

## Supplementary information

Table S1: Sequences of adapters and primers used in F-MSAP of common bottlenose dolphins. FAM: Primers were labeled with the blue fluorescent dye 6-FAM (6-carboxyfluorescein).

Adapter and primer	EcoRI (5'–3')	HpaII/MspI(5'–3')
<i>Adapter 1</i>	CTCGTAGACTGCGTACC	GACGATGAGTCTAGAA
<i>Adapter 2</i>	AATTGGTACGCAGTCTAC	CGTTCTAGACTCATC
<i>Pre-amplification primer</i>	GACTGCGTACCAATTC+A	GATGAGTCTAGAACGG+T
<i>Selective primer</i>	GACTGCGTACCAATTC+AAC <sup>1,3</sup>	FAM-GATGAGTCTAGAACGG+TAA <sup>1,4</sup>
	GACTGCGTACCAATTC+AAG	FAM-GATGAGTCTAGAACGG+TAT <sup>2,3</sup>
	GACTGCGTACCAATTC+ACA	FAM-GATGAGTCTAGAACGG+TAG
	GACTGCGTACCAATTC+AGT	FAM-GATGAGTCTAGAACGG+TAC
	GACTGCGTACCAATTC+ACT <sup>2,4</sup>	
	GACTGCGTACCAATTC+AGA	
	GACTGCGTACCAATTC+ATG	
	GACTGCGTACCAATTC+ATC	

Note. <sup>1-4</sup> Primer combinations used after preliminary evaluation.

Table S2. Analysis of molecular variance (AMOVA) between coastal and offshore ecotypes of common bottlenose dolphins, for epigenetic and genetic markers, using a more conservative method for fragment identification (DNA fragments between 100-350 bp; 100 RFU).

Source of Variation	df	SS	Variance (%)	$\phi_{ST}$	p-value
<b>Epigenetic Markers</b>					
Between ecotypes	1	338.8	12.50 (12%)	0.1159	<0.0001
Within ecotypes	37	3526	95.29 (88%)		
Total	38	3865			
<b>Genetic Markers</b>					
Between ecotypes	1	19.2	0.73 (13%)	0.1268	<0.0001
Within ecotypes	37	185.1	5.00 (87%)		
Total	38	204.3			

Note. df, degrees of freedom; SS, sums of squares;  $\phi_{ST}$ ,  $\phi$ -statistics.

Table S3. Output from STRUCTURE analyses to determine the optimal number of population clusters of common bottlenose dolphins based on patterns of log-likelihood scores.

<b>Methylation-Susceptible Loci (MSL)</b>							
K	Reps	Mean LnP(K)	Stdev LnP(K)	Ln'(K)	Ln''(K)	Delta K	
1	20	-10882.67500	2.69832	—	—	—	
2	20	-10492.58000	3.91443	390.09500	435.26500	111.19508	
3	20	-10537.75000	34.69055	-45.17000	563.50000	16.24362	
4	20	-11146.42000	1624.64143	-608.67000	—	—	
<b>Non-Methylated Loci (NML)</b>							
K	Reps	Mean LnP(K)	Stdev LnP(K)	Ln'(K)	Ln''(K)	Delta K	
1	20	-1824.30500	4.31905	—	—	—	
2	20	-1741.61500	1.19880	82.69000	83.13000	69.34410	
3	20	-1742.05500	1.04603	-0.44000	1.50000	1.43399	
4	20	-1743.99500	1.58030	-1.94000	—	—	

Table S4. Fisher's exact test to assess differences in locus-specific methylation status of common bottlenose dolphins.

Loci	p-value	p-value (FDR)
M3_164	0.000000	0.000000
M3_89	0.000000	0.000000
M3_90	0.000000	0.000000
M4_84	0.000000	0.000000
M8_123	0.000000	0.000001
M3_163	0.000000	0.000001
M3_254	0.000000	0.000001
M1_17	0.000000	0.000001
M3_243	0.000000	0.000001
M8_43	0.000000	0.000001
M8_143	0.000000	0.000001
M8_19	0.000000	0.000001
M3_249	0.000000	0.000001

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M3_267	0.000000	0.000001
M8_208	0.000000	0.000001
M8_39	0.000000	0.000003
M3_242	0.000000	0.000003
M8_141	0.000000	0.000004
M3_240	0.000000	0.000005
M8_207	0.000000	0.000007
M8_240	0.000000	0.000007
M8_60	0.000000	0.000008
M8_3	0.000000	0.000015
M3_192	0.000001	0.000019
M8_127	0.000001	0.000020
M3_247	0.000001	0.000026
M3_238	0.000001	0.000041
M8_62	0.000001	0.000044
M8_188	0.000002	0.000049
M8_81	0.000002	0.000049
M8_129	0.000002	0.000052
M3_212	0.000002	0.000069
M8_249	0.000003	0.000071
M8_137	0.000003	0.000081
M8_53	0.000003	0.000081
M8_171	0.000003	0.000081
M8_47	0.000003	0.000081
M3_250	0.000004	0.000084
M4_121	0.000004	0.000103
M1_207	0.000005	0.000115
M4_184	0.000008	0.000173
M3_210	0.000008	0.000176
M1_165	0.000009	0.000191
M3_231	0.000010	0.000204
M8_37	0.000011	0.000216
M4_223	0.000011	0.000217
M3_153	0.000012	0.000228
M4_128	0.000016	0.000299
M4_79	0.000017	0.000306
M3_213	0.000018	0.000318
M3_211	0.000021	0.000374
M8_179	0.000025	0.000433
M4_180	0.000028	0.000480
M4_319	0.000030	0.000500
M1_22	0.000034	0.000551
M8_69	0.000038	0.000609
M3_214	0.000040	0.000619
M4_16	0.000040	0.000619
M3_229	0.000044	0.000666
M4_119	0.000045	0.000673
M4_252	0.000048	0.000701
M3_269	0.000049	0.000714
M3_224	0.000057	0.000815
M3_154	0.000077	0.001081

M3_156	0.000080	0.001107
M4_198	0.000082	0.001113
M4_120	0.000086	0.001154
M8_204	0.000093	0.001225
M3_177	0.000095	0.001238
M3_83	0.000100	0.001274
M8_231	0.000118	0.001493
M8_205	0.000126	0.001563
M8_230	0.000142	0.001734
M8_239	0.000145	0.001734
M8_201	0.000145	0.001734
M1_114	0.000157	0.001847
M3_181	0.000160	0.001855
M8_124	0.000170	0.001948
M3_183	0.000184	0.002089
M8_256	0.000203	0.002266
M3_101	0.000215	0.002372
M3_26	0.000228	0.002448
M1_278	0.000230	0.002448
M8_131	0.000230	0.002448
M1_54	0.000234	0.002466
M1_246	0.000239	0.002484
M3_62	0.000254	0.002611
M4_117	0.000258	0.002622
M1_192	0.000263	0.002641
M4_91	0.000315	0.003129
M1_255	0.000322	0.003169
M4_304	0.000340	0.003285
M4_267	0.000343	0.003285
M3_258	0.000345	0.003285
M3_202	0.000371	0.003499
M1_179	0.000379	0.003530
M3_91	0.000436	0.004022
M3_234	0.000447	0.004078
M4_107	0.000458	0.004143
M8_36	0.000470	0.004205
M3_265	0.000503	0.004425
M8_257	0.000504	0.004425
M3_255	0.000529	0.004598
M1_201	0.000543	0.004674
M8_194	0.000588	0.005011
M1_142	0.000615	0.005196
M1_228	0.000768	0.006428
M1_169	0.000791	0.006555
M8_169	0.000831	0.006822
M8_61	0.000861	0.007008
M1_166	0.000958	0.007722
M4_90	0.000974	0.007727
M1_80	0.000976	0.007727
M4_186	0.001010	0.007928
M4_77	0.001098	0.008549

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M1_125	0.001140	0.008797
M8_245	0.001218	0.009184
M4_187	0.001224	0.009184
M3_246	0.001229	0.009184
M1_202	0.001242	0.009184
M1_216	0.001242	0.009184
M4_305	0.001294	0.009436
M4_178	0.001297	0.009436
M1_112	0.001357	0.009796
M8_211	0.001394	0.009931
M4_257	0.001398	0.009931
M1_239	0.001418	0.009990
M1_235	0.001490	0.010415
M1_253	0.001570	0.010896
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M3_161	0.001662	0.011328
M8_162	0.001671	0.011328
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M4_8	0.001981	0.013234
M1_261	0.002008	0.013312
M8_217	0.002041	0.013429
M3_205	0.002510	0.016395
M4_292	0.002547	0.016521
M4_161	0.002568	0.016536
M4_226	0.002640	0.016879
M3_63	0.002744	0.017355
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M1_243	0.002884	0.017927
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M3_87	0.003186	0.019531
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M3_82	0.003733	0.021695
M4_63	0.003825	0.022088
M8_72	0.003906	0.022408
M1_183	0.004003	0.022821
M4_5	0.004069	0.023047
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M3_206	0.004264	0.023704
M3_142	0.004398	0.024300
M4_103	0.004613	0.025329
M1_229	0.004675	0.025512
M3_187	0.004800	0.026035
M1_134	0.004909	0.026470

M4_256	0.004944	0.026495
M4_242	0.005063	0.026974
M8_246	0.005167	0.027362
M1_79	0.005324	0.028027
M4_156	0.005536	0.028975
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M8_66	0.005826	0.030142
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M3_104	0.014385	0.059883
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M4_129	0.020569	0.078006
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M3_208	0.022477	0.082787
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M3_218	0.023305	0.084788
M8_175	0.025819	0.093307
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M3_225	0.025990	0.093420
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M1_148	0.028671	0.100630
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M3_253	0.029119	0.101406
M1_161	0.029860	0.103193
M8_200	0.029863	0.103193
M4_251	0.030219	0.104025
M8_199	0.030535	0.104708
M3_190	0.030950	0.105070
M4_124	0.030967	0.105070
M1_184	0.031064	0.105070
M4_31	0.031110	0.105070
M4_225	0.031791	0.106721
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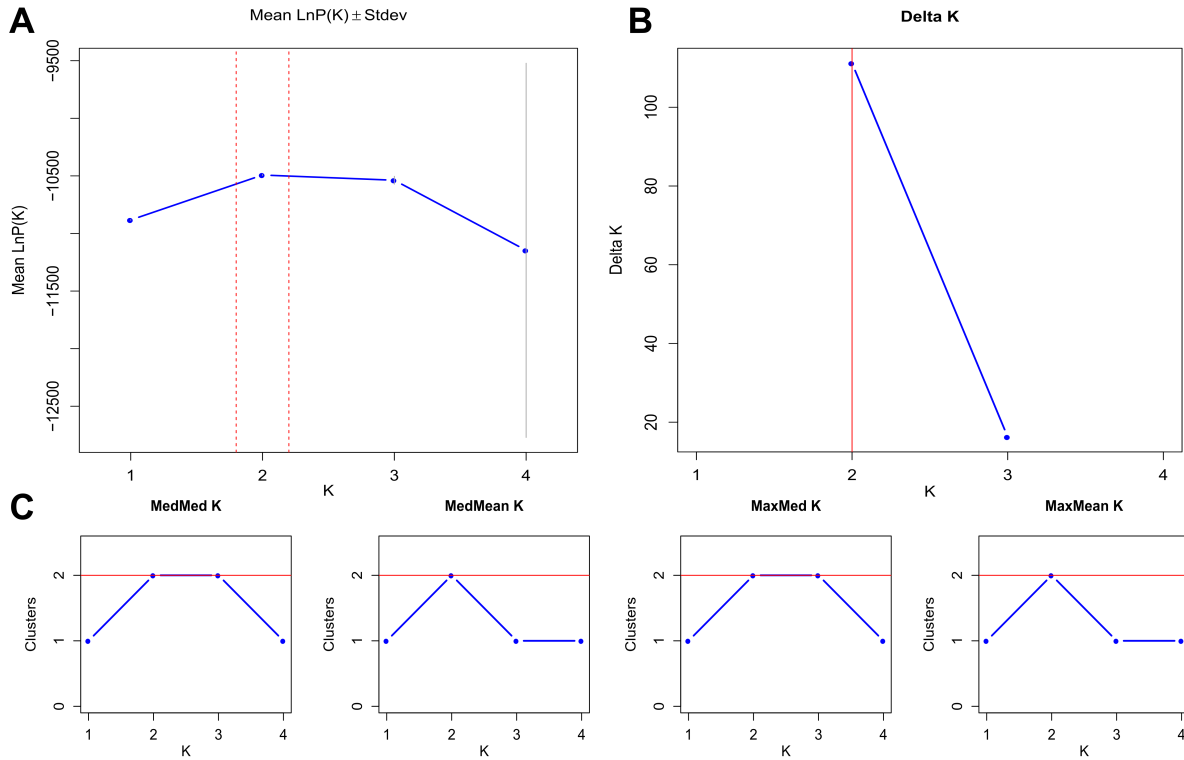
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M4_232	0.032689	0.107732
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M1_117	0.033626	0.110163
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M8_219	0.034683	0.112878
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M8_101	0.039797	0.124540
M4_234	0.040651	0.126768
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M1_241	0.041933	0.128089
M3_162	0.042261	0.128650
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M3_35	0.047124	0.136492
M3_189	0.047124	0.136492
M8_161	0.047124	0.136492
M8_238	0.047124	0.136492
M8_56	0.047124	0.136492
M1_144	0.047615	0.137026
M8_140	0.047615	0.137026
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M3_203	0.048079	0.137479
M3_158	0.048396	0.137943
M3_150	0.048882	0.138888
M8_176	0.049549	0.139925
M4_239	0.049581	0.139925
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## ESTIMATORS OF THE MOST LIKELY K VALUE

### MSL



### NML

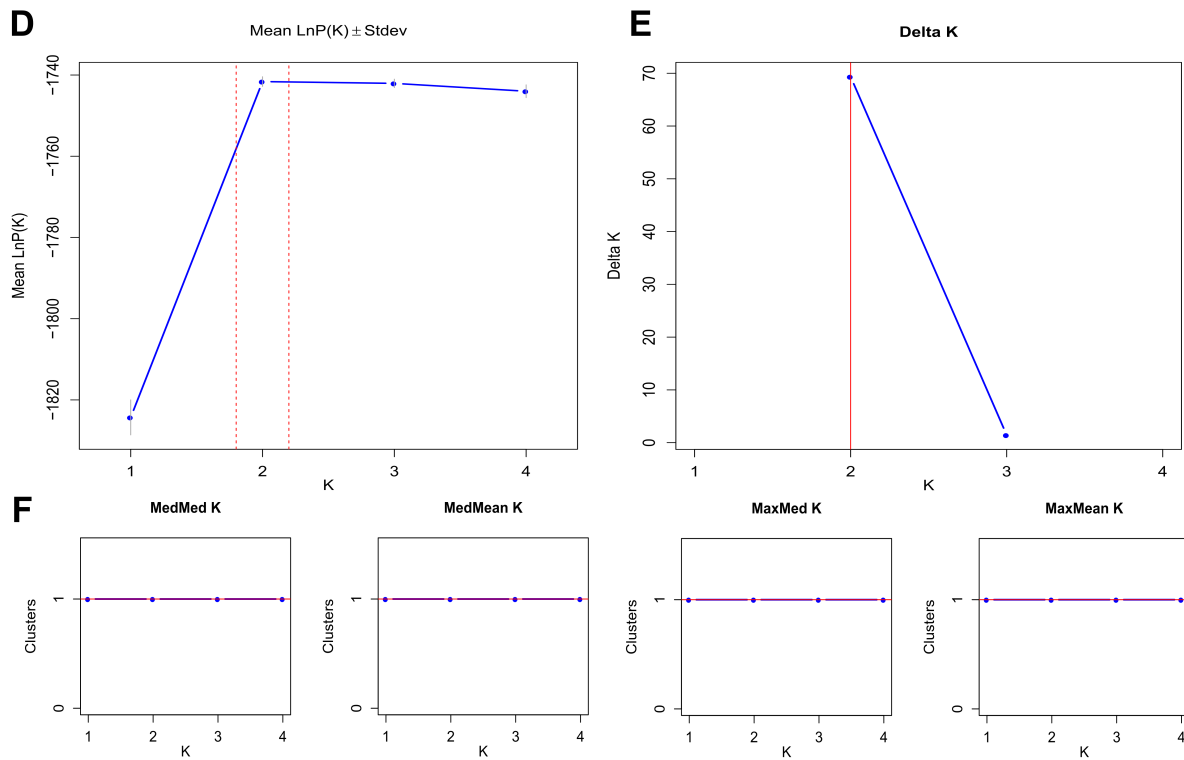


Fig. S1. Ln Pr(X|K) (Pritchard method),  $\Delta K$  (Evanno method), and MedMeaK, MaxMeaK, MedMedK and MaxMedK (Puechmaille method) estimators of most likely number of populations (K) of common bottlenose dolphins in STRUCTURE analyses, using StructureSelector.