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Supplementary Table S1. Actual measurements of condylobasal length (CBL), rostrum length (RL) in millimeters and gape angle in degrees. Crania belong to the Zoological Museum of M.V. Lomonosov Moscow State University.

Museum number	Sex	Locality	CBL, mm	RL, mm	Gape angle, °
97739	male	Chukchi Peninsula	130	79	43
97547	male	Chukchi Peninsula	123	73	44
97487	male	Chukchi Peninsula	121	73	45
97722	male	Chukchi Peninsula	119	72	45
97533	male	Chukchi Peninsula	130	75	46
97643	male	Chukchi Peninsula	118	72	47
97526	male	Chukchi Peninsula	125	75	48
97534	male	Chukchi Peninsula	128	76	50
97614	male	Chukchi Peninsula	124	75	51
97693	male	Chukchi Peninsula	118	73	51
97559	male	Chukchi Peninsula	123	74	52
97531	male	Chukchi Peninsula	127	77	53
97546	male	Chukchi Peninsula	125	77	53
97624	male	Chukchi Peninsula	125	75	53
97748	male	Chukchi Peninsula	125	73	53
97529	male	Chukchi Peninsula	127	78	55
97548	male	Chukchi Peninsula	126	73	55
97671	male	Chukchi Peninsula	123	71	56
97545	male	Chukchi Peninsula	125	75	57
97523	male	Chukchi Peninsula	125	76	59
97524	male	Chukchi Peninsula	125	73	65
97553	male	Chukchi Peninsula	125	73	65
97733	female	Chukchi Peninsula	120	72	39
97578	female	Chukchi Peninsula	119	70	44
97638	female	Chukchi Peninsula	120	73	45
97603	female	Chukchi Peninsula	119	71	46
97581	female	Chukchi Peninsula	117	71	47
97564	female	Chukchi Peninsula	121	74	47
97741	female	Chukchi Peninsula	110	67	48
97606	female	Chukchi Peninsula	116	71	48
97630	female	Chukchi Peninsula	122	74	48
97695	female	Chukchi Peninsula	112	67	48

97584	female	Chukchi Peninsula	117	70	48
97572	female	Chukchi Peninsula	120	74	49
97734	female	Chukchi Peninsula	116	69	50
97577	female	Chukchi Peninsula	120	74	51
97567	female	Chukchi Peninsula	118	70	51
97650	female	Chukchi Peninsula	119	73	52
97743	female	Chukchi Peninsula	116	70	52
97751	female	Chukchi Peninsula	119	72	54
97629	female	Chukchi Peninsula	118	72	54
97747	female	Chukchi Peninsula	117	69	55
97617	female	Chukchi Peninsula	116	70	59
12033	male	Mednyi Island	128	79	53
12010	male	Mednyi Island	134	73	54
12056	male	Mednyi Island	129	80	54
6166	male	Mednyi Island	125	76	54
12031	male	Mednyi Island	129	75	55
12036	male	Mednyi Island	131	79	56
6167	male	Mednyi Island	130	78	58
5932	male	Mednyi Island	131	74	60
12041	male	Mednyi Island	133	79	60
12054	male	Mednyi Island	133	77	60
12026	male	Mednyi Island	135	78	61
12034	male	Mednyi Island	130	72	62
12025	male	Mednyi Island	129	78	62
12007	male	Mednyi Island	134	77	63
12050	male	Mednyi Island	137	81	68
12030	male	Mednyi Island	134	78	71
12052	male	Mednyi Island	122	75	73
6169	male	Mednyi Island	124	71	76
11965	female	Mednyi Island	127	77	50
12046	female	Mednyi Island	119	71	55
179792	female	Mednyi Island	124	73	55
167038	female	Mednyi Island	123	70	59
5931	female	Mednyi Island	122	72	59
6165	female	Mednyi Island	125	77	60
6168	female	Mednyi Island	123	68	61
12038	female	Mednyi Island	123	74	61
6170	female	Mednyi Island	126	70	63
179790	female	Mednyi Island	125	70	63
12051	female	Mednyi Island	125	79	64
179789	female	Mednyi Island	121	67	71
166354	male	Bering Island	132	76	45
166640	male	Bering Island	128	77	46
166344	male	Bering Island	130	79	46

30361	male	Bering Island	128	76	47
166539	male	Bering Island	138	82	49
166670	male	Bering Island	133	80	49
166449	male	Bering Island	130	79	52
166551	male	Bering Island	132	80	55
166653	male	Bering Island	131	78	56
166664	male	Bering Island	137	79	56
166642	male	Bering Island	133	79	58
167009	male	Bering Island	132	84	58
11991	male	Bering Island	134	82	60
166464	male	Bering Island	131	76	61
166556	male	Bering Island	128	75	61
166636	male	Bering Island	131	79	63
166645	male	Bering Island	131	82	63
167017	male	Bering Island	136	83	64
166654	male	Bering Island	134	79	70
166362	male	Bering Island	134	80	74
166406	male	Bering Island	127	76	80
166665	female	Bering Island	119	70	47
166345	female	Bering Island	123	72	51
166528	female	Bering Island	125	78	51
166427	female	Bering Island	120	70	52
11974	female	Bering Island	127	78	52
12059	female	Bering Island	127	80	53
30355	female	Bering Island	124	76	54
166510	female	Bering Island	114	69	55
166531	female	Bering Island	129	76	55
166646	female	Bering Island	127	75	55
42779	female	Bering Island	128	80	57
166659	female	Bering Island	132	81	59
166668	female	Bering Island	127	75	59
166496	female	Bering Island	127	75	60
166648	female	Bering Island	125	74	60
166652	female	Bering Island	131	78	60
30339	female	Bering Island	125	78	60
166569	female	Bering Island	122	74	62
166595	female	Bering Island	125	75	63
166543	female	Bering Island	128	76	64

Additional statistical tests

Mann-Whitney tests

Supplementary Table S2 shows the results of a pairwise comparison among all measurements with a non-parametric Mann-Whitney test. Supplementary Table S3 shows the same analysis performed on males and females to compare sexual dimorphism among populations. The results of these tests are largely in accord with the ANOVA results, the chief difference being that ANOVA found no significant differences in gape angle between Mednyi and Bering populations. The non-parametric analyses were initially performed and are included here for enabling an easy comparison of our results with other works whose small sample sizes favour the use of non-parametric tests.

Supplementary Table S2. Mann-Whitney test for condylobasal length (CBL), rostrum length (RL), residuals of linear RL/CBL regression and gape angle between mainland (main), Mednyi Island (Med) and Bering Island (Ber) populations. Significant values are in boldface.

Locations	CBL			RL			RL/CBL			Gape angle		
	U	Z	*p*	U	Z	*p*	U	Z	*P*	U	Z	*p*
Main/Med	**219**	**4.78**	**<0.01**	526	1.33	0.18	**417**	**2.55**	**<0.05**[b]	**130**	**5.77**	**<0.01**
Main/Ber	**346**	**4.79**	**<0.01**	**346**	**4.79**	**<0.01**	877	0.04	0.97	**420**	**4.13**	**<0.01**
Med/Ber	523	1.07	0.28	**402**	**2.47**	**<0.05**[a]	**401**	**2.49**	**<0.05**[c]	**430**	**2.15**	**<0.05**[d]

[a] $p = 0.0136$. [b] $p = 0.0108$. [c] $p = 0.0127$. [d] $p = 0.0313$.

Supplementary Table S3. Mann-Whitney test for condylobasal length (CBL), rostrum length (RL), residuals of linear RL/CBL regression and gape angle between males and females in each location. Significant values are in boldface.

Location	CBL			RL			RL/CBL			Gape angle		
	U	Z	*p*	U	Z	*p*	U	Z	*p*	U	Z	*p*
Mainland	**13**	**4.97**	**<0.01**	**48**	**3.98**	**<0.01**	170	0.55	0.58	172	1.44	0.15
Bering Is.	**31**	**4.66**	**<0.01**	**78**	**1.33**	**<0.01**	162	1.25	0.21	198	0.31	0.75
Mednyi Is.	**19**	**3.75**	**<0.01**	**37**	**2.98**	**<0.01**	83	1.04	0.30	107	0.02	0.98

Multivariate analysis of variance (MANOVA)

Supplementary Tables S4-S8 refer to the results of a MANOVA among all measurements. The results of these analyses are entirely in agreement with the results of the univariate ANOVA described in the main text. Additionally, *loc*sex* clearly shows that sexual dimorphism is not important in comparing our samples, for differences between males and females are consistent among all three populations.

Supplementary Table S4. MANOVA. Significant values are in boldface.

		CBL		RL		Gape angle	
	df	F	*p*	F	*p*	F	*P*
Intercept	1	**152018.3**	**0.000000**	**81331.37**	**0.000000**	**8338.043**	**0.000000**
loc	2	**57.2**	**0.000000**	**28.66**	**0.000000**	**22.395**	**0.000000**
sex	1	**109.6**	**0.000000**	**51.40**	**0.000000**	1.946	0.165895
loc*sex	2	0.0	0.987756	0.27	0.766136	0.213	0.808441

Supplementary Table S5. Multivariate tests of significance. Significant values are in boldface.

	Test	Value	F	Effect - df	Error - df	*p*
Intercept	Wilks	0.000671	52610.37	3	106	**0.000000**
loc	Wilks	0.352185	24.21	6	212	**0.000000**
sex	Wilks	0.492994	36.34	3	106	**0.000000**
loc*sex	Wilks	0.989883	0.18	6	212	0.982053

Supplementary Tables S6. Newman-Keuls test; variable CBL. Approximate Probabilities for Post Hoc Tests Error: Between MS = 11.325, df = 108.00. Legend: loc 1 - Mainland, loc 2- Mednyi, loc 3 - Bering, sex 1- males, sex 2 -females.

	loc	sex	**{1} - 124.42**	**{2} - 117.71**	**{3} - 130.42**	**{4} - 123.54**	**{5} - 131.91**	**{6} - 125.27**
1	1	1	0	**0.000114**	**0.000115**	0.432334	**0.000138**	0.445294
2	1	2	**0.000114**	0	**0.000115**	**0.000105**	**0.000120**	**0.000138**
3	2	1	**0.000115**	**0.000115**	0	**0.000138**	0.187215	**0.000114**
4	2	2	0.432334	**0.000105**	**0.000138**	0	**0.000115**	0.269904
5	3	1	**0.000138**	**0.000120**	0.187215	**0.000115**	0	**0.000114**
6	3	2	0.445294	**0.000138**	**0.000114**	0.269904	**0.000114**	0

Supplementary Table S7. Newman-Keuls test; variable RL. Approximate probabilities for post hoc tests error: between MS = 7.5269, df = 108.00. Legend as in Supplementary Table S6.

	loc	sex	**{1} - 74.475**	**{2} - 71.095**	**{3} - 76.671**	**{4} - 72.348**	**{5} - 79.089**	**{6} - 75.500**
1	1	1	0	**0.001038**	**0.045580**	**0.021288**	**0.000145**	0.262245
2	1	2	**0.001038**	0	**0.000115**	0.171142	**0.000120**	**0.000158**
3	2	1	**0.045580**	**0.000115**	0	**0.000168**	**0.009135**	0.200632
4	2	2	**0.021288**	0.171142	**0.000168**	0	**0.000115**	**0.002281**
5	3	1	**0.000145**	**0.000120**	**0.009135**	**0.000115**	0	**0.000511**
6	3	2	0.262245	**0.000158**	0.200632	**0.002281**	**0.000511**	0

Supplementary Table S8. Newman-Keuls test; variable gape angle. Approximate probabilities for post hoc tests error: between MS = 41.274, df = 108.00. Legend as in Supplementary Table S6.

	loc	sex	**{1} - 52.091**	**{2} - 49.286**	**{3} - 61.111**	**{4} - 60.083**	**{5} - 57.762**	**{6} - 56.450**
1	1	1	0	0.190593	**0.000562**	**0.001685**	**0.024146**	**0.043163**
2	1	2	0.190593	0	**0.000122**	**0.000128**	**0.000820**	**0.003128**
3	2	1	**0.000562**	**0.000122**	0	0.630434	0.261876	0.132942
4	2	2	**0.001685**	**0.000128**	0.630434	0	0.278153	0.207584
5	3	1	**0.024146**	**0.000820**	0.261876	0.278153	0	0.539254
6	3	2	**0.043163**	**0.003128**	0.132942	0.207584	0.539254	0