

Abstract

Cenomanian plant fossils from the Peruc-Korycany Formation of the Bohemian Cretaceous Basin, Czech Republic are described, analysed and their palaeoenvironment is interpreted.

Cycad foliage *Nilssonia mirovanae* Čepičková et J.Kvaček including micromorphology of its cuticle was described. It shows deeply sunken stomatal apparatus surrounded by papillae overhanging the stomatal pit. The haplocheilic stomata are arranged in rows. *Todziaphyllum saportanum* (Velen.) Čepičková et J.Kvaček is a serrate-margined leaf with semicraspedodromous venation. Since the cuticle of this plant fossil has not been preserved, macro-observation is the only method available. *Ascarinophyllum pecinovense* Čepičková et J.Kvaček is a serrate-margined leaf, having an abaxial cuticle covered by striations, randomly oriented, and radially oriented striations around the stomata. This species shows a combination of laterocytic/laterocyclocytic, stephanocytic-bicyclic, amphibrachyparacytic, less frequently brachyparacytic and holoparacytic stomata, sometimes with T-shaped thickenings of the internal cuticle at the poles. *Papillaephyllum labutae* Čepičková et J.Kvaček is characterised by leaves with serrate margins. It shows an abaxial cuticle covered by large papillae. Its stomatal apparatus shows a combination of latero-cyclocytic and stephanocytic-bicyclic type of stomata.

Micromorphology of cuticle and its isotopic signal ($\delta^{13}\text{C}$ in n-C₂₉) was used for estimating water stress of the studied plant fossils. In the Pecínov quarry, selected plant fragments from units U1–U5 have been analysed. Palaeoenvironments and plant assemblages of the Peruc flora based on palaeobotany, palynology, palaeoecology, sedimentology and geochemistry analyses are reconstructed:

- 1) Saltmarsh vegetation, *Frenelopsis-Classopollis* assemblage
- 2) Coastal wetland vegetation, *Cunninghamites-Taxodiaceapollenites* assemblage
- 3) Meandering river floodplain vegetation, *Myrtophyllum-Perucipollis* assemblage
- 4) Braided river floodplain vegetation, *Eucalyptolaurus-Mauldinia* assemblage
- 5) Vegetation of slopes and drier upland areas (fern prairies with angiosperms and Bennettitales) *Zamites-Ephedripites* assemblages

Evidence of angiosperm dominance and gymnosperm decline in alluvial palaeoenvironments of the Peruc flora is documented. Distribution and dispersal of angiosperms in the Albian and Cenomanian are discussed in a European context.

