

## The Limits of Speciation

A Debate with Bill Fortenberry

In this short debate, Bill refutes the claim that the small variations observed within a given species can eventually give rise to a new species.

**Tyler:** The only difference between “micro-evolution” and “macro-evolution” is time. Saying this is impossible can be compared to saying that it's possible to walk to the kitchen, but impossible to walk to the mall down the road.

**Bill:** Are you familiar with the research of DeVries in the limitations of polyploidy?

**Anja:** Inform us Bill, as far as I can see De Vries was one of the first genecists and he died in 1935, therefore his research seems pretty out of date.

**Bill:** Do you consider Newton's research in the laws of motion to be extremely out of date?

DeVries discovered that variation (what some people mislabel as micro-evolution) within plants has very strict limits and that the variants can be selectively bred from one extreme to the other in such a way that it is impossible to state which variant was the first to appear on the earth.

**Anja:** Depends, but essentially yes. So is einsteins work, but reconfirmation of their "ideas" makes sure that they're up to date. However I'm still not sure what you talk about, so inform us about the limitations of Polyploid.

I'm curious, are you trying to argue against evolution?

Which kind of limits and what do that limit them to?

and how is it a problem of evolution if there is a slight problem with tracing certain plants past? Not granting that it's true, I just don't see how, even if it was true, it could be a problem.

**Bill:** Tyler made the claim: "The only difference between 'micro-evolution' and 'macro-evolution' is time." Polyploidy is the primary method of supposed micro-evolution within plants, and it is often touted as proof of plant speciation. DeVries provided definite proof that this variation within plants has very strict limits which cannot be breached. These limits stand in stark contradiction to Tyler's claim.

The fact that it is impossible to state which variant of a particular plant was the original indicates that polyploid variation neither introduces new information nor eliminates existing information. This also indicates that variation or "micro-evolution" is demonstrably different from macro-evolution. There is a greater difference between the two terms than just time.

**Anja:** Please, may I have a source?

**Bill:** The following quotes are taken from pages 516-575 of the 1905 edition of the book *Species and Varieties*.

"I sowed half as many seeds as formerly, and the result proved quite the same. With the exception of gigas all the described forms sprang anew from the purely fertilized ancestry of normal Lamarckianas..."

"New forms [beyond those already discovered] did not arise, and the capacity of my strain seemed exhausted. This conclusion was strengthened by the results of the next three generations, which were made on a much smaller scale and yielded the same, or at least the most common mutants, as also did the fourth and fifth..."

"It is most striking that the various mutation of the evening-primrose display a great degree of regularity. There is no chaos of forms, no indefinite varying in all degrees and in all directions. Quite on the contrary, it is at once evident that very simple rules govern the whole phenomenon..."

"New elementary species appear suddenly, without intermediate steps..."

"There is no danger that Lamarckiana might die out from the act of mutating nor that the mutating strain itself would be exposed to ultimate destruction from this cause..."

"If our gigas and rebrinervis were growing in equal numbers with the Lamarckiana in the native field, would it be possible to decide which of them was the progenitor of the others? ...if this period of mutation were ended, probably there would be no way to decide concerning the mutual relationship of the single species. Hence the lack of a recognizable main stem in swarms of elementary species makes it impossible to answer the question concerning their common origin..."

"Is the number of such germs to be supposed to be limited or unlimited? My experiment has produced about a dozen new forms. Without doubt I could easily have succeeded in getting more, if I had had any definite reason to search for them. But such figures are far from favoring the assumption of indefinite mutability. The group of possible new forms is no doubt sharply circumscribed..."

"the present mutations are only repetitions of previous ones, and do not contribute new lines of development to those already existing. This leads us to the supposition of some common original cause, which produced a number of changes, but which itself is no longer at work, but has left the affected qualities, and only these, in the state of mutability..."

**Tyler:** From what I understand, this is an observation of speciation.

**Bill:** It is an observation of the limits of speciation. In other words it is an observation that "micro-evolution" differs from macro-evolution in a real and significant way.