

Is evolution actually halted in ‘living fossils’?

One late spring weekend a few years back, my wife and I drove out to Delaware to see an amazingly old tradition.

Knowing that both time and tide were critical, we had asked around for the best spot and right hour. Primate Hook National Wildlife Refuge at sunset was the most popular answer, and so, after a day of reading in camp, we pulled up to a beach shaded orange by the evening light. Tracey and I strolled down the beach for a while, watching sanderlings and ghost crabs go about their respective business, but we weren't greeted by the natural spectacle we had hoped to see. The only sign of the ancient players were dried, gull-pecked husks scattered on the sand.

We were about to give up for the night when a receding wave briefly revealed what we had driven so far to see. There, in the dark water, were two horseshoe crabs, the male clasped onto the back of the larger female. They barely looked alive, more like olive-shaded helmets than animals, yet there they were, doing their part to perpetuate the species. On previous nights the tideline had been covered with similar pairs, but, even though I had missed the peak of horseshoe crab mating season, I was happy to get even a glimpse of nuptials that have been going on much the same way since the Jurassic.

But it would be a mistake to call horseshoe crabs “living fossils.” The term is catchy, and was coined by none other than Charles Darwin himself, but it's only of those sneaky turns of phrase that quickly breaks down under close examination.

The pop definition of living fossil, as handed down by nature documentaries, is “a species that has gone unchanged for millions of years.” But this doesn't work for even the most famous examples of supposedly static species.

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