

## Distribution, group characteristics and movements of the Critically Endangered Maui's dolphin *Cephalorhynchus hectori maui*

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*Endangered Species Research 19: 1–10 (2012)*

**Supplement.** The supplementary tables below show the dolphins' responses to all tissue biopsy samples taken (Table S1) and data on the location of samples taken during the 2010 and 2011 summer research (Table S2). The majority of behavioural responses were low-level and pre-biopsy behaviour was resumed shortly after the sample was taken. Individual dolphin movements varied between and within years and there was no sex-bias observed with dolphin movement patterns.

Table S1. *Cephalorhynchus hectori maui*. Individual behavioural reactions of Maui's dolphins to biopsy sampling using hierarchical classification from Tezanos-Pinto & Baker (2012)

Level	Category	Individual behavioural reactions	N (%)
0	Mild reactions	No visible reaction, dolphin continues with prebiopsy behaviour.	4 (6)
1		Startle reaction, dolphin moves with/without a speed burst, flinches or dives but stays in the vicinity of the boat.	22 (31)
2		Splashing when moving away, tail slap or flick, with or without returning to the boat.	44 (62)
3	Moderate reaction	Single leap or porpoising by the individual dolphin struck by the biopsy dart.	–
4	Strenuous reactions	Multiple leaps and/or high-speed porpoising by the individual dolphin struck by the biopsy dart.	1 (1) <sup>a</sup>
5		Multiple leaps in quick succession by more than one individual and group reacts by prolonged diving and/or travelling at high speed (>12 knots) in apparent avoidance of the boat.	–

<sup>a</sup>On one occasion, the dart stayed stuck on the back of the dolphin following the biopsy attempt. The dolphin reacted by performing 2 high clean leaps soon after the dart stuck; the dart was released after the second leap. The dolphin immediately went back to its pre-biopsy attempt behaviour with no avoidance of the boat

Table S2. *Cephalorhynchus hectori maui*. Individual movements of Maui’s dolphins that were sampled more than once during 2010–2011, as identified by genotype recapture. Samples from the same individual are grouped in alternating shaded and non-shaded blocks. Distances observed between recapture locations, ‘Distance (km)’, within and across years were measured as straight-line distances using the distance calculator (<http://jan.ucc.nau.edu/~cvm/latlongdist.html>). \*Sample pair used for calculating the maximum straight-line distance between recaptures. F: female; M: male

Sample ID ID	Date (d/mo/yr)	Location	Latitude (°S)	Longitude (°E)	Sex	Within 2010		Within 2011		Max. across 2001–2011	
						Distance (km)	Time span	Distance (km)	Time span	Distance (km)	Time span
NI10-14	7 Feb 10	S. Manukau	37.228167	174.615667	F	17.88	9 d			18.59	367 d
NI10-31*	16 Feb 10	N. Raglan	37.376717	174.692650							
NI11-12*	18 Feb 11	N. Raglan	37.223450	174.609350							
NI10-04	5 Feb 10	S. Manukau	37.162028	174.575389	F	0.91	2 d			0.91	2 d
NI10-12	7 Feb 10	S. Manukau	37.165217	174.584783							
NI10-05	6 Feb 10	S. Manukau	37.194750	174.592861	F	0.65	1 h	0.34	2 min	8.10	373 d
NI10-07	6 Feb 10	S. Manukau	37.197861	174.596500							
NI10-08*	6 Feb 10	S. Manukau	37.198833	174.598167							
NI11-03	14 Feb 11	S. Manukau	37.133183	174.568550							
NI11-04*	14 Feb 11	S. Manukau	37.130717	174.566233							
NI10-06	6 Feb 10	S. Manukau	37.196056	174.592778	M					3.12	377 d
NI11-13	18 Feb 11	S. Manukau	37.220900	174.609050							
NI10-11	7 Feb 10	S. Manukau	37.163567	174.583667	F					4.20	372 d
NI11-05	14 Feb 11	S. Manukau	37.129067	174.564583							
NI10-13	7 Feb 10	S. Manukau	37.181250	174.592333	F					0.88	372 d
NI11-02	14 Feb 11	S. Manukau	37.176150	174.584817							
NI10-16	7 Feb 10	S. Manukau	37.207550	174.604450	M					5.29	373 d
NI11-07	15 Feb 11	S. Manukau	37.163867	174.581033							
NI10-17	8 Feb 10	N. Manukau	36.757267	174.376350	F	1.27	42 min			46.30	372 d
NI10-18	8 Feb 10	N. Manukau	36.757267	174.376350							
NI10-19*	8 Feb 10	N. Manukau	36.755367	174.362417							
NI11-06*	15 Feb 11	S. Manukau	37.138217	174.565733							
NI10-20	8 Feb 10	N. Manukau	36.737783	174.362467	M	11.07	1 day			11.07	1 d
NI10-22	9 Feb 10	N. Manukau	36.651500	174.300833							
NI10-21	9 Feb 10	N. Manukau	36.652667	174.301667	F	11.33	2.5 h	78.62	19 d	80.43	375 d
NI10-23*	9 Feb 10	N. Manukau	36.568167	174.231000							
NI11-18*	19 Feb 11	S. Manukau	37.222083	174.615183							
NI11-36	10 Mar 11	N. Manukau	36.583767	174.237067							
NI10-24	11 Feb 10	S. Manukau	37.360233	174.685983	F	14.03	13 d	7.44	3 d	37.67	356 d
NI10-37*	24 Feb 10	Raglan	37.483067	174.721283							
NI11-08*	15 Feb 11	S. Manukau	37.163950	174.579717							
NI11-11	18 Feb 11	N. Raglan	37.225767	174.611600							
NI10-26	11 Feb 10	S. Manukau	37.362500	174.683667	F	26.44	5 d			26.44	5 d
NI10-29	16 Feb 10	N. Raglan	37.592000	174.759500							
NI10-27*	11 Feb 10	S. Manukau	37.362500	174.687500	M	18.81	5 d			18.81	5 d
NI10-34*	16 Feb 10	N. Raglan	37.526100	174.740917							

NI11-31	9 Mar 11	N. Raglan	37.440833	174.696833					
NI10-28*	16 Feb 10	N. Raglan	37.591833	174.759000	M	3.17	9 d	18.57	9 d
NI11-29*	28 Feb 11	N. Raglan	37.432533	174.696717					
NI11-35	9 Mar 11	N. Raglan	37.459467	174.708267					
NI10-35*	23 Feb 10	Raglan	37.596117	174.765800					
NI11-10	18 Feb 11	N. Raglan	37.470867	174.713583	M	24.30	3 d	38.97	363 d
NI11-27*	21 Feb 11	S. Manukau	37.262350	174.632467					
NI11-09	17 Feb 11	Raglan	37.582433	174.766050	M	1.42	20 d	1.42	20 d
NI11-32	9 Mar 11	N. Raglan	37.595200	174.766717					
NI11-14	18 Feb 11	N. Raglan	37.216550	174.607467	F	0.32	13 min	0.32	13 min
NI11-16	18 Feb 11	N. Raglan	37.213683	174.60815					
NI11-21	21 Feb 11	S. Manukau	37.098167	174.546333	M	0.88	11min	0.88	11 min
NI11-22	21 Feb 11	S. Manukau	37.091667	174.540667					
NI11-33	9 Mar 11	N. Raglan	37.599550	174.763850	M	6.64	4 h	6.64	4 h
NI11-34	9 Mar 11	N. Raglan	37.541583	174.746117					

#### LITERATURE CITED

Tezanos-Pinto G, Baker CS (2012) Short-term reactions and long-term responses of bottlenose dolphins (*Tursiops truncatus*) to remote biopsy sampling. NZ J Mar Freshw Res 46:13–29