

**IN MEMORY OF IVAN GUŠIĆ (1938–2024)
MICROPALAEONTOLOGIST, PROFESSOR EMERITUS OF FACULTY OF SCIENCE,
UNIVERSITY OF ZAGREB**



FIGURE 1. Late professor Gušić with colleagues somewhere in karstic Dinarides (photo credit: D. Bucković).

Dinaric Mountain range (Dinarides), Limestones, Karst, Benthic foraminifera, Calcareous algae, Event Stratigraphy, Evolution and much more—this briefly describes the scientific interests of Ivan Gušić. He was also a brilliant teacher of paleontology and geology and a popular mentor, known for his easy-going manner and ability to inspire enthusiasm and curiosity for his subject.

He graduated from the Faculty of Science at the University of Zagreb, earning both his Master's degree and a doctorate there. When he obtained a position as a teaching assistant at the Department of Geology, he began his scientific work by studying the Mesozoic shallow-water deposits of External Dinarides and the associated biota. At that time, he was supervised by two professors in the field of microfossils, Vanda Kochansky-Devidé and Milan Herak, both of whom strongly influenced his research in the following years. From 1977 to 1980, he received a prestigious Alexander von Humboldt Fellowship and then, from 1980 to 1985, conducted research at the Institute of Geology and Paleontology at the University of Münster. After returning to Zagreb, he worked for five years as a researcher at the Croatian Geological Survey, before rejoining the Faculty of Science as a full professor, later retiring in 2012.

His main research topic was the Mesozoic stratigraphy of the Adriatic Carbonate platform, an important shallow-water

entity in the central Neotethys Ocean, which contributed significantly to the formation of today's Dinarides. Gušić's work in this field can be divided into two phases, before and after his time in Germany. He was a pioneer in the application of benthic foraminifera and calcareous algae (Dasycladales) in the study of Jurassic and Cretaceous shallow-water limestones from this region. Apart from the contribution to the taxonomy of benthic foraminifera (between 1969 and 1997), he introduced the superfamily Biokovincea, family Biokovinceidae, two genera, and four species alone (Gušić, 1969a, 1977) and, in collaboration with colleagues and a former Ph.D. student, family Lutuoliporidae, genus Lutuolipora and four additional species of benthic foraminifera (Velić & Gušić, 1973; Gušić & Velić, 1978; De Castro et al., 1994; Cvetko Tešović et al., 1997), and four new species of calcareous algae (Gušić, 1969b). He improved their application as a tool for biostratigraphic zonation. While the number of newly identified species may seem modest, it's important to consider the challenge of diagnosing new species from thin sections of strongly recrystallized, cemented and dolomitized carbonates using only a light microscope. His work advanced understanding of microfossils and their evolution and age attribution (Gušić, 1981; Gušić et al., 1988), as the described species (even if some taxa were newly re-described by others), proved to be reliable index

fossils and indicators of paleoenvironmental and paleogeographic conditions (important for microfacies and lithofacies analyses). Enriched with the experience of working in a multidisciplinary and multinational environment with even better access to literature and technical support, his interest shifted to the application of data reconstruction of paleoenvironmental settings and regional interpretations. The meticulously studied carbonate microfacies formed the basis for a major achievement: the correlation of Cretaceous events on the Adriatic carbonate platform with global eustatic and geotectonic events. This work, carried out in collaboration with V. Jelaska, culminated in the construction of the Brač-model—a model of event stratigraphy that has been successfully applied to other perimediterranean platforms (Gušić & Jelaska, 1990, 1993).

More recently, Ivan Gušić was a member of the so-called Neanderthal Consortium (<https://genome.ucsc.edu/Neanderthal>), led by Nobel Prize winner Svante Pääbo, which is working on the reconstruction of Neanderthal DNA (Green et al., 2010; Kuhlwilm et al., 2016). His passion for researching the origin of life also has led him to publish articles and books (Gušić 2014, 2017) promoting the theory of evolution.

He received many recognitions for his work. He was a full member of the Croatian Academy of Sciences and Arts and a corresponding member of the Slovenian Academy of Sciences and Arts. He was awarded the Rugjer Bošković State Prize for Scientific Work, and the Croatian State Prize for a Lifetime Achievement in Natural Sciences.

His scientific legacy includes around 80 publications in international journals and the many diploma and doctoral students (some of whom now hold academic positions themselves). Beyond these achievements, Professor Gušić was a person who was always ready to help, a brilliant mind who recognized the obstacles one faced in research, a master of foreign languages who was ready to proofread other's work and make corrections and, above all, he remained a down-to-earth person, a gifted "storyteller", full of vitality and *joie de vivre* and an excellent companion in any conversation.

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