

**Supplementary Material**

**Assessment of humpback whale swimming speeds in two eastern Australian bays**

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**Table S1.** Summary of the sighting data collected during southern migration in Hervey Bay and the Gold Coast between 2010 and 2020.

Location	Year	Total number of pods	Total number of individuals	Total number of adults	Total number of calves	First survey day	Last survey day	Total number of surveys	Survey time (h)
Hervey Bay south	2010	608	1563	941	390	238	288	89	525
	2011	625	1508	984	230	220	280	85	471
	2012	323	867	352	182	217	294	64	264
	2013	429	1054	497	226	216	268	73	315
	2014	502	1228	509	198	213	281	84	252
	2015	401	968	493	241	223	281	72	300
	2016	676	1591	1016	399	201	291	138	504
	2017	601	1395	674	353	196	302	115	375
	2018	531	1209	559	236	195	286	112	336
	2019	405	929	208	88	194	283	88	264
2020	151	351	98	33	207	258	41	123	
Gold Coast north	2010	128	236	179	15	141	219	80	200
	2011	38	99	70	2	151	221	24	60
	2012	49	109	85	6	169	221	22	55
	2013	54	135	100	15	163	221	37	92.5
	2014	37	84	45	14	153	220	27	67.5
	2015	72	155	96	17	153	219	43	107.5
	2016	98	228	133	26	151	221	50	125
	2017	107	232	163	28	147	221	62	155
	2018	104	239	147	32	149	221	58	145
	2019	148	325	257	27	153	221	67	167.5
2020	44	90	52	6	152	221	20	50	
Gold Coast south	2010	127	287	228	41	224	308	73	182.5
	2011	19	49	17	8	223	297	8	20
	2012	55	147	90	22	235	304	29	72.5
	2013	62	155	102	42	228	304	35	87.5
	2014	78	196	138	40	227	297	48	120
	2015	101	223	159	48	222	306	60	150
	2016	146	389	227	96	222	306	69	172.5
	2017	133	366	246	83	222	308	76	190
	2018	129	344	192	60	223	305	62	155
	2019	161	412	277	96	222	304	83	207.5
2020	153	410	257	75	222	303	72	180	

Note that total number of individuals also includes juveniles and sub-adults.

**Table S2.** Sightings data for southward migration of a humpback whale calf with lower jaw deformity in 2021.

Date	Location	Details
6–9 September	Hervey Bay (Qld)	
14 September	Point Arkwright (Qld)	
18 September	Gold Coast bay (Qld)	
30 September	Shellharbour (NSW)	
3 October	Horseshoe Bay (NSW)	Last confirmed sighting. Poor health with dry baleen
4 October	Eden (NSW)	Unconfirmed report the calf had died.



**Figure S1.** Photographs of a humpback whale calf with lower jaw deformity taken at Hervey Bay between 6 and 9 September (left, courtesy of Melanie Bragg) and off the Gold Coast on 18 September (right, courtesy of HHR) during its southward migration in 2021.