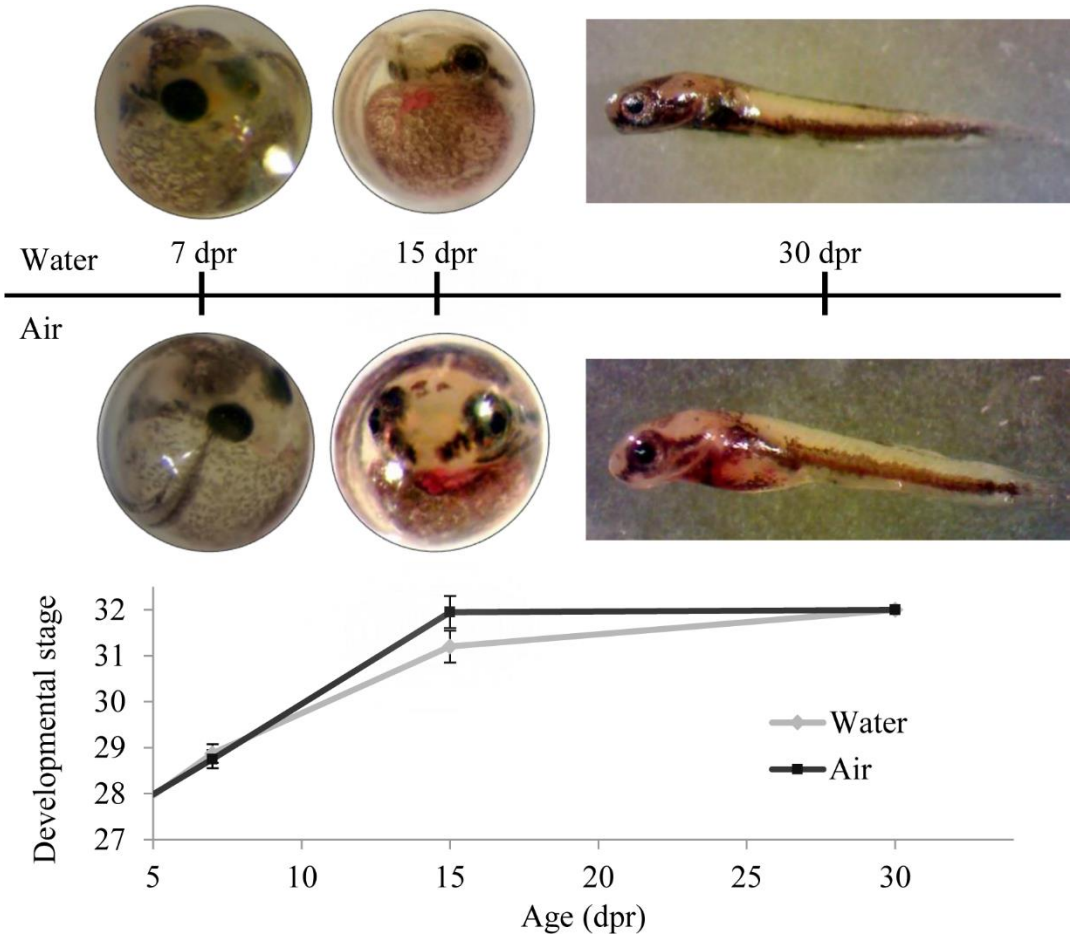


**Fig. S1. Representative images of embryos developing in water and developing in air at 7, 15 and 30 dpr.** Embryos were unaffected by rearing environment at 7 dpr. At 15 dpr embryos reared in air had reached stage 32, hatching competency, while embryos reared in water were at an average of stage 31. However, at 30 dpr, water embryos were at the same stage as aerially reared embryos but had a visually distinct reduction in their yolk sac. Average developmental stage was plotted against the age of the embryo (dpr).

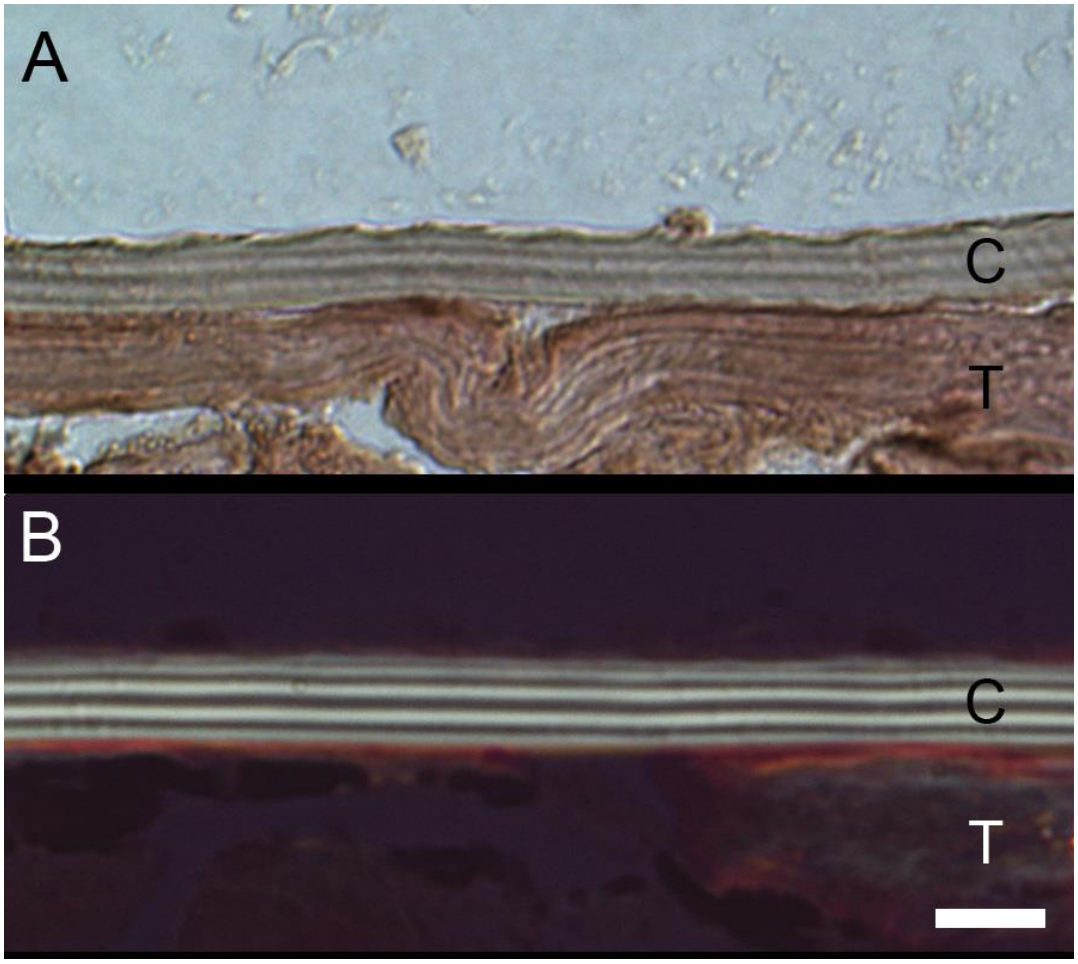


**Fig. S2. Chorion of *K. marmoratus* embryos** (A) Representative brightfield photomicrograph of a chorion cross-section stained with hematoxylin and eosin. (B) Representative photomicrograph of picrosirius red stained chorion cross-section viewed under polarized light. Five collagen-containing layers ("lamellae") are present in the innermost layer of the chorion. C, chorion, T, embryonic tissue. Scale bar = 0.01 mm.

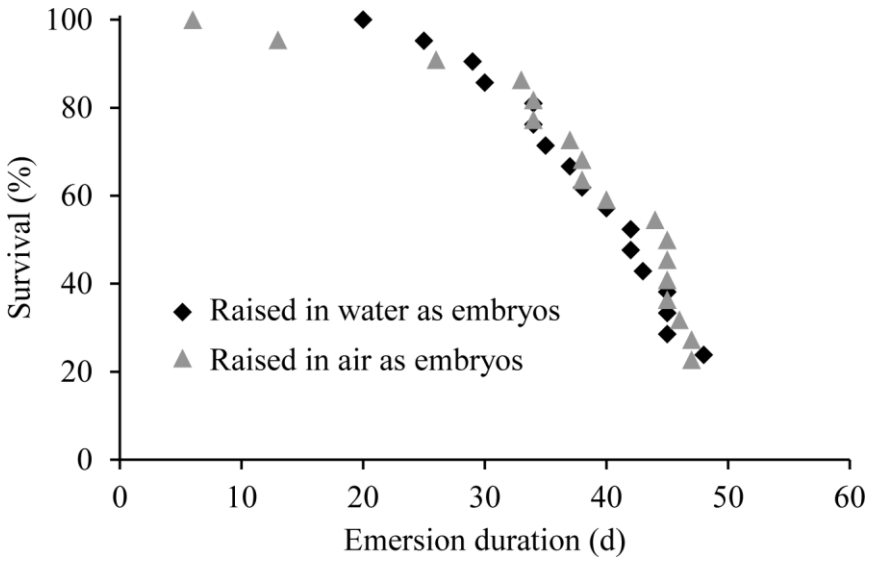


**Fig. S3. Survival of *K. marmoratus* reared in either an aquatic or terrestrial environment as embryos and subsequently exposed to terrestrial conditions for 7 weeks as adults.** There was no significant effect of embryonic rearing environment ($p > 0.05$).


**Movie 1.** Opercular movements in fish embryos.