RESOURCE
For everyone at Wageningen University & Research

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‘No one need ponder this any longer’

Text: **Lieke de Kwant**

His suit is ready, the speech is drafted and the party venue has been booked. Postdoc researcher Tom Berghof is nearly ready for his PhD graduation. He is happy to make time to explain – with a wink – how he solved an age-old dilemma in his sixth proposition.

Tom Berghof received his PhD on 19 January for a study on breeding chickens with strong natural resistance to disease.

Proposition: The chicken came before the chicken egg.

‘Yes indeed, I’ve solved it. It’s simple. That is, as long as you are talking about a chicken’s egg – that addition is crucial. An animal belongs to a certain species from the moments its DNA sequence sufficiently resembles the DNA of that species. If you go back in evolution and look at the genome of chickens, you can point out a moment at which we say; before this, there was no *Gallus gallus*, and after this there was.

Of course it took thousands of mutations before the ancestors of the chicken became a chicken, but one mutation has to be the last, decisive one. Mutations take place in the cells of sperm and eggs. Between them, gametes with that particular mutation resulted in a chicken embryo, but that was in an ancestor’s egg, not in a chicken’s egg.

In this way you can reason backwards: even the earliest ancestor of the chicken came from the egg of its ancestor, and so on. At some point there must have been an animal that laid the very first egg.

The argument has a weakness, though. Because mutations are random, an animal can de-evolve as well as evolve. Then you can get a non-chicken coming out of a chicken’s egg. But the main point is as clear as day to me: no one need wonder about this anymore!’