Supplementary Materials

Table S1. Summary output for linear models comparing the change in hue in relation to the angle of observation for three great tinamou eggs and the Araucana chicken egg.

Species	**Egg ID**	**Hue**	**Term**[ii]	***F***	**dfs**	***P***
Great tinamou	tmajor1	-0.24 ± 0.08	Location ID	17.95	9, 77	< 0.001
			Angle	8.10	1, 77	0.006
	tmajor2	-0.75 ± 0.10	Location ID	11.95	9, 75	< 0.001
			Angle	53.69	1, 75	< 0.001
	tmajor3	-0.96 ± 0.03	Location ID	256.8	9, 78	< 0.001
			Angle	873.3	1, 78	< 0.001
	tmajor2EDTA	-0.02 ± 0.01	Location ID	33.55	4, 39	< 0.001
			Angle	1.64	1, 39	0.21
Chicken		0.02 ± 0.04	Location ID	7.39	9, 78	< 0.001
			Angle	0.21	1, 78	0.65

[i]Change in hue (nm) per 1^{o} increase ± SE

[ii]Location ID: location of measurement; Angle: angle of illumination and reflection

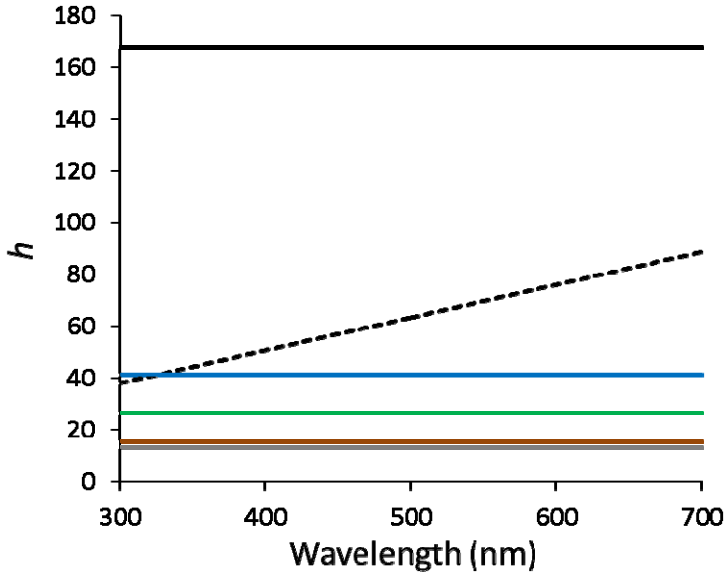

Figure S1. Rayleigh's criterion for surface smoothness, below which eggshell surfaces are smooth enough to produce gloss (dashed line). Black, *G. gallus*; blue, *T. major*; green, *E. elegans*; grey, *N. perdicaria*; brown, *N. maculosa*.

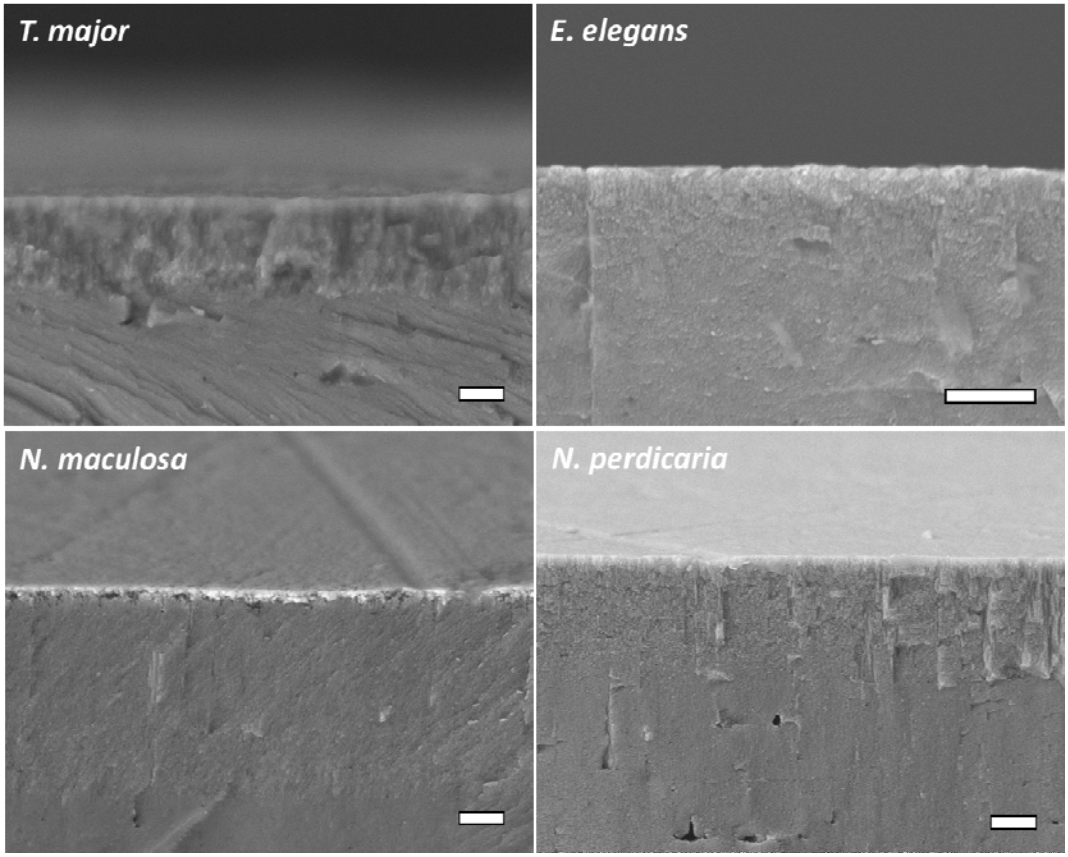

Figure S2. SEM cross-section images of tinamou eggshells' surfaces showing variable cuticle thickness and structure across eggs of different tinamou species. The cuticle is easily distinguishable from the underlying eggshell for *T. major* and *N. maculosa* eggshells, but not *E. elegans* and *N. perdicaria* eggshells. Cuticle thickness of *T. major* and *N. maculosa* eggshells is respectively 2 µm and 0.4 µm; the thickness of *E. elegans* and *N. perdicaria* eggshell cuticles is unclear from SEM images. Scale bars: 1µm.