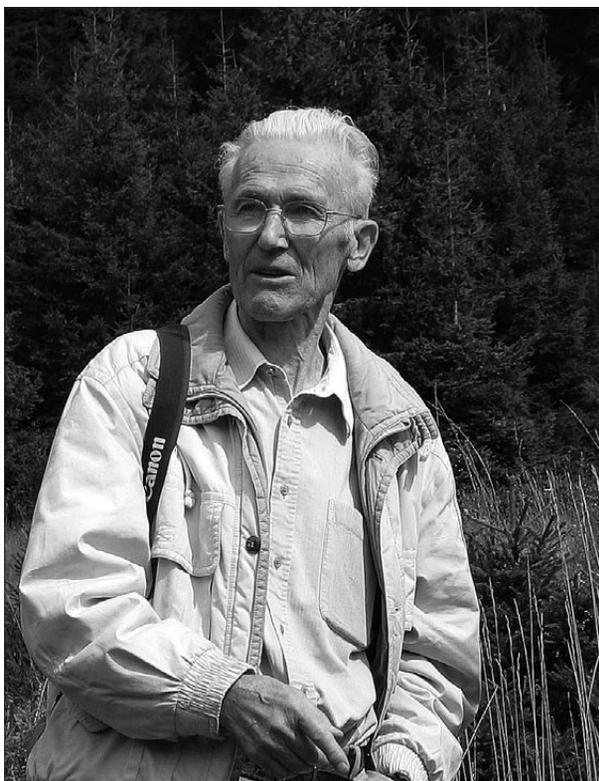


## IN MEMORIAM

### ACADEMICIAN PROF. DR. IVAN GAMS (1923–2014), KARSTOLOGIST AND SPELEOLOGIST



*Professor Gams on a field trip on mount Snežnik.*

Ivan Gams was born near the town of Slovenj Gradec (Koroška, Slovene Carinthia) and studied geography, ethnography, and national history at the Ljubljana University. Soon after the promotion for doctor of science (1959) he was engaged at the Karst Research Institute at Postojna (1962-66) as a researcher. In 1966 he was elected professor at the Geographical Department of the Ljubljana Philosophical Faculty. He was the first to teach the Geography of karst and beside karst he lectured different subjects of physical geography to the end of his active life.

For the purpose of his karst studies he started to visit karst underground and thus he became a caver.

Like everything he took caving seriously too and soon he became good and experienced caver and as such recognised by his fellows. Ivan Gams was the first of the young (“after War”) generation of cavers who was admitted to the Board of the Ljubljana Caving Society, at that time the leading and practically the only caving organisation in Slovenia. I emphasize this because the Board was quite conservative and narrow minded and closed towards younger generation. Soon, he was among the best cavers in Slovenia. In 1958 he organized the survey of the 107 m deep shaft, the deepest of the time of the Dolenjsko region (Lower Carniola). Not only organizer, he was among the first at the bottom too. In 1955 Gams began to explore Triglavsko Brezno (Triglav Shaft) at the altitude of 2.500 m and in 1961 he organized the “Action Bottom”, one among the greatest caving events ever performed in Slovenia. In a week long action with the help of 28 cavers (“sherpas” not included) and with more than one tone of equipment the group “Bottom” reached the bottom at -255 m. The group “Bottom” consisted of four members, Gams among them. But Gams’ main interest were not caving achievements, but data gathered for his scientific work. For his study of climate changes during the Pleistocene he was especially interested in ice and high mountain caves. Other topics of his cave studies were morphology of caves and speleothems. His research was based on field observations and measurements in the field of microclimate, he performed chemical analyses of ice and water, and he weighted flowstone and measured speleothems’ growth... Upon his instigation and under his leadership the measurements of corrosion intensity started more than 50 years ago in the cave laboratory at Podpeška Jama cave. Today this method using “standard limestone tablets” is applied all over the World. Gams’ contribution to the knowledge of surface karst phenomena is worldwide renown. Having J. Corbel for the model he tried to solve the problem of karst geomorphology by studying corrosion intensity. The most important achievement of his work is typification of poljes, karst corrosion, forms of contact karst and speleothems’

morphology. His definition of polje is the World's known as well as his theory on the development of Dinaric poljes in two phases. Many of his written works are dedicated to karst hydrology. His complete bibliography consists of over 1.200 units, among them about 700 original scientific works and in the frame of them there is over 300 works dedicated to karst, a lot of them directly connected to speleology. Basic descriptions of many of great Slovenian caves in Slovenia are his work. Just to mention an example, the paper on the cave of Logarček published in *Acta carsologica* (1963) has nearly 100 pages. When became less active in speleology, Gams focused on changes of karst surface due to man's activity and to man's impact on karst in general. Among others he published two big volumes on karst as general (1974) and on karst in Slovenia especially (2004). Maybe less visible but especially important for the promotion of Slovenian karst is his work in terminology. In connection with this his explanation of the terms karst and doline has to be mentioned together with Slovene karst terminology, the first and up to now the only publication of such a kind. As a complete geographer he did not forget the man: he studied the connection of man and karst, their mutual impact and consequences of man's activity upon karst environment. He analysed and published basic works on dry walls, cleaning of karst surface and on doline modifications. On Kras he was the first to focus upon numerous dolines changed by man to improve cultivation. He explained the techniques of work and introduced the term "delana" (worked) doline. Gams was the editor and member of editorial boards of many books and journals, for us the most important is his work as the member of

Editorial Board of *Acta carsologica* and in the same time as the author of numerous articles in this review. Gams was active in the field of karstology nearly to the end of his life. In 2011 in the journal *Acta carsologica* an article on the subcutaneous karst was published and among the authors his name appeared too. But not only in karstology, in every activity Gams tried to be acquainted with actual trends. When mature, well mature, when in general we do not like novelties and tried to avoid them, Gams started to use computer, to use e-mail, and he even learned to use "single rope techniques".

In the karstological sphere Gams held numerous leading positions. It is worth to mention that he was the instigator of the foundation of the International Union of Speleology during the 4th international congress in Slovenia 1965. He was a member of the Board of this organisation, member of its commissions, president of the Slovene caving organization, and a member of other professional societies. It has to be emphasized that he was the chair and long time member of the Karst Commission of the International Geographical Union. It is well understood that he got many awards and recognitions and he was nominated honorary member. After him the cave spider *Troglohyphantes gamsi* got the name. His research work and published opus was repaid by the nomination for the member of the Slovenian Academy of Sciences and Arts which for the first time accepted a karstologist and thus gave the highest recognition to the science of karstology.

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28.11.2014