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
NAA σ (age 1)	0.000	0.003	0.000	Inf
NAA σ (age 2-10+)	0.614	0.041	0.539	0.700
NAA residual AR1 ρ age	0.000	–	–	–
NAA residual AR1 ρ year	0.697	0.049	0.588	0.781
Index 1 fully selected q	0.000	0.000	0.000	0.012
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 a_{50}	1.283	0.140	1.033	1.583
Block 1: Mean 1/slope (increasing)	0.199	0.072	0.098	0.401
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	–	–	–
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	–	–	–

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 3: Selectivity for age 4	0.418	0.178	0.147	0.750
Block 3: Selectivity for age 5	0.187	0.079	0.077	0.388
Block 3: Selectivity for age 6	0.141	0.048	0.070	0.262
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	0.605	0.152	0.306	0.841
Block 4: Selectivity for age 5	0.415	0.101	0.240	0.616
Block 4: Selectivity for age 6	0.315	0.062	0.208	0.446
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	0.210	0.059	0.122	0.364
Fleet 1 age comp, logistic-normal: σ	12.536	1.329	10.184	15.431
Index 2 age comp, logistic-normal: σ	34.023	4.948	25.585	45.243
Index 3 age comp, logistic-normal: σ	30.989	3.088	25.491	37.674

Table 2. Abundance at age (1000s).

	1	2	3	4	5	6	7	8	9	10+
1968	6534853	1930688	1639979	800520	304375	149996	33997	42675	332160	3467
1969	6534853	5233492	3500808	1479215	202287	107415	71268	83433	52648	267389
1970	6534853	1595033	8092045	3148250	568433	119785	78317	112390	142928	132742
1971	6534853	2649975	1868367	6802877	1933553	375208	94611	63958	81335	198093
1972	6534853	1692955	2934311	2001238	4342097	942119	239104	51964	68421	125106
1973	6534853	2557007	2066461	2237111	1733087	2089982	427122	114815	42517	58453
1974	6534853	2447744	2019381	1082241	1466586	1049436	991104	257286	65622	39248
1975	6534853	4471151	1423296	1150004	587741	888713	608511	516157	168394	39764
1976	6534853	4889509	3506520	1037415	655778	382026	554758	402033	251831	172422
1977	6534853	2486446	4921314	2811976	714128	545221	312185	398909	308308	214567
1978	6534853	997175	1556322	3834327	1931610	789066	425335	191193	450086	740829
1979	6534853	1657313	388711	1189522	3060612	2163197	692789	273434	223533	795706
1980	6534853	2363033	712122	387210	1008358	3134509	1048207	384774	224127	567511
1981	6534853	973179	1715444	453384	378105	1153993	1435765	556799	275139	306429
1982	6534853	1766234	345664	1122219	159147	340360	483236	981568	308133	496029
1983	6534853	4618353	1463228	249533	583182	73398	84860	424158	641017	534060
1984	6534853	7379362	5815186	825860	150846	288924	55101	69909	318688	1727109
1985	6534853	994118	22146457	4675656	493391	85977	398589	51404	53128	1644935
1986	6534853	2974337	1571528	22092959	3952263	337401	84527	422510	34468	887719
1987	6534853	2321238	2473974	1177129	21975992	2656952	349949	65548	354492	493633
1988	6534853	1834446	1320854	1217690	927262	14795485	1864193	209196	81872	524372
1989	6534853	3631338	1576696	996826	976556	398363	11908707	760423	137995	349555
1990	6534853	5577281	5568194	1267045	941683	790557	222397	8556861	445959	174424
1991	6534853	3200937	9771002	5080818	999619	796934	589598	216022	6897030	217447
1992	6534853	3636941	2615299	8901207	4636492	716346	478829	430279	240346	4286210
1993	6534853	3306404	3596403	2154707	7073582	3061734	504141	266507	425464	2288344
1994	6534853	1777138	4954925	4416987	1468802	5135813	1646925	256629	135544	836084
1995	6534853	4628202	1111079	4124431	3456526	959956	2892448	961272	126674	268491
1996	6534853	5055113	4383181	478893	2539955	2667758	485519	1677597	466465	107685
1997	6534853	4018875	3879929	2063600	269988	1191675	1077535	287888	741637	197749
1998	6534853	4153483	3015586	2174971	824915	160268	525358	587079	103555	241111

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

	1	2	3	4	5	6	7	8	9	10+
1999	6534853	1926143	3783466	1863648	987090	327752	47719	208478	181269	104591
2000	6534853	2517852	1657107	2045374	768901	319311	106089	17690	54681	40940
2001	6534853	6114701	2541753	902481	946388	261635	85940	33102	8819	7619
2002	6534853	2755408	16712517	1483525	519693	412875	217079	11410	3650	2855
2003	6534853	2513957	3005481	12880935	987566	224135	301782	139312	228	1343
2004	6534853	3161076	1156447	1045620	5103620	267365	100397	69189	70244	335
2005	6534853	4154779	2770663	621944	438054	2227505	121150	30563	6523	13468
2006	6534853	1844000	6638169	1732114	292100	168691	1082687	38037	3385	1532
2007	6534853	3214826	2387428	3648472	623504	76278	71643	358235	7354	246
2008	6534853	1487657	4386188	840576	971214	120814	18159	15514	65397	1169
2009	6534853	2325923	866487	1553375	194137	236195	21336	2640	1016	15537
2010	6534853	2088018	1286992	207593	380588	44660	66327	4998	76	2275
2011	6534853	826838	1071914	309668	38224	58500	7248	7842	473	775
2012	6534853	3618026	403146	405257	78854	8223	5713	611	245	489
2013	6534853	2771353	2103271	94318	110365	15740	718	561	44	322
2014	6534853	2556740	1699576	723236	26773	17164	691	220	71	173
2015	6534853	2389599	910641	518633	165072	16169	1100	438	40	122
2016	6534853	3072690	948478	315964	192147	98434	3174	114	99	84
2017	6534853	4526576	1901537	489204	137478	103537	23330	296	28	97
2018	6534853	771312	5652346	1298322	257247	53218	40998	1536	72	67
2019	6534853	2062260	914125	2972094	383701	97497	15268	3947	335	76
2020	6534853	1706767	2625925	511467	1119009	113848	29700	1530	554	227
2021	6534853	2017187	1160355	842741	136519	159539	32678	6073	755	432
2022	6534853	2880936	1315785	345601	155278	9825	70266	17974	3113	660

Table 3. Total fishing mortality at age.

	1	2	3	4	5	6	7	8	9	10+
1968	0.020	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046	0.046
1969	0.002	0.045	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049
1970	0.025	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062

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

	1	2	3	4	5	6	7	8	9	10+
1971	0.013	0.095	0.098	0.098	0.098	0.098	0.098	0.098	0.098	0.098
1972	0.004	0.090	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101
1973	0.028	0.121	0.123	0.123	0.123	0.123	0.123	0.123	0.123	0.123
1974	0.017	0.120	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
1975	0.047	0.105	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106
1976	0.003	0.081	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
1977	0.001	0.018	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019
1978	0.000	0.003	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
1979	0.001	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
1980	0.000	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
1981	0.003	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
1982	0.002	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
1983	0.006	0.008	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
1984	0.000	0.006	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
1985	0.003	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
1986	0.001	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
1987	0.001	0.006	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
1988	0.003	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
1989	0.002	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
1990	0.001	0.009	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
1991	0.001	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
1992	0.001	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
1993	0.001	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
1994	0.002	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
1995	0.001	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
1996	0.002	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
1997	0.002	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007	0.007
1998	0.001	0.008	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
1999	0.001	0.009	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
2000	0.004	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
2001	0.001	0.012	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013

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

	1	2	3	4	5	6	7	8	9	10+
2002	0.002	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
2003	0.002	0.011	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012
2004	0.009	0.028	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029
2005	0.003	0.031	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
2006	0.007	0.030	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
2007	0.001	0.022	0.023	0.023	0.023	0.023	0.023	0.023	0.023	0.023
2008	0.005	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021
2009	0.009	0.036	0.037	0.037	0.037	0.037	0.037	0.037	0.037	0.037
2010	0.005	0.038	0.039	0.039	0.039	0.039	0.039	0.039	0.039	0.039
2011	0.002	0.018	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019
2012	0.002	0.013	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
2013	0.002	0.010	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
2014	0.003	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
2015	0.003	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
2016	0.004	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
2017	0.001	0.013	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
2018	0.002	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
2019	0.001	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009
2020	0.002	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
2021	0.001	0.010	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
2022	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002