Fossil Association of the Stity Locality (Bystrice Lithofacial Development of the Bohemian Cretaceous Basin)

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Aleš Janderka Gymnasium Masaryk Square 8, Šumperk, Czech Republic The thesis focuses on Cretaceous macrofossil, microfossil, and ichnofossil specimens from the Štíty Graben. The research covers the structure of the Bohemian Cretaceous Basin and previous paleontological findings from the locality. Emphasis was placed on field research and subsequent laboratory research. The present state of the locality has been examined and samples of siltstone, pelosiderite concretions, and sandstone containing a wide variety of fossils have been gathered. The most important part of the thesis is the taxonomical and palaeoecological processing of the collection of a wide range of species. The main part of the collection consists of benthic and planktonic foraminifera. In total, 31 genera and 26 species of Coniacian, and 11 genera and 7 species of Cenomanian and Turonian foraminifera were found. The association of Cenomanian and Turonian fossils is poorer in terms of species and numbers compared to the Coniacian and contains only benthic foraminifera. The results show, that in the Upper Cretaceous (between 100,6-86,9 Ma) in the Štíty Graben, there was a cold shallow sea rich in nutrients, occasionally disturbed by storm surges. During the 14 million years from the Cenomanian to the Coniacian, a marine transgression occurred, and the distribution of species changed. Various foraminifera, crustaceans, gastropods, bivalves, cephalopods, echinoderms, and even sharks lived in the locality. The coastal character is confirmed by the findings of flora, such as remnants of sequoias of the genus Geinitzia.

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