Table S1

Grain size characteristics of the sandy sediment fraction used in the experiments.

Sediment fraction	Grain size (μm)	SD
D_{10}	239	3.9
D_{50}	352	1.3
D_{90}	520	10.7

Table S2

Representative measurements of the shell valves and fragments used in the experiments.

Shell type	# samples	Length	Width	Height	Weight
Valves	200	27.5 (± 4.5)	23.6 (± 3.9)	9.5 (± 2.3)	2.3 (± 1.4)
Fragments	455	18.2 (± 7.8)	13 (± 6)	4.5 (± 2.6)	0.74 (± 0.9)

Length, width and height are in units of mm, while weight is in g. Height represents the thickness of the shell, from the umbra to the center hinge.
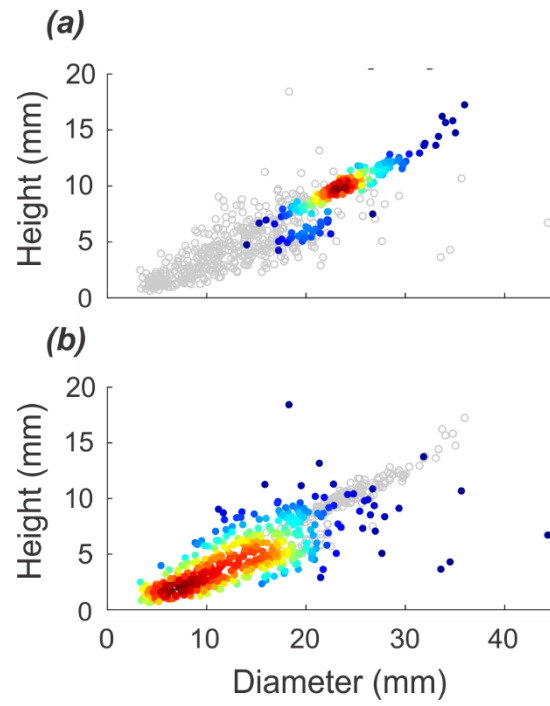
Figure S1: Measured shell height vs. diameter (thickness) for (a) whole shell valves and (b) shell fragments.