

Table S1: Dive trips and electronics deployments, ordered by individual bird ID. Where multiple foraging trips were recorded in one deployment the data were separated into individual trips.

Bird ID	Year	StartDate	StartTime	EndDate	EndTime	Duration (h)	Nights	TripType	DeployType	ForageType	Sex
bird001	2016	8/12/2016	20:10:04	10/12/2016	08:03:59	35.90	2	Multiday	GPS + TDR	Benthic	M
bird001	2017	13/12/2017	10:10:04	13/12/2017	20:03:59	9.90	0	Daytrip	TDR only	Pelagic	M
bird013	2017	17/12/2017	18:03:04	18/12/2017	22:29:59	28.45	1	Multiday	TDR only	Pelagic	M
bird013	2017	14/12/2017	14:00:04	16/12/2017	23:18:59	57.32	2	Multiday	GPS + TDR	Pelagic	M
bird019	2015	19/12/2015	18:05:04	21/12/2015	22:22:29	52.29	2	Multiday	TDR only	Benthic	M
bird019	2016	10/12/2016	07:05:04	11/12/2016	20:41:59	37.62	1	Multiday	GPS + TDR	Benthic	M
bird022	2016	14/12/2016	18:15:04	18/12/2016	14:25:59	92.18	4	Multiday	GPS + TDR	Pelagic	F
bird022	2017	23/12/2017	06:13:04	25/12/2017	16:03:59	57.85	2	Multiday	TDR only	Pelagic	F
bird022	2017	27/12/2017	05:55:04	27/12/2017	13:16:59	7.37	0	Daytrip	GPS + TDR	Pelagic	F
bird025	2015	27/11/2015	12:40:04	30/11/2015	07:17:39	66.63	3	Multiday	TDR only	Benthic	F
bird025	2017	15/12/2017	19:36:04	19/12/2017	01:16:59	77.68	4	Multiday	TDR only	Pelagic	F
bird025	2017	19/12/2017	16:06:04	20/12/2017	12:46:59	20.68	1	Multiday	GPS + TDR	Pelagic	F
bird029	2015	21/12/2015	20:19:04	25/12/2015	22:00:59	97.70	4	Multiday	TDR only	Benthic	F
bird030	2016	10/12/2016	05:58:04	12/12/2016	16:07:59	58.17	2	Multiday	GPS + TDR	Benthic	M
bird032	2016	26/12/2016	05:21:04	28/12/2016	12:16:59	54.93	2	Multiday	GPS + TDR	Pelagic	F
bird035	2015	3/12/2015	04:58:04	7/12/2015	22:12:59	113.25	4	Multiday	TDR only	Benthic	M
bird035	2017	10/12/2017	17:22:04	13/12/2017	00:19:59	54.97	3	Multiday	TDR only	Benthic	M
bird035	2017	13/12/2017	17:30:04	15/12/2017	18:11:59	48.70	2	Multiday	GPS + TDR	Pelagic	M
bird039	2015	14/12/2015	19:39:04	15/12/2015	08:24:54	12.76	1	Multiday	TDR only	Benthic	F
bird039	2015	23/12/2015	05:54:13	24/12/2015	16:11:13	34.28	1	Multiday	TDR only	Benthic	F
bird040	2015	4/12/2015	19:43:04	7/12/2015	17:39:59	69.95	3	Multiday	TDR only	Benthic	M
bird042	2016	12/12/2016	16:45:04	14/12/2016	14:46:59	46.03	2	Multiday	GPS + TDR	Pelagic	F
bird042	2017	10/12/2017	19:37:04	14/12/2017	15:46:59	92.17	4	Multiday	TDR only	Benthic	F
bird042	2017	15/12/2017	05:33:04	15/12/2017	15:42:59	10.17	0	Daytrip	GPS + TDR	Pelagic	F
bird050	2017	22/12/2017	17:05:04	23/12/2017	22:41:59	29.62	1	Multiday	TDR only	Pelagic	M
bird050	2017	24/12/2017	19:52:04	25/12/2017	16:52:59	21.02	1	Multiday	GPS + TDR	Pelagic	M
bird052	2015	10/12/2015	04:30:04	12/12/2015	19:22:29	62.87	2	Multiday	TDR only	Benthic	F
bird052	2016	9/12/2016	15:03:04	10/12/2016	14:06:59	23.07	1	Multiday	GPS + TDR	Benthic	F

bird052	2017	13/12/2017	18:29:04	14/12/2017	13:01:59	18.55	1	Multiday	TDR only	Benthic	F
bird052	2017	15/12/2017	05:51:04	18/12/2017	13:47:59	79.95	3	Multiday	GPS + TDR	Pelagic	F
bird053	2015	14/12/2015	04:16:04	14/12/2015	23:49:59	19.57	0	Daytrip	TDR only	Benthic	F
bird053	2016	9/12/2016	17:48:04	10/12/2016	19:22:59	25.58	1	Multiday	GPS + TDR	Benthic	F
bird053	2017	11/12/2017	16:46:04	12/12/2017	14:44:59	21.98	1	Multiday	TDR only	Pelagic	F
bird053	2017	13/12/2017	15:39:04	15/12/2017	11:57:59	44.32	2	Multiday	GPS + TDR	Pelagic	F
bird063	2015	13/12/2015	19:03:04	14/12/2015	18:11:59	23.15	1	Multiday	TDR only	Benthic	F
bird063	2015	15/12/2015	20:35:04	16/12/2015	18:43:59	22.15	1	Multiday	TDR only	Benthic	F
bird063	2015	17/12/2015	19:33:04	18/12/2015	13:58:04	18.42	1	Multiday	TDR only	Benthic	F
bird064	2016	26/12/2016	19:37:04	28/12/2016	23:20:59	51.73	2	Multiday	GPS + TDR	Benthic	
bird068	2015	15/12/2015	05:40:04	15/12/2015	21:07:59	15.47	0	Daytrip	TDR only	Benthic	M
bird068	2017	12/12/2017	15:23:04	13/12/2017	15:10:59	23.80	1	Multiday	TDR only	Benthic	M
bird068	2017	10/12/2017	15:37:04	11/12/2017	15:52:59	24.27	1	Multiday	GPS + TDR	Benthic	M
bird086	2016	10/12/2016	05:32:04	10/12/2016	15:01:59	9.50	0	Daytrip	GPS + TDR	Pelagic	M
bird086	2017	14/12/2017	05:13:04	14/12/2017	20:03:59	14.85	0	Daytrip	TDR only	Benthic	M
bird086	2017	17/12/2017	05:49:04	17/12/2017	19:48:59	14.00	0	Daytrip	GPS + TDR	Pelagic	M
bird095	2017	13/12/2017	05:13:04	15/12/2017	13:20:59	56.13	2	Multiday	TDR only	Benthic	F
bird095	2017	11/12/2017	15:55:04	12/12/2017	13:30:59	21.60	1	Multiday	GPS + TDR	Pelagic	F
bird101	2016	16/12/2016	18:19:04	17/12/2016	17:30:59	23.20	1	Multiday	GPS + TDR	Pelagic	F
bird101	2017	21/12/2017	14:49:04	23/12/2017	15:09:59	48.35	2	Multiday	TDR only	Pelagic	F
bird101	2017	24/12/2017	05:46:04	24/12/2017	18:26:59	12.68	0	Daytrip	GPS + TDR	Pelagic	F
bird105	2017	23/12/2017	05:52:04	23/12/2017	17:25:59	11.57	0	Daytrip	TDR only	Pelagic	F
bird105	2017	24/12/2017	13:44:04	24/12/2017	22:53:59	9.17	0	Daytrip	GPS + TDR	Pelagic	F
bird106	2016	12/12/2016	17:59:04	13/12/2016	17:38:59	23.67	1	Multiday	GPS + TDR	Benthic	M
bird106	2017	27/12/2017	12:20:04	27/12/2017	21:36:59	9.28	0	Daytrip	TDR only	Pelagic	M
bird106	2017	21/12/2017	15:47:04	22/12/2017	22:09:59	30.38	1	Multiday	GPS + TDR	Pelagic	M
bird107	2016	13/12/2016	14:47:04	15/12/2016	10:55:59	44.15	2	Multiday	GPS + TDR	Benthic	M
bird107	2017	24/12/2017	17:39:04	24/12/2017	23:18:59	5.67	0	Daytrip	TDR only	Benthic	M
bird107	2017	21/12/2017	14:49:04	22/12/2017	23:05:59	32.28	1	Multiday	GPS + TDR	Pelagic	M
bird111	2016	15/12/2016	05:27:04	16/12/2016	18:52:59	37.43	1	Multiday	GPS + TDR	Pelagic	F
bird117	2016	10/12/2016	15:09:04	11/12/2016	16:44:59	25.60	1	Multiday	GPS + TDR	Benthic	M
bird117	2017	13/12/2017	17:43:04	14/12/2017	14:35:59	20.88	1	Multiday	TDR only	Benthic	M

bird117	2017	10/12/2017	15:16:04	12/12/2017	23:15:59	56.00	2	Multiday	GPS + TDR	Benthic	M
bird120	2016	25/12/2016	17:40:04	28/12/2016	03:57:59	58.30	3	Multiday	GPS + TDR	Benthic	F
bird132	2016	14/12/2016	05:46:04	16/12/2016	00:30:59	42.75	2	Multiday	GPS + TDR	Pelagic	M
bird142	2016	12/12/2016	14:05:04	15/12/2016	19:16:59	77.20	3	Multiday	GPS + TDR	Pelagic	F
bird142	2017	15/12/2017	12:08:04	15/12/2017	21:28:59	9.35	0	Daytrip	TDR only	Pelagic	F
bird142	2017	11/12/2017	05:19:04	13/12/2017	20:52:59	63.57	2	Multiday	GPS + TDR	Pelagic	F
bird143	2016	10/12/2016	07:25:04	11/12/2016	20:29:59	37.08	1	Multiday	GPS + TDR	Benthic	F
bird145	2016	15/12/2016	05:19:04	17/12/2016	16:03:59	58.75	2	Multiday	GPS + TDR	Benthic	F
bird149	2016	25/12/2016	22:04:04	27/12/2016	05:41:59	31.63	2	Multiday	GPS + TDR	Pelagic	F
bird153	2016	9/12/2016	10:18:04	12/12/2016	02:11:49	63.90	3	Multiday	GPS + TDR	Benthic	F
bird154	2016	24/12/2016	17:03:04	25/12/2016	15:03:59	22.02	1	Multiday	GPS + TDR	Benthic	M
bird155	2016	24/12/2016	16:01:04	25/12/2016	16:23:59	24.38	1	Multiday	GPS + TDR	Benthic	M
bird155	2017	31/12/2017	15:46:04	2/01/2018	16:51:59	49.10	2	Multiday	TDR only	Pelagic	M
bird155	2017	16/12/2017	04:49:04	16/12/2017	20:13:59	15.42	0	Daytrip	GPS + TDR	Benthic	M
bird159	2016	24/12/2016	20:00:04	25/12/2016	20:44:59	24.75	1	Multiday	GPS + TDR	Benthic	M
bird160	2016	25/12/2016	18:46:04	27/12/2016	03:36:59	32.85	2	Multiday	GPS + TDR	Benthic	M
bird160	2017	21/12/2017	17:59:04	22/12/2017	12:09:59	18.18	1	Multiday	TDR only	Pelagic	M
bird160	2017	23/12/2017	06:00:04	23/12/2017	16:47:59	10.80	0	Daytrip	GPS + TDR	Pelagic	M
bird160	2017	24/12/2017	13:22:04	24/12/2017	21:59:59	8.63	0	Daytrip	GPS + TDR	Pelagic	M
bird161	2016	24/12/2016	17:36:04	25/12/2016	17:47:59	24.20	1	Multiday	GPS + TDR	Pelagic	F
bird161	2017	27/12/2017	05:00:04	27/12/2017	13:15:59	8.27	0	Daytrip	TDR only	Pelagic	F
bird161	2017	23/12/2017	18:17:04	25/12/2017	16:40:59	46.40	2	Multiday	GPS + TDR	Pelagic	F
bird161	2017	26/12/2017	05:28:04	26/12/2017	11:34:59	6.12	0	Daytrip	GPS + TDR	Pelagic	F
bird162	2016	25/12/2016	22:52:04	27/12/2016	22:21:59	47.50	2	Multiday	GPS + TDR	Pelagic	F
bird164	2016	24/12/2016	13:25:04	26/12/2016	08:00:59	42.60	2	Multiday	GPS + TDR	Pelagic	F
bird170	2016	18/12/2016	06:07:04	18/12/2016	22:00:59	15.90	0	Daytrip	GPS + TDR	Pelagic	F
bird171	2016	17/12/2016	22:48:04	19/12/2016	10:08:59	35.35	2	Multiday	GPS + TDR	Pelagic	M
bird172	2016	17/12/2016	18:17:04	19/12/2016	11:06:59	40.83	2	Multiday	GPS + TDR	Pelagic	M
bird175	2016	13/12/2016	16:35:04	15/12/2016	22:21:59	53.78	2	Multiday	GPS + TDR	Benthic	F
bird183	2016	26/12/2016	18:31:04	27/12/2016	19:18:59	24.80	1	Multiday	GPS + TDR	Pelagic	F
bird185	2016	5/12/2016	18:25:04	7/12/2016	11:30:04	41.08	2	Multiday	GPS + TDR	Benthic	M
bird186	2016	5/12/2016	05:27:04	5/12/2016	20:46:59	15.33	0	Daytrip	GPS + TDR	Benthic	F

bird187	2016	7/12/2016	05:19:04	8/12/2016	11:55:09	30.60	1	Multiday	GPS + TDR	Benthic	F
bird189	2016	14/12/2016	15:01:04	14/12/2016	19:49:59	4.82	0	Daytrip	GPS + TDR	Pelagic	M
bird191	2016	17/12/2016	23:58:04	19/12/2016	20:41:59	44.73	2	Multiday	GPS + TDR	Benthic	M
bird192	2016	17/12/2016	16:41:04	18/12/2016	19:34:59	26.90	1	Multiday	GPS + TDR	Benthic	M
bird205	2016	25/12/2016	16:47:04	27/12/2016	08:48:59	40.03	2	Multiday	GPS + TDR	Pelagic	F
bird206	2016	25/12/2016	17:40:04	26/12/2016	21:07:59	27.47	1	Multiday	GPS + TDR	Benthic	M
bird207	2016	25/12/2016	16:59:04	26/12/2016	17:26:59	24.47	1	Multiday	GPS + TDR	Benthic	F
bird208	2016	25/12/2016	20:40:04	26/12/2016	20:51:59	24.20	1	Multiday	GPS + TDR	Benthic	F
bird209	2016	27/12/2016	05:25:04	28/12/2016	03:54:59	22.50	1	Multiday	GPS + TDR	Benthic	M
bird210	2016	25/12/2016	17:00:04	28/12/2016	07:30:44	62.51	3	Multiday	GPS + TDR	Benthic	F
bird213	2016	30/12/2016	05:17:04	31/12/2016	18:13:59	36.95	1	Multiday	GPS + TDR	Pelagic	F
bird214	2016	30/12/2016	16:00:04	31/12/2016	18:21:59	26.37	1	Multiday	GPS + TDR	Pelagic	F
bird215	2016	30/12/2016	03:47:04	1/01/2017	09:42:59	53.93	2	Multiday	GPS + TDR	Benthic	F
bird216	2016	31/12/2016	18:08:04	1/01/2017	18:09:59	24.03	1	Multiday	GPS + TDR	Benthic	M
bird217	2016	30/12/2016	15:39:04	1/01/2017	13:22:59	45.73	2	Multiday	GPS + TDR	Benthic	M
bird233	2017	4/12/2017	06:01:04	4/12/2017	17:54:59	11.90	0	Daytrip	GPS + TDR	Pelagic	F
bird233	2017	18/12/2017	05:50:04	18/12/2017	17:13:59	11.40	0	Daytrip	GPS + TDR	Pelagic	F
bird233	2017	19/12/2017	05:05:04	19/12/2017	12:53:59	7.82	0	Daytrip	GPS + TDR	Pelagic	F
bird233	2017	20/12/2017	05:23:04	20/12/2017	14:55:59	9.55	0	Daytrip	GPS + TDR	Pelagic	F
bird244	2017	31/12/2017	15:54:04	1/01/2018	12:32:59	20.65	1	Multiday	TDR only	Pelagic	M
bird244	2017	4/12/2017	18:33:04	5/12/2017	18:16:59	23.73	1	Multiday	GPS + TDR	Pelagic	M
bird244	2017	16/12/2017	11:09:04	17/12/2017	00:57:59	13.82	1	Multiday	GPS + TDR	Pelagic	M
bird245	2017	1/01/2018	05:37:04	2/01/2018	16:34:59	34.97	1	Multiday	TDR only	Pelagic	F
bird245	2017	16/12/2017	06:29:04	16/12/2017	20:12:59	13.73	0	Daytrip	GPS + TDR	Pelagic	F
bird247	2017	3/01/2018	06:52:04	3/01/2018	15:38:59	8.78	0	Daytrip	TDR only	Pelagic	F
bird247	2017	4/12/2017	05:44:04	4/12/2017	19:54:59	14.18	0	Daytrip	GPS + TDR	Pelagic	F
bird247	2017	17/12/2017	05:34:04	18/12/2017	16:12:59	34.65	1	Multiday	GPS + TDR	Pelagic	F
bird249	2017	31/12/2017	15:46:04	31/12/2017	21:59:59	6.23	0	Daytrip	TDR only	Pelagic	M
bird249	2017	4/12/2017	01:14:04	5/12/2017	21:37:59	44.40	1	Multiday	GPS + TDR	Benthic	M
bird249	2017	17/12/2017	05:34:04	17/12/2017	20:41:59	15.13	0	Daytrip	GPS + TDR	Benthic	M
bird250	2017	4/12/2017	02:29:04	6/12/2017	23:32:59	69.07	2	Multiday	GPS + TDR	Benthic	F
bird254	2017	1/01/2018	05:37:04	1/01/2018	14:42:59	9.10	0	Daytrip	TDR only	Pelagic	F

bird254	2017	16/12/2017	15:23:04	17/12/2017	10:02:59	18.67	1	Multiday	GPS + TDR	Pelagic	F
bird267	2017	3/01/2018	06:46:04	3/01/2018	14:07:59	7.37	0	Daytrip	TDR only	Pelagic	F
bird267	2017	2/01/2018	07:04:04	2/01/2018	19:18:59	12.25	0	Daytrip	GPS + TDR	Pelagic	F
bird268	2017	31/12/2017	14:22:04	1/01/2018	20:50:59	30.48	1	Multiday	TDR only	Pelagic	M
bird268	2017	2/01/2018	07:57:04	2/01/2018	15:28:59	7.53	0	Daytrip	TDR only	Pelagic	M
bird268	2017	3/01/2018	13:33:04	3/01/2018	21:40:59	8.13	0	Daytrip	GPS + TDR	Pelagic	M
bird269	2017	1/01/2018	14:00:04	2/01/2018	21:14:59	31.25	1	Multiday	TDR only	Pelagic	F
bird269	2017	3/01/2018	14:58:04	4/01/2018	15:03:59	24.10	1	Multiday	GPS + TDR	Pelagic	F
bird270	2017	1/01/2018	06:32:04	1/01/2018	14:51:59	8.33	0	Daytrip	TDR only	Pelagic	F
bird270	2017	2/01/2018	13:03:04	2/01/2018	21:00:59	7.97	0	Daytrip	GPS + TDR	Pelagic	F

Table S2: Success of dive type categorisation using Bayesian modelling with different dive parameters. Success was measured as the percentage of dives agreeing with a sample of manually-categorised dives (n=3979 dives). The model based on inter-dive depth change (depth change between subsequent dives) gave the best match, and was selected as the model to use for analysing all dives (n=72,993 dives)

Parameter	Success
Inter-dive depth change	96.4%
Bottom time %	76.5%
Bottom time	83.5%
Dive depth	71.8%

Table S3: Results for fixed effects from LME models on all dives for selected dive parameters: maximum dive depth, dive time, and bottom time (the time in the bottom portion of the dive, at maximum depth). Independent variables are year (2015, 2016, and 2017); sex (male and female); deployment type (TDR logger only, or GPS and TDR loggers); and dive type (benthic, pelagic, and transition). For each dive parameter the estimates and standard errors show the change in individual variable levels from the intercept value. χ^2 and p-values show the results of ANOVA testing for the variables in each LME model. Asterisks denote significance (***<0.001, **<0.01, *<0.05).

Dive Parameter	Variable	Estimate	Std. Error	χ^2	p-value
Max Depth (m)	(Intercept)	90.49	1.15		
	Year-2016	-16.16	0.49	3698.68	<0.001***
	Year-2017	-23.03	0.41		
	Sex-F	0.16	1.38	0.01	0.91
	Deploy Type-TDR	0.55	0.22	6.43	0.01*
	Dive Type-Pelagic	-50.17	0.26	38478.80	<0.001***
	Dive Type-Transition	-30.54	0.42		
Dive Time (s)	(Intercept)	156.64	1.94		
	Year-2016	-17.21	0.98	1748.14	<0.001***
	Year-2017	-29.48	0.83		
	Sex-F	-5.59	2.24	6.25	0.01*
	Deploy Type-TDR	0.85	0.44	3.74	0.05
	Dive Type-Pelagic	-56.40	0.52	11855.57	<0.001***
	Dive Type-Transition	-39.18	0.84		
Bottom Time (s)	(Intercept)	40.99	1.01		
	Year-2016	4.32	0.50	184.16	<0.001***
	Year-2017	5.44	0.42		
	Sex-F	-4.21	1.17	12.87	<0.001***
	Deploy Type-TDR	1.51	0.22	45.64	<0.001***
	Dive Type-Pelagic	-23.71	0.26	8248.32	<0.001***
	Dive Type-Transition	-22.71	0.43		

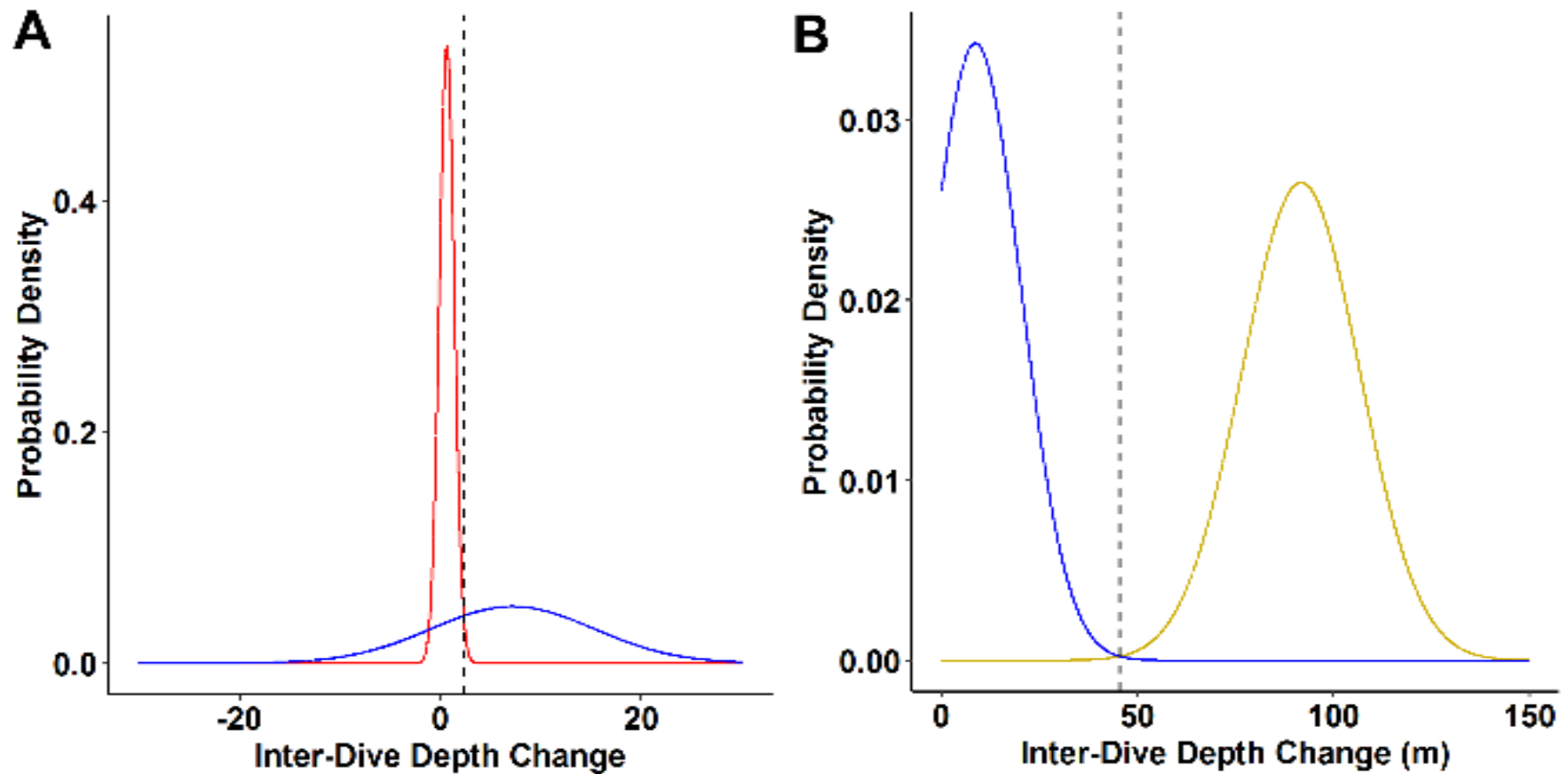


Figure S1: Bayesian models used for dive type categorisation. Dive types were defined using the inter-dive depth change (change in maximum depth between subsequent dives) to categorise benthic dives (A, red line) and transition dives (B, yellow line). In both cases the remaining dives (blue lines) were categorised as pelagic. The dotted lines show each log likelihood ratio criterion, which is the cutoff value used to categorise dive types for each model; 2.9% for differentiating between benthic vs pelagic dives (A) and 45 m for differentiating between transition vs pelagic dives (B). A combination of both models was used to automatically categorise all dives.

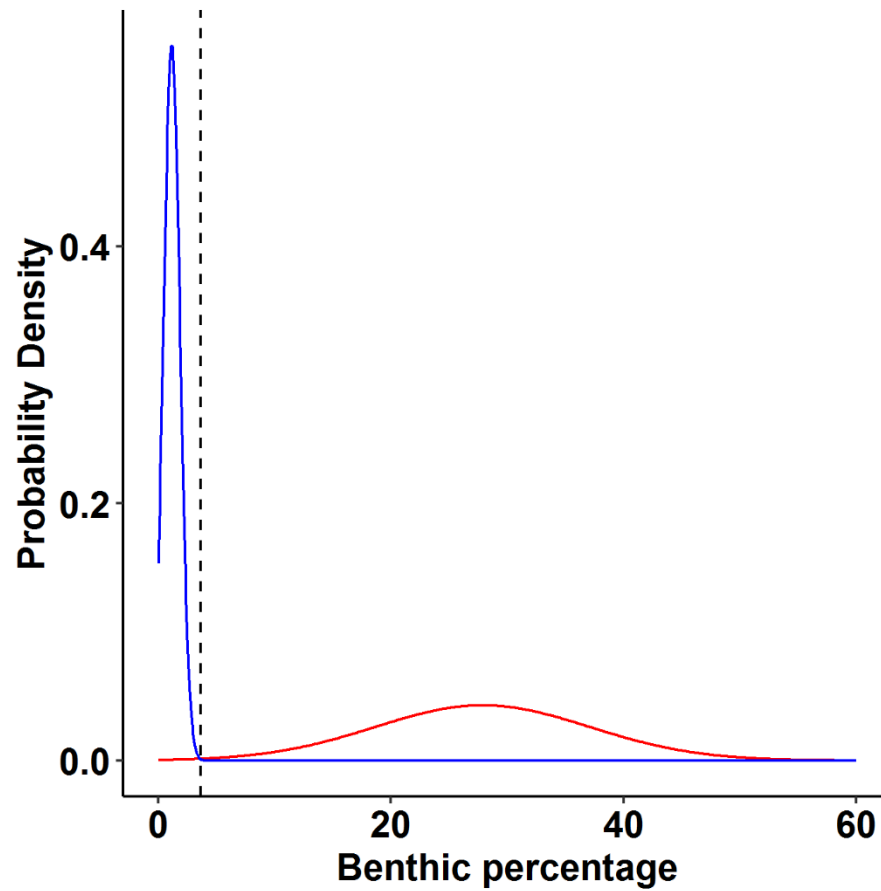


Figure S2: Bayesian model used for foraging trip categorisation. Trip types were analysed using the percentage of benthic dives contained in the trip, and were defined as benthic (red line) and pelagic (blue line). The dotted line shows the log likelihood ratio criterion (where 3.63% of the trip were benthic dives), which is the cutoff value used to categorise foraging trips as either a trip containing benthic dives, or solely pelagic dives.