Selaginella life cycle pdf

Updated July 21, 2017 Bob Cannon Selaginella is often described as primitive or living fossils because of the nature of their physiology and reproduction. They are the only living members of their family, with about 700 species. Celaginella is found in a wide range of environments, from cold temperate to desert to humid humid tropics. Many of them look like mosses, but they differ in considerable ways-reproduction is the most obvious. Selaginella breeds by producing two types of spores that combine to produce a new plant. Mature Selaginella produces, at the tips of branches, small structures are sometimes called cones, but more correctly called strobili. There are two types of strobes that differ in size and color, each of which has a component for the sexual reproduction of the plant. The plant, which has both microspores and megasporous ones, is called megasporangy because of their size, usually yellow and can seem lumpy. Four large spores can be seen using a magnifying lens. They act as a female component in the reproduction of Selaginella. The smaller structure is darker, usually orange in color, and not lumpy, but oval in shape. This structure is a microsporanium and contains a lot, almost microscopic, of spores. These microspores act as a male component in reproduction. As in ferns, the Selaghinella spores escalate into gametophyte. Gametophyte produced a large spores in the megasporangyum produces eggs. Small spores in microspporanga grow into gametophyte, which produces sperm. A water film is needed for the sperm to travel to the egg; it is provided in the wild by dew, fog or rain. When sperm connects to an egg, cell division produces a tiny new plant called sporophyte. Sporophyte roots on the ground and develops into a plant over time, producing spores to replicate the process when mature. Sexual reproduction of selaghinella is not considered easy, so asexual reproduction is preferred by most producers. In asexual reproduction of the chereno, seliginella is pressed to the rich, well drained, media and will form roots over time. These new plants will continue to grow and produce spores when mature. Some popular Celaginella are: the resurrection of the plant (Selaginella pilifera A. Brown or Celaginella lepidophylla (Hook. Spring), peacock thorn moss (Celaginella cucinata (Desv. ex poir.) Spring) and Bay spikemoss (Selaginella ludoviciana A. Brown). rare tropical fruit log. It has a special interest in rare plants and maintains several internet sites and a list of groups for those with similar interests. Interests. is a question-and-answer forum for students, teachers, and visitors to the general village to share articles, answers and notes. Answer now and help others. Answer Now Here's How It Works: Anyone Can Ask a Question Anyone Can Answer The Best Answers Voted and Rise to the Top Is a Question and Answer Forum for students, teachers and general visitors to share articles, answers and notes. Answer now and help others. Answer Now Here's How It Works: Anyone Can Ask a Question Anyone Can Answer The Best Answers Voted and Climb to the Top Most Species of Selaginella inhabit rainforests and are spread around the world; some species are also growing in temperate regions. They are located in the mountains and abundantly cultivated, in private gardens. Some are xerophytic and grow on rocky cliffs or dry sandy soil. They are mostly perennial, some small, delicate annuals. Common Indian species of selaghinella are S. rupestris, S. pentagona, S. proniflora, S. semichordata and S. megaphylla. Sporophyte seliginella: In general appearance, they tend to be long, slender, a lot branched, dorsiventral, creeping stems. All forms of branch are free, mainly in one plane, and branching in most cases is dichotomous or pseudo-monopodial. The stems are thickly dressed with numerous small, more or less ovarian leaves, usually two different species- some large and some small, arranged usually in four longitudinal rows, two of which originate from the bottom and two of the top of the stem. The leaves of the lower surface are much larger than the top, one small leaf and one large leaf arise at each node. At the base of the abdominal surface of the sheet is membranous ligule, which is characteristic of Celaghinella. The roots are mostly adventurous because the first root dies early. Branching roots is dichotomically in alternative planes. Each later the stem develops a root organ, a risopor, which when the soil reaches produces roots there. Rhizophore morphology: Three opinions have been put forward regarding the morphological nature of rhizophore: (a) Root nature: Rhizophores resemble the roots of positively geotropic and leafy, In the fact the anatomical structure as the root and species with the polystheistic stem shows monostetic rispor, but they differ from the roots in being non root caps and root hair b) Stem nature: Rispors resemble stems in exogenous origin, no root caps and root hairs , a position defined in relation to the stem, i.e. in basal dichotomy, and sometimes the leaf shoots develop during beheading. c) Suigeneris organs: Risoras are organs that are neither stems nor roots. Cross section of stem shows areas clearly differentiated into bark and stele or stele. Teh Teh multi-layered, consisting either of a completely thin-walled parenchemoma, or the outermost part of it, being thick-walled and high or registered (sclerified parenchemic), with or without intercellular spaces, and is limited outside by a single-layer epidermis consisting of thick wall cells and with a cotucolay. The number of meridians varies from one to three or more, each of which is surrounded by airspace, which is surrounded by radially elongated cells with outstanding caspar stripes, trabecules, which are endodermis. Around each mediator is one layer of pericycle, consisting of noticeable parenchem cells. Vascular beams are androcentric; xylem exarch and diarch. The cross section of the risophore shows an epidermis and a well-developed bark enclosing the stele. Endodermis is not clearly marked. There is a single protoxyl and phloem completely surrounds xylem. Celaginella is heterosporous, because asexual reproductive units, spores, have two kinds; smaller ones are microspores and larger ones megaspores, which are produced in different kinds of sporangia. Sporangia is mostly reniform or ovoid, sometimes flattened and soon pursued. Two types of sporangia vary greatly in size, mega-sporangia is much larger than microsporanga. Sporophylls bearing mega-sporangia are called mega-sporophylls and those carrying micro-sporangia are called micro-sporophylls. Sporophylls, which are almost the same size, are usually collected in more or less different, quadrangle cone or sporangiferous thorn or strobilus. These strobes are terminally located on the apics of branches. Each strobilus usually consists of both types of sporophylls, but in some species only one type of sporophylls can occur. The order of location of two types of sporophylls is variable in different species. Each mega-sporophyll carries a mega-sporange in its axil, in which there is only one functional mega-spore parent cell, and this leads to four megaspores due to the reduction of division. On the contrary, each microspophile carries in its axil microsporangium, containing many microsporous maternal cells, each of which produces four microspores due to the reduction of division, so that in each microspor there are many microspores. Both types of spore tetraegral and the wall shows a three-radiat ridge and decorations. With reduced division and spores formation, gametophytic or haploid generation begins. Gametophyte Selaginella: Male gametophyte: Microspores, when still included in the micro-sporange, begin to sprout, but eventually release the transverse rupture of the sporangia wall. The result of the germination of each microspor is a male protalus (pushillial cell), which is extremely reduced to one cell. This is the so-called rudimentary anteridi (primary sperm - four in quantity) is surrounded by a jacket of sterile cells (jacket cells), and all of them remain included in the wall of spores. From the primary sperm produced from 128 to 256 sperm of the mother cells. Biflagelat sperm are developed from sperm of the maternal cells of the so-called anterydia, and they end up floating freely in the spores wall cavity. The spore wall bursts and releases sperm in the surrounding water film. Women's gametophyte: Similarly, mega-spores sprout before they are free of mega-sporangium. When germination, the disputed wall does not burst immediately and is followed by free nuclear fission, forming a large number of nuclei, which are distributed in the total mass of the cytoplasm surrounding the large central vacuole. As the number of nuclei increases, the cytoplasmic layer becomes thicker and the vacuole becomes smaller and smaller until it is completely filled with cytoplasm. The formation of the wall around the nuclei follows from the periphery near the apical area (to the three-beam ridge), forming a fabric that gradually spreads inside. In some cases, after the formation of a tissue consisting of 3-10 layers of cells from the periphery, the formation of walls temporarily stops and the inner wall of the lower layer of cells thickens, forming the so-called diaphragm, which separates the peripheral tissue from the noncellular part. Megasporas, around this stage, are freed from the mega-sporangia and the walls of each megaspor are eventually torn along a three-radiating ridge exposing archegon and part female gametophyte. The female gametophyte then turns green and also develops risoids that go through three to emit cracks. Thus, the female gametophyte thus eventually becomes independent of sporophyte, but is not free of megaconspor, being still enclosed in a wall dispute. In each archegon develops oat or evosphere. When archegon reaches maturity, the cells of the neck and abdominal cells are disorganized. The biflagelat of sperm, sticks out of the anterydia of the neighboring rudimentary male pushed, floats to archegon in dew or rainwater, and eventually one of them fertilizes the egg. The fertilized egg, shining a wall around it, becomes an overusance. With the fertilization and formation of sporophytic or diploid oospore, the generation begins. The new sporophyte of Celaginella: oospore gradually leads to an embryo possessing a stem, two cotyledons, legs, root, and suspensor, and from this embryo the plant Selaginella is derived. Derived. selaginella life cycle in sinhala. selaginella life cycle diagram. selaginella life cycle ppt. selaginella life cycle in hindi. selaginella life cycle pdf. selaginella life cycle video. selaginella life cycle wikipedia. in the selaginella life cycle the archegonia