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Cover Strombolian activity of the Voragine crater at Mt. Etna taken on June 26, 2024 (photo M. Viccaro) | *In copertina Attività stromboliana al cratere Voragine del Mt. Etna ripresa il 26 Giugno 2024 (foto M. Viccaro).*

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The advancements in the studies on Serracozzo Cave I (1971 Etna eruption)

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1971 eruption presented a complex eruptive phenomenology that, from a volcanological point of view, signified the beginning of a new phase for the volcano and the way to study Mt. Etna volcanic activity. The birth of the South-East Crater, the current summit of the volcano (3348 m s.l.m.) and the protagonist of most of the activity in recent decades, and the early indications of the change in magma chemistry of Mt. Etna were the main signals of the change of the pattern in the volcanic activity that we observe even today. This eruption, therefore, represented the most important event of this period, and for this very reason has engaged the energies of many Italian and foreign researchers that carried out intense field observations and concentrated deployment of instruments during the event [Guest and Skelhorn, 1973]. Volcanospeleology is among the many relevant aspects of the study of the 1971 eruption. The study of the caves formed during this eruption has had an important impact on the history of speleology on Etna because of the ideas regarding the formation of lava tunnels that have been stimulated by the study of this eruption. It is noteworthy the fallout of the studies on the rheology of 1971 lava flows in modelling the cave formation. This contribution summarises the salient aspects of the 1971 eruption in the Serracozzo area, the observations made by volcanologists and speleologists at the effusive mouths and in the portions of the flows immediately downstream of these. Emphasis is placed on the interpretations of the processes and the model proposed by Alfred Rittmann [1977] to explain the formation of the lava tunnels in aa lava field. Finally, an interpretation of the formation mechanism of the entrance to the Serracozzo Cave I is also proposed according to Puglisi [2023] whose morphology is absolutely unique in the panorama of Etna's caves.