DESCRIPTION FOR THE GENERAL PUBLIC

The Upper Devonian deposits of the Holy Cross Mountains for many years have been the subject of intense research of many generations of paleontologists and geologists. The quarry in the Kowala village, where the rocks of Devonian age are outcropped, gave an access to these interesting deposits. Although fossils and deposits occurring in the quarry have been the subject of many scientific publications, the newly exposed sections still provide a wealth of new informations. A few years ago, a rich fossil assemblages of non-biomineralized algae, arthropods and coelacanth fishes were discovered in the lower Famennian strata (ca. 370 Ma ago). Within the last two years, some scientific papers on these fossils were published, but these were rather concentrated only on selected aspects of this unique pelagic ecosystem.

The proposed project is the first attempt to fully describe the early Famennian ecosystem preserved in the Kowala deposits. To fulfill this aim it is necessary to undertake an in-depth investigation of these unique fossil assemblages, not only by means of taxonomical classification of fossils, but also through study of their morphology, state of preservation and investigation of the way they have been preserved. But a description of inhabitants of the Famennian sea is not enough. In order to decipher their habitat, we must use several independent methods applied to the enclosing rocks. Using sedimentological, mineralogical and geochemical methods we are able to look into the past climate, oxygenetaion and productivity of waters, as well as conditions prevailing within the sediment. The last ones will help us to understand the problems concerning the preservation of the fossils investigated.

The results obtained certainly will broaden our knowledge in the field of palaeontology of the investigated fossils. They will also enable us to take a glance at this interesting and uniqe on both regional and world-wide scale, open-sea ecosystem from nearly 370 million years ago.