

**Integrating genetic and morphological data to assess species delimitation of two
Japanese large abalones: *Haliotis discus discus* and *H. madaka***

Running title

Species boundary in abalones

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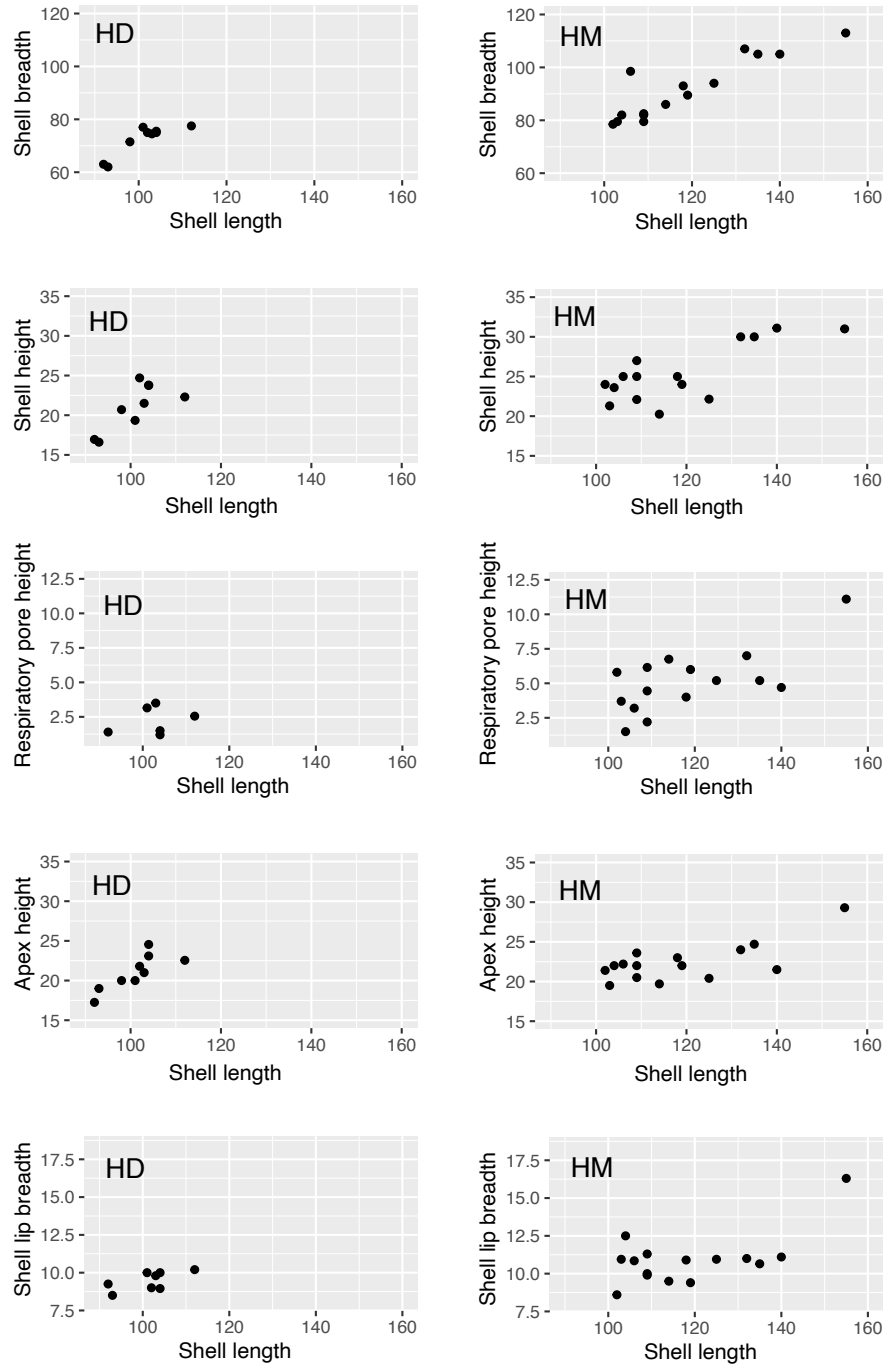


Figure S1. Relationship between shell lengths and other measurements in *Haliotis discus discus* (HD) and *H. madaka* (HM).

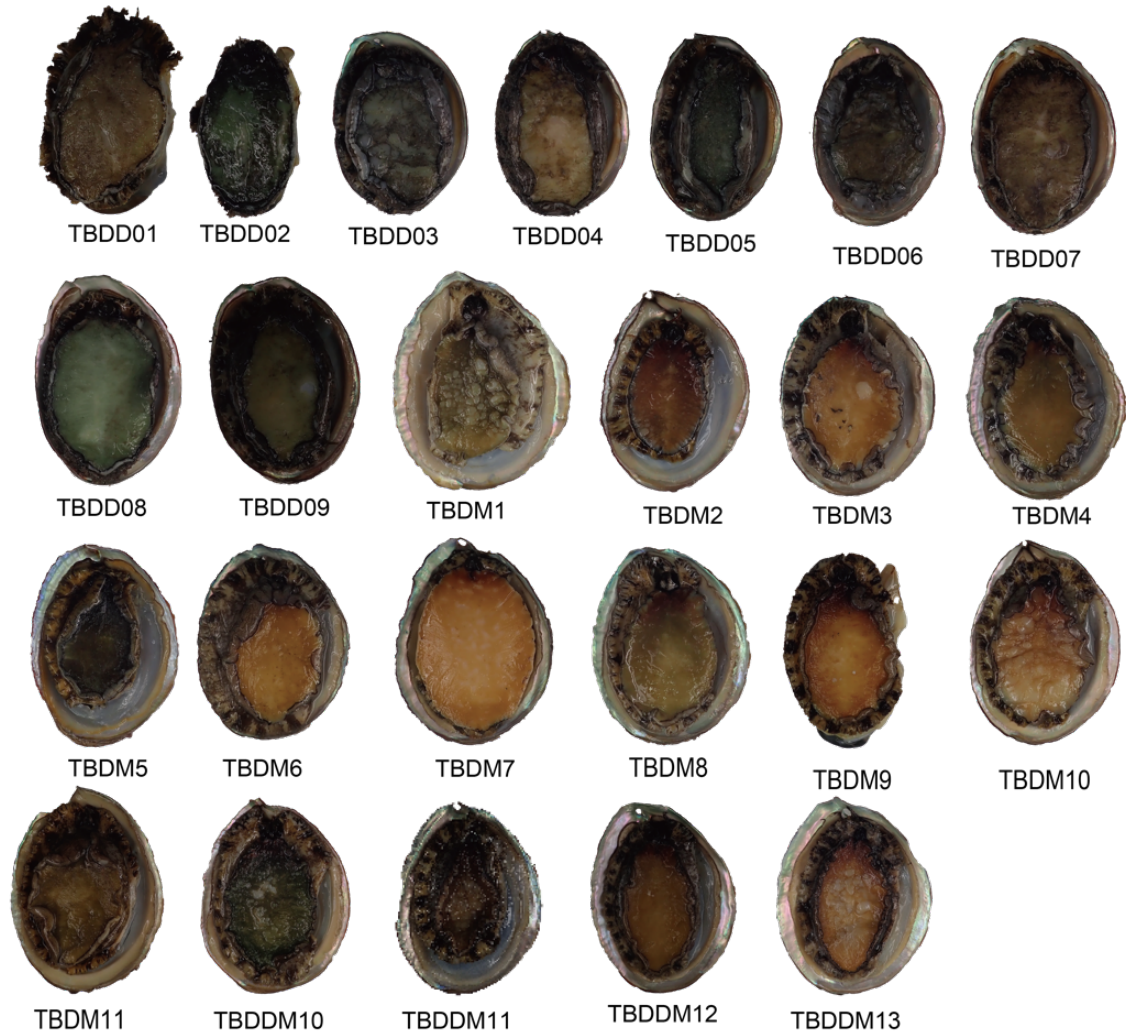


Figure S2. Images showing muscle parts of *Haliotis discus discus* and *H. madaka* that were used for obtaining RGB values.

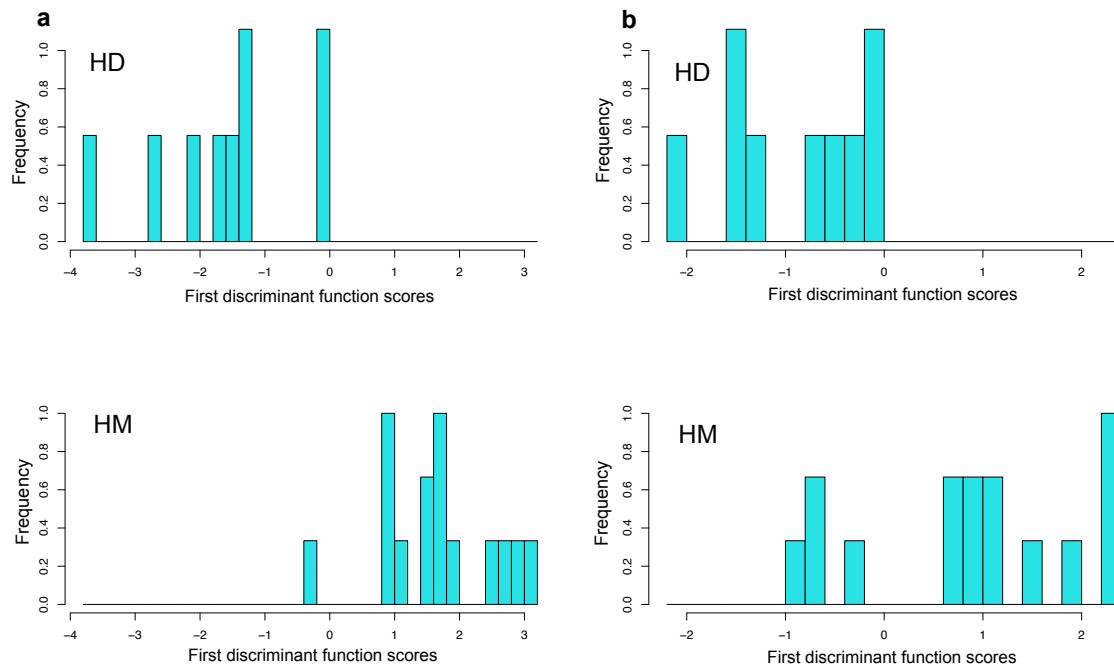


Figure S3. Histogram illustrating the scores for the first discriminant function in linear discriminant analysis based on (a) shell morphometric measurements and (b) RGB values obtained from foot muscles of *H. discus discus* (HD) and *H. madaka* (HM).

Table S1. Mean and standard deviation (SD) of normalized measurement data from the two abalone species

Species		Shell breadth	Shell height	Respiratory pore height	Lip breath	Apex height
<i>Haliotis discus discus</i>	Mean	0.774	0.215	0.042	0.093	0.190
	SD	0.048	0.021	0.015	0.012	0.018
<i>Haliotis madaka</i>	Mean	0.716	0.208	0.016	0.092	0.208
	SD	0.029	0.022	0.011	0.007	0.014

Table S2. Genomic positions of 118 divergent SNP loci in *Halictus discus humai* genome

Scaffold	position
HDSC00009	838147
HDSC00025	867648
HDSC00039	464488
HDSC00040	596825
HDSC00060	639786
HDSC00060	639957
HDSC00079	718070
HDSC00150	251967
HDSC00150	251971
HDSC00194	343991
HDSC00195	518411
HDSC00208	484422
HDSC00208	761875
HDSC00241	546338
HDSC00283	576579
HDSC00319	425480
HDSC00338	442053
HDSC00439	198897
HDSC00449	252229
HDSC00449	415000
HDSC00523	402134
HDSC00523	402230
HDSC00569	263937
HDSC00569	314618
HDSC00569	314739
HDSC00587	285761
HDSC00587	285785
HDSC00587	285782
HDSC00587	285794
HDSC00587	285808
HDSC00723	95380
HDSC00732	179830
HDSC00733	32916
HDSC00733	250228
HDSC00733	250269
HDSC00733	250399
HDSC00789	292605
HDSC00845	26767
HDSC00857	128388
HDSC00857	128389
HDSC00857	128528
HDSC00971	73261
HDSC00971	73267
HDSC00971	73295
HDSC00971	73302
HDSC00989	206101
HDSC01042	59272
HDSC01042	197701
HDSC01146	214256
HDSC01216	39555
HDSC01235	147581
HDSC01235	147584
HDSC01235	147586
HDSC01251	122661
HDSC01263	215610
HDSC01264	27748
HDSC01372	307426
HDSC01400	162134
HDSC01400	162148
HDSC01400	162185
HDSC01421	179081
HDSC01421	179086
HDSC01500	127929
HDSC01562	42647
HDSC01562	42668
HDSC01616	239910
HDSC01657	149252
HDSC01657	149294
HDSC01657	172949
HDSC01657	172951
HDSC01657	173118
HDSC01745	143888
HDSC02097	254871
HDSC02108	153258
HDSC02264	38060
HDSC02293	286533
HDSC02350	36632
HDSC02350	36771
HDSC02404	107442
HDSC02573	2033
HDSC02573	2104
HDSC02573	2221
HDSC02598	98883
HDSC02598	98953
HDSC02598	98963
HDSC02625	15212
HDSC02625	107340
HDSC02660	94248
HDSC02750	147912
HDSC02768	117265
HDSC02820	9061
HDSC03162	72558
HDSC03235	12197
HDSC03275	71269
HDSC03294	95932
HDSC03480	116485
HDSC03480	116547
HDSC03507	14619
HDSC03836	15876
HDSC04042	66719
HDSC04078	123136
HDSC04147	45549
HDSC04180	51129
HDSC04345	116238
HDSC04393	11024
HDSC04393	11028
HDSC04460	66093
HDSC04493	16927
HDSC04650	2119
HDSC04650	2120
HDSC04985	41056
HDSC04994	205736
HDSC05403	32527
HDSC06059	83014
HDSC06059	83031
HDSC06059	83065
HDSC06457	40189
HDSC14005	878

