

Supplemental figures and tables for:

**The Shyest Blackfish: The Global Phylogeography of the Pygmy Killer Whale (*Feresa attenuata*) Suggests Considerable Population Structure and an Unrecognized Taxon**

Brittany L. Hancock-Hanser<sup>1</sup>, Robin W. Baird<sup>2</sup>, Frederick I. Archer<sup>1</sup>, Patricia E. Rosel<sup>3</sup>, Antonio A. Mignucci-Giannoni<sup>4,5</sup>, Louella Dolar<sup>6</sup>, Lynsey A. Wilcox Talbot<sup>3</sup>, Karen K. Martien<sup>1</sup>

<sup>1</sup>Marine Mammal and Turtle Division, Southwest Fisheries Science Center, National Marine Fisheries Service, La Jolla, California, USA

<sup>2</sup>Cascadia Research Collective, Olympia, Washington, USA

<sup>3</sup>Marine Mammal and Turtle Division, Southeast Fisheries Science Center, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Lafayette, Louisiana, USA

<sup>4</sup>Caribbean Manatee Conservation Center, Inter American University of Puerto Rico, Bayamon, Puerto Rico, USA

<sup>5</sup>Center for Conservation Medicine and Ecosystem Health, Ross University School of Veterinary Medicine, Basseterre, Saint Kitts and Nevis

<sup>6</sup>Institute of Environmental and Marine Sciences, Silliman University, Dumaguete City, Philippines

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Correspondence: Karen K. Martien (karen.martien@noaa.gov)

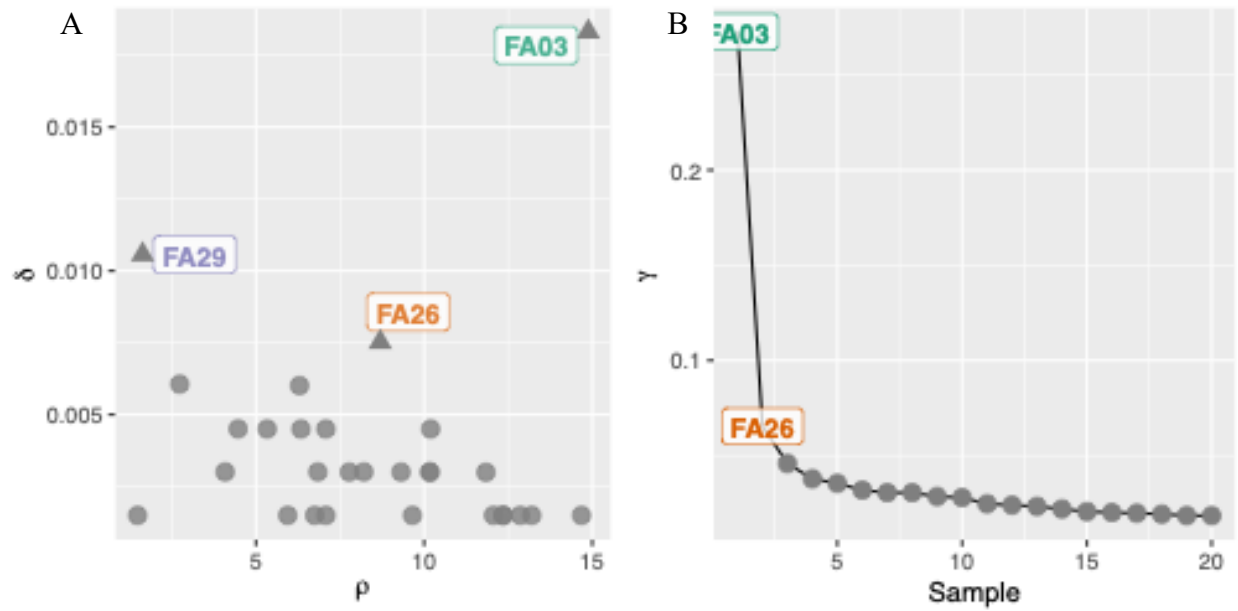
Supplemental Table 1. Metadata for samples included in the study. ‘Hap’ is short for haplotype, with entries corresponding to the haplotype identifiers listed in Tables 1 and 2 of the main text. LabID is the unique identifier assigned to each sample within the Southwest Fisheries Science Center’s Marine Mammal and Sea Turtle Research collection, while FieldID is the unique identifier assigned to a sample at the time of collection. Sex is abbreviated as F = female, M = male, and U = unknowable (no field data available, molecular determination failed). In cases where the precise stranding date is not known, collection date is listed as the year, or as NA. All other dates are formatted as MM/DD/YY. Similarly, latitude and longitude are listed as NA when no precise location is available. Latitude and longitude are redacted for bycatch samples due to U.S. privacy laws.

LabID	Hap	Sex	FieldID	Collection Method	Fine Scale stratum	Broad scale stratum	Date	Latitude	Longitude
2605	FA29	F	WFP0758/SUML0054	Bycatch	Sulu Sea	Sulu Sea	4/21/94	Redacted	Redacted
3944	FA12	M	S-94-FA-40	Stranding	US East Coast	Atlantic	12/18/94	29.67	-81.25
5747	FA28	M	ZZZ0039	Stranding	Sulu Sea	Sulu Sea	6/19/96	NA	NA
5749	FA29	F	ZZZ0041	Stranding	Sulu Sea	Sulu Sea	6/19/96	NA	NA
9549	FA06	M	TN9702	Stranding	Taiwan	Pacific	NA	NA	NA
9550	FA06	M	TN9704	Stranding	Taiwan	Pacific	NA	NA	NA
9551	FA06	M	TN9706	Stranding	Taiwan	Pacific	NA	NA	NA
9552	FA06	M	TN9701	Stranding	Taiwan	Pacific	NA	NA	NA
9853	FA19	F	GIR980404.01	Biopsy	Maldives	NA	4/4/98	6.45	73.23
11707	FA27	F	DSJ981130.01	Biopsy	ETP	Pacific	11/30/98	17.35	-103.87
11708	FA27	F	DSJ981130.02	Biopsy	ETP	Pacific	11/30/98	17.35	-103.87
11709	FA27	F	DSJ981130.03	Biopsy	ETP	Pacific	11/30/98	17.35	-103.87
11710	FA27	F	DSJ981130.04	Biopsy	ETP	Pacific	11/30/98	17.35	-103.87
11711	FA26	M	DSJ981130.05	Biopsy	ETP	Pacific	11/30/98	17.37	-103.92
18132	FA27	M	DSJ000905.02	Biopsy	ETP	Pacific	9/5/00	12.90	-101.43
18133	FA27	F	DSJ000905.03	Biopsy	ETP	Pacific	9/5/00	12.90	-101.43
18134	FA27	M	DSJ000905.04	Biopsy	ETP	Pacific	9/5/00	12.90	-101.43
18135	FA25	F	DSJ000905.05	Biopsy	ETP	Pacific	9/5/00	12.90	-101.43
18136	FA27	F	DSJ000905.06	Biopsy	ETP	Pacific	9/5/00	12.90	-101.43
18137	FA27	F	DSJ000905.07	Biopsy	ETP	Pacific	9/5/00	12.90	-101.43
30074	FA08	U	RWB300902.03	Biopsy	Hawai'i	Pacific	9/30/02	19.43	-156.02
30075	FA08	F	RWB300902.04	Biopsy	Hawai'i	Pacific	9/30/02	19.43	-156.02
30076	FA11	F	RWB300902.05	Biopsy	Hawai'i	Pacific	9/30/02	19.43	-156.02
35855	FA11	F	RWB111003.A01	Biopsy	Hawai'i	Pacific	10/11/03	19.55	-156.02
35856	FA11	F	RWB111003.A02	Biopsy	Hawai'i	Pacific	10/11/03	19.53	-156.02
48132	FA12	F	NEPST836	Stranding	Caribbean	Atlantic	3/22/02	17.97	-66.45
55171	FA21	F	RWB2006APR12.01	Biopsy	Hawai'i	Pacific	4/12/06	19.58	-156.08
55172	FA02	M	RWB2006APR12.02	Biopsy	Hawai'i	Pacific	4/12/06	19.58	-156.08
55173	FA21	M	RWB2006APR12.03	Biopsy	Hawai'i	Pacific	4/12/06	19.68	-156.12
61433	FA11	M	RWB2006NOV25.02	Biopsy	Hawai'i	Pacific	11/25/06	19.68	-156.07
61434	FA11	M	RWB2006NOV25.03	Biopsy	Hawai'i	Pacific	11/25/06	19.68	-156.07
61441	FA03	M	RWB2006DEC07.01	Biopsy	Hawai'i	Pacific	12/7/06	19.37	-156.07
61925	FA21	F	RWB2006JUL23.04	Biopsy	Hawai'i	Pacific	7/23/06	19.33	-155.95
67090	FA24	U	DSJ061126.10	Biopsy	ETP	Pacific	11/26/06	18.85	-106.10
70977	FA11	F	SLP2006001	Stranding	Hawai'i	Pacific	7/23/06	NA	NA
71014	FA11	F	RWB2007AUG13.01 TAG	Non-invasive sampling	Hawai'i	Pacific	8/13/07	19.78	-156.08
78825	FA03	M	OES090214.01	Biopsy	Hawai'i	Pacific	2/14/09	19.43	-156.08
94817	FA08	M	RWB2010APR21.04	Biopsy	Hawai'i	Pacific	4/21/10	19.55	-156.02
102488	FA11	F	RWB2010OCT18.01	Biopsy	Hawai'i	Pacific	10/18/10	21.32	-158.17
102489	FA11	F	RWB2010OCT18.02	Biopsy	Hawai'i	Pacific	10/18/10	21.32	-158.17
102490	FA11	F	RWB2010OCT18.03	Biopsy	Hawai'i	Pacific	10/18/10	21.32	-158.17

114347	FA03	M	LL4495	Bycatch	CNP	Pacific	1/5/13	Redacted	Redacted
116522	FA01	M	NC06-003	Stranding	New Caledonia	Pacific	2006	NA	NA
116523	FA01	M	NC06-004	Stranding	New Caledonia	Pacific	2006	NA	NA
116524	FA01	F	NC06-005	Stranding	New Caledonia	Pacific	2006	NA	NA
116525	FA01	M	NC06-006	Stranding	New Caledonia	Pacific	2006	NA	NA
116526	FA01	M	NC06-007	Stranding	New Caledonia	Pacific	2006	NA	NA
116527	FA01	F	NC06-165	Stranding	New Caledonia	Pacific	2006	NA	NA
116528	FA20	U	FJ13-002	Biopsy	Fiji	Pacific	4/7/13	-17.87	177.18
116823	FA21	F	PIC130625.04B	Biopsy	Guam	Pacific	6/25/13	13.48	144.64
116825	FA21	F	PIC130625.06B	Biopsy	Guam	Pacific	6/25/13	13.48	144.65
116826	FA21	F	PIC130625.07B	Biopsy	Guam	Pacific	6/25/13	13.47	144.65
123244	FA11	M	RWB2010AUG24.01	Biopsy	Hawai'i	Pacific	8/24/10	19.77	-156.17
123336	FA07	M	MAC100930.01	Biopsy	CNP	Pacific	9/30/10	18.73	-158.28
123337	FA07	M	MAC100930.02	Biopsy	CNP	Pacific	9/30/10	18.73	-158.28
123338	FA07	F	MAC100930.03	Biopsy	CNP	Pacific	9/30/10	18.73	-158.28
145402	FA10	M	DSJ141014.01	Biopsy	California	Pacific	10/14/14	32.22	-121.15
145403	FA11	M	DSJ141014.02	Biopsy	California	Pacific	10/14/14	32.22	-121.15
157684	FA11	F	RWB2008DEC06.07	Biopsy	Hawai'i	Pacific	12/6/08	19.72	-156.07
159696	FA15	M	GA2004003	Stranding	US East Coast	Atlantic	1/9/04	31.24	-81.29
159697	FA15	M	SC0607	Stranding	US East Coast	Atlantic	3/11/06	32.18	-80.71
159698	FA18	M	07IMMS041908	Stranding	US Gulf Coast	Atlantic	4/19/08	30.33	-88.51
159699	FA15	M	SC0736	Stranding	US East Coast	Atlantic	8/15/07	33.80	-78.71
159700	FA16	M	SC0737	Stranding	US East Coast	Atlantic	8/15/07	33.80	-78.71
159701	FA04	M	MML0803	Stranding	US Gulf Coast	Atlantic	6/16/08	26.82	-82.27
159702	FA14	M	GNL080	Stranding	US East Coast	Atlantic	8/13/08	34.53	-77.33
159703	FA12	M	DRN0049	Stranding	Caribbean	Atlantic	3/8/11	18.41	-65.81
159704	FA13	F	VAQS20131421	Stranding	US East Coast	Atlantic	11/9/13	36.92	-76.00
159705	FA13	F	VAQS20131422	Stranding	US East Coast	Atlantic	11/9/13	36.92	-76.00
159706	FA13	F	VAQS20131424	Stranding	US East Coast	Atlantic	11/18/13	36.87	-75.98
159707	FA12	M	31IMMS090115	Stranding	US Gulf Coast	Atlantic	9/1/15	30.21	-89.45
159989	FA11	F	RWB2015NOV13.01	Biopsy	Hawai'i	Pacific	11/13/15	19.20	-155.92
173621	FA17	M	PKW	Stranding	Philippines	Pacific	8/30/12	NA	NA
174714	FA09	M	KW2009006	Stranding	Hawai'i	Pacific	5/22/09	NA	NA
174715	FA11	F	KW2015006	Stranding	Hawai'i	Pacific	5/1/15	19.81	-156.01
175869	FA03	M	RWB2016OCT10.01	Biopsy	Hawai'i	Pacific	10/10/16	21.30	-158.16
185067	FA15	M	SC0735/MMES2007044SC	Stranding	US East Coast	Atlantic	8/15/07	33.81	-78.69
198380	FA22	M	U18-084	Stranding	New Zealand	Pacific	11/27/18	-34.68	172.90
198381	FA05	F	U18-079	Stranding	New Zealand	Pacific	11/28/18	-34.68	172.90
198382	FA01	M	U18-080	Stranding	New Zealand	Pacific	11/28/18	-34.68	172.90
198383	FA23	F	U18-081	Stranding	New Zealand	Pacific	11/28/18	-34.68	172.90
198384	FA01	M	U18-082	Stranding	New Zealand	Pacific	11/28/18	-34.68	172.90
198385	FA05	F	U18-083	Stranding	New Zealand	Pacific	11/28/18	-34.68	172.90
198386	FA22	M	U18-086	Stranding	New Zealand	Pacific	11/29/18	-34.68	172.90
198468	FA22	M	KW2019016	Stranding	Hawai'i	Pacific	8/29/19	20.78	-156.47
198469	FA22	F	KW2019017	Stranding	Hawai'i	Pacific	8/29/19	20.78	-156.47
198470	FA22	F	KW2019018	Stranding	Hawai'i	Pacific	8/29/19	20.78	-156.47
198471	FA22	F	KW2019019	Stranding	Hawai'i	Pacific	8/29/19	20.78	-156.47
198472	FA22	M	KW2019020	Stranding	Hawai'i	Pacific	8/29/19	20.78	-156.47

Supplemental Table 2. Pairwise estimates of differentiation between strata for the reduced data set, in which potential close relatives are removed. All  $\chi^2$  p-values are statistically significant at  $p < 0.05$  (bolded). The Pacific stratum does not include the Sulu Sea samples.

Comparison		$F_{ST}$	$\Phi_{ST}$	$\chi^2$ p-value	$d_A$
Strata 1	Strata 2				
ETP	Hawai'i	0.17	0.37	<b>0.002</b>	0.006
ETP	New Zealand	0.17	0.52	<b>0.027</b>	0.004
ETP	US East Coast	0.2	0.66	<b>0.005</b>	0.006
Hawai'i	New Zealand	0.12	-0.048	<b>0.004</b>	0.0003
Hawai'i	US East Coast	0.17	0.12	<b>0.001</b>	0.002
New Zealand	US East Coast	0.17	0.3	<b>0.004</b>	0.002
Western North Atlantic	Pacific	0.1	0.12	<b>0.001</b>	0.001
Sulu Sea	All other samples	0.13	0.76	<b>0.012</b>	0.013



Supplemental Figure 1. Results of Density Clustering analysis. (A) Decision graph showing the values of  $\rho$  (local density) and  $\delta$  (distance to next haplotype with higher  $\rho$ ) for each haplotype. The three haplotypes chosen as cluster centers are labeled and depicted by triangles; all other haplotypes are depicted by circles. (B) Gamma graph showing the decrease in  $\gamma$  (the product of  $\rho$  and  $\delta$ ) across haplotypes, with the two haplotypes with the highest values of  $\gamma$  labeled.