

**THE KARSTOLOGISTS IN THE SECOND  
HALF OF THE 20<sup>TH</sup> CENTURY**

**KRASOSLOVCI V DRUGI POLOVICI  
20. STOLETJA**

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**Izvleček**

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**Peter Habič: Krasoslovci v drugi polovici 20. stoletja**

V uvodnem prispevku je avtor predstavil jubilanta Ivana Gamsa in čas, v katerem je raziskoval klasični kras. S svojimi študijami je prof. Gams pomembno prispeval k razvoju slovenske speleologije in krasoslovja. S svojim delom se je uveljavil tudi v svetu. Na podlagi citatov iz krasoslovnih monografij je uvrščen med deset najvidnejših krasoslovcev druge polovice 20. stoletja.

Ključne besede: krasoslovje, klasični kras, krasoslovci, Ivan Gams

**Abstract**

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**Peter Habič: The karstologists in the second half of the 20th Century**

In the plenary paper the author presented Ivan Gams and the time during which he was investigating the Classical Karst. Prof. Gams contributed a lot to the development of Slovene speleology and karstology by his studies. He is famous also in the international sphere. Based upon the citation from the karstological monographies he is ranged between the top ten karstologists from the second half of the 20th Century.

Key words: karstology, Classical Karst, karstologists, Ivan Gams

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## THE KARSOLOGISTS IN THE SECOND HALF OF THE 20<sup>th</sup> CENTURY

I have a special duty and honour to greet you, dear and esteemed guests, speleologists and karstologists on behalf of Tourist Organization Postojnska jama where I started to work half a year ago. Before, for good 30 years, I worked one kilometer away only at the Karst Research Institute ZRC SAZU. For external world this difference is not essential as Postojna and the whole Classical karst around it established its reputation not as a touristic curiosity only but as a focus of modern views to karst.

Karst is natural, geological and hydrological, physico-geographical and in particular sensitive ecological phenomenon. This is the landscape where man survives during ten to hundred thousands of years. The problem how to preserve the karst to be friendly to a man and how man can take care that his survival remains easier will be the topics of this symposium. The colleagues of the Institute dedicated it to a special occasion of 70<sup>th</sup> anniversary of our the most eminent karstologist, academician prof. dr. Ivan Gams to honour his exceptional contribution to the Slovenian and universal karstology and at the same time to review and to define the directions for future explorations and international co-operation in the new conditions of our independent Slovenia.

Regarding my physical capacities of this very moment my contribution will be relatively short but in future I intend to describe the evolution of our karstology in the second half of the 20<sup>th</sup> century. This is the time of the extreme progress related to all the human activities, to various branches of science in particular, and the same could be said for the speleology and the karstology. I would like to present you the circumstances in which dr. Gams and his companions worked.

One has to know that the Classical Karst experienced in the era of the great discoveries in the past century (the explorers Schmidl, Putick, Martel, Müller, Hanke, Marinitsch) and increased interest for it at the beginning of this century (Cvijić, Grund, Katzer, Perko) two fatal war periods. These two catastrophes inflicted deep wound into the rising Slovenian amateur and professional speleological and karstological activity. During the First World War the Slovenian cavers lost an important part of the Classical Karst, the area from Trieste to Postojna and Planina became Italy. The Society for Cave

exploration, Ljubljana hardly revived its activity and again the work was interrupted in the period 1941-1945. New initiative reappeared after 1947 only when the karst between Postojna and Sežana was given back to the Slovenia. But during the war the caving groups thinned and everything must be started from the beginning again.

The biggest burden was loaded to the youngest of the pre-war cavers, valued as a researcher and scientist due to his studies. In 1947 Dr. Alfred Šerko took over the duties of the director of Postojnska jama and other show caves of Slovenia and at the same time he was the head of the Speleological Institute, founded in Postojna by the SAZU. But the very next year, when the lectures about karst on the Ljubljana University have to start, the Slovenian speleology was literally struck by a lightning, as a virtual lightning struck dr. Alfred Šerko during his voyage on Karst. This heavy blow tried to fulfill older Slovenian cavers and thus dr. Bohinec took over the presidency of the Society for Cave Research in Ljubljana, biospeleologist Egon Pretner became the director of the Postojnska jama, and the geographer dr. Roman Savnik the head of the Institute for Karst Research; from eastern Slovenia dr. France Habe moved to Postojna and founded here the Caving Club Luka Čeč. The exploration of the Postojna underground was taken over by Ivan Michler, already retired at that time, helped by France Hribar and younger cavers. The geographer dr. Anton Melik and the anthropologist dr. Srečko Brodar have, similar as the biologist dr. Jovan Hadži, dedicated more of their scientific interest to the karst.

In Ljubljana prof. Pavel Kunaver, the cave photographer Franci Bar and the brothers Kuščer, geologist and physician, animated young cavers and they together explored the karst in the Ljubljanica river basin, on Dolenjska and in Julian Alps. The oldest among the young cavers was Ivan Gams. At the beginning of the fifties he studied geography, after degree and thesis he almost entirely dedicated to the caving and to the karstology. He has taken part at all bigger explorations, within the Institute for Geography he wrote about karst and about the results of the karstologists in the world. His extreme research and creative energy produced great results and at this moment we are not yet able to revise and to estimate his work entirely.

The karstological activity of dr. Gams could be divided into various periods with rounded research themes. His student period is linked to the caving activity in the Society and to publication of reports and shorter contributions in the periodicals *Geografski vestnik* and *Proteus*. After his doctoral thesis, in the second half of the fifties, the independent researches of the karst phenomena, underground systems and superficial features started. He wrote about Logarček, Globodol, about blind valleys, snow-fields in Alps, and a larger treatise was consecrated to the geomorphological development of Bela krajina. In the sixties, when he came to the Karst Institute in Postojna, he started to measure the corrosion intensity and to study the factors of

corrosion dynamics, accelerated corrosion in particular, on karst. His research field was Slovenia in the triangle among Postojna - Planina - Cerknica, he studied the forms and the growth of the speleothems in Postojnska jama and he was active at the series of other caving activities characteristic of this time. Among the most popular is, without doubt, the expedition to the Triglavsko brezno. Beside geomorphological and caving researches, the hydrological researches are very important too as he tried to prove the connection among particular superficial and underground waters by water tracings; he studied the maximisation of the underground water flow and other hydrological laws of the underground drainage.

In the middle of the sixties his important activity was the organization of the International Speleological Congress. He contributed a series of original lectures to present the Slovenian karst to the international public; his efforts to found the International Speleological Union are very important too.

Soon after the International Speleological Congress he started the pedagogical work. As professor at the Ljubljana University he introduced a new subject Karst Geography. In addition he started a series of research studies and thus contributed to the development of the Slovenian karst terminology, to the classification and topology of various karst phenomena, karst poljes in particular. He initiated the study of human impact on karst, studied the climate, vegetation and soil on karst and the human interventions to the karst surface. We owe to dr. Gams the original views on the transformation of the karst surface on the Classical and Mediterranean Karst. The most important work of the seventies is his monograph Kras.

In the eighties there stands out his experiment with carbonate tablets, the experiment of direct measurements of the corrosion intensity under various climatic conditions. With international cooperation dr. Gams contributed original data about the recent corrosion controlled by various conditions.

In the nineties he returned to the problems of contact karst started several times before. He added new views to the systematization, classification and typology of special karst phenomena at the contact of permeable and impermeable karst surface.

His karst opus comprises more than 200 works but this is one quarter of his publications only. No doubt that his extreme energy and capability to write aroused the interest all over the world. Most of his contributions are written in the Slovenian language but those published in foreign languages aroused the interest of the international karstological public.

His position among the most eminent karstologists in the second half of the 20<sup>th</sup> century could be presented by rather objective procedure although not the most reliable one. I have chosen seven karstological monographs, namely: Sweeting (1972), Gams (1974), Bleahu (1974), Jakucs (1977), Jennings (1985), White (1988) and Ford-Williams (1989) and I have compared the frequency of the cited works and the citation without taking into the account the autocitations.

The result is interesting and worth to be treated more in detail in respect to the contents and the importance of the cited works. The scale of the cited units in the mentioned monographs is as follows: on the first place with 107 cited units is Bögli, followed by Lehmann with 93 units, then comes Ford with 87 units, Sweeting by 77, followed by Williams with 74 units, then comes Corbel 72, Roglič and Gerstenhauer 68, Cvijić and Jennings with 65 units, and the ninth place occupies Gams with 58 cited units; those following are White (51), Renault (40), Smith (35), Warwick (29). The continuing scale of other hundred authors could be interesting mostly for regional sources and the authors which are isolated due to language barrier maybe. This language barrier is an important obstacle in mutual understanding and in the development of the scientific explanation of karst. A common effort should be needed to overcome this isolation.

I am sure that the ratio of Gams should be much bigger if his monographs would be published in some foreign language. The same could be said for the Roumanian Bleahu and for the Russian Maksimovič and for some others as well. But nevertheless this "sport" ranging of Prof. Gams among the ten the most eminent karstologists means a great personal achievement. The reputation of the first Slovenian karstologist in this international company put on new duties to our younger researchers of the classical karst (for example Čar, Habič, Kranjc, Kogovšek, Šušteršič, Slabe) to whom prof. Gams was at the same time supervisor and co-worker.

At the end, permit me to thank on behalf of the Slovenian geographers, cavers and karstologists to the academician prof. dr. Ivan Gams for his outstanding contribution and efficiency at discovering the basic laws of origin and development of the karst surface and the underground and for his care for human being and his impact on the sensitive karst nature. My best congratulations to his personal jubilee with wishes to have a lot of creative power and to be in good health.