

The following supplement accompanies the article

Paternity analysis in a litter of whale shark embryos

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Supplement 1. Morphological and genetic data for whale shark embryos

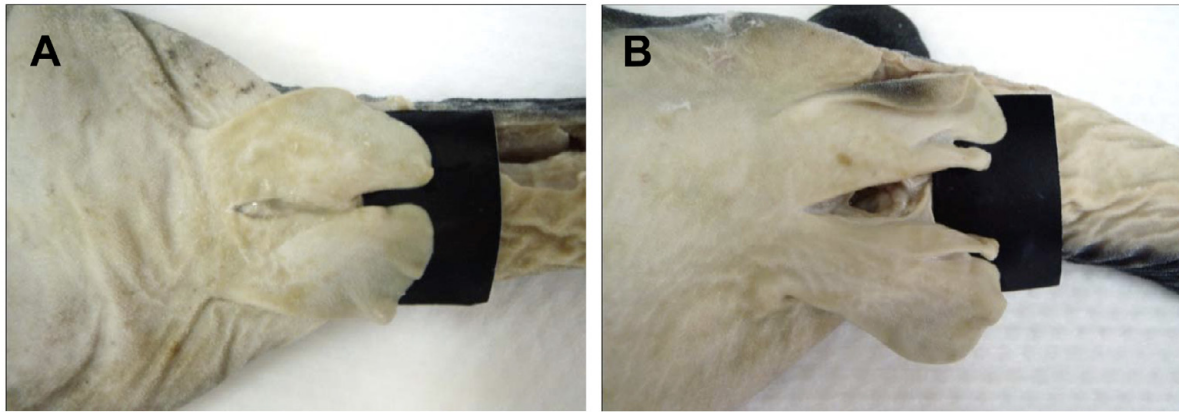


Fig. S1. *Rhincodon typus*. Clasper morphology of whale shark embryos. Pelvic fins of (A) female and (B) male whale shark embryos, showing claspers present on male embryos

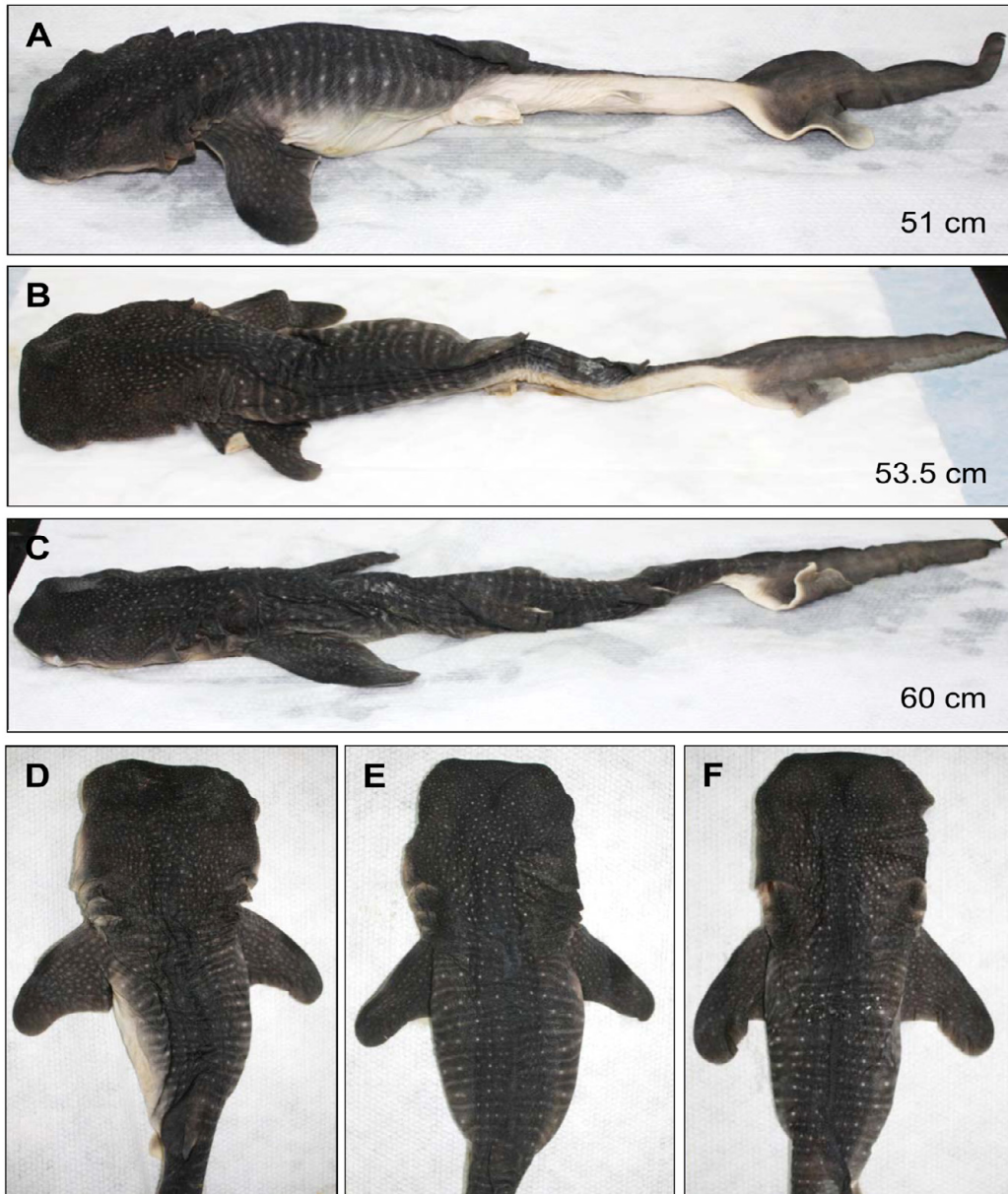


Fig. S2. *Rhincodon typus*. External morphology of whale shark embryos. Embryos representing (A, D) size class 1, (B, E) class 2 and (C, F) class 3 are shown in lateral (A, B, C) and dorsal (D, E, F) views. Photos are not to scale; for images A–C, the embryo total length (TL) is given in the lower right corner of the photo

Table S1. *Rhincodon typus*. Measurements of whale shark embryos. All measurements are given in cm. Size class data are from Joung et al. (1996). Class 1: 42–52 cm total length (TL); Class 2: 52–58 cm TL; Class 3: 58–64 cm TL. F: female; M: male

Embryo	Sex	Total length	Fork length	Precaudal length	Clasper length	Size class
1	F	48.0	37.0	32.0		1
2	F	49.5	39.0	33.0		1
3	F	51.5	41.0	36.0		1
4	F	52.0	41.0	35.0		1/2
5	F	53.0	42.0	36.5		2
6	F	53.0	41.5	35.0		2
7	F	53.5	42.0	36.5		2
8	F	53.5	40.0	35.5		2
9	F	54.0	42.5	36.0		2
10	F	54.0	43.0	36.5		2
11	F	54.5	43.0	37.5		2
12	F	57.5	45.5	39.0		2
13	F	59.5	47.0	40.0		3
14	F	60.0	47.5	41.0		3
15	M	50.0	43.5	37.0	3.0	1
16	M	50.5	39.5	33.5	2.0	1
17	M	51.0	40.5	34.5	2.5	1
18	M	51.5	41.0	35.5	2.0	1
19	M	53.0	42.5	36.5	2.5	2
20	M	53.5	42.0	36.0	3.0	2
21	M	54.0	42.0	35.5	2.0	2
22	M	55.5	43.5	37.0	3.0	2
29	M	56.0 ^a	44.0	37.0	2.5	2
23	M	57.0	44.0	38.0	3.0	2
24	M	57.5	44.5	38.0	3.0	2
25	M	59.0	46.0	39.0	3.0	3
26	M	59.5	47.0	41.0	3.0	3
27	M	59.5	46.5	40.5	3.0	3
28	M	61.0	48.0	41.5	3.5	3

^aMissing tail tip; total length estimated from similarly proportioned animals

Table S2. *Rhincodon typus*. Whale shark embryo microsatellite data

Embryo	Microsatellite locus								
	Rtyp1	Rtyp2	Rtyp3	Rtyp4	Rtyp5	Rtyp7	Rtyp8	Rtyp9	Rty38
1	217, 217	214, 233	240, 242	162, 164	238, 248	224, 250	211, 212	316, 328	182, 186
2	217, 217	214, 233	240, 242	162, 164	238, 248	224, 248	211, 212	328, 336	182, 186
3	217, 220	233, 233	240, 242	164, 164	238, 250	246, 248	212, 212	316, 328	182, 186
4	217, 217	214, 233	240, 242	162, 164	238, 250	224, 248	212, 212	276, 316	180, 184
5	217, 217	233, 233	240, 242	162, 164	246, 250	246, 248	211, 212	316, 328	180, 184
6	217, 217	214, 233	240, 242	162, 164	246, 248	224, 250	212, 212	276, 336	180, 184
7	217, 220	233, 233	240, 242	162, 164	238, 250	224, 250	212, 212	316, 328	180, 186
8	217, 217	214, 233	240, 242	164, 164	238, 250	224, 248	212, 212	276, 316	180, 186
9	217, 220	214, 233	240, 242	162, 164	238, 248	246, 248	212, 212	328, 336	180, 184
10	217, 217	233, 233	240, 242	164, 164	246, 250	246, 248	211, 212	276, 336	182, 184
11	217, 220	214, 233	240, 242	162, 164	238, 248	224, 250	211, 212	276, 316	180, 184
12	217, 220	233, 233	240, 242	164, 164	246, 248	246, 250	211, 212	316, 328	182, 184
13	217, 220	214, 233	240, 242	162, 164	238, 248	224, 250	212, 212	276, 336	182, 186
14	217, 217	214, 233	240, 242	162, 164	246, 248	224, 248	211, 212	276, 316	182, 186
15	217, 220	214, 233	240, 242	164, 164	246, 250	246, 250	212, 212	276, 336	180, 184
16	217, 220	233, 233	240, 242	164, 164	246, 248	246, 250	212, 212	316, 328	182, 184
17	217, 217	214, 233	240, 242	162, 164	238, 248	224, 250	211, 212	328, 336	182, 186
18	217, 220	214, 233	240, 242	164, 164	238, 250	246, 250	212, 212	328, 336	180, 186
19	217, 217	233, 233	240, 242	164, 164	246, 248	246, 250	211, 212	328, 336	182, 184
20	217, 217	233, 233	240, 242	162, 164	238, 250	246, 250	212, 212	316, 328	182, 184
21	217, 220	214, 233	240, 242	164, 164	246, 250	224, 250	211, 212	276, 336	180, 184
22	217, 217	233, 233	240, 242	162, 164	246, 248	224, 250	212, 212	328, 336	182, 186
23	217, 217	233, 233	240, 242	162, 164	246, 248	246, 250	212, 212	328, 336	182, 184
24	217, 217	214, 233	240, 242	164, 164	246, 250	246, 250	212, 212	328, 336	180, 186
25	217, 220	233, 233	240, 242	164, 164	238, 250	224, 250	211, 212	328, 336	182, 184
26	217, 220	214, 233	240, 242	164, 164	238, 250	224, 250	211, 212	276, 336	180, 186
27	217, 220	214, 233	240, 242	162, 164	246, 248	246, 248	212, 212	276, 336	182, 184
28	217, 217	214, 233	240, 242	164, 164	238, 250	224, 250	211, 212	276, 316	182, 186
29	217, 220	233, 233	240, 242	164, 164	238, 250	246, 250	212, 212	276, 336	182, 186
Embryo genotypes	217, 217 217, 220	214, 233 233, 233	240 ^a , 242	162, 164 164, 164	238, 248 238, 250 246, 248 246, 250	224, 248 224, 250 246, 248 246, 250	211 ^b , 212 212, 212	276, 316 276, 336 316, 328 328, 336	180, 184 180, 186 182, 184 182, 186
Parental genotypes	217, 217 217, 220	214, 233 233, 233	240 ^a , 240 ^a 242, 242	162, 164 164, 164	238, 246 248, 250	224, 246 248, 250	211 ^b , 212 212, 212	276, 328 316, 336	180, 182 184, 186

^aThe Rtyp3 240 allele is a new allele not found in the larger population study. ^bThe Rtyp8 211 allele was found previously in only a single animal