The Reproductive Lives of Nonvascular Plants: Alternation of Generations - Crash Course Biology

The plants that we see today probably evolved from a single species of algae that noodged itself onshore about 1. 2 billion years ago. the main defining trait of nonvascular plants is that they don't have specialized conductive tissues. since they don't have roots and stems. They can't reach down into the soil to get to water and nutrients. they have to take moisture in directly through their cell walls and move it around from cell to cell through osmosis. nonvascular plants are collectively referred to as Bryophytes. There are over 24,000 species of species of nonvascular plant. about 15,000 mosses, 9,000 liverworts and only about 100 hornworts. the oldest fossils of plant fragments look really similar to liverwort. Nobody really knows which of the Brysophytes evolved first and which descended from which. one generation, called the gametophyte, reproduces sexually by producing gametes, eggs and sperm. another generation. is called the sporophyte generation, which is asexual. when the sperm and egg fuse, they give rise to the second generation. This type of reproductive cycle is called alternation of generations.

Nonvascular plants are the least complex kind of plants and their alternation of generations process is about as simple as it gets. but with vascular plants, because they have all kinds of specialized tissues, things get a little more convoluted. in bryophytes. You recognize the gametophyte as being the.... You know, the plant part. while the sporophyte is less recognizable and smaller. but as plants get more complicated., like with vascular. plants, the sporophtes become the dominant phase. crash Course Biology is the latest episode of our weekly Science show. We'll review. All the contents of this week's episode of Crash course Biology. and if you have any questions for us, we 're on Facebook and Twitter and, of course, we're down in the comments below.