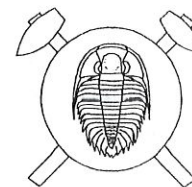


A silicified stem of *Podocarpoxylon helmstedtianum* Gottwald, 1966 from the Palaeogene site Kučlín (NW Bohemia)



Zkřemenělý kmen *Podocarpoxylon helmstedtianum* Gottwald, 1966 z paleogénního naleziště Kučlín (sz. Čechy) (Czech summary)

(1 text-fig., 4 plates)

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A large portion of the silicified stem has been recovered at the base of diatomite on the Trupelník Hill at Kučlín situated on western periphery of the České středohoří Mts. Its wood structure corresponds with *Podocarpoxylon helmstedtianum* Gottwald. Twigs and cone scales of the same plant belong to *Doliostrobus* Marion, an extinct conifer of taxodialean affinity, and occur frequently in adjacent diatomite layers. Fossilization took place stepwise starting with carbonization, several phases of silicification and variously intensive recrystallization. Beside carbonized tissue, fossil wood is converted mostly into opal. Cristobalite, ? tridymite, chalcedon, quartzine, quartz and xonotlite have also been recognized in wood and cavities. From stratigraphical and palaeoecological correlations the Late Eocene to Sanoisian age is assumed for the Kučlín flora.

Introduction

In 1976 diatomite layers on the Trupelník Hill at Kučlín near Bílina (NW Bohemia) were exposed for exploitation carried out by the North Bohemian Ceramic Works (Severočeské keramické závody n.p.). One of the authors (F. H.) recovered a large silicified stem lying on the bottom of the clay pit just between the diatomite and the underlying tuffite. The stem was later uncovered by the staff of the Palaeontological Department of the National Museum, Praha (F. Holý, K. Drábek, A. Skalický). In its original position (pl. I) the stem was divided into the stump and the trunk parts, the latter broken into pieces. The stump was transported to Teplice in front of the entrance of the County Museum. Most pieces of the trunk as well as thin sections and mineralogical samples are deposited in the collections of the National Museum, Praha.

The silicified stem was buried in the tuffite for the most part. The preserved portions together attain 7.5 m in length. The stump is 1.6 m wide, the trunk gently narrows, the preserved upper part is little compressed, 0.5 m across.

The outer, mostly carbonized, partly limonitized layer of the cortex was very soft while the inner woody part was compact, but porous. Numerous fraction cracks arose during diagenesis, filled by opal and other Si-minerals. Concretions containing chalcedon and quartz were recovered during the excavations in rock layers adjacent to the stem.

In the present account the wood anatomy (D. Březinová) and mineralogy (A. Kužvartová) is given together with general information (F. Holý – Z. Kvaček) and stratigraphical-palaeoecological considerations (F. Holý). The final version of the manuscript was prepared and translated by Z. Kvaček.

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The diatomite of Kučlín

The site Kučlín represents a relict of the Volcanogenic Complex of the České středohoří on the top of the Trupelník Hill (Trippelberg in German) near Bílina. Tertiary strata are underlain by the Upper Cretaceous (Upper Turonian to Coniacian) marlstone that crops out at the foot of the hill.

Three levels can be recognized within the relict and belong to Palaeogene: at the base about 16 m thick layer of the sandy limestone and marl with intercalations of coaly clay, the middle part about 10 to 15 m thick, built of vari-