.42
203			308981.349	2107.79	5	6.57	0.0042	1302	0.58
204			308981.349	2106.21	11	19.08	0.027	8328	0.52
205			308981.349	2503.85	5	12.96	0.007	2163	0.42
206			308981.349	2320.99	7	15.73	0.0128	3964	0.51
207			308981.349	1363.56	8	19.62	0.0311	9621	0.46
208			308981.349	1211.61	4	26.06	0.0233	7191	0.67
209			308981.349	1475.38	3	16.78	0.0092	2851	0.58
211			289890.902	1376.09	3	16.08	0.0095	2749	0.58
212			306620.935	1537.48	3	10.66	0.0056	1725	0.71
213			306620.935	2207.89	4	14.11	0.0069	2120	0.55
214			306620.935	1563.51	3	8.89	0.0046	1414	0.58
215	Y	216	306620.935	658.32	2	20.47	0.0078	4798	0.71
216	Y	215	306620.935	750.86	2	20.47	0.0078	4798	0.71
218	Y	219, 220	184319.071	97.9	1	28.08	0.0073	5787	1
219	Y	218, 220	301918.791	507.57	1	28.08	0.0073	5787	1
220	Y	218, 219	301918.791	428.92	1	28.08	0.0073	5787	1

Table 20. Estimated density (# individuals per square km), abundance, and CV of *Globicephala macrorhynchus* (short-finned pilot whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	0	0	0	0	-1
36	Y	35	227825.029	679.23	0	0	0	0	-1
46			126041.276	3824.05	2	16.5	0.0023	288	0.71
47	Y	48	245192.991	6799.92	2	11.18	0.001	514	0.79
48	Y	47	245192.991	207.89	2	11.18	0.001	514	0.79
58			133537.58	2925.48	0	0	0	0	-1
59			256281.022	8103.33	0	0	0	0	-1
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	2	6.98	0.0008	209	0.71
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	6	14.03	0.0065	1685	0.68
87			285654.927	2666.94	2	16.95	0.0034	982	0.71
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	4	12.01	0.0096	1361	0.83
119			273314.083	4770.17	3	42.65	0.0073	1983	0.71
120			301918.791	3571.23	1	19.25	0.0015	440	1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	1	7.5	0.0007	219	1
125			301918.791	1850.43	2	22.24	0.0065	1963	0.71
126			301918.791	1953.39	4	10.15	0.0056	1697	0.74
127			301918.791	1519.92	1	11.25	0.002	604	1
128	Y	129	301918.791	730.39	2	10.35	0.003	1827	0.71
129	Y	128	301918.791	1119.84	2	10.35	0.003	1827	0.71
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	6	12.22	0.0086	901	0.46
138			208420.013	2863.28	11	14.08	0.0146	3049	0.42
139			306486.611	5374.53	33	17.84	0.0296	9080	0.32
140			306620.935	5165.5	26	15.3	0.0208	6386	0.36
141			306620.935	3107.02	9	16.83	0.0132	4044	0.43
142			306620.935	1871.07	5	13.87	0.01	3074	0.5
143			306620.935	3248.82	4	23.46	0.0078	2396	0.56
144			306620.935	3651.71	6	23.78	0.0106	3240	0.54
145			306620.935	2121.32	1	12.33	0.0016	482	1
146			306620.935	2084.39	1	13.6	0.0018	541	1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	3	18.33	0.0105	3223	0.58
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	2	13.88	0.0038	2360	0.71

Table 20 continued. *Globicephala macrorhynchus* (short-finned pilot whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	2	13.88	0.0038	2360	0.71
158			103515.717	949.85	1	2.55	0.0007	75	1
159			308359.665	5549.39	3	6.48	0.0009	292	0.58
160			308981.349	5034.88	5	8.9	0.0024	738	0.46
161			308981.349	4191.84	6	9.51	0.0037	1138	0.59
162			308981.349	4226.43	6	29.27	0.0112	3473	0.62
163			308981.349	2752.83	5	14.27	0.007	2166	0.49
164			308981.349	3170.56	4	16.99	0.0058	1791	0.58
165			308981.349	4364.3	6	10.83	0.004	1245	0.43
166			308981.349	3130.92	1	19	0.0016	507	1
167			308981.349	1979.39	2	57.5	0.0157	4856	1
168	Y	169, 170	308981.349	419.91	2	28.33	0.0193	17876	1
169	Y	168, 170	308981.349	12.97	2	28.33	0.0193	17876	1
170	Y	168, 169	308981.349	361.95	2	28.33	0.0193	17876	1
179	y	180, 181	17800.7129	274.67	6	20.64	0.0249	2629	0.44
180	y	179, 181	5937.88703	149.96	6	20.64	0.0249	2629	0.44
181	y	179, 180	81676.9261	1133.24	6	20.64	0.0249	2629	0.44
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 21. Estimated density (# individuals per square km), abundance, and CV of *Orcinus orca* (killer whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	6	6.67	0.003	1370	0.9
36	Y	35	227825.029	679.23	6	6.67	0.003	1370	0.9
46			126041.276	3824.05	1	2.5	0.0003	37	1
47	Y	48	245192.991	6799.92	1	6	0.0004	188	1
48	Y	47	245192.991	207.89	1	6	0.0004	188	1
58			133537.58	2925.48	0	0	0	0	-1
59			256281.022	8103.33	2	3.92	0.0004	111	0.71
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	1	6	0.0002	63	1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	1	2	0.0001	28	1
86			261079.092	3528.84	2	3	0.0003	84	0.71
87			285654.927	2666.94	1	3	0.0002	61	1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	1	1	0.0001	15	1
102	Y	101	181031.403	2383.79	1	1	0.0001	15	1
103			294911.804	2726.38	1	1	0.0001	20	1
104			294911.804	4436.66	1	4.67	0.0002	59	1
105			294911.804	2857.59	1	2	0.0001	39	1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	2	2.83	0.0002	62	0.71
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	1	4.5	0.0003	82	1
122			301918.791	2836.37	1	2	0.0001	40	1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	2	5.67	0.0008	232	0.71
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	1	2	0.0002	59	1
127			301918.791	1519.92	2	5.97	0.0015	449	0.71
128	Y	129	301918.791	730.39	3	4.5	0.0014	835	0.58
129	Y	128	301918.791	1119.84	3	4.5	0.0014	835	0.58
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	1	1	0.0001	14	1
139			306486.611	5374.53	1	5	0.0002	54	1
140			306620.935	5165.5	1	4	0.0001	45	1
141			306620.935	3107.02	3	5.2	0.001	292	0.58
142			306620.935	1871.07	1	7	0.0007	217	1
143			306620.935	3248.82	3	4.08	0.0007	219	0.58
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	1	3	0.0004	110	1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1

Table 21 continued. *Orcinus orca* (killer whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
150	Y	151	306620.935	1295.96	1	8	0.0008	477	1
151	Y	150	306620.935	654.42	1	8	0.0008	477	1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	2	5.13	0.0004	108	0.71
160			308981.349	5034.88	4	4.73	0.0007	220	0.63
161			308981.349	4191.84	1	0	0	0	1
162			308981.349	4226.43	1	0	0	0	1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	1	3	0.0002	55	1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	3	4.11	0.0007	231	0.58
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	0	0	0	0	-1
180	y	179, 181	5937.88703	149.96	0	0	0	0	-1
181	y	179, 180	81676.9261	1133.24	0	0	0	0	-1
182			27251.9505	624.15	1	6	0.0018	50	1
200			269857.128	1768.98	1	2	0.0002	58	1
201			308981.349	2983.42	4	4.45	0.0011	349	0.64
202			308981.349	1784.42	1	11.33	0.0012	372	1
203			308981.349	2107.79	2	2.5	0.0004	139	0.71
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	1	6.67	0.0005	156	1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	1	21	0.0029	902	1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	1	4.5	0.0006	170	1
213			306620.935	2207.89	2	14.67	0.0025	772	0.71
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	1	3.6	0.0005	296	1
216	Y	215	306620.935	750.86	1	3.6	0.0005	296	1
218	Y	219, 220	184319.071	97.9	3	7.19	0.004	3116	0.58
219	Y	218, 220	301918.791	507.57	3	7.19	0.004	3116	0.58
220	Y	218, 219	301918.791	428.92	3	7.19	0.004	3116	0.58

Table 22. Estimated density (# individuals per square km), abundance, and CV of *Phocoena sinus* (Vaquita) in the eastern Pacific Ocean based on Jaramillo-Legorreta et al. (1999).

stratum	area (sq km)	density	abund	CV
182	27251.9505	0.00987898	269.22	1.96

Table 23. Estimated density (# individuals per square km), abundance, and CV of *Phocoenoides dalli* (Dall's porpoise) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	178	3.36	0.1158	73877	0.36
35	y	34, 46, 47	227825.029	1062.53	178	3.36	0.1158	73877	0.36
46	y	34, 35, 47	126041.276	1112.01	178	3.36	0.1158	73877	0.36
47	y	34, 35, 46	245192.991	1462.66	178	3.36	0.1158	73877	0.36
58	y	71, 72	133537.58	600.2	0	0	0	0	-1
59	y	60, 73	256281.022	988.36	3	2.17	0.0036	2843	0.58
60	y	59, 73	260698.374	296.86	3	2.17	0.0036	2843	0.58
71	y	58, 72	68358.8563	148.74	0	0	0	0	-1
72	y	58, 71	268470.334	854.38	0	0	0	0	-1
73	y	59, 60	274220.696	403.08	3	2.17	0.0036	2843	0.58

Table 24. Estimated density (# individuals per square km), abundance, and CV of *Physeter macrocephalus* (sperm whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	2	12.42	0.0017	419	0.71
23	Y	22	199809.686	1495.16	2	12.42	0.0017	419	0.71
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	2	2.75	0.0002	75	0.71
36	Y	35	227825.029	679.23	2	2.75	0.0002	75	0.71
46			126041.276	3824.05	10	9.63	0.0035	440	0.59
47	Y	48	245192.991	6799.92	9	5.59	0.001	507	0.47
48	Y	47	245192.991	207.89	9	5.59	0.001	507	0.47
58			133537.58	2925.48	2	1.5	0.0003	35	0.71
59			256281.022	8103.33	13	4.55	0.0011	282	0.42
60			260698.374	1923.08	1	3.56	0.0002	64	1
71			68358.8563	806.32	2	2	0.0008	53	0.71
72			268470.334	4846.67	9	1.63	0.0005	128	0.43
73			274220.696	1199.11	1	1.75	0.0002	63	1
85			211488.112	2904.44	2	9	0.001	206	0.71
86			261079.092	3528.84	10	2.99	0.0013	348	0.53
87			285654.927	2666.94	1	6.5	0.0004	110	1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	4	13	0.003	886	0.72
104			294911.804	4436.66	2	1.5	0.0001	31	0.71
105			294911.804	2857.59	1	4.82	0.0003	78	1
106			294911.804	1427.29	2	3	0.0007	195	0.71
111	Y	112	294911.804	269.34	1	1	0.0001	56	1
112	Y	111	291761.174	1378.83	1	1	0.0001	56	1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	7	7.71	0.0018	487	0.47
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	3	2.5	0.0004	113	0.71
122			301918.791	2836.37	1	0	0	0	1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	4	3.83	0.0009	261	0.77
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	11	5.72	0.0043	450	0.43
138			208420.013	2863.28	10	4.66	0.0026	534	0.62
139			306486.611	5374.53	11	12.68	0.0041	1253	0.52
140			306620.935	5165.5	6	5.3	0.001	297	0.75
141			306620.935	3107.02	3	7.2	0.0011	336	0.71
142			306620.935	1871.07	1	14.67	0.0012	378	1
143			306620.935	3248.82	6	3.05	0.0009	272	0.64
144			306620.935	3651.71	4	5.88	0.001	311	0.58
145			306620.935	2121.32	1	30.83	0.0023	702	1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	1	6.33	0.0006	194	1
148			306620.935	1415.22	2	4.49	0.001	306	0.71
149			306620.935	1182.79	1	5	0.0007	204	1
150	Y	151	306620.935	1295.96	1	1	0.0001	50	1

Table 24 continued. *Physeter macrocephalus* (sperm whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	1	1	0.0001	50	1
158			103515.717	949.85	6	9.81	0.0098	1010	0.86
159			308359.665	5549.39	22	8.22	0.0051	1583	0.41
160			308981.349	5034.88	14	7.92	0.0035	1072	0.5
161			308981.349	4191.84	3	4.53	0.0005	158	0.58
162			308981.349	4226.43	3	7.83	0.0009	271	0.58
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	1	11	0.0005	169	1
165			308981.349	4364.3	2	7.33	0.0005	164	0.71
166			308981.349	3130.92	1	9	0.0005	140	1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	7	3.55	0.0023	240	0.55
180	y	179, 181	5937.88703	149.96	7	3.55	0.0023	240	0.55
181	y	179, 180	81676.9261	1133.24	7	3.55	0.0023	240	0.55
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	9	13.09	0.0105	2829	0.69
201			308981.349	2983.42	4	4.88	0.001	318	0.64
202			308981.349	1784.42	5	2.17	0.001	295	0.6
203			308981.349	2107.79	1	7	0.0005	162	1
204			308981.349	2106.21	1	13.5	0.001	312	1
205			308981.349	2503.85	3	4.33	0.0008	253	0.58
206			308981.349	2320.99	5	9.58	0.0033	1004	0.66
207			308981.349	1363.56	1	1	0.0001	36	1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	5	12.4	0.0071	2057	0.67
212			306620.935	1537.48	1	2	0.0002	63	1
213			306620.935	2207.89	1	3	0.0002	66	1
214			306620.935	1563.51	1	2.5	0.0003	77	1
215	Y	216	306620.935	658.32	3	2	0.0007	409	0.58
216	Y	215	306620.935	750.86	3	2	0.0007	409	0.58
218	Y	219, 220	184319.071	97.9	2	49.88	0.0152	11969	0.71
219	Y	218, 220	301918.791	507.57	2	49.88	0.0152	11969	0.71
220	Y	218, 219	301918.791	428.92	2	49.88	0.0152	11969	0.71

Table 25. Estimated density (# individuals per square km), abundance, and CV of *Kogia breviceps* (pygmy sperm whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	3	1.17	0.0015	974	0.58
35	y	34, 46, 47	227825.029	1062.53	3	1.17	0.0015	974	0.58
46	y	34, 35, 47	126041.276	1112.01	3	1.17	0.0015	974	0.58
47	y	34, 35, 46	245192.991	1462.66	3	1.17	0.0015	974	0.58
58	y	71, 72	133537.58	600.2	5	1.4	0.0121	5690	0.72
59	y	60, 73	256281.022	988.36	1	1	0.0031	2478	1
60	y	59, 73	260698.374	296.86	1	1	0.0031	2478	1
71	y	58, 72	68358.8563	148.74	5	1.4	0.0121	5690	0.72
72	y	58, 71	268470.334	854.38	5	1.4	0.0121	5690	0.72
73	y	59, 60	274220.696	403.08	1	1	0.0031	2478	1
86	y	87, 104, 105	261079.092	430.57	2	1	0.0018	2039	0.71
87	y	86, 104, 105	285654.927	709.6	2	1	0.0018	2039	0.71
88	y	106	285654.927	579.91	0	0	0	0	-1
104	y	87, 86, 105	294911.804	824.8	2	1	0.0018	2039	0.71
105	y	87, 86, 104	294911.804	517.74	2	1	0.0018	2039	0.71
106	y	88	294911.804	323.66	0	0	0	0	-1
179	y	180, 181	17800.7129	41.22	1	1	0.0039	406	1
180	y	179, 181	5937.88703	24.63	1	1	0.0039	406	1
181	y	179, 180	81676.9261	509.41	1	1	0.0039	406	1
182			27251.9505	446.13	0	0	0	0	-1

Table 26. Estimated density (# individuals per square km), abundance, and CV of *Kogia sima* (dwarf sperm whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
85	y	103, 102, 101	211488.112	1558.27	19	1.57	0.0171	12877	0.49
86	y	87, 104, 105	261079.092	430.57	3	1.67	0.0045	5098	0.58
87	y	86, 104, 105	285654.927	709.6	3	1.67	0.0045	5098	0.58
88	y	106	285654.927	579.91	1	1	0.0025	1439	1
101	y	85, 103, 102	65027.1922	353.73	19	1.57	0.0171	12877	0.49
102	y	85, 103, 101	181031.403	1043.35	19	1.57	0.0171	12877	0.49
103	y	85, 102, 101	294911.804	949.71	19	1.57	0.0171	12877	0.49
104	y	87, 86, 105	294911.804	824.8	3	1.67	0.0045	5098	0.58
105	y	87, 86, 104	294911.804	517.74	3	1.67	0.0045	5098	0.58
106	y	88	294911.804	323.66	1	1	0.0025	1439	1
118	y	137, 138, 139	141140.114	279.22	19	1.64	0.0269	20421	0.52
119	y	120, 141, 140	273314.083	1567.22	17	1.96	0.0171	20292	0.5
120	y	119, 141, 140	301918.791	1147.61	17	1.96	0.0171	20292	0.5
121	y	122, 142, 143	301918.791	963.86	15	1.34	0.021	25570	0.52
122	y	121, 142, 143	301918.791	632.1	15	1.34	0.021	25570	0.52
123	y	124, 144, 145	301918.791	678.83	2	1.5	0.0045	5496	0.71
124	y	123, 144, 145	301918.791	289.29	2	1.5	0.0045	5496	0.71
125	y	126, 147, 146	301918.791	108.09	4	2	0.0173	21028	0.62
126	y	125, 147, 146	301918.791	331.26	4	2	0.0173	21028	0.62
127	y	128, 149, 148	301918.791	308.05	1	1	0.0052	6298	1
128	y	127, 149, 148	301918.791	14.52	1	1	0.0052	6298	1
129	y	130, 151, 150	301918.791	341.43	0	0	0	0	-1
130	y	129, 151, 150	301918.791	79.52	0	0	0	0	-1
137	y	118, 138, 139	104484.838	656.37	19	1.64	0.0269	20421	0.52
138	y	118, 137, 139	208420.013	399.37	19	1.64	0.0269	20421	0.52
139	y	118, 137, 138	306486.611	1265.13	19	1.64	0.0269	20421	0.52
140	y	119, 120, 141	306620.935	1211.84	17	1.96	0.0171	20292	0.5
141	y	119, 120, 140	306620.935	447.43	17	1.96	0.0171	20292	0.5
142	y	121, 122, 143	306620.935	181.3	15	1.34	0.021	25570	0.52
143	y	121, 122, 142	306620.935	399.44	15	1.34	0.021	25570	0.52
144	y	123, 124, 145	306620.935	406.77	2	1.5	0.0045	5496	0.71
145	y	123, 124, 144	306620.935	124.36	2	1.5	0.0045	5496	0.71
146	y	125, 126, 147	306620.935	256.61	4	2	0.0173	21028	0.62
147	y	125, 126, 146	306620.935	341.23	4	2	0.0173	21028	0.62
148	y	127, 128, 149	306620.935	52.28	1	1	0.0052	6298	1
149	y	127, 128, 148	306620.935	58.06	1	1	0.0052	6298	1
150	y	129, 130, 151	306620.935	160.83	0	0	0	0	-1
151	y	129, 130, 150	306620.935	114.89	0	0	0	0	-1
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	1	1	0.0017	4312	1
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	1	1	0.0017	4312	1
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	1	1	0.0017	4312	1
161	y	162, 163, 164, 202, 203, 204, 205	308981.349	37.91	0	0	0	0	-1
162	y	161, 163, 164, 202, 203, 204, 205	308981.349	7.78	0	0	0	0	-1
163	y	161, 162, 164, 202, 203, 204, 205	308981.349	25	0	0	0	0	-1
164	y	161, 162, 163, 202, 203, 204, 205	308981.349	9.57	0	0	0	0	-1

Table 26 continued. *Kogia sima* (dwarf sperm whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
165	y	166, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	6.63	0	0	0	0	-1
166	y	165, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
167	y	165, 166, 168, 169, 170, 206, 207, 208, 209	308981.349	26.25	0	0	0	0	-1
168	y	165, 166, 167, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
169	y	165, 166, 167, 168, 170, 206, 207, 208, 209	308981.349	12.97	0	0	0	0	-1
170	y	165, 166, 167, 168, 169, 206, 207, 208, 209	308981.349	9.88	0	0	0	0	-1
179	y	180, 181	17800.7129	41.22	5	2	0.0385	4060	0.72
180	y	179, 181	5937.88703	24.63	5	2	0.0385	4060	0.72
181	y	179, 180	81676.9261	509.41	5	2	0.0385	4060	0.72
182			27251.9505	446.13	0	0	0	0	-1
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	1	1	0.0017	4312	1
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	1	1	0.0017	4312	1
202	y	161, 162, 163, 164, 203, 204, 205	308981.349	31.67	0	0	0	0	-1
203	y	161, 162, 163, 164, 202, 204, 205	308981.349	105.71	0	0	0	0	-1
204	y	161, 162, 163, 164, 202, 203, 205	308981.349	115.94	0	0	0	0	-1
205	y	161, 162, 163, 164, 202, 203, 204	308981.349	92.98	0	0	0	0	-1
206	y	165, 166, 167, 168, 169, 170, 207, 208, 209	308981.349	69.25	0	0	0	0	-1
207	y	165, 166, 167, 168, 169, 170, 206, 208, 209	308981.349	51.88	0	0	0	0	-1
208	y	165, 166, 167, 168, 169, 170, 206, 207, 209	308981.349	66.09	0	0	0	0	-1
209	y	165, 166, 167, 168, 169, 170, 206, 207, 208	308981.349	35.3	0	0	0	0	-1
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	1	1	0.0017	4312	1
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	1	1	0.0017	4312	1

Table 26 continued. *Kogia sima* (dwarf sperm whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	1	1	0.0017	4312	1
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	1	1	0.0017	4312	1

Table 27. Estimated density (# individuals per square km), abundance, and CV of Ziphiid whales in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	7	2.36	0.0025	1585	0.52
35	y	34, 46, 47	227825.029	1062.53	7	2.36	0.0025	1585	0.52
46	y	34, 35, 47	126041.276	1112.01	7	2.36	0.0025	1585	0.52
47	y	34, 35, 46	245192.991	1462.66	7	2.36	0.0025	1585	0.52
58	y	71, 72	133537.58	600.2	1	2	0.0008	378	1
59	y	60, 73	256281.022	988.36	0	0	0	0	-1
60	y	59, 73	260698.374	296.86	0	0	0	0	-1
71	y	58, 72	68358.8563	148.74	1	2	0.0008	378	1
72	y	58, 71	268470.334	854.38	1	2	0.0008	378	1
73	y	59, 60	274220.696	403.08	0	0	0	0	-1
85	y	103, 102, 101	211488.112	1558.27	14	1.91	0.0036	2686	0.41
86	y	87, 104, 105	261079.092	430.57	1	2	0.0004	474	1
87	y	86, 104, 105	285654.927	709.6	1	2	0.0004	474	1
88	y	106	285654.927	579.91	1	1	0.0006	335	1
101	y	85, 103, 102	65027.1922	353.73	14	1.91	0.0036	2686	0.41
102	y	85, 103, 101	181031.403	1043.35	14	1.91	0.0036	2686	0.41
103	y	85, 102, 101	294911.804	949.71	14	1.91	0.0036	2686	0.41
104	y	87, 86, 105	294911.804	824.8	1	2	0.0004	474	1
105	y	87, 86, 104	294911.804	517.74	1	2	0.0004	474	1
106	y	88	294911.804	323.66	1	1	0.0006	335	1
118	y	137, 138, 139	141140.114	279.22	8	2.19	0.0035	2668	0.59
119	y	120, 141, 140	273314.083	1567.22	11	1.8	0.0024	2804	0.47
120	y	119, 141, 140	301918.791	1147.61	11	1.8	0.0024	2804	0.47
121	y	122, 142, 143	301918.791	963.86	3	1.67	0.0012	1477	0.58
122	y	121, 142, 143	301918.791	632.1	3	1.67	0.0012	1477	0.58
123	y	124, 144, 145	301918.791	678.83	3	1.56	0.0016	1989	0.58
124	y	123, 144, 145	301918.791	289.29	3	1.56	0.0016	1989	0.58
125	y	126, 147, 146	301918.791	108.09	0	0	0	0	-1
126	y	125, 147, 146	301918.791	331.26	0	0	0	0	-1
127	y	128, 149, 148	301918.791	308.05	0	0	0	0	-1
128	y	127, 149, 148	301918.791	14.52	0	0	0	0	-1
129	y	130, 151, 150	301918.791	341.43	1	1	0.0007	911	1
130	y	129, 151, 150	301918.791	79.52	1	1	0.0007	911	1
137	y	118, 138, 139	104484.838	656.37	8	2.19	0.0035	2668	0.59
138	y	118, 137, 139	208420.013	399.37	8	2.19	0.0035	2668	0.59
139	y	118, 137, 138	306486.611	1265.13	8	2.19	0.0035	2668	0.59
140	y	119, 120, 141	306620.935	1211.84	11	1.8	0.0024	2804	0.47
141	y	119, 120, 140	306620.935	447.43	11	1.8	0.0024	2804	0.47
142	y	121, 122, 143	306620.935	181.3	3	1.67	0.0012	1477	0.58
143	y	121, 122, 142	306620.935	399.44	3	1.67	0.0012	1477	0.58
144	y	123, 124, 145	306620.935	406.77	3	1.56	0.0016	1989	0.58
145	y	123, 124, 144	306620.935	124.36	3	1.56	0.0016	1989	0.58
146	y	125, 126, 147	306620.935	256.61	0	0	0	0	-1
147	y	125, 126, 146	306620.935	341.23	0	0	0	0	-1
148	y	127, 128, 149	306620.935	52.28	0	0	0	0	-1
149	y	127, 128, 148	306620.935	58.06	0	0	0	0	-1
150	y	129, 130, 151	306620.935	160.83	1	1	0.0007	911	1
151	y	129, 130, 150	306620.935	114.89	1	1	0.0007	911	1
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	6	1.5	0.0036	9029	0.56

Table 27 continued. Ziphiid whales

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	6	1.5	0.0036	9029	0.56
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	6	1.5	0.0036	9029	0.56
161	y	162, 163, 164, 202, 203, 204, 205	308981.349	37.91	1	2	0.0024	5878	1
162	y	161, 163, 164, 202, 203, 204, 205	308981.349	7.78	1	2	0.0024	5878	1
163	y	161, 162, 164, 202, 203, 204, 205	308981.349	25	1	2	0.0024	5878	1
164	y	161, 162, 163, 202, 203, 204, 205	308981.349	9.57	1	2	0.0024	5878	1
165	y	166, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	6.63	1	3.5	0.0068	21151	1
166	y	165, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	0	1	3.5	0.0068	21151	1
167	y	165, 166, 168, 169, 170, 206, 207, 208, 209	308981.349	26.25	1	3.5	0.0068	21151	1
168	y	165, 166, 167, 169, 170, 206, 207, 208, 209	308981.349	0	1	3.5	0.0068	21151	1
169	y	165, 166, 167, 168, 170, 206, 207, 208, 209	308981.349	12.97	1	3.5	0.0068	21151	1
170	y	165, 166, 167, 168, 169, 206, 207, 208, 209	308981.349	9.88	1	3.5	0.0068	21151	1
179	y	180, 181	17800.7129	41.22	0	0	0	0	-1
180	y	179, 181	5937.88703	24.63	0	0	0	0	-1

Table 27 continued. Ziphiid whales

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
181	y	179, 180	81676.9261	509.41	0	0	0	0	-1
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	6	1.5	0.0036	9029	0.56
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	6	1.5	0.0036	9029	0.56
202	y	161, 162, 163, 164, 203, 204, 205	308981.349	31.67	1	2	0.0024	5878	1
203	y	161, 162, 163, 164, 202, 204, 205	308981.349	105.71	1	2	0.0024	5878	1
204	y	161, 162, 163, 164, 202, 203, 205	308981.349	115.94	1	2	0.0024	5878	1
205	y	161, 162, 163, 164, 202, 203, 204	308981.349	92.98	1	2	0.0024	5878	1
206	y	165, 166, 167, 168, 169, 170, 207, 208, 209	308981.349	69.25	1	3.5	0.0068	21151	1
207	y	165, 166, 167, 168, 169, 170, 206, 208, 209	308981.349	51.88	1	3.5	0.0068	21151	1
208	y	165, 166, 167, 168, 169, 170, 206, 207, 209	308981.349	66.09	1	3.5	0.0068	21151	1
209	y	165, 166, 167, 168, 169, 170, 206, 207, 208	308981.349	35.3	1	3.5	0.0068	21151	1
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	6	1.5	0.0036	9029	0.56
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	6	1.5	0.0036	9029	0.56

Table 27 continued. Ziphiid whales

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	6	1.5	0.0036	9029	0.56
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	6	1.5	0.0036	9029	0.56

Table 28. Estimated density (# individuals per square km), abundance, and CV of *Indopacetus pacificus*? (Tropical bottlenose whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution.

stratum	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
144	306620.935	3651.71	1	10.95	0.0004	114	1
160	308981.349	5034.88	1	7.67	0.0002	58	1
161	308981.349	4191.84	1	13	0.0004	119	1

Table 29. Estimated density (# individuals per square km), abundance, and CV of *Mesoplodon* sp. (*Mesoplodon*, unidentified species) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	4	1.25	0.0005	332	0.56
35	y	34, 46, 47	227825.029	1062.53	4	1.25	0.0005	332	0.56
46	y	34, 35, 47	126041.276	1112.01	4	1.25	0.0005	332	0.56
47	y	34, 35, 46	245192.991	1462.66	4	1.25	0.0005	332	0.56
85	y	103, 102, 101	211488.112	1558.27	11	2.45	0.0028	2133	0.39
86	y	87, 104, 105	261079.092	430.57	1	3	0.0005	560	1
87	y	86, 104, 105	285654.927	709.6	1	3	0.0005	560	1
88	y	106	285654.927	579.91	0	0	0	0	-1
101	y	85, 103, 102	65027.1922	353.73	11	2.45	0.0028	2133	0.39
102	y	85, 103, 101	181031.403	1043.35	11	2.45	0.0028	2133	0.39
103	y	85, 102, 101	294911.804	949.71	11	2.45	0.0028	2133	0.39
104	y	87, 86, 105	294911.804	824.8	1	3	0.0005	560	1
105	y	87, 86, 104	294911.804	517.74	1	3	0.0005	560	1
106	y	88	294911.804	323.66	0	0	0	0	-1
118	y	137, 138, 139	141140.114	279.22	2	3.25	0.001	780	0.71
119	y	120, 141, 140	273314.083	1567.22	4	1.33	0.0005	594	0.63
120	y	119, 141, 140	301918.791	1147.61	4	1.33	0.0005	594	0.63
121	y	122, 142, 143	301918.791	963.86	6	2.34	0.0027	3269	0.51
122	y	121, 142, 143	301918.791	632.1	6	2.34	0.0027	3269	0.51
123	y	124, 144, 145	301918.791	678.83	1	3	0.0008	1006	1
124	y	123, 144, 145	301918.791	289.29	1	3	0.0008	1006	1
125	y	126, 147, 146	301918.791	108.09	1	4	0.0016	1924	1
126	y	125, 147, 146	301918.791	331.26	1	4	0.0016	1924	1
127	y	128, 149, 148	301918.791	308.05	0	0	0	0	-1
128	y	127, 149, 148	301918.791	14.52	0	0	0	0	-1
129	y	130, 151, 150	301918.791	341.43	0	0	0	0	-1
130	y	129, 151, 150	301918.791	79.52	0	0	0	0	-1
137	y	118, 138, 139	104484.838	656.37	2	3.25	0.001	780	0.71
138	y	118, 137, 139	208420.013	399.37	2	3.25	0.001	780	0.71
139	y	118, 137, 138	306486.611	1265.13	2	3.25	0.001	780	0.71
140	y	119, 120, 141	306620.935	1211.84	4	1.33	0.0005	594	0.63
141	y	119, 120, 140	306620.935	447.43	4	1.33	0.0005	594	0.63
142	y	121, 122, 143	306620.935	181.3	6	2.34	0.0027	3269	0.51
143	y	121, 122, 142	306620.935	399.44	6	2.34	0.0027	3269	0.51
144	y	123, 124, 145	306620.935	406.77	1	3	0.0008	1006	1
145	y	123, 124, 144	306620.935	124.36	1	3	0.0008	1006	1
146	y	125, 126, 147	306620.935	256.61	1	4	0.0016	1924	1
147	y	125, 126, 146	306620.935	341.23	1	4	0.0016	1924	1
148	y	127, 128, 149	306620.935	52.28	0	0	0	0	-1
149	y	127, 128, 148	306620.935	58.06	0	0	0	0	-1
150	y	129, 130, 151	306620.935	160.83	0	0	0	0	-1
151	y	129, 130, 150	306620.935	114.89	0	0	0	0	-1
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	5	1.75	0.0028	6905	0.45
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	5	1.75	0.0028	6905	0.45
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	5	1.75	0.0028	6905	0.45
161	y	162, 163, 164, 202, 203, 204, 205	308981.349	37.91	1	2	0.0019	4624	1
162	y	161, 163, 164, 202, 203, 204, 205	308981.349	7.78	1	2	0.0019	4624	1

Table 29 continued. *Mesoplodon* sp.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
163	y	161, 162, 164, 202, 203, 204, 205	308981.349	25	1	2	0.0019	4624	1
164	y	161, 162, 163, 202, 203, 204, 205	308981.349	9.57	1	2	0.0019	4624	1
165	y	166, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	6.63	0	0	0	0	-1
166	y	165, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
167	y	165, 166, 168, 169, 170, 206, 207, 208, 209	308981.349	26.25	0	0	0	0	-1
168	y	165, 166, 167, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
169	y	165, 166, 167, 168, 170, 206, 207, 208, 209	308981.349	12.97	0	0	0	0	-1
170	y	165, 166, 167, 168, 169, 206, 207, 208, 209	308981.349	9.88	0	0	0	0	-1
179	y	180, 181	17800.7129	41.22	1	3.67	0.0064	672	1
180	y	179, 181	5937.88703	24.63	1	3.67	0.0064	672	1
181	y	179, 180	81676.9261	509.41	1	3.67	0.0064	672	1
182			27251.9505	446.13	0	0	0	0	-1
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	5	1.75	0.0028	6905	0.45
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	5	1.75	0.0028	6905	0.45
202	y	161, 162, 163, 164, 203, 204, 205	308981.349	31.67	1	2	0.0019	4624	1
203	y	161, 162, 163, 164, 202, 204, 205	308981.349	105.71	1	2	0.0019	4624	1
204	y	161, 162, 163, 164, 202, 203, 205	308981.349	115.94	1	2	0.0019	4624	1
205	y	161, 162, 163, 164, 202, 203, 204	308981.349	92.98	1	2	0.0019	4624	1
206	y	165, 166, 167, 168, 169, 170, 207, 208, 209	308981.349	69.25	0	0	0	0	-1
207	y	165, 166, 167, 168, 169, 170, 206, 208, 209	308981.349	51.88	0	0	0	0	-1
208	y	165, 166, 167, 168, 169, 170, 206, 207, 209	308981.349	66.09	0	0	0	0	-1
209	y	165, 166, 167, 168, 169, 170, 206, 207, 208	308981.349	35.3	0	0	0	0	-1
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	5	1.75	0.0028	6905	0.45
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	5	1.75	0.0028	6905	0.45
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	5	1.75	0.0028	6905	0.45
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	5	1.75	0.0028	6905	0.45

Table 30. Estimated density (# individuals per square km), abundance, and CV of *Mesoplodon densirostris* (Blaineville's beaked whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	1	4.75	0.0005	315	1
35	y	34, 46, 47	227825.029	1062.53	1	4.75	0.0005	315	1
46	y	34, 35, 47	126041.276	1112.01	1	4.75	0.0005	315	1
47	y	34, 35, 46	245192.991	1462.66	1	4.75	0.0005	315	1
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	2	2	0.0013	3157	0.71
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	2	2	0.0013	3157	0.71
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	2	2	0.0013	3157	0.71
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	2	2	0.0013	3157	0.71
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	2	2	0.0013	3157	0.71
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	2	2	0.0013	3157	0.71
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	2	2	0.0013	3157	0.71
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	2	2	0.0013	3157	0.71
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	2	2	0.0013	3157	0.71

Table 31. Estimated density (# individuals per square km), abundance, and CV of *Ziphius cavirostris* (Cuvier's beaked whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	7	2.19	0.0031	1991	0.54
35	y	34, 46, 47	227825.029	1062.53	7	2.19	0.0031	1991	0.54
46	y	34, 35, 47	126041.276	1112.01	7	2.19	0.0031	1991	0.54
47	y	34, 35, 46	245192.991	1462.66	7	2.19	0.0031	1991	0.54
58	y	71, 72	133537.58	600.2	0	0	0	0	-1
59	y	60, 73	256281.022	988.36	5	1.87	0.0054	4299	0.55
60	y	59, 73	260698.374	296.86	5	1.87	0.0054	4299	0.55
71	y	58, 72	68358.8563	148.74	0	0	0	0	-1
72	y	58, 71	268470.334	854.38	0	0	0	0	-1
73	y	59, 60	274220.696	403.08	5	1.87	0.0054	4299	0.55
85	y	103, 102, 101	211488.112	1558.27	6	2.06	0.0025	1906	0.62
86	y	87, 104, 105	261079.092	430.57	1	1	0.0003	365	1
87	y	86, 104, 105	285654.927	709.6	1	1	0.0003	365	1
88	y	106	285654.927	579.91	0	0	0	0	-1
101	y	85, 103, 102	65027.1922	353.73	6	2.06	0.0025	1906	0.62
102	y	85, 103, 101	181031.403	1043.35	6	2.06	0.0025	1906	0.62
103	y	85, 102, 101	294911.804	949.71	6	2.06	0.0025	1906	0.62
104	y	87, 86, 105	294911.804	824.8	1	1	0.0003	365	1
105	y	87, 86, 104	294911.804	517.74	1	1	0.0003	365	1
106	y	88	294911.804	323.66	0	0	0	0	-1
118	y	137, 138, 139	141140.114	279.22	6	2	0.0037	2816	0.6
119	y	120, 141, 140	273314.083	1567.22	9	2.11	0.0035	4142	0.52
120	y	119, 141, 140	301918.791	1147.61	9	2.11	0.0035	4142	0.52
121	y	122, 142, 143	301918.791	963.86	4	2	0.003	3638	0.82
122	y	121, 142, 143	301918.791	632.1	4	2	0.003	3638	0.82
123	y	124, 144, 145	301918.791	678.83	2	2	0.0022	2624	0.71
124	y	123, 144, 145	301918.791	289.29	2	2	0.0022	2624	0.71
125	y	126, 147, 146	301918.791	108.09	0	0	0	0	-1
126	y	125, 147, 146	301918.791	331.26	0	0	0	0	-1
127	y	128, 149, 148	301918.791	308.05	0	0	0	0	-1
128	y	127, 149, 148	301918.791	14.52	0	0	0	0	-1
129	y	130, 151, 150	301918.791	341.43	3	1.56	0.0054	6540	0.58
130	y	129, 151, 150	301918.791	79.52	3	1.56	0.0054	6540	0.58
137	y	118, 138, 139	104484.838	656.37	6	2	0.0037	2816	0.6
138	y	118, 137, 139	208420.013	399.37	6	2	0.0037	2816	0.6
139	y	118, 137, 138	306486.611	1265.13	6	2	0.0037	2816	0.6
140	y	119, 120, 141	306620.935	1211.84	9	2.11	0.0035	4142	0.52
141	y	119, 120, 140	306620.935	447.43	9	2.11	0.0035	4142	0.52
142	y	121, 122, 143	306620.935	181.3	4	2	0.003	3638	0.82
143	y	121, 122, 142	306620.935	399.44	4	2	0.003	3638	0.82
144	y	123, 124, 145	306620.935	406.77	2	2	0.0022	2624	0.71
145	y	123, 124, 144	306620.935	124.36	2	2	0.0022	2624	0.71
146	y	125, 126, 147	306620.935	256.61	0	0	0	0	-1
147	y	125, 126, 146	306620.935	341.23	0	0	0	0	-1
148	y	127, 128, 149	306620.935	52.28	0	0	0	0	-1
149	y	127, 128, 148	306620.935	58.06	0	0	0	0	-1
150	y	129, 130, 151	306620.935	160.83	3	1.56	0.0054	6540	0.58
151	y	129, 130, 150	306620.935	114.89	3	1.56	0.0054	6540	0.58
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	0	0	0	0	-1

Table 31 continued. *Ziphius cavirostris* (Cuvier's beaked whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	0	0	0	0	-1
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	0	0	0	0	-1
161	y	162, 163, 164, 202, 203, 204, 205	308981.349	37.91	2	2	0.0073	18094	0.71
162	y	161, 163, 164, 202, 203, 204, 205	308981.349	7.78	2	2	0.0073	18094	0.71
163	y	161, 162, 164, 202, 203, 204, 205	308981.349	25	2	2	0.0073	18094	0.71
164	y	161, 162, 163, 202, 203, 204, 205	308981.349	9.57	2	2	0.0073	18094	0.71
165	y	166, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	6.63	1	4.33	0.013	40306	1
166	y	165, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	0	1	4.33	0.013	40306	1
167	y	165, 166, 168, 169, 170, 206, 207, 208, 209	308981.349	26.25	1	4.33	0.013	40306	1
168	y	165, 166, 167, 169, 170, 206, 207, 208, 209	308981.349	0	1	4.33	0.013	40306	1
169	y	165, 166, 167, 168, 170, 206, 207, 208, 209	308981.349	12.97	1	4.33	0.013	40306	1
170	y	165, 166, 167, 168, 169, 206, 207, 208, 209	308981.349	9.88	1	4.33	0.013	40306	1
179	y	180, 181	17800.7129	41.22	4	2.79	0.038	4004	0.73
180	y	179, 181	5937.88703	24.63	4	2.79	0.038	4004	0.73
181	y	179, 180	81676.9261	509.41	4	2.79	0.038	4004	0.73
182			27251.9505	446.13	0	0	0	0	-1

Table 31 continued. *Ziphius cavirostris* (Cuvier's beaked whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	0	0	0	0	-1
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	0	0	0	0	-1
202	y	161, 162, 163, 164, 203, 204, 205	308981.349	31.67	2	2	0.0073	18094	0.71
203	y	161, 162, 163, 164, 202, 204, 205	308981.349	105.71	2	2	0.0073	18094	0.71
204	y	161, 162, 163, 164, 202, 203, 205	308981.349	115.94	2	2	0.0073	18094	0.71
205	y	161, 162, 163, 164, 202, 203, 204	308981.349	92.98	2	2	0.0073	18094	0.71
206	y	165, 166, 167, 168, 169, 170, 207, 208, 209	308981.349	69.25	1	4.33	0.013	40306	1
207	y	165, 166, 167, 168, 169, 170, 206, 208, 209	308981.349	51.88	1	4.33	0.013	40306	1
208	y	165, 166, 167, 168, 169, 170, 206, 207, 209	308981.349	66.09	1	4.33	0.013	40306	1
209	y	165, 166, 167, 168, 169, 170, 206, 207, 208	308981.349	35.3	1	4.33	0.013	40306	1
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	0	0	0	0	-1
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	0	0	0	0	-1
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	0	0	0	0	-1
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	0	0	0	0	-1

Table 32. Estimated density (# individuals per square km), abundance, and CV of *Berardius bairdii* (Baird's beaked whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	5	4.12	0.0005	239	0.47
36	Y	35	227825.029	679.23	5	4.12	0.0005	239	0.47
46			126041.276	3824.05	2	16.17	0.001	128	0.71
47	Y	48	245192.991	6799.92	1	19.2	0.0003	161	1
48	Y	47	245192.991	207.89	1	19.2	0.0003	161	1
58			133537.58	2925.48	0	0	0	0	-1
59			256281.022	8103.33	2	7.87	0.0002	60	0.71
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	1	7.5	0.0012	79	1
72			268470.334	4846.67	1	5.4	0.0001	37	1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1

Table 32 continued. *Berardius bairdii* (Baird's beaked whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 33. Estimated density (# individuals per square km), abundance, and CV of Rorqual, unidentified to species, in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	4	1	0.0006	140	0.76
23	Y	22	199809.686	1495.16	4	1	0.0006	140	0.76
34			38788.4619	702.16	2	1	0.0007	28	0.71
35	Y	36	227825.029	5267.09	5	1.5	0.0002	112	0.47
36	Y	35	227825.029	679.23	5	1.5	0.0002	112	0.47
46			126041.276	3824.05	16	1.47	0.0013	161	0.27
47	Y	48	245192.991	6799.92	4	1.67	0.0002	82	0.52
48	Y	47	245192.991	207.89	4	1.67	0.0002	82	0.52
58			133537.58	2925.48	3	1.33	0.0003	46	0.58
59			256281.022	8103.33	22	1.44	0.0009	226	0.34
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	2	1	0.0009	62	1
72			268470.334	4846.67	3	1	0.0002	61	0.58
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	2	1	0.0003	54	0.71
86			261079.092	3528.84	7	1.06	0.0008	201	0.49
87			285654.927	2666.94	2	1	0.0003	79	0.71
88			285654.927	864.14	1	1	0.0004	122	1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	1	1	0.0001	40	1
104			294911.804	4436.66	2	1	0.0002	49	0.71
105			294911.804	2857.59	1	1	0.0001	38	1
106			294911.804	1427.29	1	1	0.0003	76	1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	5	1	0.0004	105	0.54
120			301918.791	3571.23	1	1	0.0001	31	1
121			301918.791	3152.12	1	1	0.0001	35	1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	1	1	0.0001	43	1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	1	1	0.0002	60	1
126			301918.791	1953.39	2	1	0.0004	114	0.71
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	1	1	0.0002	17	1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	1	0	0	0	1
140			306620.935	5165.5	5	1.48	0.0005	161	0.55
141			306620.935	3107.02	3	1	0.0004	109	0.58
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	1	1	0.0001	35	1
144			306620.935	3651.71	1	1	0.0001	31	1
145			306620.935	2121.32	1	1	0.0002	53	1
146			306620.935	2084.39	1	1	0.0002	54	1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1

Table 33 continued. Rorqual, unidentified to species

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
150	Y	151	306620.935	1295.96	1	1	0.0002	116	1
151	Y	150	306620.935	654.42	1	1	0.0002	116	1
158			103515.717	949.85	1	2	0.0008	80	1
159			308359.665	5549.39	2	1	0.0001	41	0.71
160			308981.349	5034.88	8	1.25	0.0007	226	0.49
161			308981.349	4191.84	6	1.17	0.0006	190	0.46
162			308981.349	4226.43	5	1.4	0.0006	188	0.61
163			308981.349	2752.83	5	1.2	0.0008	248	0.54
164			308981.349	3170.56	5	1.4	0.0008	251	0.64
165			308981.349	4364.3	5	1	0.0004	130	0.45
166			308981.349	3130.92	2	1.25	0.0003	91	0.71
167			308981.349	1979.39	3	1.11	0.0006	192	0.58
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	11	2.73	0.0051	539	0.65
180	y	179, 181	5937.88703	149.96	11	2.73	0.0051	539	0.65
181	y	179, 180	81676.9261	1133.24	11	2.73	0.0051	539	0.65
182			27251.9505	624.15	13	1.85	0.0103	279	0.54
200			269857.128	1768.98	1	1	0.0002	56	1
201			308981.349	2983.42	3	1	0.0004	114	0.58
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	2	1	0.0003	108	0.71
204			308981.349	2106.21	2	1	0.0003	108	0.71
205			308981.349	2503.85	1	1	0.0001	45	1
206			308981.349	2320.99	3	1.5	0.0007	220	0.58
207			308981.349	1363.56	1	1	0.0003	83	1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	1	1	0.0002	73	1
213			306620.935	2207.89	1	1	0.0002	51	1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	6	1	0.0016	956	0.53
216	Y	215	306620.935	750.86	6	1	0.0016	956	0.53
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 34. Estimated density (# individuals per square km), abundance, and CV of *Balaenoptera acutorostrata* (minke whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	7	1.04	0.0004	258	0.44
35	y	34, 46, 47	227825.029	1062.53	7	1.04	0.0004	258	0.44
46	y	34, 35, 47	126041.276	1112.01	7	1.04	0.0004	258	0.44
47	y	34, 35, 46	245192.991	1462.66	7	1.04	0.0004	258	0.44
58	y	71, 72	133537.58	600.2	1	1	0.0002	79	1
59	y	60, 73	256281.022	988.36	2	1	0.0003	252	0.71
60	y	59, 73	260698.374	296.86	2	1	0.0003	252	0.71
71	y	58, 72	68358.8563	148.74	1	1	0.0002	79	1
72	y	58, 71	268470.334	854.38	1	1	0.0002	79	1
73	y	59, 60	274220.696	403.08	2	1	0.0003	252	0.71

Table 35. Estimated density (# individuals per square km), abundance, and CV of *Balaenoptera edeni* (Bryde's whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	0	0	0	0	-1
36	Y	35	227825.029	679.23	0	0	0	0	-1
46			126041.276	3824.05	0	0	0	0	-1
47	Y	48	245192.991	6799.92	1	2	0.0001	35	1
48	Y	47	245192.991	207.89	1	2	0.0001	35	1
58			133537.58	2925.48	0	0	0	0	-1
59			256281.022	8103.33	0	0	0	0	-1
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	4	1	0.0006	120	0.65
86			261079.092	3528.84	3	1	0.0003	91	0.58
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	1	1	0.0001	33	1
102	Y	101	181031.403	2383.79	1	1	0.0001	33	1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	1	2	0.0002	55	1
105			294911.804	2857.59	1	1	0.0001	42	1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	1	2	0.0003	79	1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	1	5.67	0.0009	275	1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	3	1.33	0.0009	269	0.58
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	2	1	0.0005	164	0.71
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	1	2	0.0002	47	1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	1	1	0.0001	41	1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	1	3	0.0008	240	1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1

Table 35 continued. *Balaenoptera edeni* (Bryde's whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
159			308359.665	5549.39	1	1	0.0001	23	1
160			308981.349	5034.88	8	1.73	0.0011	349	0.5
161			308981.349	4191.84	10	1.52	0.0015	461	0.47
162			308981.349	4226.43	2	1.73	0.0003	104	0.71
163			308981.349	2752.83	1	1.8	0.0003	83	1
164			308981.349	3170.56	2	2.25	0.0006	181	0.71
165			308981.349	4364.3	2	1.5	0.0003	87	0.71
166			308981.349	3130.92	2	3.17	0.0008	257	0.71
167			308981.349	1979.39	2	1.33	0.0006	171	0.71
168	Y	169, 170	308981.349	419.91	1	1	0.0005	480	1
169	Y	168, 170	308981.349	12.97	1	1	0.0005	480	1
170	Y	168, 169	308981.349	361.95	1	1	0.0005	480	1
179	y	180, 181	17800.7129	274.67	3	2.2	0.0011	119	0.58
180	y	179, 181	5937.88703	149.96	3	2.2	0.0011	119	0.58
181	y	179, 180	81676.9261	1133.24	3	2.2	0.0011	119	0.58
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	2	6.25	0.0029	891	0.71
203			308981.349	2107.79	2	2	0.0008	241	0.71
204			308981.349	2106.21	1	2.33	0.0005	141	1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	1	1	0.0002	55	1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	1	1	0.0003	105	1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	1	1	0.0003	87	1
212			306620.935	1537.48	1	1	0.0003	82	1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	2	1	0.0006	357	0.71
216	Y	215	306620.935	750.86	2	1	0.0006	357	0.71
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 36. Estimated density (# individuals per square km), abundance, and CV of *Balaenoptera borealis* (sei whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	1	2.01	0	18	1
36	Y	35	227825.029	679.23	1	2.01	0	18	1
46			126041.276	3824.05	0	0	0	0	-1
47	Y	48	245192.991	6799.92	0	0	0	0	-1
48	Y	47	245192.991	207.89	0	0	0	0	-1
58			133537.58	2925.48	0	0	0	0	-1
59			256281.022	8103.33	0	0	0	0	-1
60			260698.374	1923.08	0	0	0	0	-1

Table 37. Estimated density (# individuals per square km), abundance, and CV of *Balaenoptera physalus* (fin whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	2	1	0.0003	70	0.71
23	Y	22	199809.686	1495.16	2	1	0.0003	70	0.71
34			38788.4619	702.16	1	1	0.0004	14	1
35	Y	36	227825.029	5267.09	7	1.43	0.0004	193	0.52
36	Y	35	227825.029	679.23	7	1.43	0.0004	193	0.52
46			126041.276	3824.05	37	2.52	0.0048	600	0.28
47	Y	48	245192.991	6799.92	18	1.79	0.001	501	0.42
48	Y	47	245192.991	207.89	18	1.79	0.001	501	0.42
58			133537.58	2925.48	3	2	0.0005	69	0.58
59			256281.022	8103.33	42	1.62	0.0018	451	0.35
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1

Table 37 continued. *Balaenoptera physalus* (fin whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	4	7.89	0.0054	567	0.89
180	y	179, 181	5937.88703	149.96	4	7.89	0.0054	567	0.89
181	y	179, 180	81676.9261	1133.24	4	7.89	0.0054	567	0.89
182			27251.9505	624.15	14	1.71	0.0103	279	0.53
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 38. Estimated density (# individuals per square km), abundance, and CV of *Balaenoptera musculus* (blue whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.12629	316.69	0	0	0	0	-1
23	Y	22	199809.6856	1495.16	0	0	0	0	-1
34			38788.46188	702.16	0	0	0	0	-1
35	Y	36	227825.0286	5267.09	4	1.28	0.0002	87	0.52
36	Y	35	227825.0286	679.23	4	1.28	0.0002	87	0.52
46			126041.2757	3824.05	35	1.58	0.0035	442	0.28
47	Y	48	245192.991	6799.92	9	1.48	0.0005	234	0.42
48	Y	47	245192.991	207.89	9	1.48	0.0005	234	0.42
58			133537.5799	2925.48	37	1.77	0.005	673	0.45
59			256281.0217	8103.33	78	1.65	0.0035	887	0.21
60			260698.3744	1923.08	2	2.25	0.0006	153	0.71
71			68358.85627	806.32	0	0	0	0	-1
72			268470.3338	4846.67	3	1.56	0.0002	55	0.58
73			274220.6956	1199.11	0	0	0	0	-1
85			211488.1116	2904.44	0	0	0	0	-1
86			261079.0919	3528.84	19	1.26	0.0014	378	0.45
87			285654.9267	2666.94	2	1.75	0.0003	80	0.71
88			285654.9267	864.14	0	0	0	0	-1
101	Y	102	65027.19224	719.65	0	0	0	0	-1
102	Y	101	181031.4029	2383.79	0	0	0	0	-1
103			294911.8044	2726.38	0	0	0	0	-1
104			294911.8044	4436.66	2	1	0.0001	28	0.71
105			294911.8044	2857.59	0	0	0	0	-1
106			294911.8044	1427.29	0	0	0	0	-1
111	Y	112	294911.8044	269.34	0	0	0	0	-1
112	Y	111	291761.1743	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.0832	4770.17	6	1.5	0.0004	110	0.46
120			301918.7913	3571.23	5	1.07	0.0003	96	0.59
121			301918.7913	3152.12	0	0	0	0	-1
122			301918.7913	2836.37	0	0	0	0	-1
123			301918.7913	2562.26	0	0	0	0	-1
124			301918.7913	2791.69	0	0	0	0	-1
125			301918.7913	1850.43	0	0	0	0	-1
126			301918.7913	1953.39	0	0	0	0	-1
127			301918.7913	1519.92	0	0	0	0	-1
128	Y	129	301918.7913	730.39	0	0	0	0	-1
129	Y	128	301918.7913	1119.84	0	0	0	0	-1
130	Y	131	301918.7913	1061.65	0	0	0	0	-1
131	Y	130	301918.7913	247.07	0	0	0	0	-1
137			104484.8376	2300.5	0	0	0	0	-1
138			208420.0133	2863.28	0	0	0	0	-1
139			306486.6107	5374.53	2	1	0.0001	24	0.71
140			306620.9351	5165.5	10	1.28	0.0005	162	0.43
141			306620.9351	3107.02	1	2.33	0.0002	49	1
142			306620.9351	1871.07	0	0	0	0	-1
143			306620.9351	3248.82	0	0	0	0	-1
144			306620.9351	3651.71	0	0	0	0	-1
145			306620.9351	2121.32	0	0	0	0	-1
146			306620.9351	2084.39	0	0	0	0	-1
147			306620.9351	1580.33	0	0	0	0	-1
148			306620.9351	1415.22	0	0	0	0	-1
149			306620.9351	1182.79	0	0	0	0	-1

Table 38 continued. *Balaenoptera musculus* (blue whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
150	Y	151	306620.9351	1295.96	0	0	0	0	-1
151	Y	150	306620.9351	654.42	0	0	0	0	-1
158			103515.7168	949.85	0	0	0	0	-1
159			308359.665	5549.39	0	0	0	0	-1
160			308981.3489	5034.88	0	0	0	0	-1
161			308981.3489	4191.84	0	0	0	0	-1
162			308981.3489	4226.43	0	0	0	0	-1
163			308981.3489	2752.83	1	2.25	0.0002	54	1
164			308981.3489	3170.56	0	0	0	0	-1
165			308981.3489	4364.3	0	0	0	0	-1
166			308981.3489	3130.92	0	0	0	0	-1
167			308981.3489	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.3489	419.91	0	0	0	0	-1
169	Y	168, 170	308981.3489	12.97	0	0	0	0	-1
170	Y	168, 169	308981.3489	361.95	0	0	0	0	-1
200			269857.1276	1768.98	1	1	0.0001	33	1
201			308981.3489	2983.42	0	0	0	0	-1
202			308981.3489	1784.42	3	1.53	0.0006	170	0.58
203			308981.3489	2107.79	2	3.5	0.0007	219	0.71
204			308981.3489	2106.21	1	1	0.0001	31	1
205			308981.3489	2503.85	1	2	0.0002	53	1
206			308981.3489	2320.99	0	0	0	0	-1
207			308981.3489	1363.56	0	0	0	0	-1
208			308981.3489	1211.61	0	0	0	0	-1
209			308981.3489	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.9351	1537.48	0	0	0	0	-1
213			306620.9351	2207.89	1	1	0.0001	30	1
214			306620.9351	1563.51	0	0	0	0	-1
215	Y	216	306620.9351	658.32	0	0	0	0	-1
216	Y	215	306620.9351	750.86	0	0	0	0	-1
218	Y	219, 220	184319.0706	97.9	0	0	0	0	-1
219	Y	218, 220	301918.7913	507.57	0	0	0	0	-1
220	Y	218, 219	301918.7913	428.92	0	0	0	0	-1

Table 39. Estimated density (# individuals per square km), abundance, and CV of *Megaptera novaeangliae* (humpback whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	7	1.71	0.0043	166	0.37
35	Y	36	227825.029	5267.09	0	0	0	0	-1
36	Y	35	227825.029	679.23	0	0	0	0	-1
46			126041.276	3824.05	64	2.03	0.0069	869	0.26
47	Y	48	245192.991	6799.92	1	2.67	0.0001	47	1
48	Y	47	245192.991	207.89	1	2.67	0.0001	47	1
58			133537.58	2925.48	0	0	0	0	-1
59			256281.022	8103.33	8	1.77	0.0004	92	0.44
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	2	2	0.0011	73	0.71
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	0	0	0	0	-1
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	2	1	0.0002	19	0.71
138			208420.013	2863.28	0	0	0	0	-1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1

Table 39 continued. *Megaptera novaeangliae* (humpback whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	8	2.45	0.0044	457	0.5
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	2	1.01	0.0003	29	0.71
180	y	179, 181	5937.88703	149.96	2	1.01	0.0003	29	0.71
181	y	179, 180	81676.9261	1133.24	2	1.01	0.0003	29	0.71
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	3	2.44	0.0009	239	0.58
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	1	2	0.0002	63	1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 40. Estimated density (# individuals per square km), abundance, and CV of dolphin, unidentified to species, in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	1	1	0.0006	139	1
23	Y	22	199809.686	1495.16	1	1	0.0006	139	1
34			38788.4619	702.16	2	2	0.0062	239	0.71
35	Y	36	227825.029	5267.09	9	7.11	0.0117	5309	0.51
36	Y	35	227825.029	679.23	9	7.11	0.0117	5309	0.51
46			126041.276	3824.05	25	11.59	0.045	5672	0.379
47	Y	48	245192.991	6799.92	11	5.25	0.0084	4130	0.511
48	Y	47	245192.991	207.89	11	5.25	0.0084	4130	0.511
58			133537.58	2925.48	9	29.75	0.0301	4016	0.62
59			256281.022	8103.33	12	10.77	0.0121	3114	0.417
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	6	13.5	0.0281	1919	0.91
72			268470.334	4846.67	5	4.92	0.0014	381	0.62
73			274220.696	1199.11	1	4	0.0009	256	1
85			211488.112	2904.44	16	28.16	0.0434	9169	0.7
86			261079.092	3528.84	20	11.02	0.0174	4556	0.45
87			285654.927	2666.94	5	11.08	0.0058	1659	0.78
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	24	7.32	0.0158	3894	0.59
102	Y	101	181031.403	2383.79	24	7.32	0.0158	3894	0.59
103			294911.804	2726.38	28	7.54	0.0216	6382	0.4
104			294911.804	4436.66	22	8.57	0.0119	3502	0.49
105			294911.804	2857.59	14	3.52	0.0048	1421	0.53
106			294911.804	1427.29	6	10.73	0.0126	3719	0.49
111	Y	112	294911.804	269.34	3	3	0.0015	895	0.71
112	Y	111	291761.174	1378.83	3	3	0.0015	895	0.71
118			141140.114	1347.49	13	5.67	0.0153	2157	0.63
119			273314.083	4770.17	54	97.68	0.3091	84468	0.92
120			301918.791	3571.23	25	13.32	0.0261	7868	0.51
121			301918.791	3152.12	26	6.57	0.0152	4576	0.47
122			301918.791	2836.37	16	18.52	0.0292	8817	0.51
123			301918.791	2562.26	15	31.52	0.0516	15572	0.92
124			301918.791	2791.69	13	5.25	0.0068	2064	0.89
125			301918.791	1850.43	5	13.66	0.0103	3115	0.62
126			301918.791	1953.39	9	3.92	0.005	1524	0.5
127			301918.791	1519.92	10	3.83	0.007	2125	0.57
128	Y	129	301918.791	730.39	9	7.14	0.0097	5864	0.63
129	Y	128	301918.791	1119.84	9	7.14	0.0097	5864	0.63
130	Y	131	301918.791	1061.65	5	12.67	0.0135	8167	0.58
131	Y	130	301918.791	247.07	5	12.67	0.0135	8167	0.58
137			104484.838	2300.5	20	10.45	0.0254	2654	0.54
138			208420.013	2863.28	20	2.23	0.0044	908	0.38
139			306486.611	5374.53	47	12.12	0.0296	9077	0.38
140			306620.935	5165.5	32	9.36	0.0162	4970	0.4
141			306620.935	3107.02	23	4.56	0.0094	2894	0.43
142			306620.935	1871.07	7	3.8	0.004	1218	0.87
143			306620.935	3248.82	12	4.1	0.0042	1298	0.54
144			306620.935	3651.71	15	5.39	0.0062	1897	0.47
145			306620.935	2121.32	11	2.78	0.004	1235	0.58
146			306620.935	2084.39	11	8.88	0.0131	4014	0.49
147			306620.935	1580.33	8	3.44	0.0049	1494	0.48
148			306620.935	1415.22	3	2.67	0.0016	486	0.58

Table 40 continued. Dolphin, unidentified to species

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
149			306620.935	1182.79	7	5.4	0.0089	2739	0.62
150	Y	151	306620.935	1295.96	8	5.14	0.0059	3616	0.41
151	Y	150	306620.935	654.42	8	5.14	0.0059	3616	0.41
158			103515.717	949.85	6	9.38	0.0166	1713	0.68
159			308359.665	5549.39	30	5.4	0.0082	2516	0.4
160			308981.349	5034.88	17	18.88	0.0178	5504	0.87
161			308981.349	4191.84	10	12.88	0.0086	2653	0.7
162			308981.349	4226.43	21	11.42	0.0159	4902	0.53
163			308981.349	2752.83	11	17.77	0.0198	6133	0.75
164			308981.349	3170.56	11	73	0.0708	21872	0.71
165			308981.349	4364.3	15	9.38	0.009	2784	0.7
166			308981.349	3130.92	13	11.38	0.0132	4080	0.51
167			308981.349	1979.39	5	3.83	0.0027	836	0.58
168	Y	169, 170	308981.349	419.91	4	2.5	0.0035	3260	0.71
169	Y	168, 170	308981.349	12.97	4	2.5	0.0035	3260	0.71
170	Y	168, 169	308981.349	361.95	4	2.5	0.0035	3260	0.71
179	y	180, 181	17800.7129	274.67	21	61.75	0.1658	17479	0.53
180	y	179, 181	5937.88703	149.96	21	61.75	0.1658	17479	0.53
181	y	179, 180	81676.9261	1133.24	21	61.75	0.1658	17479	0.53
182			27251.9505	624.15	4	85.25	0.1093	2978	0.91
200			269857.128	1768.98	11	116.56	0.2026	54666	1.06
201			308981.349	2983.42	24	9.15	0.0206	6357	0.63
202			308981.349	1784.42	11	78.97	0.1361	42039	1.05
203			308981.349	2107.79	7	17.33	0.0161	4971	0.64
204			308981.349	2106.21	10	4.89	0.0065	2004	0.63
205			308981.349	2503.85	10	5.46	0.0061	1882	0.58
206			308981.349	2320.99	9	4	0.0043	1340	0.58
207			308981.349	1363.56	2	218.33	0.0895	27656	1
208			308981.349	1211.61	6	57	0.0789	24377	0.58
209			308981.349	1475.38	6	2.7	0.0031	948	0.69
211			289890.902	1376.09	6	5.8	0.0071	2048	0.51
212			306620.935	1537.48	9	45.4	0.0743	22776	0.74
213			306620.935	2207.89	5	1.14	0.0007	222	0.71
214			306620.935	1563.51	3	9.17	0.0049	1507	1
215	Y	216	306620.935	658.32	8	6	0.0095	5813	0.8
216	Y	215	306620.935	750.86	8	6	0.0095	5813	0.8
218	Y	219, 220	184319.071	97.9	3	0	0	0	1
219	Y	218, 220	301918.791	507.57	3	0	0	0	1
220	Y	218, 219	301918.791	428.92	3	0	0	0	1

Table 41. Estimated density (# individuals per square km), abundance, and CV of small whale, unidentified to species, in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	3	1	0.0002	107	0.58
35	y	34, 46, 47	227825.029	1062.53	3	1	0.0002	107	0.58
46	y	34, 35, 47	126041.276	1112.01	3	1	0.0002	107	0.58
47	y	34, 35, 46	245192.991	1462.66	3	1	0.0002	107	0.58
58	y	71, 72	133537.58	600.2	5	1.4	0.0008	376	0.53
59	y	60, 73	256281.022	988.36	5	1.2	0.001	757	0.43
60	y	59, 73	260698.374	296.86	5	1.2	0.001	757	0.43
71	y	58, 72	68358.8563	148.74	5	1.4	0.0008	376	0.53
72	y	58, 71	268470.334	854.38	5	1.4	0.0008	376	0.53
73	y	59, 60	274220.696	403.08	5	1.2	0.001	757	0.43
85	y	103, 102, 101	211488.112	1558.27	11	1.8	0.0011	838	0.48
86	y	87, 104, 105	261079.092	430.57	6	1.33	0.0007	800	0.53
87	y	86, 104, 105	285654.927	709.6	6	1.33	0.0007	800	0.53
88	y	106	285654.927	579.91	1	1	0.0002	141	1
101	y	85, 103, 102	65027.1922	353.73	11	1.8	0.0011	838	0.48
102	y	85, 103, 101	181031.403	1043.35	11	1.8	0.0011	838	0.48
103	y	85, 102, 101	294911.804	949.71	11	1.8	0.0011	838	0.48
104	y	87, 86, 105	294911.804	824.8	6	1.33	0.0007	800	0.53
105	y	87, 86, 104	294911.804	517.74	6	1.33	0.0007	800	0.53
106	y	88	294911.804	323.66	1	1	0.0002	141	1
118	y	137, 138, 139	141140.114	279.22	10	1.29	0.0011	826	1.35
119	y	120, 141, 140	273314.083	1567.22	10	1.78	0.0009	1061	0.44
120	y	119, 141, 140	301918.791	1147.61	10	1.78	0.0009	1061	0.44
121	y	122, 142, 143	301918.791	963.86	13	2.8	0.0037	4532	0.59
122	y	121, 142, 143	301918.791	632.1	13	2.8	0.0037	4532	0.59
123	y	124, 144, 145	301918.791	678.83	5	2	0.0015	1796	0.55
124	y	123, 144, 145	301918.791	289.29	5	2	0.0015	1796	0.55
125	y	126, 147, 146	301918.791	108.09	3	2.33	0.0015	1804	0.58
126	y	125, 147, 146	301918.791	331.26	3	2.33	0.0015	1804	0.58
127	y	128, 149, 148	301918.791	308.05	2	1	0.001	1235	1
128	y	127, 149, 148	301918.791	14.52	2	1	0.001	1235	1
129	y	130, 151, 150	301918.791	341.43	2	4.5	0.0028	3453	0.71
130	y	129, 151, 150	301918.791	79.52	2	4.5	0.0028	3453	0.71
137	y	118, 138, 139	104484.838	656.37	10	1.29	0.0011	826	1.35
138	y	118, 137, 139	208420.013	399.37	10	1.29	0.0011	826	1.35
139	y	118, 137, 138	306486.611	1265.13	10	1.29	0.0011	826	1.35
140	y	119, 120, 141	306620.935	1211.84	10	1.78	0.0009	1061	0.44
141	y	119, 120, 140	306620.935	447.43	10	1.78	0.0009	1061	0.44
142	y	121, 122, 143	306620.935	181.3	13	2.8	0.0037	4532	0.59
143	y	121, 122, 142	306620.935	399.44	13	2.8	0.0037	4532	0.59
144	y	123, 124, 145	306620.935	406.77	5	2	0.0015	1796	0.55
145	y	123, 124, 144	306620.935	124.36	5	2	0.0015	1796	0.55
146	y	125, 126, 147	306620.935	256.61	3	2.33	0.0015	1804	0.58
147	y	125, 126, 146	306620.935	341.23	3	2.33	0.0015	1804	0.58
148	y	127, 128, 149	306620.935	52.28	2	1	0.001	1235	1
149	y	127, 128, 148	306620.935	58.06	2	1	0.001	1235	1
150	y	129, 130, 151	306620.935	160.83	2	4.5	0.0028	3453	0.71
151	y	129, 130, 150	306620.935	114.89	2	4.5	0.0028	3453	0.71
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	3	1	0.0005	1268	0.58

Table 41 continued. Small whale, unidentified to species

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	3	1	0.0005	1268	0.58
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	3	1	0.0005	1268	0.58
161	y	162, 163, 164, 202, 203, 204, 205	308981.349	37.91	3	2	0.003	7431	0.71
162	y	161, 163, 164, 202, 203, 204, 205	308981.349	7.78	3	2	0.003	7431	0.71
163	y	161, 162, 164, 202, 203, 204, 205	308981.349	25	3	2	0.003	7431	0.71
164	y	161, 162, 163, 202, 203, 204, 205	308981.349	9.57	3	2	0.003	7431	0.71
165	y	166, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	6.63	3	2	0.0049	15281	0.58
166	y	165, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	0	3	2	0.0049	15281	0.58
167	y	165, 166, 168, 169, 170, 206, 207, 208, 209	308981.349	26.25	3	2	0.0049	15281	0.58
168	y	165, 166, 167, 169, 170, 206, 207, 208, 209	308981.349	0	3	2	0.0049	15281	0.58
169	y	165, 166, 167, 168, 170, 206, 207, 208, 209	308981.349	12.97	3	2	0.0049	15281	0.58
170	y	165, 166, 167, 168, 169, 206, 207, 208, 209	308981.349	9.88	3	2	0.0049	15281	0.58
179	y	180, 181	17800.7129	41.22	0	0	0	0	-1
180	y	179, 181	5937.88703	24.63	0	0	0	0	-1
181	y	179, 180	81676.9261	509.41	0	0	0	0	-1
182			27251.9505	446.13	1	1	0.001	27	1
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	3	1	0.0005	1268	0.58
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	3	1	0.0005	1268	0.58
202	y	161, 162, 163, 164, 203, 204, 205	308981.349	31.67	3	2	0.003	7431	0.71
203	y	161, 162, 163, 164, 202, 204, 205	308981.349	105.71	3	2	0.003	7431	0.71
204	y	161, 162, 163, 164, 202, 203, 205	308981.349	115.94	3	2	0.003	7431	0.71
205	y	161, 162, 163, 164, 202, 203, 204	308981.349	92.98	3	2	0.003	7431	0.71
206	y	165, 166, 167, 168, 169, 170, 207, 208, 209	308981.349	69.25	3	2	0.0049	15281	0.58
207	y	165, 166, 167, 168, 169, 170, 206, 208, 209	308981.349	51.88	3	2	0.0049	15281	0.58

Table 41 continued. Small whale, unidentified to species

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
208	y	165, 166, 167, 168, 169, 170, 206, 207, 209	308981.349	66.09	3	2	0.0049	15281	0.58
209	y	165, 166, 167, 168, 169, 170, 206, 207, 208	308981.349	35.3	3	2	0.0049	15281	0.58
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	3	1	0.0005	1268	0.58
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	3	1	0.0005	1268	0.58
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	3	1	0.0005	1268	0.58
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	3	1	0.0005	1268	0.58

Table 42. Estimated density (# individuals per square km), abundance, and CV of large whale, unidentified to species, in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	1	1	0.0001	35	1
23	Y	22	199809.686	1495.16	1	1	0.0001	35	1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	0	0	0	0	-1
36	Y	35	227825.029	679.23	0	0	0	0	-1
46			126041.276	3824.05	19	1.42	0.0016	205	0.32
47	Y	48	245192.991	6799.92	3	1	0.0001	53	0.58
48	Y	47	245192.991	207.89	3	1	0.0001	53	0.58
58			133537.58	2925.48	2	1	0.0002	23	0.71
59			256281.022	8103.33	15	14.53	0.0034	870	0.84
60			260698.374	1923.08	1	1	0.0001	34	1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	2	1	0.0002	41	0.71
73			274220.696	1199.11	1	1	0.0003	84	1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	7	1.07	0.0008	204	0.39
87			285654.927	2666.94	1	1	0.0001	39	1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	0	0	0	0	-1
104			294911.804	4436.66	2	1	0.0002	49	0.71
105			294911.804	2857.59	1	1	0.0001	38	1
106			294911.804	1427.29	2	1	0.0005	152	0.71
111	Y	112	294911.804	269.34	1	1	0.0002	131	1
112	Y	111	291761.174	1378.83	1	1	0.0002	131	1
118			141140.114	1347.49	1	1	0.0003	39	1
119			273314.083	4770.17	3	1	0.0002	63	0.58
120			301918.791	3571.23	4	1	0.0004	124	0.55
121			301918.791	3152.12	1	1	0.0001	35	1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	3	1.5	0.0009	270	0.71
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	0	0	0	0	-1
138			208420.013	2863.28	4	1.25	0.0006	134	0.5
139			306486.611	5374.53	2	1.75	0.0002	73	0.71
140			306620.935	5165.5	1	1	0.0001	22	1
141			306620.935	3107.02	3	1	0.0004	109	0.58
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	1	2	0.0002	69	1
144			306620.935	3651.71	1	1	0.0001	31	1
145			306620.935	2121.32	2	1	0.0003	106	0.71
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	1	2	0.0005	143	1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	1	2.33	0.0007	222	1
150	Y	151	306620.935	1295.96	0	0	0	0	-1

Table 42 continued. Large whale, unidentified to species

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	2	1.67	0.0002	68	0.71
160			308981.349	5034.88	7	2.17	0.0011	342	0.68
161			308981.349	4191.84	7	1	0.0006	190	0.41
162			308981.349	4226.43	5	1.33	0.0006	179	0.58
163			308981.349	2752.83	1	0	0	0	1
164			308981.349	3170.56	2	1	0.0002	72	0.71
165			308981.349	4364.3	5	2	0.0008	260	0.72
166			308981.349	3130.92	7	1	0.0008	254	0.54
167			308981.349	1979.39	1	1	0.0002	57	1
168	Y	169, 170	308981.349	419.91	1	1	0.0005	429	1
169	Y	168, 170	308981.349	12.97	1	1	0.0005	429	1
170	Y	168, 169	308981.349	361.95	1	1	0.0005	429	1
179	y	180, 181	17800.7129	274.67	7	1.04	0.0006	60	0.44
180	y	179, 181	5937.88703	149.96	7	1.04	0.0006	60	0.44
181	y	179, 180	81676.9261	1133.24	7	1.04	0.0006	60	0.44
182			27251.9505	624.15	1	1	0.0002	5	1
200			269857.128	1768.98	2	1	0.0004	112	0.71
201			308981.349	2983.42	3	1	0.0004	114	0.58
202			308981.349	1784.42	2	1	0.0004	127	0.71
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	1	1	0.0002	54	1
205			308981.349	2503.85	2	1.5	0.0004	136	0.71
206			308981.349	2320.99	2	1	0.0003	98	0.71
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	1	1	0.0003	94	1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	1	1	0.0003	77	1
212			306620.935	1537.48	1	1	0.0002	73	1
213			306620.935	2207.89	1	2.33	0.0004	119	1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	3	1	0.0008	478	0.58
216	Y	215	306620.935	750.86	3	1	0.0008	478	0.58
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 43. Estimated density (# individuals per square km), abundance, and CV of *Kogia sp*. (Kogia, unidentified to species) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	1	1	0.0004	278	1
35	y	34, 46, 47	227825.029	1062.53	1	1	0.0004	278	1
46	y	34, 35, 47	126041.276	1112.01	1	1	0.0004	278	1
47	y	34, 35, 46	245192.991	1462.66	1	1	0.0004	278	1
58	y	71, 72	133537.58	600.2	0	0	0	0	-1
59	y	60, 73	256281.022	988.36	1	1	0.0031	2478	1
60	y	59, 73	260698.374	296.86	1	1	0.0031	2478	1
71	y	58, 72	68358.8563	148.74	0	0	0	0	-1
72	y	58, 71	268470.334	854.38	0	0	0	0	-1
73	y	59, 60	274220.696	403.08	1	1	0.0031	2478	1
85	y	103, 102, 101	211488.112	1558.27	3	1.67	0.0029	2158	0.58
86	y	87, 104, 105	261079.092	430.57	0	0	0	0	-1
87	y	86, 104, 105	285654.927	709.6	0	0	0	0	-1
88	y	106	285654.927	579.91	0	0	0	0	-1
101	y	85, 103, 102	65027.1922	353.73	3	1.67	0.0029	2158	0.58
102	y	85, 103, 101	181031.403	1043.35	3	1.67	0.0029	2158	0.58
103	y	85, 102, 101	294911.804	949.71	3	1.67	0.0029	2158	0.58
104	y	87, 86, 105	294911.804	824.8	0	0	0	0	-1
105	y	87, 86, 104	294911.804	517.74	0	0	0	0	-1
106	y	88	294911.804	323.66	0	0	0	0	-1
118	y	137, 138, 139	141140.114	279.22	0	0	0	0	-1
119	y	120, 141, 140	273314.083	1567.22	1	1	0.0005	609	1
120	y	119, 141, 140	301918.791	1147.61	1	1	0.0005	609	1
121	y	122, 142, 143	301918.791	963.86	3	2.07	0.0065	7867	0.58
122	y	121, 142, 143	301918.791	632.1	3	2.07	0.0065	7867	0.58
123	y	124, 144, 145	301918.791	678.83	1	3	0.0045	5496	1
124	y	123, 144, 145	301918.791	289.29	1	3	0.0045	5496	1
125	y	126, 147, 146	301918.791	108.09	1	1	0.0022	2628	1
126	y	125, 147, 146	301918.791	331.26	1	1	0.0022	2628	1
127	y	128, 149, 148	301918.791	308.05	0	0	0	0	-1
128	y	127, 149, 148	301918.791	14.52	0	0	0	0	-1
129	y	130, 151, 150	301918.791	341.43	0	0	0	0	-1
130	y	129, 151, 150	301918.791	79.52	0	0	0	0	-1
137	y	118, 138, 139	104484.838	656.37	0	0	0	0	-1
138	y	118, 137, 139	208420.013	399.37	0	0	0	0	-1
139	y	118, 137, 138	306486.611	1265.13	0	0	0	0	-1
140	y	119, 120, 141	306620.935	1211.84	1	1	0.0005	609	1
141	y	119, 120, 140	306620.935	447.43	1	1	0.0005	609	1
142	y	121, 122, 143	306620.935	181.3	3	2.07	0.0065	7867	0.58
143	y	121, 122, 142	306620.935	399.44	3	2.07	0.0065	7867	0.58
144	y	123, 124, 145	306620.935	406.77	1	3	0.0045	5496	1
145	y	123, 124, 144	306620.935	124.36	1	3	0.0045	5496	1
146	y	125, 126, 147	306620.935	256.61	1	1	0.0022	2628	1
147	y	125, 126, 146	306620.935	341.23	1	1	0.0022	2628	1
148	y	127, 128, 149	306620.935	52.28	0	0	0	0	-1
149	y	127, 128, 148	306620.935	58.06	0	0	0	0	-1
150	y	129, 130, 151	306620.935	160.83	0	0	0	0	-1
151	y	129, 130, 150	306620.935	114.89	0	0	0	0	-1
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	1	1.33	0.0023	5749	1
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	1	1.33	0.0023	5749	1

Table 43 continued. *Kogia sp*. (Kogia, unidentified to species)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	1	1.33	0.0023	5749	1
161	y	162, 163, 164, 202, 203, 204, 205	308981.349	37.91	0	0	0	0	-1
162	y	161, 163, 164, 202, 203, 204, 205	308981.349	7.78	0	0	0	0	-1
163	y	161, 162, 164, 202, 203, 204, 205	308981.349	25	0	0	0	0	-1
164	y	161, 162, 163, 202, 203, 204, 205	308981.349	9.57	0	0	0	0	-1
165	y	166, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	6.63	0	0	0	0	-1
166	y	165, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
167	y	165, 166, 168, 169, 170, 206, 207, 208, 209	308981.349	26.25	0	0	0	0	-1
168	y	165, 166, 167, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
169	y	165, 166, 167, 168, 170, 206, 207, 208, 209	308981.349	12.97	0	0	0	0	-1
170	y	165, 166, 167, 168, 169, 206, 207, 208, 209	308981.349	9.88	0	0	0	0	-1
179	y	180, 181	17800.7129	41.22	1	2	0.0077	812	1
180	y	179, 181	5937.88703	24.63	1	2	0.0077	812	1
181	y	179, 180	81676.9261	509.41	1	2	0.0077	812	1
182			27251.9505	446.13	0	0	0	0	-1
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	1	1.33	0.0023	5749	1
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	1	1.33	0.0023	5749	1
202	y	161, 162, 163, 164, 203, 204, 205	308981.349	31.67	0	0	0	0	-1
203	y	161, 162, 163, 164, 202, 204, 205	308981.349	105.71	0	0	0	0	-1
204	y	161, 162, 163, 164, 202, 203, 205	308981.349	115.94	0	0	0	0	-1
205	y	161, 162, 163, 164, 202, 203, 204	308981.349	92.98	0	0	0	0	-1
206	y	165, 166, 167, 168, 169, 170, 207, 208, 209	308981.349	69.25	0	0	0	0	-1
207	y	165, 166, 167, 168, 169, 170, 206, 208, 209	308981.349	51.88	0	0	0	0	-1
208	y	165, 166, 167, 168, 169, 170, 206, 207, 209	308981.349	66.09	0	0	0	0	-1
209	y	165, 166, 167, 168, 169, 170, 206, 207, 208	308981.349	35.3	0	0	0	0	-1
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	1	1.33	0.0023	5749	1

Table 43 continued. *Kogia sp*. (Kogia, unidentified to species)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	1	1.33	0.0023	5749	1
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	1	1.33	0.0023	5749	1
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	1	1.33	0.0023	5749	1

Table 44. Estimated density (# individuals per square km), abundance, and CV of *Mesoplodon* species A in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
85	y	103, 102, 101	211488.112	1558.27	3	2.67	0.0008	632	0.58
86	y	87, 104, 105	261079.092	430.57	1	3	0.0005	560	1
87	y	86, 104, 105	285654.927	709.6	1	3	0.0005	560	1
88	y	106	285654.927	579.91	0	0	0	0	-1
101	y	85, 103, 102	65027.1922	353.73	3	2.67	0.0008	632	0.58
102	y	85, 103, 101	181031.403	1043.35	3	2.67	0.0008	632	0.58
103	y	85, 102, 101	294911.804	949.71	3	2.67	0.0008	632	0.58
104	y	87, 86, 105	294911.804	824.8	1	3	0.0005	560	1
105	y	87, 86, 104	294911.804	517.74	1	3	0.0005	560	1
106	y	88	294911.804	323.66	0	0	0	0	-1
118	y	137, 138, 139	141140.114	279.22	1	3	0.0005	360	1
119	y	120, 141, 140	273314.083	1567.22	3	2	0.0006	669	0.58
120	y	119, 141, 140	301918.791	1147.61	3	2	0.0006	669	0.58
121	y	122, 142, 143	301918.791	963.86	2	1.75	0.0007	813	0.71
122	y	121, 142, 143	301918.791	632.1	2	1.75	0.0007	813	0.71
123	y	124, 144, 145	301918.791	678.83	2	1.5	0.0008	1006	0.71
124	y	123, 144, 145	301918.791	289.29	2	1.5	0.0008	1006	0.71
125	y	126, 147, 146	301918.791	108.09	0	0	0	0	-1
126	y	125, 147, 146	301918.791	331.26	0	0	0	0	-1
127	y	128, 149, 148	301918.791	308.05	0	0	0	0	-1
128	y	127, 149, 148	301918.791	14.52	0	0	0	0	-1
129	y	130, 151, 150	301918.791	341.43	0	0	0	0	-1
130	y	129, 151, 150	301918.791	79.52	0	0	0	0	-1
137	y	118, 138, 139	104484.838	656.37	1	3	0.0005	360	1
138	y	118, 137, 139	208420.013	399.37	1	3	0.0005	360	1
139	y	118, 137, 138	306486.611	1265.13	1	3	0.0005	360	1
140	y	119, 120, 141	306620.935	1211.84	3	2	0.0006	669	0.58
141	y	119, 120, 140	306620.935	447.43	3	2	0.0006	669	0.58
142	y	121, 122, 143	306620.935	181.3	2	1.75	0.0007	813	0.71
143	y	121, 122, 142	306620.935	399.44	2	1.75	0.0007	813	0.71
144	y	123, 124, 145	306620.935	406.77	2	1.5	0.0008	1006	0.71
145	y	123, 124, 144	306620.935	124.36	2	1.5	0.0008	1006	0.71
146	y	125, 126, 147	306620.935	256.61	0	0	0	0	-1
147	y	125, 126, 146	306620.935	341.23	0	0	0	0	-1
148	y	127, 128, 149	306620.935	52.28	0	0	0	0	-1
149	y	127, 128, 148	306620.935	58.06	0	0	0	0	-1
150	y	129, 130, 151	306620.935	160.83	0	0	0	0	-1
151	y	129, 130, 150	306620.935	114.89	0	0	0	0	-1
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	1	3	0.0009	2367	1
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	1	3	0.0009	2367	1
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	1	3	0.0009	2367	1
161	y	162, 163, 164, 202, 203, 204, 205	308981.349	37.91	0	0	0	0	-1
162	y	161, 163, 164, 202, 203, 204, 205	308981.349	7.78	0	0	0	0	-1

Table 44 continued. Mesoplodon species A

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
163	y	161, 162, 164, 202, 203, 204, 205	308981.349	25	0	0	0	0	-1
164	y	161, 162, 163, 202, 203, 204, 205	308981.349	9.57	0	0	0	0	-1
165	y	166, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	6.63	0	0	0	0	-1
166	y	165, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
167	y	165, 166, 168, 169, 170, 206, 207, 208, 209	308981.349	26.25	0	0	0	0	-1
168	y	165, 166, 167, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
169	y	165, 166, 167, 168, 170, 206, 207, 208, 209	308981.349	12.97	0	0	0	0	-1
170	y	165, 166, 167, 168, 169, 206, 207, 208, 209	308981.349	9.88	0	0	0	0	-1
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	1	3	0.0009	2367	1
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	1	3	0.0009	2367	1
202	y	161, 162, 163, 164, 203, 204, 205	308981.349	31.67	0	0	0	0	-1
203	y	161, 162, 163, 164, 202, 204, 205	308981.349	105.71	0	0	0	0	-1
204	y	161, 162, 163, 164, 202, 203, 205	308981.349	115.94	0	0	0	0	-1
205	y	161, 162, 163, 164, 202, 203, 204	308981.349	92.98	0	0	0	0	-1
206	y	165, 166, 167, 168, 169, 170, 207, 208, 209	308981.349	69.25	0	0	0	0	-1
207	y	165, 166, 167, 168, 169, 170, 206, 208, 209	308981.349	51.88	0	0	0	0	-1
208	y	165, 166, 167, 168, 169, 170, 206, 207, 209	308981.349	66.09	0	0	0	0	-1
209	y	165, 166, 167, 168, 169, 170, 206, 207, 208	308981.349	35.3	0	0	0	0	-1
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	1	3	0.0009	2367	1
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	1	3	0.0009	2367	1

Table 44 continued. Mesoplodon species A

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	1	3	0.0009	2367	1
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	1	3	0.0009	2367	1

Table 45. Estimated density (# individuals per square km), abundance, and CV of *Stenella longirostris centroamericana* (Central American or Costa Rican spinner dolphin) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution.

stratum	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
118	141140.114	1347.49	1	1033.33	0.1484	20943	1

Table 46. Estimated density (# individuals per square km), abundance, and CV of *Stenella attenuata* (spotted dolphin, unidentified to subspecies) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
58			133537.58	2925.48	0	0	0	0	-1
71			68358.8563	806.32	0	0	0	0	-1
72			268470.334	4846.67	2	107.33	0.0064	1706	0.71
73			274220.696	1199.11	2	71.25	0.0278	7626	0.71
85			211488.112	2904.44	2	36.71	0.00485134	1026	0.71
86			261079.092	3528.84	0	0	0	0	-1
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	1	51.67	0.014	3997	1
101	Y	102	65027.1922	719.65	1	144	0.0068	1661	1
102	Y	101	181031.403	2383.79	1	144	0.0068	1661	1
103			294911.804	2726.38	2	203.925	0.02492949	7352	0.731704
104			294911.804	4436.66	0	0	0	0	-1
105			294911.804	2857.59	0	0	0	0	-1
106			294911.804	1427.29	0	0	0	0	-1
111	Y	112	294911.804	269.34	1	31	0.0044	2582	1
112	Y	111	291761.174	1378.83	1	31	0.0044	2582	1
118			141140.114	1347.49	6	13.56	0.01537479	2170	1.02
119			273314.083	4770.17	6	89.36	0.02580182	7052	0.567234
120			301918.791	3571.23	4	110.46	0.02856397	8624	0.532356
121			301918.791	3152.12	0	0	0	0	-1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	0	0	0	0	-1
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	0	0	0	0	-1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	2	13.42	0.0034	325	0.71
138			208420.013	2863.28	3	67.08	0.02004606	4178	0.58
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	0	0	0	0	-1
141			306620.935	3107.02	0	0	0	0	-1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	0	0	0	0	-1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1
158			103515.717	949.85	2	28.5	0.01420074	1470	0.71
159			308359.665	5549.39	0	0	0	0	-1
160			308981.349	5034.88	0	0	0	0	-1
161			308981.349	4191.84	0	0	0	0	-1
162			308981.349	4226.43	0	0	0	0	-1
163			308981.349	2752.83	0	0	0	0	-1

Table 46 continued. *Stenella attenuata* (spotted dolphin, unidentified to subspecies)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
164			308981.349	3170.56	0	0	0	0	-1
165			308981.349	4364.3	0	0	0	0	-1
166			308981.349	3130.92	0	0	0	0	-1
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	0	0	0	0	-1
169	Y	168, 170	308981.349	12.97	0	0	0	0	-1
170	Y	168, 169	308981.349	361.95	0	0	0	0	-1
179	y	180, 181	17800.7129	274.67	2	336.47	0.0667	7030	0.71
180	y	179, 181	5937.88703	149.96	2	336.47	0.0667	7030	0.71
181	y	179, 180	81676.9261	1133.24	2	336.47	0.0667	7030	0.71
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	1	216.67	0.02683642	7242	1
201			308981.349	2983.42	0	0	0	0	-1
202			308981.349	1784.42	0	0	0	0	-1
203			308981.349	2107.79	0	0	0	0	-1
204			308981.349	2106.21	0	0	0	0	-1
205			308981.349	2503.85	0	0	0	0	-1
206			308981.349	2320.99	0	0	0	0	-1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	0	0	0	0	-1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	0	0	0	0	-1
215	Y	216	306620.935	658.32	0	0	0	0	-1
216	Y	215	306620.935	750.86	0	0	0	0	-1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 47. Estimated density (# individuals per square km), abundance, and CV of unidentified cetaceans in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34	y	35, 46, 47	38788.4619	270.51	4	1	0.0002	142	0.45
35	y	34, 46, 47	227825.029	1062.53	4	1	0.0002	142	0.45
46	y	34, 35, 47	126041.276	1112.01	4	1	0.0002	142	0.45
47	y	34, 35, 46	245192.991	1462.66	4	1	0.0002	142	0.45
58	y	71, 72	133537.58	600.2	2	1.5	0.0005	237	0.71
59	y	60, 73	256281.022	988.36	1	3	0.0005	378	1
60	y	59, 73	260698.374	296.86	1	3	0.0005	378	1
71	y	58, 72	68358.8563	148.74	2	1.5	0.0005	237	0.71
72	y	58, 71	268470.334	854.38	2	1.5	0.0005	237	0.71
73	y	59, 60	274220.696	403.08	1	3	0.0005	378	1
85	y	103, 102, 101	211488.112	1558.27	8	1.57	0.0007	532	0.52
86	y	87, 104, 105	261079.092	430.57	1	1	0.0001	100	1
87	y	86, 104, 105	285654.927	709.6	1	1	0.0001	100	1
88	y	106	285654.927	579.91	0	0	0	0	-1
101	y	85, 103, 102	65027.1922	353.73	8	1.57	0.0007	532	0.52
102	y	85, 103, 101	181031.403	1043.35	8	1.57	0.0007	532	0.52
103	y	85, 102, 101	294911.804	949.71	8	1.57	0.0007	532	0.52
104	y	87, 86, 105	294911.804	824.8	1	1	0.0001	100	1
105	y	87, 86, 104	294911.804	517.74	1	1	0.0001	100	1
106	y	88	294911.804	323.66	0	0	0	0	-1
118	y	137, 138, 139	141140.114	279.22	7	1.83	0.0011	824	0.51
119	y	120, 141, 140	273314.083	1567.22	6	2.5	0.0008	895	0.58
120	y	119, 141, 140	301918.791	1147.61	6	2.5	0.0008	895	0.58
121	y	122, 142, 143	301918.791	963.86	1	0	0	0	1
122	y	121, 142, 143	301918.791	632.1	1	0	0	0	1
123	y	124, 144, 145	301918.791	678.83	6	2	0.0018	2156	0.54
124	y	123, 144, 145	301918.791	289.29	6	2	0.0018	2156	0.54
125	y	126, 147, 146	301918.791	108.09	1	1	0.0002	258	1
126	y	125, 147, 146	301918.791	331.26	1	1	0.0002	258	1
127	y	128, 149, 148	301918.791	308.05	1	1	0.0005	618	1
128	y	127, 149, 148	301918.791	14.52	1	1	0.0005	618	1
129	y	130, 151, 150	301918.791	341.43	0	0	0	0	-1
130	y	129, 151, 150	301918.791	79.52	0	0	0	0	-1
137	y	118, 138, 139	104484.838	656.37	7	1.83	0.0011	824	0.51
138	y	118, 137, 139	208420.013	399.37	7	1.83	0.0011	824	0.51
139	y	118, 137, 138	306486.611	1265.13	7	1.83	0.0011	824	0.51
140	y	119, 120, 141	306620.935	1211.84	6	2.5	0.0008	895	0.58
141	y	119, 120, 140	306620.935	447.43	6	2.5	0.0008	895	0.58
142	y	121, 122, 143	306620.935	181.3	1	0	0	0	1
143	y	121, 122, 142	306620.935	399.44	1	0	0	0	1
144	y	123, 124, 145	306620.935	406.77	6	2	0.0018	2156	0.54
145	y	123, 124, 144	306620.935	124.36	6	2	0.0018	2156	0.54
146	y	125, 126, 147	306620.935	256.61	1	1	0.0002	258	1
147	y	125, 126, 146	306620.935	341.23	1	1	0.0002	258	1
148	y	127, 128, 149	306620.935	52.28	1	1	0.0005	618	1
149	y	127, 128, 148	306620.935	58.06	1	1	0.0005	618	1
150	y	129, 130, 151	306620.935	160.83	0	0	0	0	-1
151	y	129, 130, 150	306620.935	114.89	0	0	0	0	-1
158	y	159, 160, 200, 201, 211, 212, 219, 220	103515.717	255.54	1	1	0.0002	423	1
159	y	158, 160, 200, 201, 211, 212, 219, 220	308359.665	326.15	1	1	0.0002	423	1

Table 47 continued. Unidentified cetaceans

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
160	y	158, 159, 200, 201, 211, 212, 219, 220	308981.349	178.4	1	1	0.0002	423	1
161	y	162, 163, 164, 202, 203, 204, 205	308981.349	37.91	0	0	0	0	-1
162	y	161, 163, 164, 202, 203, 204, 205	308981.349	7.78	0	0	0	0	-1
163	y	161, 162, 164, 202, 203, 204, 205	308981.349	25	0	0	0	0	-1
164	y	161, 162, 163, 202, 203, 204, 205	308981.349	9.57	0	0	0	0	-1
165	y	166, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	6.63	0	0	0	0	-1
166	y	165, 167, 168, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
167	y	165, 166, 168, 169, 170, 206, 207, 208, 209	308981.349	26.25	0	0	0	0	-1
168	y	165, 166, 167, 169, 170, 206, 207, 208, 209	308981.349	0	0	0	0	0	-1
169	y	165, 166, 167, 168, 170, 206, 207, 208, 209	308981.349	12.97	0	0	0	0	-1
170	y	165, 166, 167, 168, 169, 206, 207, 208, 209	308981.349	9.88	0	0	0	0	-1
179	y	180, 181	17800.7129	41.22	0	0	0	0	-1
180	y	179, 181	5937.88703	24.63	0	0	0	0	-1
181	y	179, 180	81676.9261	509.41	0	0	0	0	-1
182			27251.9505	446.13	1	1	0.0009	25	1
200	y	158, 159, 160, 201, 211, 212, 219, 220	269857.128	161.52	1	1	0.0002	423	1
201	y	158, 159, 160, 200, 211, 212, 219, 220	308981.349	107.07	1	1	0.0002	423	1
202	y	161, 162, 163, 164, 203, 204, 205	308981.349	31.67	0	0	0	0	-1
203	y	161, 162, 163, 164, 202, 204, 205	308981.349	105.71	0	0	0	0	-1
204	y	161, 162, 163, 164, 202, 203, 205	308981.349	115.94	0	0	0	0	-1
205	y	161, 162, 163, 164, 202, 203, 204	308981.349	92.98	0	0	0	0	-1
206	y	165, 166, 167, 168, 169, 170, 207, 208, 209	308981.349	69.25	0	0	0	0	-1
207	y	165, 166, 167, 168, 169, 170, 206, 208, 209	308981.349	51.88	0	0	0	0	-1
208	y	165, 166, 167, 168, 169, 170, 206, 207, 209	308981.349	66.09	0	0	0	0	-1
209	y	165, 166, 167, 168, 169, 170, 206, 207, 208	308981.349	35.3	0	0	0	0	-1

Table 47 continued. Unidentified cetaceans

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
211	y	158, 159, 160, 200, 201, 212, 219, 220	289890.902	39.65	1	1	0.0002	423	1
212	y	158, 159, 160, 200, 201, 211, 219, 220	306620.935	189.01	1	1	0.0002	423	1
219	y	158, 159, 160, 200, 201, 211, 212, 220	301918.791	38.74	1	1	0.0002	423	1
220	y	158, 159, 160, 200, 201, 211, 212, 219	301918.791	2.78	1	1	0.0002	423	1

Table 48. Estimated density (# individuals per square km), abundance, and CV of unidentified whales in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
22	Y	23	47461.1263	316.69	0	0	0	0	-1
23	Y	22	199809.686	1495.16	0	0	0	0	-1
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	1	1	0	19	1
36	Y	35	227825.029	679.23	1	1	0	19	1
46			126041.276	3824.05	1	1	0.0001	8	1
47	Y	48	245192.991	6799.92	0	0	0	0	-1
48	Y	47	245192.991	207.89	0	0	0	0	-1
58			133537.58	2925.48	0	0	0	0	-1
59			256281.022	8103.33	1	1	0	8	1
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	3	1.33	0.0018	125	0.58
72			268470.334	4846.67	2	1	0.0002	41	0.71
73			274220.696	1199.11	1	1	0.0003	84	1
85			211488.112	2904.44	0	0	0	0	-1
86			261079.092	3528.84	3	1	0.0003	82	0.58
87			285654.927	2666.94	0	0	0	0	-1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	3	1	0.0004	119	0.58
104			294911.804	4436.66	5	1	0.0004	122	1.24
105			294911.804	2857.59	2	1	0.0003	76	0.71
106			294911.804	1427.29	1	2	0.0005	152	1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	0	0	0	0	-1
120			301918.791	3571.23	1	1	0.0001	31	1
121			301918.791	3152.12	4	1.67	0.0008	235	0.58
122			301918.791	2836.37	4	1.5	0.0008	235	0.61
123			301918.791	2562.26	2	1	0.0003	87	1
124			301918.791	2791.69	4	3.5	0.0018	557	0.71
125			301918.791	1850.43	1	1	0.0002	60	1
126			301918.791	1953.39	3	1.85	0.001	315	0.58
127			301918.791	1519.92	2	1	0.0005	146	0.71
128	Y	129	301918.791	730.39	4	1	0.0008	480	0.72
129	Y	128	301918.791	1119.84	4	1	0.0008	480	0.72
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	5	1	0.0008	84	0.44
138			208420.013	2863.28	6	4.67	0.0036	750	0.83
139			306486.611	5374.53	2	1	0.0001	42	1
140			306620.935	5165.5	3	1	0.0002	65	0.71
141			306620.935	3107.02	3	1	0.0004	109	1
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	1	1	0.0001	35	1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	1	1	0.0002	53	1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	0	0	0	0	-1
148			306620.935	1415.22	0	0	0	0	-1
149			306620.935	1182.79	1	1	0.0003	95	1
150	Y	151	306620.935	1295.96	1	1	0.0002	116	1

Table 48 continued. Unidentified whales

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
151	Y	150	306620.935	654.42	1	1	0.0002	116	1
158			103515.717	949.85	1	1	0.0004	40	1
159			308359.665	5549.39	2	2	0.0003	82	0.71
160			308981.349	5034.88	8	1	0.0006	181	0.49
161			308981.349	4191.84	5	1	0.0004	136	0.5
162			308981.349	4226.43	7	1.86	0.0011	350	0.62
163			308981.349	2752.83	4	1.63	0.0009	268	0.56
164			308981.349	3170.56	2	1	0.0002	72	0.71
165			308981.349	4364.3	3	1	0.0003	78	0.71
166			308981.349	3130.92	4	1.33	0.0006	194	0.58
167			308981.349	1979.39	0	0	0	0	-1
168	Y	169, 170	308981.349	419.91	4	1.25	0.0023	2145	0.83
169	Y	168, 170	308981.349	12.97	4	1.25	0.0023	2145	0.83
170	Y	168, 169	308981.349	361.95	4	1.25	0.0023	2145	0.83
200			269857.128	1768.98	1	1	0.0002	56	1
201			308981.349	2983.42	8	1.33	0.0013	406	0.46
202			308981.349	1784.42	7	1.17	0.0017	520	0.48
203			308981.349	2107.79	3	1	0.0005	162	0.58
204			308981.349	2106.21	2	1	0.0003	108	0.71
205			308981.349	2503.85	2	1	0.0003	91	0.71
206			308981.349	2320.99	3	1.33	0.0006	196	0.58
207			308981.349	1363.56	3	2.67	0.0022	667	0.58
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	2	1.5	0.0007	231	0.71
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	1	1	0.0002	73	1
213			306620.935	2207.89	1	0	0	0	1
214			306620.935	1563.51	2	0	0	0	1
215	Y	216	306620.935	658.32	1	1	0.0003	159	1
216	Y	215	306620.935	750.86	1	1	0.0003	159	1
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1

Table 49. Estimated density (# individuals per square km), abundance, and CV of *Balaenoptera borealis/edeni* (rorqual identified as a sei or Bryde's whale) in the eastern Pacific Ocean based on 1986-1996 summer/fall research vessel surveys. For strata in which there was only one sighting, CV = 1.0 is a minimum estimate of variance, assuming that the sightings follow a Poisson distribution. A CV of -1 is used for strata with zero sightings to indicate that the CV is not available. Data from strata with low survey effort were pooled for density and abundance estimation.

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
34			38788.4619	702.16	0	0	0	0	-1
35	Y	36	227825.029	5267.09	0	0	0	0	-1
36	Y	35	227825.029	679.23	0	0	0	0	-1
46			126041.276	3824.05	0	0	0	0	-1
47	Y	48	245192.991	6799.92	1	1	0	18	-1
48	Y	47	245192.991	207.89	1	1	0	18	-1
58			133537.58	2925.48	0	0	0	0	-1
59			256281.022	8103.33	2	1	0.0001	16	0.71
60			260698.374	1923.08	0	0	0	0	-1
71			68358.8563	806.32	1	0	0	0	1
72			268470.334	4846.67	0	0	0	0	-1
73			274220.696	1199.11	0	0	0	0	-1
85			211488.112	2904.44	3	8.11	0.0034	729	0.58
86			261079.092	3528.84	1	1	0.0001	30	1
87			285654.927	2666.94	1	2	0.0003	88	1
88			285654.927	864.14	0	0	0	0	-1
101	Y	102	65027.1922	719.65	0	0	0	0	-1
102	Y	101	181031.403	2383.79	0	0	0	0	-1
103			294911.804	2726.38	1	1	0.0002	45	1
104			294911.804	4436.66	5	1.4	0.0006	192	0.5
105			294911.804	2857.59	3	1.67	0.0007	212	0.58
106			294911.804	1427.29	1	1	0.0003	85	1
111	Y	112	294911.804	269.34	0	0	0	0	-1
112	Y	111	291761.174	1378.83	0	0	0	0	-1
118			141140.114	1347.49	0	0	0	0	-1
119			273314.083	4770.17	1	1	0.0001	24	1
120			301918.791	3571.23	2	2	0.0005	139	0.71
121			301918.791	3152.12	1	1	0.0001	39	1
122			301918.791	2836.37	0	0	0	0	-1
123			301918.791	2562.26	2	2.75	0.0009	267	0.71
124			301918.791	2791.69	0	0	0	0	-1
125			301918.791	1850.43	1	1	0.0002	67	1
126			301918.791	1953.39	0	0	0	0	-1
127			301918.791	1519.92	0	0	0	0	-1
128	Y	129	301918.791	730.39	0	0	0	0	-1
129	Y	128	301918.791	1119.84	0	0	0	0	-1
130	Y	131	301918.791	1061.65	0	0	0	0	-1
131	Y	130	301918.791	247.07	0	0	0	0	-1
137			104484.838	2300.5	2	1	0.0004	37	0.71
138			208420.013	2863.28	1	2	0.0003	60	1
139			306486.611	5374.53	0	0	0	0	-1
140			306620.935	5165.5	1	1	0.0001	24	1
141			306620.935	3107.02	2	1	0.0003	81	0.71
142			306620.935	1871.07	0	0	0	0	-1
143			306620.935	3248.82	1	1	0.0001	39	1
144			306620.935	3651.71	0	0	0	0	-1
145			306620.935	2121.32	0	0	0	0	-1
146			306620.935	2084.39	0	0	0	0	-1
147			306620.935	1580.33	1	1	0.0003	80	1
148			306620.935	1415.22	2	1.5	0.0009	268	0.71
149			306620.935	1182.79	0	0	0	0	-1
150	Y	151	306620.935	1295.96	0	0	0	0	-1
151	Y	150	306620.935	654.42	0	0	0	0	-1

Table 49 continued. *Balaenoptera borealis/edeni* (rorqual identified as a sei or Bryde's whale)

stratum	pooled?	pooled with	area (sq km)	survey effort (km)	# sightings	school size	density	abund	CV
158			103515.717	949.85	0	0	0	0	-1
159			308359.665	5549.39	3	1.33	0.0003	91	0.58
160			308981.349	5034.88	6	1.61	0.0008	244	0.53
161			308981.349	4191.84	5	1	0.0005	152	0.5
162			308981.349	4226.43	3	1.5	0.0004	135	0.58
163			308981.349	2752.83	3	2.33	0.001	323	0.58
164			308981.349	3170.56	2	1	0.0003	80	0.71
165			308981.349	4364.3	1	1	0.0001	29	1
166			308981.349	3130.92	3	2.67	0.0011	325	0.58
167			308981.349	1979.39	4	1	0.0008	257	0.66
168	Y	169, 170	308981.349	419.91	1	1	0.0005	480	1
169	Y	168, 170	308981.349	12.97	1	1	0.0005	480	1
170	Y	168, 169	308981.349	361.95	1	1	0.0005	480	1
179	y	180, 181	17800.7129	274.67	3	1.33	0.0007	72	0.58
180	y	179, 181	5937.88703	149.96	3	1.33	0.0007	72	0.58
181	y	179, 180	81676.9261	1133.24	3	1.33	0.0007	72	0.58
182			27251.9505	624.15	0	0	0	0	-1
200			269857.128	1768.98	0	0	0	0	-1
201			308981.349	2983.42	1	1	0.0001	43	1
202			308981.349	1784.42	1	1	0.0002	71	1
203			308981.349	2107.79	3	1	0.0006	181	0.58
204			308981.349	2106.21	3	2	0.0012	362	0.58
205			308981.349	2503.85	1	1	0.0002	51	1
206			308981.349	2320.99	1	4	0.0007	219	1
207			308981.349	1363.56	0	0	0	0	-1
208			308981.349	1211.61	0	0	0	0	-1
209			308981.349	1475.38	0	0	0	0	-1
211			289890.902	1376.09	0	0	0	0	-1
212			306620.935	1537.48	1	1	0.0003	82	1
213			306620.935	2207.89	0	0	0	0	-1
214			306620.935	1563.51	3	1.67	0.0013	404	0.58
215	Y	216	306620.935	658.32	5	2.58	0.0038	2304	0.74
216	Y	215	306620.935	750.86	5	2.58	0.0038	2304	0.74
218	Y	219, 220	184319.071	97.9	0	0	0	0	-1
219	Y	218, 220	301918.791	507.57	0	0	0	0	-1
220	Y	218, 219	301918.791	428.92	0	0	0	0	-1