Chickens First Speciation by “Hopeful Monsters” in Fraternal Supertwins

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Abstract

The idea of “hopeful monster” was proposed by Goldschmidt who envisioned that speciation could occur instantaneously via major chromosomal rearrangement in a one-step process; but he could not unravel how similar individual in the opposite sex to appear on the same time and location to generate next generation. This paper provides the answer for the challenge. In this paper, a model of speciation in animals is discussed in detail. Only four steps are needed to generate a new species in sexual animals: fraternal twin zygotes, similar gross mutation on the zygotes, self-splitting of mutated zygotes into two groups of identical zygotes of both sexes, development of zygotes with birth of babies, and inbreeding when they mature. The outcome of these steps is generation of new species with chromosomal homozygosity. Viviparous animals (living young not eggs are produced) are used to explain the model. With slight modifications, other asexual organisms could be accommodated. As the model provides the simplest explanation for speciation in all sexual animals, which plausibly explains many puzzles in biology; such as chicken egg, Cambrian explosion, appearance of new organs, etc. The author presents a few predictions that can be falsified. This model needs only one assumption and it is consistent with many well-known observations.

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