

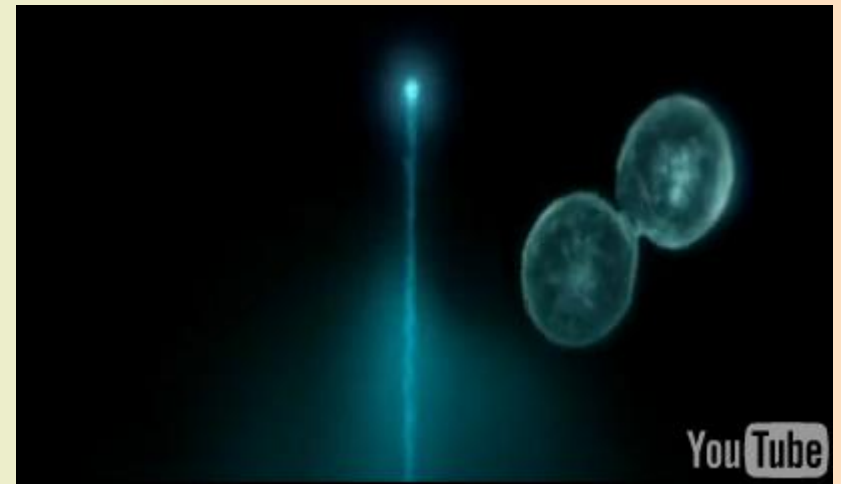
# Tree of Life



It began in the sea, some 3,000 millions years ago.

Complex chemical molecules began to clump together to form microscopic blobs, cells. These were the seeds from which the tree of life developed.

They were able to split, replicating themselves, as bacteria do. As time passed, they diversified into different groups. Some remained attached to one another, so they formed chains (algae).



# Tree of Life



Others formed hollow balls, creating bodies with internal cavities. They were the first multi-cell organisms (sponges or their direct descendents).

As more variations appeared, the tree of life grew and became more diverse.

Some organisms became more mobile and developed a mouth.

Others are bodies stiffen by an internal rod. They developed sense organs.



# Tree of Life

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A related group had their bodies divided into segments with little projections at their sides that helped them to move around the sea floor.

Some of these segmented creatures developed hard-protective skins that gave their bodies some rigidity.

So now the sea was full with a great variety of animals.



# Tree of Life

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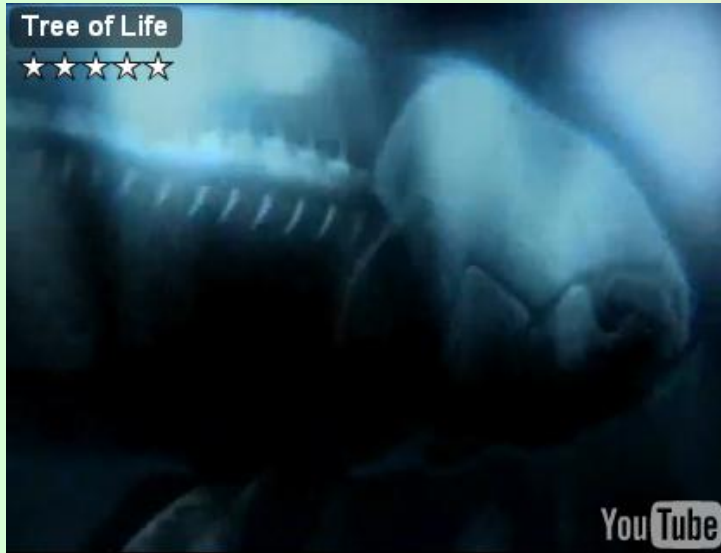
And then, around some 450 million years ago, some of these animals ventured onto land.

And here the tree of life branched into a multitude of different species that exploited the new environment in all kind of ways.

One group of them developed elongated flaps on their backs which, over many generations, eventually developed into wings: the insects had arrived.



# Tree of Life



Meanwhile, back in the seas, those creatures with the stiff rod in their bodies had strengthened it by encasing it in bone.

They grew bigger and developed fins, equipped with muscles that enabled them to swim. So fish now dominated the waters of the world.

One group of them emerged from the surface; the fleshy fins became weight-supporting legs and 375 millions years ago a few of these backbone creatures followed the insects onto the land. They were amphibians, with wet skins, and they had to return to water to lay their eggs.



# Tree of Life



But some of them evolved dry and scaly skins and broke the links with water by laying eggs with shells. These creatures, the reptiles, were the ancestors of today's tortoises, and cocrodiles. And they included the animals that dominated the land: the dinosaurs.

But 65 millions years ago a great disaster overtook the earth: a great proportion of animals were exterminated. All the dinosaurs disappeared except for one brach: the scales were modified into feathers: they were the birds.



# Tree of Life



While they spread through the skies, a small seemingly insignificant group of survivors began to increase in numbers on the ground beneath: they were the first mammals.

Their warm, insulated bodies enabled them to be active at all times and all places (from the Arctic to the Tropics, in water as well as on land).

