



Patterns of Life

D'Arcy Thompson, Structuralism and the Shape of Life

Voice Over:

Evolution. If it's all about random mutations, why do the same patterns keep cropping up in the natural world? Coincidence? Bearded man in the sky?

Not according to parrot wielding eccentric, Sir D'Arcy Thompson.

He found that the precise shapes that plants, sea shells and animal horns grow in can be described in simple equations.

Why? Because living things grow according to the laws of physics, as well as genetics. The two work together to produce the forms of living things.

These days it's a lot more sophisticated. Mathematicians can match the structure of viruses to 3d forms like the 20-sided icosahedron.

They recently simplified one medical research problem from 40 thousand possibilities to, a somewhat more manageable, three.

So could cure for the common cold turn out to be written in algebra? Complex, three-dimensional algebra that is.