

## THE EXHIBITION AND THE SCIENTIFIC CONFERENCE ON GJURO PILAR (1846-1893)

The centenary of the death of Gjuro Pilar, the geologist and the distinguished Croatian naturalist of the second half of the 19th century, was commemorated with an appropriate exhibition and a scientific conference concerning his life and work. He was a long-standing director of the Mineralogy and Geology Department at the National Museum in Zagreb and the first professor of geology, mineralogy (and astronomy) at the University of Zagreb. He was born in 1846 in Slavonski Brod (Croatia). He obtained a classical, secondary-school education in the grammar schools of Osijek and Zagreb and a versatile knowledge of natural history at the Universities of Brussels (Faculté des sciences de l' Université libre) and Paris (École des Mines and École de Chimie en Jardin des Plantes). He returned home in 1870, hoping to contribute to raise the standard of science and culture in Croatia. He found possibilities for realizing his hopes at the National Museum in Zagreb (established in 1846), where he worked on the geological, mineralogical, and palaeontological collections that became the foundation for today's fund of the Croatian Natural History Museum in Zagreb. In 1875 he became professor at the newly modernized University of Zagreb.

He was twice elected dean of the Faculty of Philosophy, and once rector of Zagreb University (1884/85). In 1875 he was elected a regular member of the Yugoslav Academy of Sciences and Arts in Zagreb. Pilar was connected with many scientific institutions and universities abroad, and he collaborated with many famous naturalists.

Pilar's scientific work, presented through his numerous published papers is diverse. Those of a theoretical nature in particular stand out. For example: "Les révolutions de l'écorce du globe" (Brusselles, 1869), where he discusses the basic question of the Earth's evolution and the causes of these changes; than "Grundzüge der Abyssodinamik" (Agram, /Zagreb/ 1881), where he deals with deep, global, geological processes; and "Die Excentricität der Erdbahn als Ursache der Eiszeit" (Agram, 1872) arguing about the glaciation periodicity caused by the eccentric movement of the Earth. He inaugurated systematic geological field research in Croatia. He started in Banovina (Banija) where he collected voluminous petrographical and palaeontological material, described and analysed in *The Tertiary and its foundation in Glinsko Pokuplje* (Zagreb, 1873). Later he researched in the Đakovo area, Dilj mountain, Moslavina, a wide area of Zagreb, and other locations. Pilar's most important work followed: *Flora fossilis Susedana*, published in 1883. In this, after detailed preliminary work and many years of collecting fossils in the area of Podsused and St. Nedelja near Zagreb, he described 232 taxa of Sarmatian plants, of which 58 were established as new species. This exemplary palaeontological monograph is still today useful for Tertiary flora studies of Croatian and neighbouring areas. After several years he published a paper that was in use for a long period: *Geographical*

*coordinates or position of main points of Dalmatia, Croatia, Slavonia, parts of Istria, Kranjska, Bosnia and Herzegovina* (Zagreb, 1890). He later worked on minerals and ores from different areas of Croatia, he was interested in possibilities of water supply for Zagreb, as well as solving the water shortage problem in karst areas. The breadth of his scientific interest can be seen from his activities in analysing precious stones, determination of the petrographic composition and origin of stone tools from various archaeological sites, determination of the composition of silver and gold coins, and he analysed, in detail, all the data about the Đakovo earthquake of 1884. etc.

Pilar was a man of European education and culture. He tried, according to foreign standards, to introduce innovations important for the general development of civil and social life. Thus he was co-founder of the Croatian Hill Walking Society (1875), where he was elected as first vice-president. Later he was the co-founder of the Croatian Natural History Society (1885). He was an excellent chess player and also, founded the Zagreb Chess Club, 1886.

The exhibition entitled "A Slavonian and the Earth - Gjuro Pilar, the versatile naturalist" was presented in Zagreb during the months of July, August and September 1993, and followed by an exhibition in Slavonski Brod in November of the same year. The main part of the display relates to the scientific work of Gjuro Pilar: manuscript facsimiles of published works, fossils, minerals, rock and ore samples from Pilar's own museum collections. The rest of the exhibition shows Pilar's life from his native town of Slavonski Brod, through Osijek, Zagreb, Brussels, Paris, and other European cities to the National Museum, Academy, and University of Zagreb.

A scientific conference concerning the life and work of Gjuro Pilar took place in Slavonski Brod on 1 October, 1993. The conference was held under the auspices of the Section for natural sciences of the Croatian Academy of Sciences and Arts, Zagreb, and was organised by the Croatian Natural History Museum, Zagreb, Museum of Brodsko Posavlje and the City Council of Slavonski Brod. Fifteen papers were presented, as follows:

- Krešimir Sakač & Milan Herak:** The life and the scientific work of Gjuro Pilar.  
**Božidar Jančiković:** Contributions of the Pilar family to Croatian culture and science.  
**Ivan Gušić & Vladimir Jelaska:** Gjuro (George) Pilar - the first professor of geology at Zagreb University.  
**Milan Herak:** Pilar's conception of geodynamics.  
**Dragutin Skoko & Eduard Prelogović:** The meaning of Pilar's contribution to the scientific interpretation of earthquakes.  
**Leo Randić:** Gjuro Pilar and astronomy.  
**Srećko Božičević:** Gjuro Pilar and speleology.  
**Krešimir Čolić et al.:** Contemporary view of Pilar's work "Geographical coordinates..."  
**Jakob Pamić:** The contribution and importance of Gjuro Pilar's research in Bosnia and Herzegovina.  
**Marta Crnjaković:** Pilar and the development of mineralogy in Croatia.

Darko Rukavina: Pilar's interpretation of glaciation causes.

Tamara Đerek: "Flora fossilis Susedana".

Željko Poljak: Pilar's role in establishing hill walking in Croatia.

Zvonimir HERNITZ: Gjuro Pilar's world of chess.

Katarina Krizmanić: The sources of information on Gjuro Pilar's life and work.

The authors of papers are the members of Croatian Academy of Sciences and Arts (6 participants), curators of the Croatian Natural History Museum in Zagreb (5), geology teachers at Zagreb University (5), as well as geologists from the oil-company INA-Naftaplin, Zagreb (1) and from the Institute of geology in Zagreb (2). The titles of papers reflect the great diversity of Pilar's scientific work and show the high scientific level Pilar had attained in his area of scientific interest. His works were a solid basis for the further development of geology and the natural sciences in general in Croatia in the second half of the 19th century.

All the papers along with short information about events concerning the scientific conference will be published in separate proceedings in the course of 1994.

Through this exhibition and scientific conference, the life of Gjuro Pilar and his contribution to Croatian and European natural sciences, especially to geology, was for the first time fully presented, as was the advance of the social life in a nationally and culturally awakened society. With these activities, the memory of Gjuro Pilar, one of the most eminent Croatian naturalists, was respectfully commemorated.

Krešimir Sakač