The State of Speleological Investigation of Volcanic Voids in the U.S.S.R.

V.N. Andraichuk

Doctor Sci (Geology and Mineralogy),

Mining Institute, Ural Branch, U.S.S.R. Academy of Sciences

Abstract

In the U.S.S.R. there are many mountainous systems where, in various geological times, active volcanic processes took place. The evidence of this activity is provided by the presence of a variety of volcanic deposits. Caves developed in these deposits are of secondary origin and resulted from epigenetic processes such as denudation, erosion, suffosion, and man's activity. Caves developed in volcanic rocks are usually small in volume and numerous in number.

Volcanic caves proper formed as the result of volcanic activity are associated with areas of Quaternary eruptions (Caucasus) and recent volcanic activity (Kamchatka, Kurile Islands). Caves formed in the processes of outflow and gas escape in the lava (tube-like and sphere-like caves) have been revealed in the above regions. The largest lava caves, approximately 500 meters long, have been described in Kamchatka. It is worth mentioning in this connection that the study of lava caves in the U.S.S.R. is at the initial stage and we are looking forward to discovering new and most interesting caves.

In the general genetic classification proposed by the author jointly with V.N. Dubljansky, volcanic caves are referred to volcanogenetic subclass of endogeneous class of underground voids. Volcanic subclass includes three types of voids: explosive, extrusive, and geyser.