

JTB on 2/16/17

"only adults breed"

This is usually true, but far from universally. Think of neotenic newts, the paedogenetic larvae of some midges etc.

Lines 31-32

"The essential point is that all modifications of all organs were expressed with utmost precision in every breeding animal."

This is somehow a revisitation of the paradox of Achilles and the tortoise. In the real world, and under a correct spatiotemporal perspective, no tortoise will escape being reached and distanced by Achilles. The paradox seems to work ... because it tells only a carefully chosen part of the story.

Line 48

"a theory of Bilaterian evolution"

Why the purported theory of evolution based on lethal juvenile cancer should apply to bilaterians, and bilaterians only, is far from clear. The only comparison the A. offers is one between humans (perhaps - vertebrates) and cnidarians (the A. mentions jellyfish, but the cited reference is to hydra); another group of bilaterians (insects) are mentioned, but essentially to say that they have found their peculiar way through reducing size, hence the number of mitosis [this should have called for a due consideration of the consequences of the resetting of the clock at each new generation, apparently ignored in a theory aiming to explain an unbroken chain of cell cycles]. Using this sample limited to two or three taxa it is impossible to identify any condition specific to the Bilateria.

Lines 85-6

"conventional theory identifies no evolutionary mechanism that was exclusive to Bilaterians"

Why should it?

Lines 112-5

"That may explain why in some animals—most notably, the insects—not equipped with immune systems capable of destroying transformed cells developmental mitosis was minimized by producing small animals with brief pre-reproductive lives."

Small animals are generally produced through a relatively small number of mitoses, but this does not imply that their pre-reproductive life (measured in days, months, or years) is necessarily short. A number of insects reach sexual maturity at an age of several years - while huge octopuses and squid usually reproduce when about 1 year old.

A final note about the language - full of words we would not expect to read in a scientific paper: the word 'perfect', or words derived from that, occur 27 times in this short ms. In addition, the A. uses 'correct', 'meticulous', 'precise', 'exact' etc. to describe biological processes.

