A Cracking Question
By Caleb Clarkson

Come one, come all, and gather ‘round as we try to solve an age-old question… What came first? The chicken or the egg? 200 years ago, this question was easily and confidently answered: “All species that exist now have always existed, and before the first egg emerged, the first chicken had to sit down and lay it. Therefore, the chicken came before the egg!”

It wasn’t until 1859 that perceptions of species origination began to change. That year, English naturalist Charles Darwin released his book, “On the Origin of Species.” In it, Darwin theorizes that new species come from the gradual change of species over time, which is a product of the mechanisms and influence the natural environment has on populations of species. If we asked Darwin about the first chicken, he might tell us, “All species that exist now have evolved and changed from a common shared ancestor; therefore, the first chicken came from an almost-chicken parent.” While his theory of evolution was revolutionary and changed the way we study biology forever, it also muddles the clear-cut, easy answer we had originally.

Using genome sequencing, scientists have discovered that the chicken we know today was most likely a domesticated variant of wild junglefowl from South-East Asia. While junglefowl species, such as the red junglefowl, have been evolving for millions of years, the junglefowl’s domestication was only about 8,000 years ago.

Due to the fragility of bird bones, it can be challenging to unearth evidence of exactly when and how the chicken was domesticated. Sometimes, in situations like these, the only clues researchers have about avian domestication are written accounts coming hundreds of years later. Did the people who first domesticated the chicken catch a junglefowl and call it a day? Did they find an abandoned nest of junglefowl eggs ready to hatch, and bring them home? In terms of domestication, we may never know which came first.

However, if we disregard domestication and compare the arrival of the first chicken-looking bird, the Red Junglefowl, to the first egg, the answer is much easier to find. As Darwin hinted earlier, the Junglefowl separated as a new species from a common ancestor roughly 5 million years ago. This common ancestor would be very chicken-like… but not yet a chicken. As time continued (and after many, MANY chicken generations), gradual changes caused by natural selection would slowly shape and form this common ancestor into a distinctly new species, the Red Junglefowl we know as our first “chicken”.

Through the lens of evolution, even though we don’t know exactly when this new species emerged, we can reasonably guess that the first “chicken” hatched from an egg laid by a very close-to-a-chicken, but not-quite-a-chicken parent. Eggs with hard shells are ancient, emerging roughly 300 million years ago, long before the Red Junglefowl ever split from its common ancestor. The first critters to lay hard-shelled eggs were the common ancestors of not only birds, but reptiles and mammals too! Our question has been answered; the egg came first… But… what makes an egg a chicken egg? Is it an egg laid by a chicken, or an egg that hatches one? That we may never decide on.

Photo: A Red Junglefowl