

# Memorial to Quido Záruba

## 1899–1993

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As a founder of the discipline of engineering geology in Czechoslovakia, Quido Záruba became recognized and respected worldwide.

Záruba was born on June 18, 1899, in České Budějovice (known as Budweis in the time of the Austrian-Hungarian empire). He died in Prague on September 8, 1993.

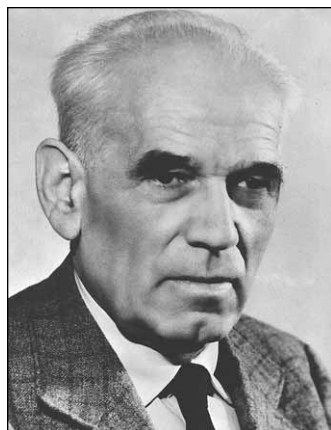
Záruba graduated from the Czech Technical University in Prague, Faculty of Civil Engineering. Working in his father's construction business, he soon recognized the importance of geology in civil engineering. When he took the business over, he established a department of geological investigation for construction planning. From his father, he inherited an interest in scientific work, leading him to study the effects of geological processes on the geotechnical conditions of construction. He published papers on some of his experiences at large construction sites. He received his Ph.D. degree at the Technical University in Prague. When he was 32, Záruba was appointed an assistant professor at Charles University. He became a professor in 1945, after the postwar reopening of Czech universities. At Charles, he began to cultivate a specific field of study—geology for civil engineers, later known as engineering geology. After his construction business was nationalized in 1948, he devoted himself to scientific research and teaching.

Záruba was often called upon for assistance at construction sites where the geological setting resulted in building difficulties. He passed his experience on to his students through teaching and publishing. Some of them are still part of the research team Záruba founded with the Czech Academy of Sciences in 1957. The department of engineering geology in his former business expanded to constitute a company that is now the largest of its kind in the Czech Republic.

Záruba gained new experience and contacts on trips abroad. On one of his first trips, to the United States and Canada in the 1930s, he presented his ideas at several international conferences. Recognized universally, Záruba was elected president of the International Association of Engineering Geology (IAEG) at its first meeting held in Prague in 1968.

Záruba was the author or coauthor of more than 230 papers, mostly case histories. Many were assembled into monographs and textbooks. His manual on geological research applied to the building industry, first published in 1932, became the basis for an essential textbook. His monograph on the geological setting of the city of Prague, based on his own documentation of foundation pits and excavations in the city, is still used for geotechnical assessment of construction sites in Prague.

Záruba's fundamental work is the textbook of engineering geology written with V. Mencl, his long-time fellow worker. It was the first—and for many years the only—textbook in this field in Czechoslovakia. Successive editions were updated by Záruba and Mencl, and it was translated into English, German, Russian, and Romanian.



Záruba and Mencl encountered several building collapses caused by mass movements; these experiences led them to write *Landslides and Their Control*, also published in several editions and translated into several languages, including Japanese.

Záruba had a special interest in geological problems at dam-construction sites. He assisted at the erection of all major dams in Czechoslovakia, and he was invited to other European countries to do the same. He was also involved in geological problems of tunneling; he directed construction of some tunnels himself and contributed to the construction of others as an expert. He was an advisor in the planning and construction of the Prague subway system.

His experience at construction sites of railroads and dams, mostly in the Flysch Zone of the Carpathians, led him to introduce his own classification of landslides and mass movements.

Because foundation engineering relates most commonly to young Quaternary sediments, Quaternary geology became one of Záruba's hobbies, a field in which he collaborated with other foremost Czech scientists. He worked on foundation soil maps as part of his studies of the geology of urban areas. His main focus was on the foundation conditions of Prague.

Záruba's professional career illuminated his close relationship to the natural world. As a construction engineer himself, he called attention to inappropriate technological interventions in nature long before ecological and environmental topics became urgent issues.

As a founder of the Czechoslovak school of engineering geology, Quido Záruba trained dozens of students who are now spread around the world, loyal to their teacher's principles and methods.

### SELECTED BIBLIOGRAPHY OF Q. ZÁRUBA

- 1932 Výzkumné práce geologické v inženýrském stavitelství (Geological investigations in civil engineering): Praha, Masarykova akademie práce, 144 p.
- 1948 Geologický podklad a základové poměry vnitřní Prahy (Geological features and foundation soils of the city of Prague): Geotechnica, v. 5, 81 p.
- 1956 Deformace hornin vzniklé vytlačováním podloží (Rock deformation of the type "bulging"): Rozpravy Československé akademie věd, 35 p.
- 1958 Bulged valleys and their importance for foundation of dams: International Congress on Large Dams, VI, New York, p. 509–515.
- 1970 The influence of hydrogeological conditions on the construction of the subway in Prague: Proceedings, Large Permanent Underground Openings, Oslo, p. 334–336.
- 1974 Importance of Quaternary events for the geological conditions of building sites: Colloque Géologie de l'Ingénieur, Liège, p. 259–272.
- 1950 (and Hromada, K.) Technický rozbor území města Kutné Hory (Geotechnical analysis of the town Kutná Hora): Praha, Geotechnica, 40 p.
- 1957 (and Mencl, V.) Inženýrská geologie (Engineering geology), Praha, Moskau, 600 p.
- 1969 (and Mencl, V.) Sesuvy a zabezpečování svahů (Landslides and their control): Praha, Elsevier, 340 p.
- 1972 ( and Vachtl, J., and Pokorný, M.) Základy geologie a petrografie pro stavební fakulty [textbook of geology for civil engineering students]: Praha, 387 p.