

Shark Metadata		Passive Acoustic Monitoring						Visual Census		Satellite Telemetry			Multimethod Tracking				
ID	Sex	Acoustic Tag Date(s)	Days Detected	Total Detections	Min Monitoring Period (days)	Max Monitoring Period (days)	Rmin	Rmax	Wildbook ID	Wildbook Encounters	Satellite Tag Date	Track Duration (days)	Cumulative Track Distance (km)	Combined Track Duration (days)	Combined Track Distance (km)	Max Distance to Aggregation	Migration Behavior
WS 001	NA	3/27/2010	2	47	7	2233	0.001	0.286	R-161	1	3/27/2010	103	2826	103	2826	XX	Emigration
WS 002	NA	3/28/2010	22	573	385	2233	0.010	0.057	R-162	1	3/28/2010	16	117	386	304	XX	Short Track
WS 003	NA	3/28/2010	24	190	432	2233	0.011	0.056	R-165	1	3/28/2010	148	584	433	831	277	Return Migration
WS 005	NA	3/29/2010	6	63	1042	2233	0.003	0.006	R-163	1	3/29/2010	156	56	1042	141	XX	Short Track
WS 008	Female	4/30/2010	12	369	14	2201	0.005	0.857	R-035	4	3/29/2010	DNR	DNR	NA	NA	NA	NA
WS 009	Female	3/30/2010	4	60	2216	2232	0.002	0.002	R-031	2	3/29/2010	DNR	DNR	NA	NA	NA	NA
WS 011	NA	3/30/2010	17	826	26	2232	0.008	0.654	R-166	1	3/30/2010	102	1493	107	1493	XX	Emigration
WS 014	Male	4/12/2010	113	2024	683	2219	0.051	0.165	R-036	4	4/12/2010	265	2760	683	3677	547	Return Migration
WS 015	Female	4/23/2010 3/16/2012	119	3301	528	1947	0.061	0.225	R-089	5	4/12/2010	197	2475	798	3358	538	Return Migration
WS 016	Male	4/12/2010	15	114	1463	2219	0.007	0.010	R-167	1	4/12/2010	263	2699	1463	3174	633	Return Migration
WS 018	Male	4/15/2010	0	0	NA	NA	NA	NA	R-041	1	4/12/2010	37	330	37	330	XX	Emigration
WS 019	Female	4/15/2010	3	28	33	2216	0.001	0.091	R-094	2	4/12/2010	177	3448	180	3448	XX	Emigration
WS 020	Female	4/12/2010	7	134	360	2219	0.003	0.019	R-084	2	3/31/2011	68	1092	419	1180	287	Return Migration
WS 023	Male	4/15/2010	1	57	2	2216	0	0.500	R-169	1	4/15/2010	DNR	DNR	NA	NA	NA	NA
WS 024	Female	5/4/2010	7	859	294	2197	0.003	0.024	R-042	4	5/4/2010	162	2638	303	2856	967	Return Migration
WS 025	Female	4/28/2010 4/20/2011	44	1325	412	2203	0.020	0.107	R-092	6	4/15/2010	DNR	DNR	NA	NA	NA	NA
WS 026	NA	4/16/2010	6	46	657	2215	0.003	0.182	R-171	1	4/16/2010	259	3475	657	3841	320	Return Migration
WS 027	NA	4/16/2010	2	30	11	2215	0.001	0.009	R-168	1	4/16/2010	167	3177	169	3177	XX	Emigration
WS 029	Female	4/16/2010	0	0	NA	NA	NA	NA	R-172	1	4/16/2010	DNR	DNR	NA	NA	NA	NA
WS 030	Male	5/4/2010	22	279	699	2197	0.010	0.031	R-177	1	5/4/2010	193	3000	700	2000	303	Return Migration
WS 031	Male	5/4/2010	53	1350	365	365	0.145	0.145	R-037	4	5/4/2010	157	2438	366	2438	392	Return Migration
WS 032	Male	4/15/2010	62	751	1802	2216	0.028	0.034	R-040	3	NA	NA	NA	NA	NA	NA	NA
WS 033	Female	4/16/2010	265	3781	2213	2215	0.120	0.120	R-058	11	NA	NA	NA	NA	NA	NA	NA
WS 034	Male	4/22/2010	1	9	2	2209	0	0.500	R-034	1	4/22/2010	118	647	120	647	XX	Emigration
WS 035	Male	4/22/2010 3/31/2016	9	378	290	322	0.028	0.031	R-124	4	4/22/2010	100	483	2177	1495	728	Return Migration
WS 036	Male	4/22/2010	1	17	3	2209	0	0.333	R-174	1	4/22/2010	17	53	22	56	XX	Short Track
WS 037	Male	4/22/2010	2	14	4	2209	0.001	0.500	R-173	1	4/22/2010	82	760	88	760	XX	Emigration
WS 038	Female	4/22/2010	8	343	282	2209	0.004	0.028	R-038	2	NA	NA	NA	NA	NA	NA	NA
WS 039	Female	4/27/2010	0	0	NA	NA	NA	NA	R-100	1	NA	NA	NA	NA	NA	NA	NA
WS 040	Male	4/28/2010	0	0	NA	NA	NA	NA	R-175	1	NA	NA	NA	NA	NA	NA	NA
WS 041	Female	4/30/2010	2	123	25	2201	0.001	0.080	R-176	1	NA	NA	NA	NA	NA	NA	NA
WS 042	Male	5/4/2010	36	666	61	2197	0.016	0.590	R-090	3	NA	NA	NA	NA	NA	NA	NA
WS 043	Female	5/7/2010	2	4	13	2194	0.001	0.154	R-096	1	NA	NA	NA	NA	NA	NA	NA
WS 044	Female	5/11/2010	3	22	3	2190	0.001	1.000	R-039	1	NA	NA	NA	NA	NA	NA	NA
WS 045	Male	5/11/2010	9	148	300	2190	0.004	0.030	R-099	3	NA	NA	NA	NA	NA	NA	NA
WS 046	Male	5/12/2010	6	26	7	2189	0.003	0.857	R-086	3	NA	NA	NA	NA	NA	NA	NA
WS 047	NA	5/14/2010	0	0	NA	NA	NA	NA	R-178	1	NA	NA	NA	NA	NA	NA	NA
WS 103	Male	3/31/2011 4/18/2012	115	3995	602	1844	0.062	0.191	R-070	7	3/31/2011	184	1142	951	1931	447	Return Migration
WS 104	Female	4/2/2011 4/20/2012	46	812	101	1653	0.028	0.455	R-085	4	3/31/2011	175	1897	721	2487	592	Return Migration
WS 105	Male	4/2/2011	0	0	NA	NA	NA	NA	R-180	1	4/2/2011	182	180	182	180	XX	Emigration
WS 106	NA	4/2/2011	0	0	NA	NA	NA	NA	R-078	1	3/31/2011	DNR	DNR	NA	NA	NA	NA
WS 107	Female	4/2/2011 3/31/2016	50	1615	67	3883	0.013	0.746	R-073	11	4/2/2011	DNR	DNR	NA	NA	NA	NA
WS 108	Female	4/6/2011	2	15	3	1860	0.001	0.667	R-181	2	4/4/2011	281	3828	281	3828	XX	Emigration
WS 109	Female	4/7/2011	23	473	361	1859	0.012	0.064	R-182	2	4/7/2011	192	3666	361	4102	598	Return Migration
WS 110	Female	4/7/2011	15	367	355	1859	0.008	0.042	R-183	2	NA	NA	NA	NA	NA	NA	NA
WS 111	Male	4/16/2011	2	156	7	1850	0.001	0.286	R-102	2	NA	NA	NA	NA	NA	NA	NA
WS 112	Male	4/14/2011 4/18/2011	3	51	4	1848	0.002	0.750	R-098	5	NA	NA	NA	NA	NA	NA	NA
WS 113	Male	4/14/2011	3	14	356	1852	0.002	0.008	R-185	1	NA	NA	NA	NA	NA	NA	NA
WS 114	Female	4/14/2011	0	0	NA	NA	NA	NA	R-186	1	NA	NA	NA	NA	NA	NA	NA
WS 115	Female	4/14/2011	27	213	588	1851	0.015	0.046	NA	NA	NA	NA	NA	NA	NA	NA	NA
WS 116	Female	4/14/2011	2	11	456	1852	0.001	0.004	NA	NA	NA	NA	NA	NA	NA	NA	NA
WS 117	Male	4/15/2011	4	166	5	1851	0.002	0.800	R-184	3	NA	NA	NA	NA	NA	NA	NA
WS 118	NA	4/20/2011	4	42	4	1846	0.002	1.000	NA	NA	4/17/2011	61	708	64	708	XX	Emigration
WS 119	Male	4/18/2011	0	0	NA	NA	NA	NA	NA	NA	4/18/2011	70	65	70	65	XX	Short Track
WS 120	Female	4/19/2011	48	961	450	1847	0.026	0.107	NA	NA	4/19/2011	78	635	450	970	118	Return Migration
WS 121	Female	4/19/2011	3	16	5	1847	0.002	0.600	NA	NA	4/19/2011	165	1107	166	1107	XX	Emigration
WS 123	Male	4/19/2011	9	562	349	1847	0.005	0.026	NA	NA	4/19/2011	99	1384	349	1813	503	Return Migration
WS 124	Male	4/20/2011	0	0	NA	NA	NA	NA	R-197	1	4/20/2011	25	83	25	83	XX	Short Track
WS 126	Male	4/22/2011	5	109	24	1844	0.003	0.208	R-190	2	NA	NA	NA	NA	NA	NA	NA
WS 127	Female	4/22/2011 3/25/2014	3	159	4	780	0.004	0.750	R-115	2	NA	NA	NA	NA	NA	NA	NA
WS 128	NA	4/22/2011	16	90	69	1844	0.009	0.232	NA	NA	NA	NA	NA	NA	NA	NA	NA
WS 129	Female	4/26/2011	26	326	683	1840	0.014	0.038	NA	NA	NA	NA	NA	NA	NA	NA	NA
WS 130	Female	4/26/2011	2	18	351	1840	0.001	0.006	R-193	1	NA	NA	NA	NA	NA	NA	NA
WS 131	Female	4/27/2011	4	48	326	1839	0.002	0.012	R-194	1	NA	NA	NA	NA	NA	NA	NA
WS 202	Male	3/16/2012	13	65	664	1515	0.009	0.020	R-196	1	NA	NA	NA	NA	NA	NA	NA
WS 203	Male	3/16/2012	24	227	367	1515	0.016	0.065	R-199	2	NA	NA	NA	NA	NA	NA	NA
WS 204	Male	3/29/2012	8	233	366	1502	0.005	0.022	R-132	2	NA	NA	NA	NA	NA	NA	NA
WS 205	NA	4/19/2012	5	17	46	1481	0.003	0.109	R-135	1	NA	NA	NA	NA	NA	NA	NA
WS 206	Male	4/19/2012	28	448	367	1481	0.019	0.076	R-134	2	NA	NA	NA	NA	NA	NA	NA
WS 207	Female	4/19/2012	11	59	366	1481	0.007	0.030	R-201	1	NA	NA	NA	NA	NA	NA	NA
WS 208	Female	4/19/2012	15	123	37	1481	0.010	0.405	R-200	1	NA	NA	NA	NA	NA	NA	NA
WS 209	Female	5/3/2012	26	553	346	1467	0.018	0.075	R-101	2	NA	NA	NA	NA	NA	NA	NA
WS 210	NA	5/3/2012	4	30	270	1467	0.003	0.015	R-203	1	NA	NA	NA	NA	NA	NA	NA
WS 211	Male	5/3/2012	3	35	678	1467	0.002	0.004	R-202	1	NA	NA	NA	NA	NA	NA	NA
WS 212	Female	5/4/2012	6	57	320	1466	0.004	0.019	R-189	1	NA	NA	NA	NA	NA	NA	NA
WS 401	NA	4/11/2014	4	33	10	759	0.005	0.400	R-116	1	NA	NA	NA	NA	NA	NA	NA
WS 402	Female	4/11/2014 3/10/2016	42	786	463	465	0.090	0.091	R-061	6	NA	NA	NA	NA	NA	NA	NA
WS 403	Male	4/12/2014	19	269	423	900	0.021	0.045	DJ-109	2	NA	NA	NA	NA	NA	NA	NA
WS 404	Female	4/26/2014	2	59	6	744	0.003	0.333	R-121	1	NA	NA	NA	NA	NA	NA	NA
WS 501	Female	4/19/2015	2	7	15	386	0.005	0.133	R-064	3	NA	NA	NA	NA	NA	NA	NA
WS 502	Male	4/19/2015	3	22	22	386	0.008	0.136	R-13								

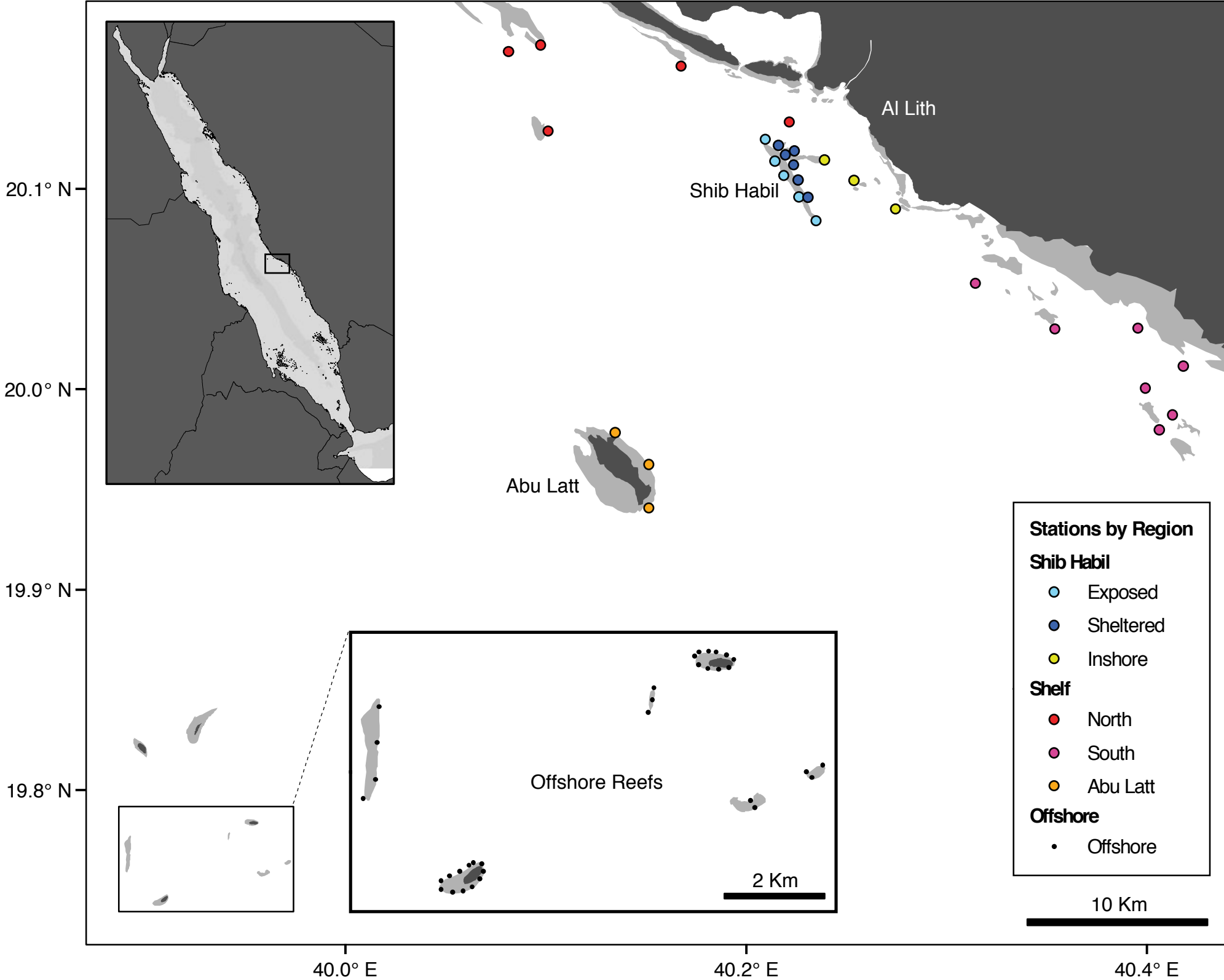
Acoustic Model Selection

Model	Log-Likelihood	AIC	ΔAIC
season + lag + effort (IS) + effort (OS) + size	-1763.9	3543.9	0
season + lag + effort (IS) + effort (OS) + sex + size	-1763.1	3546.2	2.37
season + lag + effort (IS) + size	-1767.2	3548.4	4.54
season + lag + effort (IS) + sex + size	-1766.4	3550.8	6.94
season + lag + effort (OS) + size	-1882.8	3779.6	235.74
season + lag + effort (OS) + sex + size	-1881.8	3781.7	237.79
season + lag + effort (IS) + effort (OS)	-1952.2	3918.5	374.63
season + lag + effort (IS)	-1953.9	3919.9	376.02
season + lag + effort (IS) + effort (OS) + sex	-1951.1	3920.2	376.36
season + lag + effort (IS) + sex	-1952.4	3920.7	376.87
season + lag + size	-1981.8	3975.7	431.81
season + lag + sex + size	-1980.6	3977.2	433.37
season + lag + effort (OS)	-2100.4	4212.9	668.99
season + lag + effort (OS) + sex	-2098.7	4213.3	669.43
season + lag	-2207.1	4424.2	880.29
season + lag + sex	-2205.2	4424.4	880.49

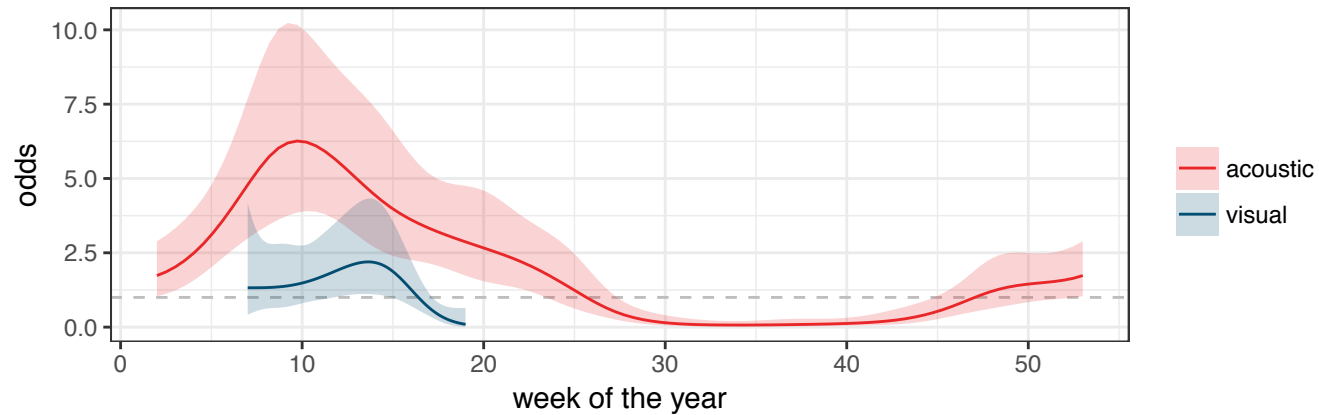
Visual Model Selection

Model	Log-Likelihood	AIC	ΔAIC
season + lag + size	-22017.5	44049.0	0
season + lag + effort + size	-22112.4	44240.8	191.7
season + lag	-25600.0	51212.1	7163.1
season + lag + effort	-25685.0	51383.9	7334.9
season + lag + sex	-2.84E+17	5.67E+17	5.67E+17

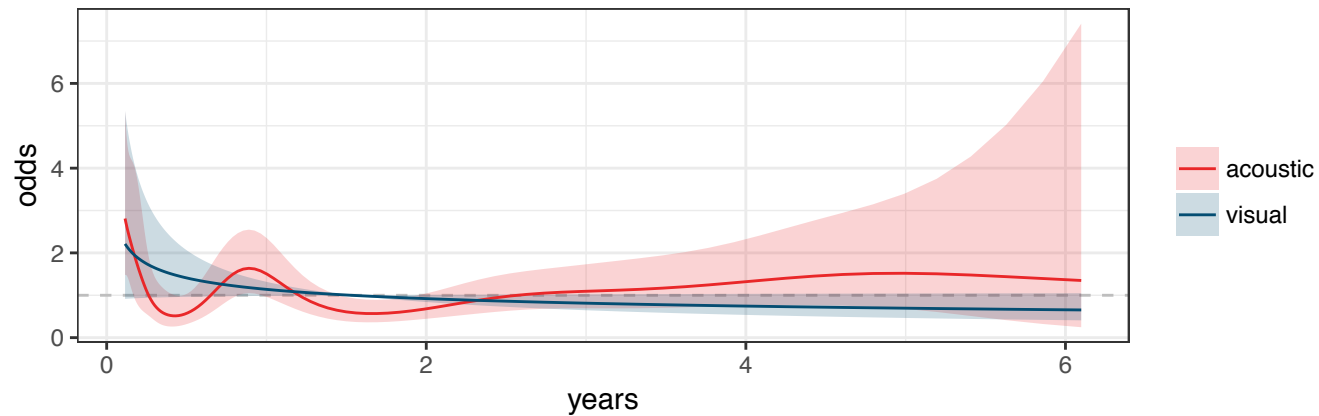
Station Metadata				Raw Detection Data					Spatial Residence (Rspatial)		
Name	Region	Latitude	Longitude	Total Days Monitored	Total Detections	Detections per day	Detections per Male	Detections per Female	Population Mean	Male Mean	Female Mean
E1	Exposed Shib Habil	20.12920	40.20968	1911	11275	5.900	100.667	203.629	0.438	0.509	0.412
E2	Exposed Shib Habil	20.11847	40.21453	1744	3278	1.880	55.444	64.933	0.316	0.333	0.320
E3	Exposed Shib Habil	20.11115	40.21888	1269	1387	1.093	47.923	46.150	0.292	0.312	0.335
E4	Exposed Shib Habil	20.10055	40.22643	1897	2910	1.534	20.800	55.143	0.203	0.215	0.183
E5	Exposed Shib Habil	20.08855	40.23510	1218	1964	1.612	25.429	41.909	0.253	0.258	0.255
Sh1	Sheltered Shib Habil	20.12632	40.21617	1530	3422	2.237	15.125	48.567	0.235	0.247	0.231
Sh2	Sheltered Shib Habil	20.12353	40.22435	2233	1363	0.610	22.944	13.971	0.082	0.105	0.068
Sh3	Sheltered Shib Habil	20.12155	40.21977	1631	1955	1.199	43.040	28.667	0.077	0.101	0.076
Sh4	Sheltered Shib Habil	20.11642	40.22397	884	1363	1.542	29.909	26.692	0.073	0.092	0.079
Sh5	Sheltered Shib Habil	20.10033	40.23085	1159	170	0.147	2.333	4.214	0.046	0.035	0.064
Sh6	Sheltered Shib Habil	20.10913	40.22597	1644	473	0.288	5.719	8.029	0.048	0.052	0.053
I1	Inshore	20.11913	40.23922	1604	172	0.107	1.813	3.030	0.022	0.025	0.025
I2	Inshore	20.10877	40.25383	1007	29	0.029	0.565	0.571	0.004	0.002	0.008
I3	Inshore	20.09453	40.27482	1050	0	0	0	0	0	0	0
N1	North Shelf	20.13787	40.22172	1647	188	0.114	3.538	3.100	0.019	0.020	0.009
N2	North Shelf	20.17630	40.09757	794	135	0.170	3.524	1.577	0.037	0.046*	0.01*
N3	North Shelf	20.13343	40.10148	1106	31	0.028	0.905	0.357	0.008	0.012	0.005
N4	North Shelf	20.16568	40.16773	1650	4813	2.917	75.607	74.212	0.262	0.287	0.251
N5	North Shelf	20.17305	40.08152	1238	1060	0.856	32.000	12.321	0.126	0.143	0.078
S1	South Shelf	20.05742	40.37817	2152	0	0	0	0	0	0	0
S2	South Shelf	20.03470	40.35413	884	55	0.062	1.773	0.615	0.010	0.003	0.020
S3	South Shelf	20.03507	40.39563	1109	8	0.007	0.348	0.000	0.000	0.001	0.000
S4	South Shelf	20.00517	40.39945	603	17	0.028	0.857	0.364	0.006	0.002	0.012
S5	South Shelf	20.01630	40.41815	883	20	0.023	3.524	0.077	0.005	0.012	0.001
S6	South Shelf	19.98447	40.40625	638	781	1.224	5.059	22.409	0.069	0.030	0.086
S7	South Shelf	19.99183	40.41287	643	129	0.201	0.647*	2.818*	0.026	0.001*	0.047*
A1	Abu Latt	19.94527	40.15162	794	29	0.037	0.765	0.609	0.014	0.008	0.011
A2	Abu Latt	19.96717	40.15167	690	34	0.049	0.105	1.391	0.035	0.027	0.048
A3	Abu Latt	19.98308	40.13472	878	82	0.093	3.095	0.654	0.027	0.044	0.022
O1	Offshore	19.78722	39.95393	582	2	0.003436426	0	0.142857143	0.006	0	0.012
O2	Offshore	19.78758	39.95578	582	4	0.007	0.083	0.214	0.011	0.014	0.012
O3	Offshore	19.78898	39.95667	393	4	0.010178117	0	0.333333333	0.001001001	0	0.002252252
O4	Offshore	19.78983	39.95533	393	2	0.005089059	0	0.166666667	0.001001001	0	0.002252252
O5	Offshore	19.79035	39.95350	619	4	0.006	0	0.286	0.008	0.000	0.017
O6	Offshore	19.79047	39.95217	619	0	0	0	0	0	0	0
O7	Offshore	19.79035	39.95042	523	0	0	0	0	0	0	0
O8	Offshore	19.78960	39.94962	619	0	0	0	0	0	0	0
O9	Offshore	19.78805	39.95032	392	0	0	0	0	0	0	0
O10	Offshore	19.78738	39.95207	581	2	0.003442341	0	0.143	0	0	0.012
O11	Offshore	19.76375	39.95963	377	0	0	0	0	0.000	0.000	0.000
O12	Offshore	19.76247	39.96040	357	0	0.000	0	0	0.000	0.000	0.000
O13	Offshore	19.77957	39.94128	373	1	0.003	0.125	0	0.002	0.006	0.000
O14	Offshore	19.78392	39.94237	372	0	0	0	0	0.000	0.000	0.000
O15	Offshore	19.78180	39.94210	594	0	0	0	0	0.000	0.000	0.000
O16	Offshore	19.76888	39.96967	595	0	0	0	0	0.000	0.000	0.000
O17	Offshore	19.77008	39.97263	582	0	0	0	0	0.000	0.000	0.000
O18	Offshore	19.76778	39.97068	583	3	0.005	0	0.214	0.000	0.000	0.001
O19	Offshore	19.76408	39.89020	379	2	0.005	0.250	0.000	0.012	0.031	0.000
O20	Offshore	19.76745	39.89238	581	9	0.015	0	0.643	0.006	0.000	0.013
O21	Offshore	19.77408	39.89265	581	16	0.028	0	0.857	0.040	0.000	0.073
O22	Offshore	19.78055	39.89298	260	3	0.012	0	0.273	0.001	0.000	0.001
O23	Offshore	19.75210	39.90915	620	16	0.025806452	0.333333333	0.857142857	0.043	0.020833333	0.073
O24	Offshore	19.75100	39.90748	387	14	0.036	0.818	0.417	0.015	0.033	0.002
O25	Offshore	19.75020	39.90563	610	26	0.043	1.250	0.714	0.057	0.042	0.074
O26	Offshore	19.74928	39.90415	610	16	0.026	0.750	0.500	0.036	0.007	0.072
O27	Offshore	19.74778	39.90418	372	4	0.011	0	0.400	0.017	0.000	0.035
O28	Offshore	19.74728	39.90620	611	34	0.056	0.750	1.500	0.082	0.021	0.110
O29	Offshore	19.74747	39.90810	382	30	0.078534031	0.818181818	1.75	0.079	0.048484848	0.133
O30	Offshore	19.74818	39.90973	621	34	0.054750403	0.75	1.5	0.044	0.034722222	0.030
O31	Offshore	19.74968	39.91112	621	14	0.022544283	0.416666667	0.428571429	0.031773917	0.020833333	0.014515536
O32	Offshore	19.75102	39.91173	621	36	0.057971014	0.833333333	1.5	0.066008151	0.020833333	0.087874609
O33	Offshore	19.75238	39.91145	620	19	0.030645161	0.583333333	0.785714286	0.066260676	0.021464646	0.087874609
O34	Offshore	19.75255	39.90998	583	23	0.039451115	0.5	1.214285714	0.048123123	0.034722222	0.073359073



Seasonality

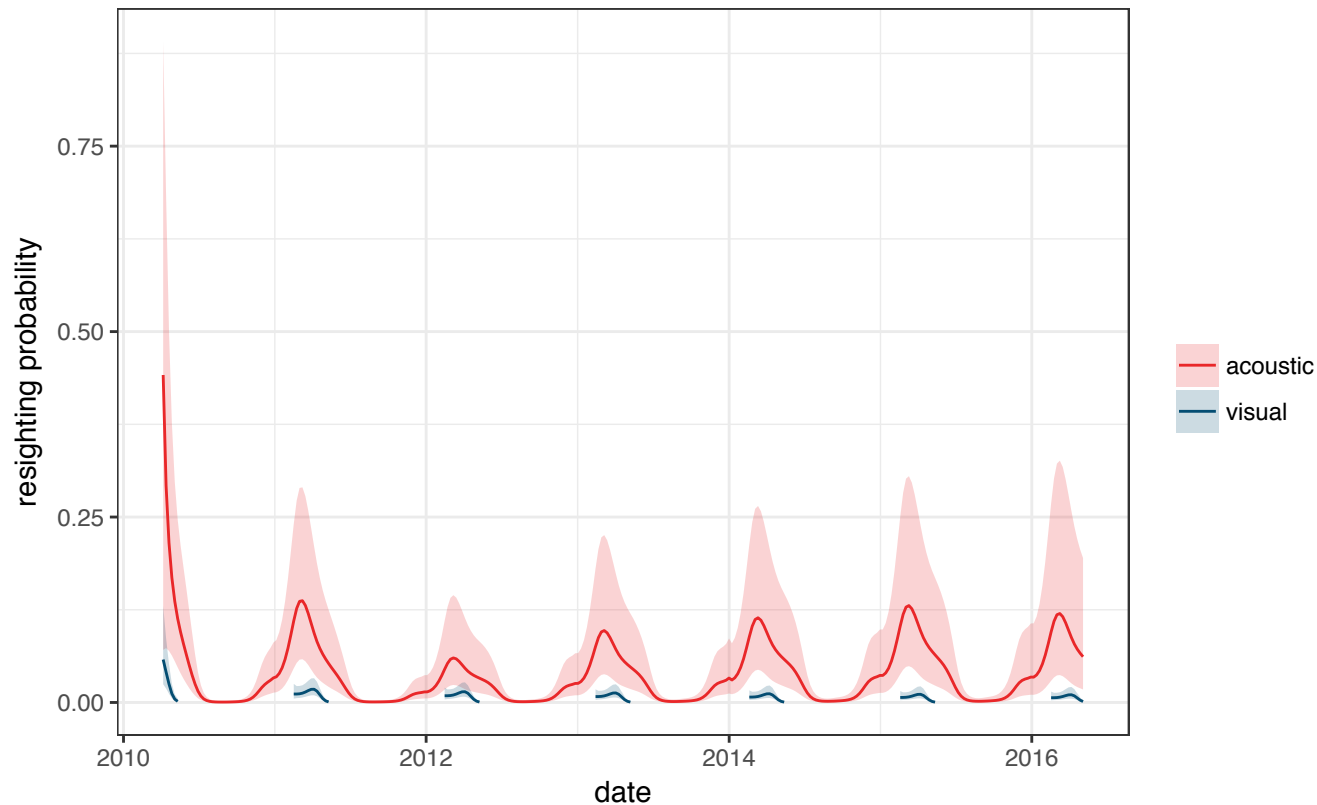


Lag



Acoustic and visual resighting probability of a hypothetical shark

Hypothetical individual first observed during the first sampling season



Assumes maximum inshore acoustic coverage and mean observed individual size

