

Abstract

This thesis aims to summarize the known information about the earliest land plants while pointing to the unresolved issues in the field. The first part discusses the abiotic changes from the Precambrian, Cambrian and Ordovician which were not a part of terrestrialization but which were its necessary precondition. The possible evolutionary link between algae and land plants will also be stressed. The centre of the thesis lies in the discussion of plant body adaptations during the transition from an aquatic to land environment, increasing plant diversity of the ecosystems from the Late Silurian to the Middle Devonian, and the earliest microscopic records of subaerial plants. Geographical distribution of the continents, localization of the first terrestrial ecosystems and a brief systematics of the earliest plants will also be mentioned. The final parts concern Rhynie Chert and Gilboa – two examples of fossil ecosystems. The process of the site preservation and the interspecies connections will be described.