WHAM output tables

Table 1. Parameter estimates, standard errors, and confidence intervals. Rounded to 3 decimal places.

	Estimate	Std. Error	95% CI lower	95% CI upper
Index 1 fully selected q	0.003	0.000	0.002	0.004
Index 2 fully selected q	0.000	0.000	0.000	0.000
Index 3 fully selected q	0.000	0.000	0.000	0.000
Block 1: Mean Selectivity for age 1	0.089	0.015	0.064	0.123
Block 1: Mean Selectivity for age 2	0.296	0.041	0.223	0.382
Block 1: Mean Selectivity for age 3	0.489	0.053	0.387	0.591
Block 1: Mean Selectivity for age 4	0.580	0.054	0.472	0.681
Block 1: Mean Selectivity for age 5	0.682	0.054	0.568	0.778
Block 1: Mean Selectivity for age 6	0.687	0.056	0.569	0.784
Block 1: Mean Selectivity for age 7	0.500	—	—	—
Block 1: Mean Selectivity for age 8	1.000	—	—	—
Block 1: Mean Selectivity for age 9	1.000	—	—	—
Block 1: Mean Selectivity for age 10+	1.000	—	—	—
Block 2: Selectivity for age 1	1.000	—	—	—
Block 2: Selectivity for age 2	1.000	—	—	—
Block 2: Selectivity for age 3	1.000	—	—	—
Block 2: Selectivity for age 4	1.000	—	—	—
Block 2: Selectivity for age 5	1.000	—	—	—
Block 2: Selectivity for age 6	1.000	—	—	—
Block 2: Selectivity for age 7	1.000	—	—	—
Block 2: Selectivity for age 8	1.000	—	—	—
Block 2: Selectivity for age 9	1.000	—	—	—

Table 1. Parameter estimates, standard errors, and confidence intervals. Rounded to 3 decimal places. *(continued)*

	Estimate	Std. Error	95% CI lower	95% CI upper
Block 2: Selectivity for age 10+	1.000	—	—	—
Block 3: Selectivity for age 1	0.000	—	—	—
Block 3: Selectivity for age 2	0.000	—	—	—
Block 3: Selectivity for age 3	1.000	—	—	—
Block 3: Selectivity for age 4	0.450	0.193	0.151	0.790
Block 3: Selectivity for age 5	0.216	0.094	0.085	0.450
Block 3: Selectivity for age 6	0.209	0.072	0.101	0.383
Block 3: Selectivity for age 7	0.000	—	—	—
Block 3: Selectivity for age 8	0.000	—	—	—
Block 3: Selectivity for age 9	0.000	—	—	—
Block 3: Selectivity for age 10+	0.000	—	—	—
Block 4: Selectivity for age 1	0.000	—	—	—
Block 4: Selectivity for age 2	0.000	—	—	—
Block 4: Selectivity for age 3	1.000	—	—	—
Block 4: Selectivity for age 4	0.690	0.179	0.301	0.920
Block 4: Selectivity for age 5	0.468	0.117	0.260	0.688
Block 4: Selectivity for age 6	0.419	0.081	0.272	0.581
Block 4: Selectivity for age 7	0.000	—	—	—
Block 4: Selectivity for age 8	0.000	—	—	—
Block 4: Selectivity for age 9	0.000	—	—	—
Block 4: Selectivity for age 10+	0.000	—	—	—
Block 1: Selectivity RE σ	0.495	0.070	0.375	0.655

Table 1. Parameter estimates, standard errors, and confidence intervals. Rounded to 3 decimal places. *(continued)*

	Estimate	Std. Error	95% CI lower	95% CI upper
Block 1: Selectivity RE AR1 ρ (age)	0.912	0.029	0.833	0.955
Block 1: Selectivity RE AR1 ρ (year)	-0.049	0.128	-0.292	0.200
Fleet 1 age comp, logistic-normal: σ	7.663	0.322	7.057	8.321
Index 2 age comp, logistic-normal: σ	52.436	7.121	40.182	68.427
Index 3 age comp, logistic-normal: σ	15.695	1.287	13.366	18.431

Table 2. Abundance at age (1000s).

	1	2	3	4	5	6	7	8	9	10+
1968	4356781	1728777	385592	104137	68695	51133	39549	13246	84445	925
1969	2040237	3443997	1295994	275604	73124	47734	35582	29461	8978	57862
1970	2467721	1650748	2623952	924910	190696	49949	32919	25217	18073	41002
1971	1009080	1906226	1198496	1784749	617662	125083	32810	23569	15789	36988
1972	944637	778295	1319192	777022	1047783	339194	68001	19880	10568	23664
1973	1014010	748110	556314	830995	466357	546886	178755	37414	7350	12657
1974	1339113	703936	413840	274900	400945	218668	254807	104291	15555	8318
1975	1355911	974667	384806	188484	120033	169189	96239	134399	35439	8112
1976	187456	818294	452364	162140	76903	47696	67582	53059	49897	16169
1977	39684	136301	403651	162474	53027	21193	13035	26325	9833	12243
1978	23158	27675	83272	235120	93449	30176	12084	8755	14507	12166
1979	105193	18793	21612	62170	173047	67054	21662	8289	5033	15331
1980	25166	81992	13435	15231	43622	118815	45795	15319	5063	12439
1981	91759	19932	60557	9451	10720	30507	83859	33279	9881	11289
1982	299224	64414	12995	38729	6015	6797	19388	59998	20807	13236
1983	2402482	234329	46245	8815	25669	3903	4403	13802	37136	21071
1984	68212	1881216	171519	32826	6212	17966	2739	3296	9448	39846
1985	161417	55291	1472187	125132	23256	4232	12096	1885	1907	28512
1986	96966	125293	41472	1050940	86252	15729	2881	8307	1086	17523
1987	92061	76900	92135	29257	734504	58700	10764	2072	5249	11759
1988	343459	71261	53702	60858	19027	470462	37517	7617	1267	10402
1989	517998	265056	49087	34101	37221	10976	282506	22571	3367	5159
1990	110556	413421	194767	31844	21038	21413	6243	153044	8091	3056
1991	217077	85549	282792	113393	17126	10561	10806	3581	61512	4480
1992	175792	170455	57135	166397	63132	9106	5596	6844	1755	32336
1993	43804	139671	126470	38803	106911	37366	5326	3375	3040	15142
1994	134466	33837	102558	88980	25384	63816	21207	2789	1130	6089
1995	121418	101152	22068	62083	53843	14073	34844	11001	917	2373
1996	312225	92200	68470	13916	38332	32573	8480	21461	5097	1524
1997	172523	237242	55295	35121	6933	17879	15397	4802	8406	2593
1998	80286	130616	154722	27486	16009	3021	7588	7641	1444	3309

Table 2. Abundance at age (1000s). *(continued)*

	1	2	3	4	5	6	7	8	9	10+
1999	158329	61943	84991	89143	12474	6518	1259	3763	2296	1428
2000	1403607	122779	40499	45275	45898	2860	1356	356	368	364
2001	159177	1112198	88030	25677	26897	26508	1026	526	66	135
2002	114459	125248	817867	54392	14584	15091	18227	411	103	39
2003	255100	85397	83135	542491	29816	5071	3781	2266	8	3
2004	723727	191717	54828	50114	322008	17492	2978	2587	1295	6
2005	169752	560597	126704	30952	25746	146505	8431	1390	688	346
2006	438234	126657	340796	54357	10664	8046	58290	1555	58	43
2007	89248	319162	67552	114669	11272	1500	1161	14043	110	7
2008	218842	66066	171294	24548	35274	3083	405	509	3294	28
2009	241027	156322	34900	67015	8066	10109	849	171	110	721
2010	52310	142285	50445	7769	12549	1330	1759	260	20	95
2011	126806	21157	29770	8208	1182	1805	193	572	34	15
2012	87478	89653	9987	8577	1631	140	93	13	3	0
2013	64486	59864	36354	2405	1715	261	26	7	0	0
2014	86920	43839	27105	9408	471	93	10	2	0	0
2015	127528	53268	19722	10781	3621	178	35	5	1	0
2016	290310	87179	25148	7635	4224	1119	54	2	0	0
2017	32234	210143	47377	10815	2856	1366	342	23	0	0
2018	108735	23400	115202	20024	4079	700	315	17	0	0
2019	66037	81456	14323	47184	6764	1217	207	129	4	0
2020	80286	48860	48004	6280	16807	2012	347	45	8	0
2021	106731	56825	24230	17066	1962	4704	566	150	10	2
2022	479829	80190	32494	9820	5461	506	1255	205	24	2

Table 3. Total fishing mortality at age.

	1	2	3	4	5	6	7	8	9	10+
1968	0.035	0.088	0.136	0.154	0.164	0.163	0.094	0.189	0.189	0.189
1969	0.012	0.072	0.137	0.168	0.181	0.172	0.144	0.289	0.289	0.289
1970	0.058	0.120	0.185	0.204	0.222	0.220	0.134	0.268	0.268	0.268

Table 3. Total fishing mortality at age. *(continued)*

	1	2	3	4	5	6	7	8	9	10+
1971	0.060	0.168	0.233	0.333	0.399	0.409	0.301	0.602	0.602	0.602
1972	0.033	0.136	0.262	0.311	0.450	0.441	0.397	0.795	0.795	0.795
1973	0.165	0.392	0.505	0.529	0.557	0.564	0.339	0.678	0.678	0.678
1974	0.118	0.404	0.586	0.629	0.663	0.621	0.440	0.879	0.879	0.879
1975	0.305	0.568	0.664	0.696	0.723	0.718	0.395	0.791	0.791	0.791
1976	0.119	0.507	0.824	0.918	1.089	1.097	0.743	1.486	1.486	1.486
1977	0.160	0.293	0.340	0.353	0.364	0.362	0.198	0.396	0.396	0.396
1978	0.009	0.047	0.092	0.107	0.132	0.131	0.177	0.354	0.354	0.354
1979	0.049	0.136	0.150	0.154	0.176	0.181	0.146	0.293	0.293	0.293
1980	0.033	0.103	0.152	0.151	0.158	0.148	0.119	0.238	0.238	0.238
1981	0.154	0.228	0.247	0.252	0.256	0.253	0.135	0.270	0.270	0.270
1982	0.044	0.131	0.188	0.211	0.233	0.234	0.140	0.280	0.280	0.280
1983	0.045	0.112	0.143	0.150	0.157	0.154	0.089	0.179	0.179	0.179
1984	0.010	0.045	0.115	0.145	0.184	0.196	0.174	0.347	0.347	0.347
1985	0.053	0.088	0.137	0.172	0.191	0.185	0.176	0.352	0.352	0.352
1986	0.032	0.107	0.149	0.158	0.185	0.179	0.130	0.259	0.259	0.259
1987	0.056	0.159	0.215	0.230	0.245	0.248	0.146	0.292	0.292	0.292
1988	0.059	0.173	0.254	0.292	0.350	0.310	0.308	0.616	0.616	0.616
1989	0.026	0.108	0.233	0.283	0.353	0.364	0.413	0.826	0.826	0.826
1990	0.056	0.180	0.341	0.420	0.489	0.484	0.356	0.711	0.711	0.711
1991	0.042	0.204	0.330	0.386	0.432	0.435	0.257	0.513	0.513	0.513
1992	0.030	0.098	0.187	0.242	0.324	0.336	0.306	0.612	0.612	0.612
1993	0.058	0.109	0.152	0.224	0.316	0.366	0.447	0.894	0.894	0.894
1994	0.085	0.227	0.302	0.302	0.390	0.405	0.456	0.913	0.913	0.913
1995	0.075	0.190	0.261	0.282	0.303	0.307	0.285	0.569	0.569	0.569
1996	0.075	0.311	0.468	0.497	0.563	0.549	0.369	0.737	0.737	0.737
1997	0.078	0.227	0.499	0.586	0.631	0.657	0.501	1.001	1.001	1.001
1998	0.059	0.230	0.351	0.590	0.699	0.675	0.501	1.002	1.002	1.002
1999	0.054	0.225	0.430	0.464	1.273	1.370	1.062	2.125	2.125	2.125
2000	0.033	0.133	0.256	0.321	0.349	0.825	0.747	1.493	1.493	1.493
2001	0.040	0.107	0.281	0.366	0.378	0.175	0.715	1.430	1.430	1.430

Table 3. Total fishing mortality at age. *(continued)*

	1	2	3	4	5	6	7	8	9	10+
2002	0.093	0.210	0.211	0.401	0.856	1.184	1.885	3.770	3.770	3.770
2003	0.086	0.243	0.306	0.322	0.333	0.332	0.180	0.359	0.359	0.359
2004	0.055	0.214	0.372	0.466	0.588	0.530	0.562	1.124	1.124	1.124
2005	0.093	0.298	0.646	0.866	0.963	0.722	1.490	2.981	2.981	2.981
2006	0.117	0.429	0.889	1.373	1.761	1.736	1.223	2.447	2.447	2.447
2007	0.101	0.422	0.812	0.979	1.096	1.109	0.625	1.250	1.250	1.250
2008	0.136	0.438	0.738	0.913	1.050	1.089	0.664	1.327	1.327	1.327
2009	0.327	0.931	1.302	1.475	1.603	1.549	0.983	1.966	1.966	1.966
2010	0.705	1.364	1.616	1.683	1.739	1.730	0.924	1.847	1.847	1.847
2011	0.147	0.551	1.044	1.416	1.934	2.761	2.472	4.943	4.943	4.943
2012	0.179	0.703	1.224	1.410	1.633	1.476	2.330	4.659	4.659	4.659
2013	0.186	0.592	1.152	1.431	2.711	3.057	2.187	4.373	4.373	4.373
2014	0.290	0.599	0.722	0.755	0.775	0.776	0.437	0.874	0.874	0.874
2015	0.180	0.551	0.749	0.737	0.975	0.987	2.895	5.791	5.791	5.791
2016	0.123	0.410	0.644	0.783	0.929	0.987	0.657	1.314	1.314	1.314
2017	0.120	0.401	0.661	0.775	1.206	1.267	2.776	5.551	5.551	5.551
2018	0.089	0.291	0.693	0.885	1.010	1.020	0.697	1.394	1.394	1.394
2019	0.101	0.329	0.624	0.832	1.012	1.054	1.320	2.639	2.639	2.639
2020	0.146	0.501	0.834	0.963	1.073	1.068	0.636	1.271	1.271	1.271
2021	0.086	0.359	0.703	0.939	1.155	1.121	0.817	1.633	1.633	1.633
2022	0.020	0.060	0.080	0.073	0.067	0.055	0.105	0.210	0.210	0.210