The following supplement accompanies the article

Calls of North Atlantic right whales *Eubalaena glacialis* contain information on individual identity and age class

Jessica A. McCordic*, Holly Root-Gutteridge, Dana A. Cusano, Samuel L. Denes, Susan E. Parks

*Corresponding author: jamccord@syr.edu

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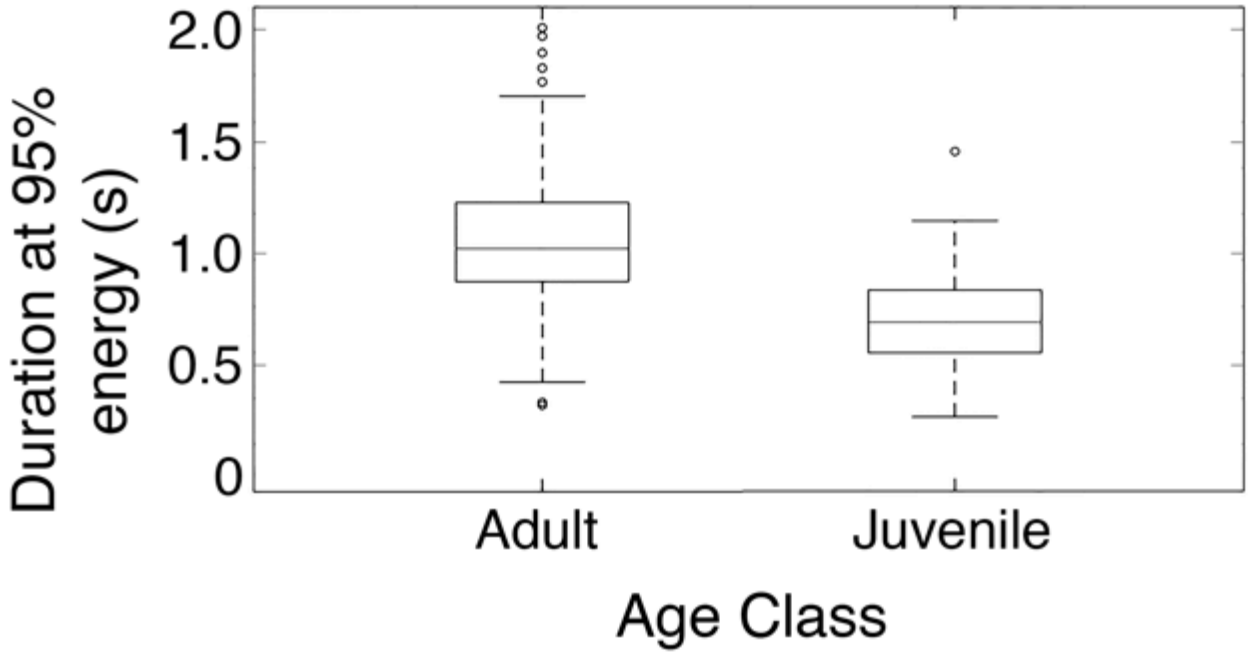

Figure S1. Boxplot of the duration at 95% energy of calls for the two age classes, with adult calls significantly longer than juvenile calls.

Table S1. Median Potential for Individuality Coding (PIC) values for each measurement variable. All variables exhibited values greater than 1, thus indicating high potential for encoding individuality (Charrier et al. 2002).

Measurement variable	Median PIC across all individuals
Minimum fundamental frequency (Hz)	1.65
Maximum fundamental frequency (Hz)	1.43
Start fundamental frequency (Hz)	1.63
End fundamental frequency (Hz)	1.44
Mean fundamental frequency (Hz)	1.46
Coefficient of variation of fundamental frequency (Hz)	1.22
Duration 95% (s)	1.44
Inflection Point (%)	1.45
Formant 1 (Hz)	1.34
Formant 2 (Hz)	1.33
Formant 3 (Hz)	1.15
Kurtosis of spectrum	1.34
Skewness of spectrum	1.27
Spectral entropy	1.40

Table S2. Mean ± Standard Deviation for measurement variables across individuals and demographic groups. Italicized values indicate variables that did not result in significant differences in the relevant groups for separate ANOVA tests. For grouping, the number is the unique identifying code from the North Atlantic right whale catalog, and in parentheses the age class (A=Adult; J= Juvenile) and sex (F=female; M = Male). U = the value is unknown for that individual.

Grouping	Inflection Point (%)			Mean fundamental frequency (Hz)			Maximum fundamental frequency (Hz)			Minimum fundamental frequency (Hz)		
1241 (AF)	0.55	±	0.08	127	±	13	178	±	18	103	±	12
1604 (AF)	0.57	±	0.10	137	±	12	204	±	23	101	±	12
1620 (AF)	0.53	±	0.14	147	±	19	234	±	91	116	±	3
1703 (AF)	0.77	±	0.12	146	±	20	210	±	54	115	±	21
2040 (AF)	0.51	±	0.25	209	±	35	262	±	73	181	±	26
2145 (AF)	0.49	±	0.07	143	±	16	222	±	40	107	±	13
2413 (AF)	0.64	±	0.13	134	±	18	206	±	27	109	±	20
3101 (AF)	0.57	±	0.06	121	±	13	157	±	12	110	±	15
2350 (AM)	0.46	±	0.12	122	±	13	174	±	20	90	±	18
3103 (JF)	0.45	±	0.09	101	±	5	135	±	8	78	±	8
3323 (JM)	0.50	±	0.10	124	±	13	181	±	29	92	±	22
3442 (JM)	0.40	±	0.22	132	±	10	151	±	18	113	±	14
3579 (JM)	0.42	±	0.13	150	±	18	227	±	37	102	±	18
3360 (UF)	0.37	±	0.18	128	±	13	166	±	28	97	±	10
Adult	0.51	±	0.14	*131*	±	*22*	189	±	37	*99*	±	*23*
Juvenile	0.44	±	0.15	*128*	±	*21*	172	±	43	*98*	±	*21*

Table S2 (continued). Mean ± Standard Deviation for measurement variables across individuals and demographic groups. Italicized values indicate variables that did not result in significant differences in the relevant groups for separate ANOVA tests.

Grouping	Start fundamental frequency (Hz)			End fundamental frequency (Hz)			Coefficient of variation of fundamental frequency			Kurtosis of spectrum			Skewness of spectrum		
1241 (AF)	120	±	39	175	±	14	0.17	±	0.02	80.95	±	41.02	7.74	±	1.91
1604 (AF)	107	±	17	201	±	22	0.23	±	0.04	310.00	±	215.92	15.63	±	5.79
1620 (AF)	131	±	20	234	±	91	0.21	±	0.16	211.13	±	206.62	12.39	±	6.98
1703 (AF)	161	±	17	210	±	54	0.14	±	0.07	278.60	±	149.09	15.10	±	4.30
2040 (AF)	193	±	19	262	±	73	0.11	±	0.07	372.65	±	162.95	17.45	±	4.63
2145 (AF)	111	±	15	222	±	40	0.24	±	0.07	104.65	±	75.36	8.56	±	3.21
2413 (AF)	111	±	22	206	±	27	0.18	±	0.06	181.78	±	96.39	12.27	±	3.15
3101 (AF)	121	±	20	157	±	12	0.10	±	0.04	119.14	±	54.07	9.29	±	2.18
2350 (AM)	97	±	25	173	±	21	0.21	±	0.07	89.41	±	23.51	8.19	±	0.95
3103 (JF)	80	±	8	135	±	8	0.19	±	0.04	110.13	±	54.22	9.35	±	2.48
3323 (JM)	101	±	26	179	±	28	0.21	±	0.06	87.18	±	64.67	7.95	±	3.17
3442 (JM)	115	±	15	150	±	18	0.08	±	0.05	107.41	±	84.91	8.42	±	3.73
3579 (JM)	102	±	18	227	±	37	0.25	±	0.06	304.71	±	153.31	15.57	±	4.56
3360 (UF)	101	±	13	165	±	28	0.15	±	0.03	80.70	±	51.60	7.52	±	2.50
Adult	*108*	±	*31*	188	±	37	0.20	±	0.07	*179.17*	±	*122.05*	*11.79*	±	*4.04*
Juvenile	*101*	±	*21*	172	±	43	0.17	±	0.08	*163.20*	±	*140.70*	*10.69*	±	*4.87*

Table S2 (continued). Mean ± Standard Deviation for measurement variables across individuals and demographic groups. Italicized values indicate variables that did not result in significant differences in the relevant groups for separate ANOVA tests.

Grouping	Spectral entropy			Duration 95% (s)			Formant 1 (Hz)			Formant 2 (Hz)			Formant 3 (Hz)		
1241 (AF)	0.65	±	0.05	0.85	±	0.18	878	±	52	1446	±	118	2505	±	257
1604 (AF)	0.44	±	0.09	0.88	±	0.16	1146	±	200	1989	±	147	3003	±	265
1620 (AF)	0.60	±	0.12	0.90	±	0.46	1205	±	136	1930	±	164	3101	±	152
1703 (AF)	0.51	±	0.09	1.71	±	0.34	885	±	235	1852	±	194	3031	±	328
2040 (AF)	0.45	±	0.10	0.64	±	0.19	730	±	264	1763	±	249	2972	±	368
2145 (AF)	0.64	±	0.08	0.96	±	0.11	741	±	187	1534	±	168	2585	±	260
2350 (AM)	0.48	±	0.10	1.16	±	0.22	891	±	275	1928	±	234	2913	±	298
2413 (AF)	0.65	±	0.04	0.88	±	0.14	841	±	94	1430	±	167	2520	±	298
3101 (AF)	0.69	±	0.02	0.66	±	0.22	929	±	134	1776	±	268	2536	±	216
3103 (JF)	0.56	±	0.09	0.69	±	0.14	714	±	216	1441	±	287	2467	±	227
3323 (JM)	0.64	±	0.10	1.03	±	0.20	840	±	229	1714	±	90	2917	±	105
3360 (UF)	0.71	±	0.05	0.86	±	0.21	1026	±	286	1851	±	238	2709	±	265
3442 (JM)	0.59	±	0.10	0.63	±	0.16	1160	±	162	1838	±	233	2865	±	271
3579 (JM)	0.74	±	0.03	0.78	±	0.19	984	±	91	1695	±	76	2676	±	75
Adult	0.52	±	0.11	1.09	±	0.29	*885*	±	*255*	1817	±	280	*1817*	±	*332*
Juvenile	0.63	±	0.11	0.76	±	0.22	*954*	±	*245*	1690	±	242	*1690*	±	*259*

Table S3. Classification results of discriminant function analysis excluding the single adult male (N calls = 93) for individual and age class based on measurements of upcalls.

Grouping		Number of whales	Number of calls	Adjusted chance classification	Percent correctly classified	Cross-validated percent correctly classified
Individual		13	119	11.35	73.1	47.9
Age	Adult	8	64			
	Juveniles	4	45			
	Total	12	109	56.15	75.2	75.2