Devonian Fact File

Cooksonia

It might be hard to guess by looking at it, but this tiny little plant is a major turning point in our history of life. This plant is one of the world's first well-adapted land plants and has been around for quite some time already; in fact, it is already becoming rare here in the Devonian as other plants begin to catch up with it!

Small is beautiful

Despite reaching only about 10cm in height, *Cooksonia* had everything it takes to be a big step forward for plants. It already possesses a thick waxy cuticle to prevent dehydration, and stomata to allow gasses in and out of its photosynthetic stem. This stem branches as it grows, and carries sporangia at the tip of each of those branches, ready to release spores and colonise more land. It even has primitive vascular tissue to transport water to every part of its body, and these vessels help to support the growing plant by having spiralled ridges running down their length. *Cooksonia* has already solved many of the problems facing plants as they ventured onto land.

Many mysteries

Many species of *Cooksonia* have been found, but no-one knows how it managed to make more plants. Obviously the plant carries sporangia, but few spores have been found in them. Did these plants have the alternation of generations that their later descendants will have? Did they have any way of actively dispersing their spores, or did they just allow the wind to blow them away? Are the different 'species' that have been found until now really different species, or are they male and female plants of the same species?

On top of this, one other mystery about *Cooksonia* remains; no one has found any roots so far. Did the plant have a stem, specialised for growing underground (a rhizome in fact) that could take in water, or did it actually have roots? We will have to find more fossils to answer all of these intriguing points!

And despite all of its groundbreaking work for the plant kingdom, poor *Cooksonia* died out early in the Devonian age, as other plants around it developed more sophisticated ways of solving the same problems it had so spectacularly overcome.