

SUMMARY OF 1992-93 SPAWNING-GROUND SURVEYS
AND COMMERCIAL CATCH IN TOMALES BAY

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Bodega Bay
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by

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DATE	POUNDS	TONS	TRIPS	LBS/TRIP	ROE COUNT
04-Jan-93	159,959	79.98	22	7,270.86	9.740
11-Jan-93	124,346	62.17	21	5,921.24	7.161
12-Jan-93	7,546	3.77	1	7,546.00	6.200
26-Jan-93	4,553	2.28	3	1,517.67	15.611
27-Jan-93	148,208	74.10	19	7,800.42	15.948
TOTAL	444,612	222.31	66	6,736.55	11.088

QUOTA = 200 TONS

CATCH = 222.31

QUOTA = -22.31
REMAINING

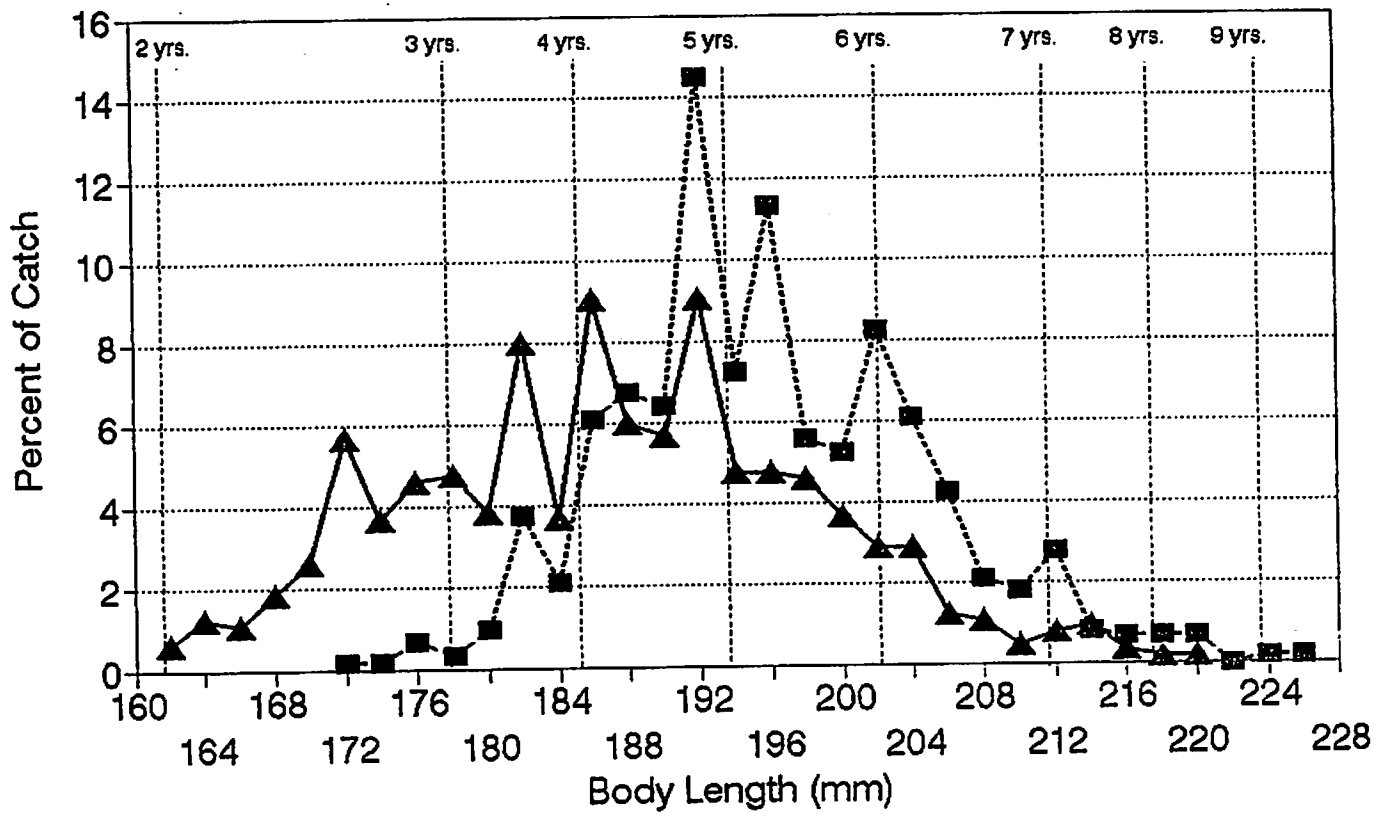
Date	Mean Length	Sex Ratio M/F
Jan 4, 1993	196.9	48/53 (n = 295)
Jan 11 & 12, 1993	194.0	52/48 (n = 161)
Jan 26 & 27, 1993	198.7	42/58 (n = 139)
Average	196.4	48/52 (n = 607)

6 Year Average 1986-87 to 1992-93	1990-91 Bodega Bay*	1991-92 Bodega Bay*	1992-93 Tomales Bay**
198	197	194	196.4

* 2-inch mesh gill net

** 2 1/8-inch mesh gill net

Length/Frequency of Commercial and Research Catch



---■--- Commercial —▲— Research

Table 3. Tomales Bay Herring Data, 1992 - 93 season.

DATE	LOCATION	AREA	EGGS/ M2	MILLIONS OF EGGS	CONVERSION FACTOR X 10 ⁻⁸	TONS
03-Dec-92	1A	41,498	160,700	6,620	1.21	80.69
03-Dec-92	1B	17,277	157,066	2,710	1.21	32.84
03-Dec-92	1C	1,372	104,969	143	1.21	1.74
03-Dec-92	28A	3,840	20,634	79	1.21	0.96
28-Dec-92	1A	41,498	1,392,478	57,800	1.21	699.20
28-Dec-92	1B	17,277	2,230,309	38,500	1.21	466.25
28-Dec-92	1C	1,372	1,768,261	2,406	1.21	29.36
28-Dec-92	1	6,170	474,487	2,930	1.21	35.42
04-Jan-93	2	8,849	336,169	3,010	0.966	29.06
04-Jan-93	2A	557	933,629	520	0.966	5.02
11-Jan-93	26-South	4,211	17,303	73	0.966	0.70
11-Jan-93	26-North	15,919	13,574	216	0.966	2.09
11-Jan-93	27	23,556	1,132,022	26,700	0.966	257.59
11-Jan-93	*	5,040	375,012	1,890	0.966	18.26
11-Jan-93	**	11,903	282,448	3,362	0.966	32.48
06-Feb-93	1A	41,498	1,276,652	53,000	0.966	511.77
06-Feb-93	1B	17,277	1,671,953	29,000	0.966	279.04
06-Feb-93	1C	1,372	4,795,795	6,580	0.966	63.56
06-Feb-93	1	6,170	44,400	274	0.966	2.65
06-Feb-93	2-High density	3,691	877,321	3,240	0.966	31.28
06-Feb-93	26-North	5,418	22,935	124	0.966	1.20
06-Feb-93	26-South	4,211	70,598	297	0.966	2.87
06-Feb-93	27	23,556	191,123	4,502	0.966	43.49
06-Feb-93	28	59,534	1,600,061	95,300	0.966	989.30

Table 3. Tomales Bay Herring Data, 1992 - 93 season.

DATE	LOCATION	AREA	EGGS/ M2	MILLIONS OF EGGS	CONVERSION FACTOR X 10 ⁻⁸	TONS
06-Feb-93	28A-High density	9,947	1,647,989	16,400	0.966	158.35
06-Feb-93	28A-Low density	11,748	62,313	732	0.966	7.07
06-Feb-93	***	1,730	470,156	813	0.966	7.86
06-Feb-93	****	7,880	547,532	4,315	0.966	41.68
22-Feb-93	1A	41,498	789	33	0.966	0.32
28-Feb-93	26	14,939	2,504	37	0.966	17.16
28-Feb-93	27	23,556	75,394	1,776	0.966	0.36
28-Feb-93	*****	100	350,000	35	0.966	0.34
TOTAL		479,197		361,022		3,856.5

* Intertidal spawn at intermittent locations between Reynolds and Marshall

** Spawn on Gracilaria bed south of Reynolds

*** Intertidal spawn south of Callihan's Pier

**** Spawn on Gracilaria bed south of Callihan's Pier

***** Intertidal spawn at Marshall Boat Works

Biomass Estimates for Tomales Bay Herring Population, 1974 - 1993

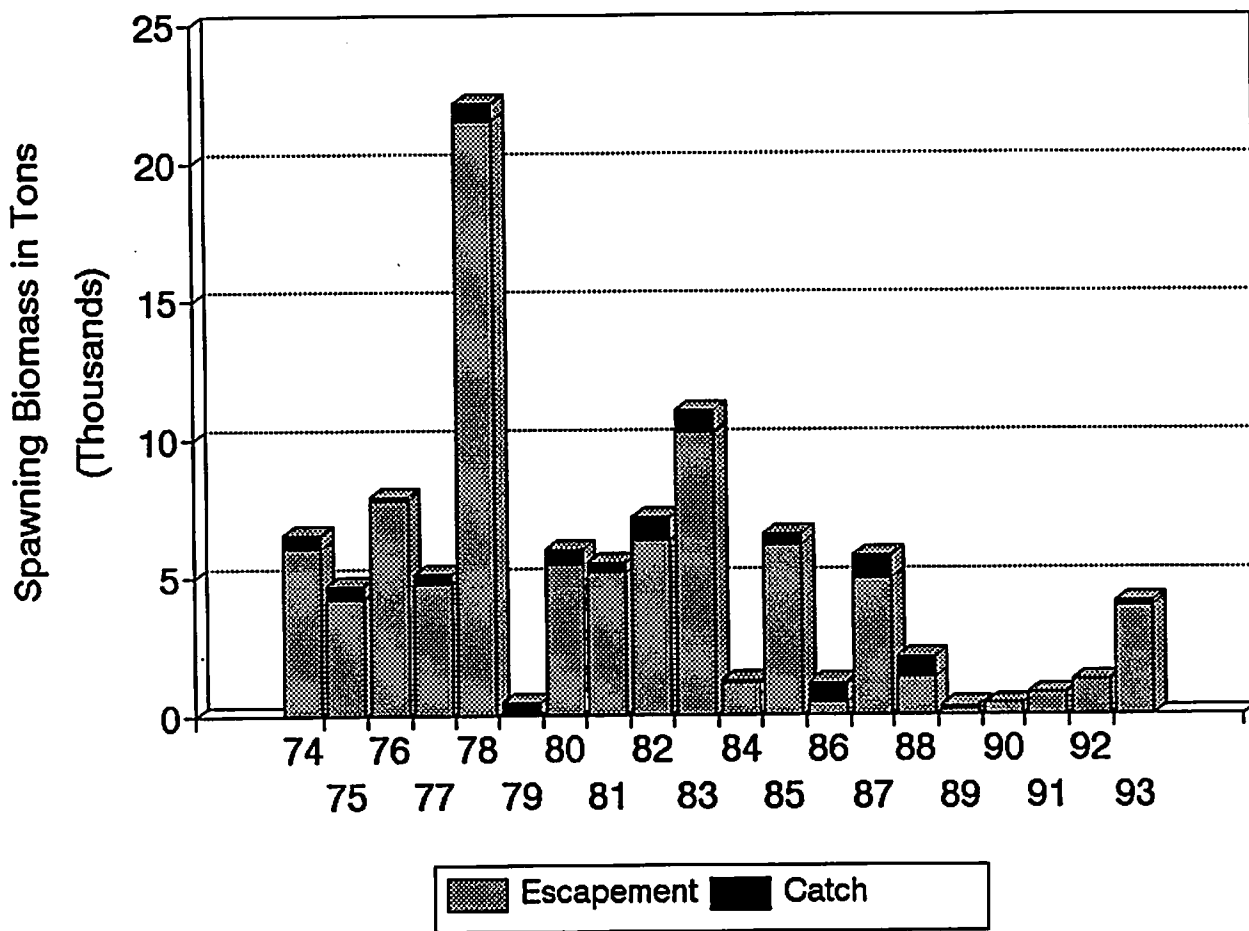


Table. Tomales Bay Herring Spawning Escapement in tons from 1973 to 1993.

SEASON	DEC.	JAN. 1-15	JAN. 16-31	FEB. 1-15	FEB. 16-28	MAR	TOTAL
73-74	551	0	2186	3052	250	2	6041
	9%	0%	36%	51%	4%	1%	
74-75	421	357	2361	769	168	134	4211
	10%	9%	56%	18%	4%	3%	
75-76	452	4557	717	1929	T	117	7769
	6%	59%	9%	25%	0%	2%	
76-77	2004	2031	245	212	41	204	4739
	42%	43%	5%	4%	1%	4%	
77-78	1072	2711	17243	405	88	0	21517
	5%	13%	80%	2%	1%	0%	
78-79	NO	FIELD	WORK	THIS	SEASON		
79-80	659	1164	3497	100	0	0	5420
	12%	22%	64%	2%	0%	0%	
80-81	192	1803	2300	T	20	0	5135
	4%	35%	45%	0%	1%	0%	
81-82	216	1161	4528	39	354	0	6298
	3%	18%	72%	1%	6%	0%	
82-83	159	1756	2807	1777	3310	553	10362
	2%	17%	27%	17%	32%	5%	
83-84	51	308	771	40	0	0	1170
	4%	26%	66%	3%	0%	0%	
84-85	120	190	5411	590	45	0	6156
	2%	5%	88%	10%	1%	0%	
85-86	0	5	195	41	193	0	435

Table. Tomales Bay Herring Spawning Escapement in tons from 1973 to 1993.

SEASON	DEC.	JAN. 1-15	JAN. 16-31	FEB. 1-15	FEB. 16-28	MAR.	TOTAL
	0%	1%	45%	9%	44%	0%	
86-87	0	130	1350	1170	2281	0	4931
		3%	27%	24%	46%		
87-88	160	195	956	0	0	0	1311
	12%	15%	73%	0%	0%	0%	
88-89	2	18	146	0	0	0	167
	1%	12%	87%	0%	0%	0%	
89-90	0	0	345	0	0	0	345
			100%				
90-91	0	54	671	0	50	3	779
	0%	7%	86%	0%	6%	1%	
91-92	150	0	890	163	8	2	1214
	12%	0%	74%	13%	1%	0%	
92-93	1346	345	0	2140	18	0	3857
	35%	9%	0%	55%	1%	0%	
AVG 73-93	398	883	2454	654	359	53	4835
AVG%	8.5%	15.4%	54.8%	12.5%	7.9%	0.9%	
CUM%	8.5%	23.9%	78.7%	91.2%	99.1%	100%	
AVG 82-93	181	273	1231	538	537	51	2793
AVG%	6.5%	9.8%	44.1%	19.3%	19.2%	1.8%	
CUM%		16.3%	60.4%	79.7%	98.9%	100%	