Supplement

Table S1. Data collection, sampling criteria, and statistical methods used to address each study objective.

	Objective	Data collected	Sample size	Sampling criteria	Analysis
Objective 1	What is the morphological variation in hatchlings at SPNWR; does it vary by year?	Morphological measurements (2009, 2012, 2013, 2016)	2617 hatchlings 199 clutches	Randomly selected hatchlings	Analysis of Variance (ANOVA), Principal Component Analysis (PCA)
Objective 2	Is morpho-logical variation within a clutch related to paternal identity within multiple paternity clutches?	Paired morphological measurements and samples from multiple paternity clutches only (2012, 2015)	5 clutches 58 hatchlings	All hatchlings used from multiple paternity clutches with paired morphological data	Multiple paternity analysis, one-tailed *t*-tests on mean pairwise differences between full-siblings and half-siblings in clutches with multiple paternity
Objective 3	Do clutches with multiple paternity have greater morphological variation among hatchlings?	Paired morphological measurements and samples (2012 and 2015), un-paired morphological measurements and samples (2009)	27 clutches 398 hatchlings	All clutches analyzed from 2012 and 2015 were used; 2009 clutches randomly selected	Multiple paternity analysis, one-tailed *t*-tests on within clutch variances as in Howe et al. 2017

Table S2. Loadings of principal component 1 and 2 from a principal component analysis of hatchling mass, straight carapace length, straight carapace width, body depth, and body condition index grouped by year.

	PC1	PC2
Mass	0.49469976	0.41022973
SCL	0.58576967	-0.36234425
SCW	0.38966302	0.3708078
BD	0.39456549	0.24011656
BCI	-0.32346073	0.71081912

Table S3. Within clutch variances in mass, straight carapace length, straight carapace width, body depth, and body condition index for 27 clutches from 2009, 2012, and 2015. MP = multiple paternity, SP = single paternity.

Mother (identified by flipper tag)	Year laid	Multiple or single paternity	Within clutch variance in mass (g^2)	Within clutch variance in SCL (mm^2)	Within clutch variance in SCW (mm^2)	Within clutch variance in BD (mm^2)	Within clutch variance in BCI (g/mm^3 x 10000)^2
3015	2009	MP	1.29	4.37	1.21	0.67	0.044
AAR544	2009	MP	3.99	4.32	2.62	0.48	0.036
AAV905	2009	MP	1.61	1.89	0.79	0.26	0.025
TTZ428	2009	MP	2.71	1.88	2.9	0.84	0.014
XXZ108	2009	MP	1.51	1.51	2.05	0.59	0.024
XXZ059	2012	MP	5.97	1.76	2.92	0.61	0.016
XXZ168	2012	MP	6.39	2.75	1.67	1.02	0.015
YYL884	2012	MP	1.54	1.85	2.16	1.05	0.017
SPP073	2015	MP	3.91	5.25	3.48	1.01	0.058
SPP088	2015	MP	21.24	11.39	4.41	1.8	0.033
AAC260	2009	SP	2.41	1.95	1.97	0.26	0.011
AAV935	2009	SP	2.8	3.04	4.01	0.77	0.051
CUL081	2009	SP	2.9	1.27	1.61	0.63	0.016
NNE247	2009	SP	3.07	3.00	2.93	0.68	0.02
YYX178	2009	SP	5.96	1.42	1.23	0.49	0.015
AAC374	2012	SP	4.27	2.62	1.98	1.2	0.019
MJ191	2012	SP	2.36	2.98	1.3	0.7	0.031
SPP052	2012	SP	8.15	6.29	3.28	0.74	0.045
TTZ345	2012	SP	1.36	12.13	0.7	0.76	0.292
YYX178	2012	SP	2.42	3.93	0.87	0.76	0.042
AAG402	2015	SP	3.81	5.07	3.13	0.58	0.035
AAR287	2015	SP	2.42	3.67	2.01	1.73	0.036
AAV938	2015	SP	2.94	2.38	2.09	0.47	0.02
SPP102	2015	SP	2.85	3.83	4.4	0.29	0.069
SPP109	2015	SP	3.13	1.56	1.72	0.85	0.01
SPP111	2015	SP	3.85	3.19	1.09	0.69	0.035
SPP285	2015	SP	1.91	4.48	1.51	0.32	0.092

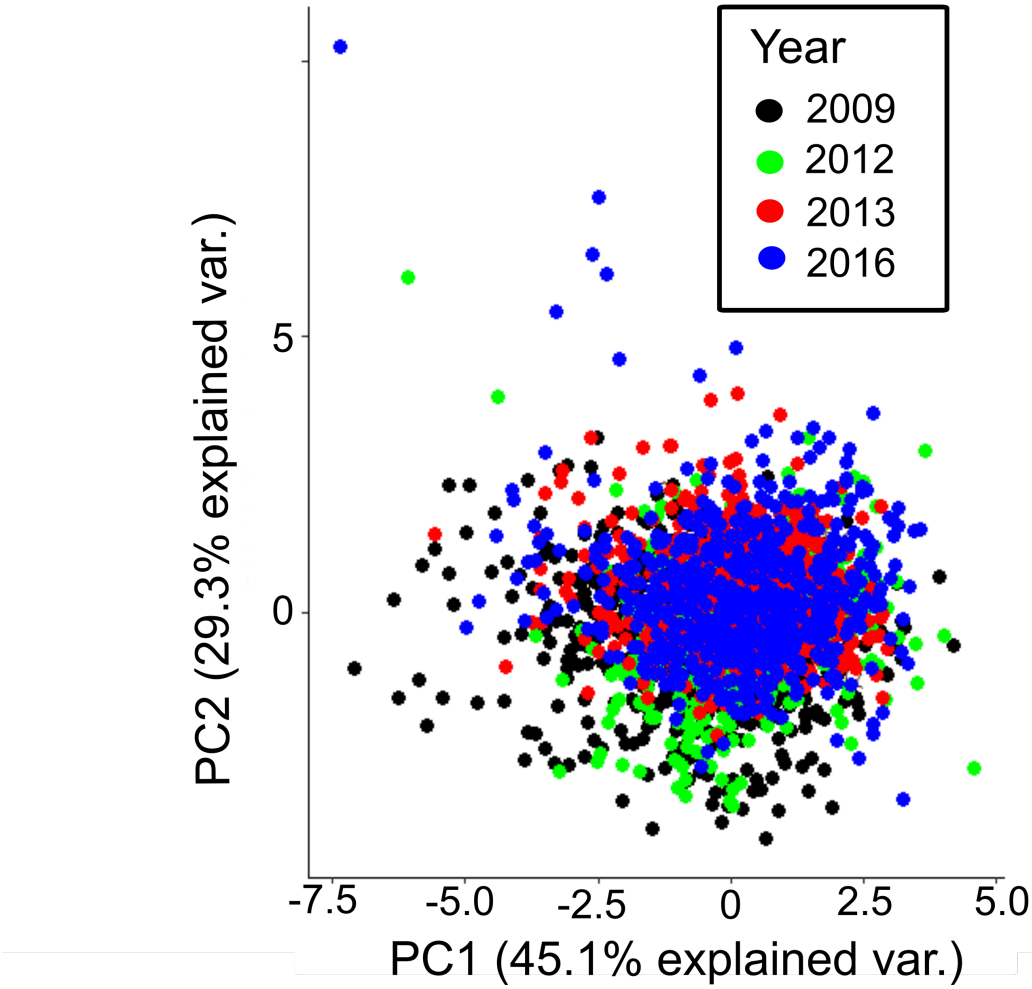

Fig. S1. Principal component analysis of hatchling mass, straight carapace length, straight carapace width, body depth, and body condition index reveals that 45.1% of the variation in morphological measurements is explained by the first principal component. Colors represent the year measurements were collected.