

Updated observer catch-at-length data from the commercial fisheries at the main Tristan da Cunha island

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Introduction

Updated catch-at-length (CAL) data from samples collected from both the powerboats and the Edinburgh have recently been provided for the 2014 season¹. This document provides various comparative plots of these data compared with data from previous seasons. MARAM/TRISTAN/2014/JAN/01 and MARAM/TRISTAN/2015/MAY/05 provided commercial CAL data for all four islands, whereas this document focuses only on such data collected from the main island of Tristan da Cunha. There were some errors made in in the documents above about the source of some of the data; these have been corrected here.

Results

Tables 1a and b provide the CAL values for males and females respectively from samples collected from the powerboat fishery. Tables 2a and b provide the CAL values for males and females respectively from samples collected from the Edinburgh vessel (since 2011). Table 3 reports the percentage females in the catch (by number) for both the powerboats and the Edinburgh.

Figure 1a reports the Tristan powerboat male (top) and female (bottom) CAL plots for pre-2008, 2008, 2009, 2010 and 2014. Percentages here sum to 100 over both sexes. Edinburgh values are shown for 2011-2014.

Figure 1b reports the Tristan male and female average sizes in the commercial catch and the % (by number) of females in the catch since 1997. Results are shown for Powerboats and Edinburgh separately.

Comments

Although the Edinburgh results for 2014 are generally similar to those in preceding years, there are some key differences for the powerboats. For the latter, the proportion of females in the catch was the lowest since 2013, and there was a notably lower proportion of larger male lobsters in the catch. The average size of both male and female lobsters taken by powerboats was near the lowest part of the range seen over recent years.

¹ 2012 refers to the 2012/13 season

Table 1a: Male CAL data (% numbers of both sexes) from the powerboats.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
55	0.190	0.244	-	0.171	0.425	0.000	0.190	0.137	0.431	0.361	0.050	0.080	0.230	0.147	-	-	-	0.001
60	1.267	1.385	-	1.140	1.105	0.000	0.666	0.607	1.239	1.345	0.050	0.581	1.889	1.396	-	-	-	0.170
65	5.003	3.545	-	3.421	4.418	0.000	3.709	3.055	2.827	3.335	0.843	3.084	5.991	5.658	-	-	-	2.891
70	11.400	8.028	-	6.100	8.298	0.000	8.702	7.148	6.220	5.960	2.133	7.669	8.894	9.699	-	-	-	9.694
75	15.643	8.924	-	8.951	11.158	0.000	13.647	11.163	8.454	8.289	4.762	11.794	9.770	15.356	-	-	-	18.027
80	12.033	10.310	-	9.521	12.886	0.000	14.551	12.182	10.366	10.749	7.192	14.090	9.493	13.960	-	-	-	22.619
85	9.120	7.579	-	6.556	12.773	0.000	15.264	12.476	9.801	11.252	10.218	13.036	8.848	7.054	-	-	-	19.388
90	4.877	6.724	-	6.784	13.820	0.000	14.028	10.556	8.266	12.728	12.599	13.116	9.055	6.539	-	-	-	15.136
95	2.660	2.608	-	4.960	10.988	0.000	12.553	8.245	5.520	12.455	14.335	10.533	8.641	5.731	-	-	-	6.463
100	1.267	1.997	-	3.364	9.063	0.000	8.512	6.189	4.066	11.394	14.931	7.589	8.018	4.041	-	-	-	2.381
105	0.380	0.530	-	1.938	4.305	0.000	4.993	3.212	2.208	8.081	14.534	3.624	5.876	2.351	-	-	-	1.361
110	0.190	0.122	-	1.254	2.096	0.000	3.138	2.193	1.966	6.638	5.754	2.002	3.295	1.029	-	-	-	1.701
Total	64.028	51.997	-	54.162	91.334	0.000	99.952	77.164	61.362	92.586	87.401	87.197	80.000	72.961	-	-	-	99.831

Table 1b: Female CAL data (% numbers of both sexes) from the powerboats.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
60	2.723	2.567	-	3.934	0.566	0.000	0.000	0.999	2.504	0.940	0.397	0.481	1.820	1.323	-	-	-	0.000
65	8.866	11.369	-	12.657	1.784	0.000	0.000	4.074	7.189	1.607	0.744	1.802	3.157	3.159	-	-	-	0.000
70	10.956	16.341	-	15.108	3.314	0.000	0.000	6.326	10.016	1.618	0.992	3.604	5.069	7.201	-	-	-	0.170
75	6.776	10.432	-	9.464	1.784	0.000	0.000	6.522	10.151	1.553	0.546	3.885	4.701	8.229	-	-	-	0.000
80	3.737	4.890	-	3.022	0.765	0.000	0.000	3.192	6.462	1.083	0.198	2.002	3.134	4.335	-	-	-	0.000
85	2.280	1.834	-	1.140	0.340	0.000	0.000	1.156	1.589	0.426	0.099	0.781	1.313	1.690	-	-	-	0.000
90	0.633	0.570	-	0.513	0.113	0.000	0.000	0.568	0.727	0.186	0.050	0.260	0.807	1.102	-	-	-	0.000
Total	35.972	48.003	-	45.838	8.666	0.000	0.000	22.836	38.638	7.414	3.026	12.815	20.000	27.039	-	-	-	0.170

Table 2a: Male CAL data (% numbers of both sexes) from the Edinburgh.

	2011	2012	2013	2014
55	0.543	0.000	0.965	0.243
60	3.664	0.055	4.440	3.311
65	11.245	0.915	12.162	11.092
70	12.350	7.306	16.602	11.635
75	11.070	14.654	13.707	12.028
80	9.519	15.403	9.653	11.841
85	7.677	11.784	12.162	10.756
90	5.002	8.596	6.178	8.081
95	2.695	6.558	3.668	5.275
100	1.590	5.088	3.089	2.507
105	0.795	2.412	0.965	1.160
110	0.213	2.121	0.579	0.599
Total	66.363	74.893	84.170	78.526

Table 2b: Female CAL data (% numbers of both sexes) from the Edinburgh.

	2011	2012	2013	2014
60	4.033	0.083	3.861	0.673
65	7.387	1.331	3.861	3.704
70	7.949	4.852	2.510	5.761
75	6.824	6.669	2.510	3.872
80	4.886	6.059	2.317	3.872
85	1.745	3.674	0.579	2.095
90	0.814	2.412	0.193	1.496
Total	33.637	25.080	15.830	21.474

Table 3: Percentage catch (F%) that are female. A “-” indicates no data collected.

	Powerboats	Edinburgh
1997	35.972	-
1998	48.003	-
1999	-	-
2000	45.838	-
2001	8.6661	-
2002	-	-
2003	0.048	-
2004	22.836	-
2005	38.638	-
2006	7.4139	-
2007	3.0258	-
2008	12.815	-
2009	20.000	-
2010	27.039	-
2011	-	33.637
2012	-	25.080
2013	-	15.830
2014	0.170	21.474

Figure 1a: Tristan **powerboat** male (top) and female (bottom) CAL plots for pre-2008, 2008, 2009, 2010 and 2014 (left side plots). Percentages here sum to 100 over both sexes. Edinburgh values are reported for 2011-2014 (right side plots).

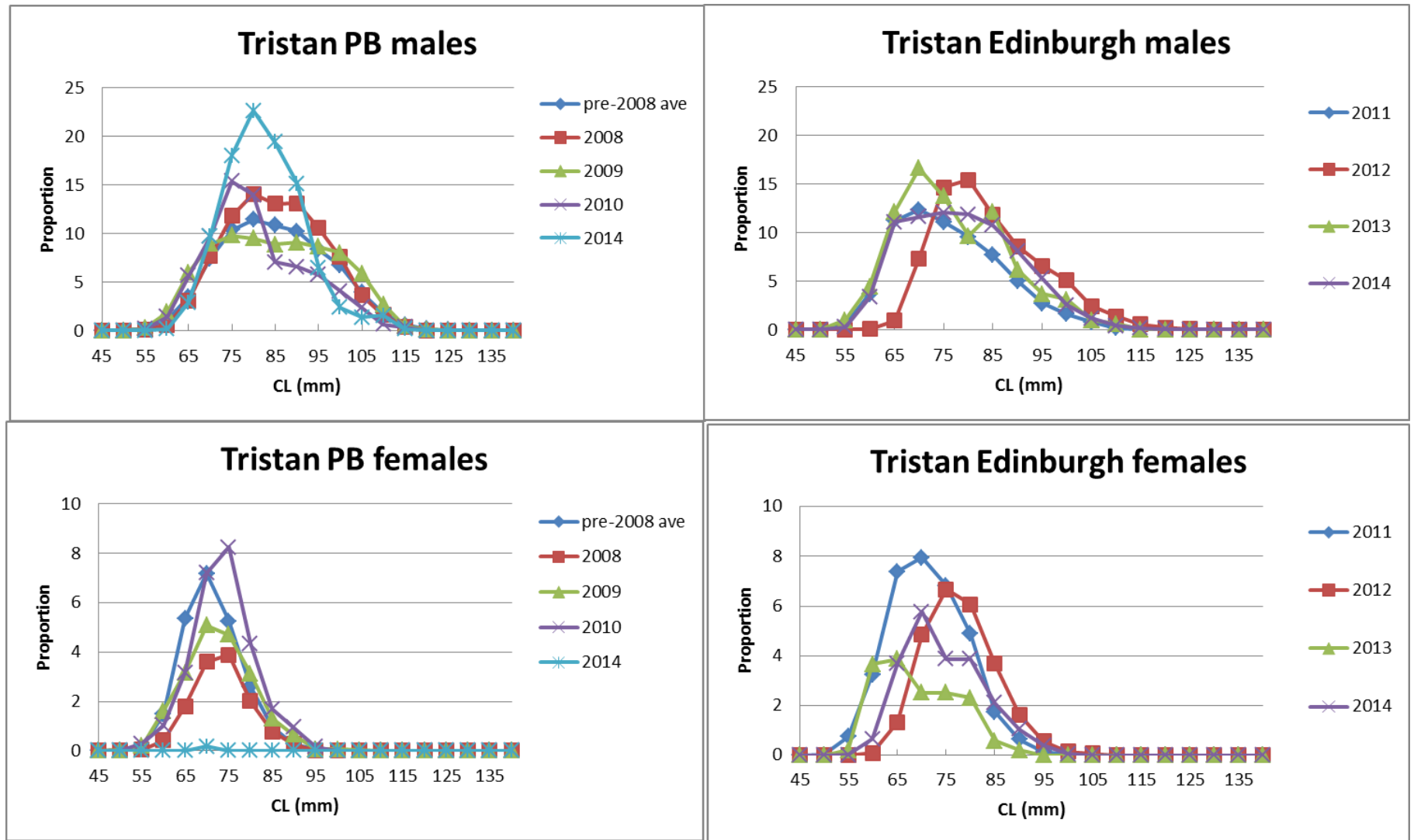


Figure 1b: Tristan male and female average sizes in the commercial catch and the % (by number) of females in the catch since 1997. Results are shown for Powerboats (left side plots) and Edinburgh (right side plots) separately.

