
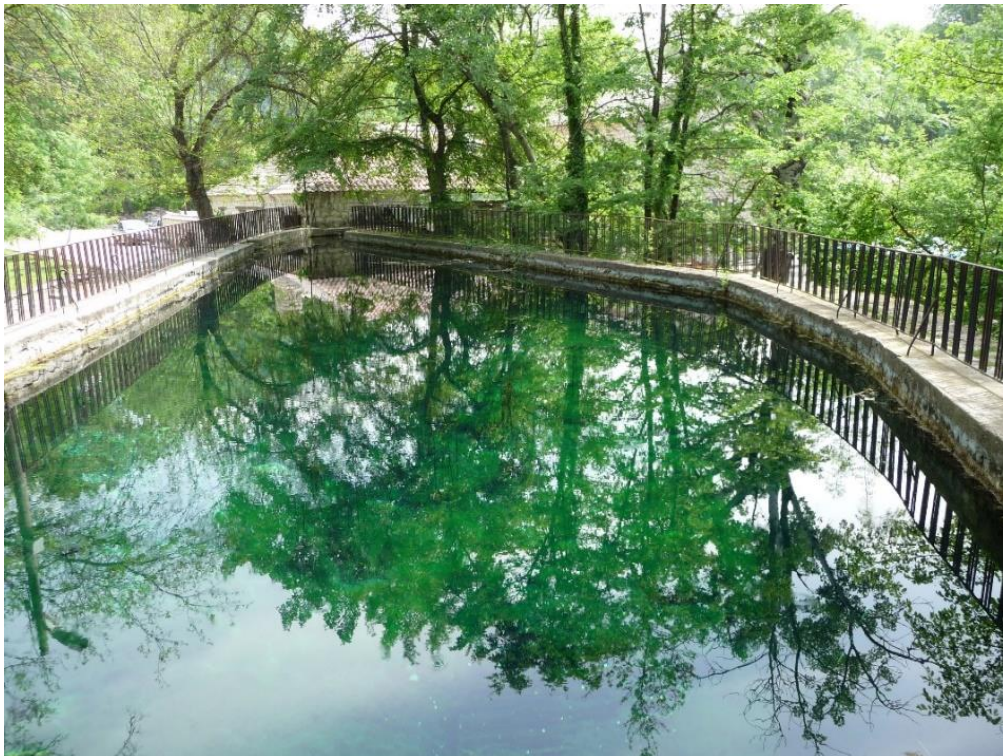




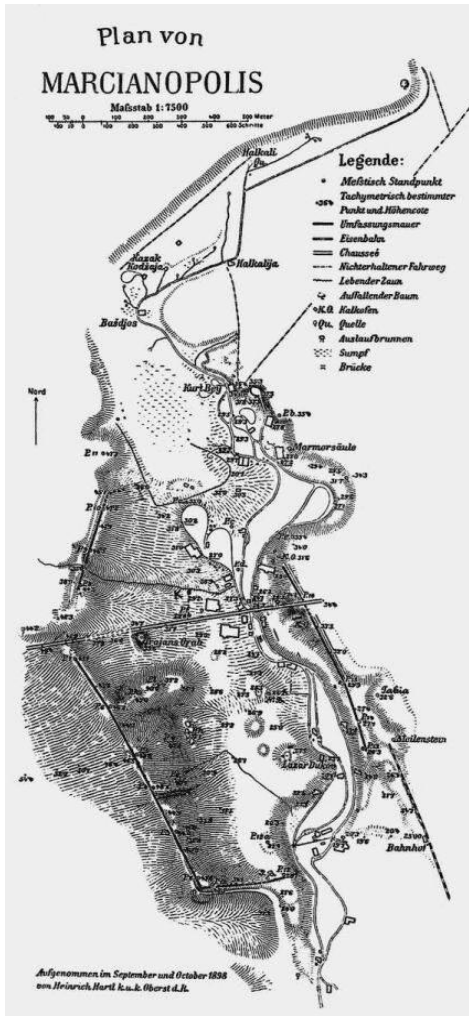
Country	MIKAS springs	Coordinates / Nearby City	Spring discharge (Q in l/s,min/av/max) / tapped or not	Criteria* in order / Main justification */ H-historic, A-aesthetic, S-scientific, E-Economic, Ec-ecologic	Data collected by
Bulgaria 	1. Devnya	N 43°13'50" E 27°35'18" Z = 25 m asl Devnya, Varna	2343/ 3347/4270 Tapped, water supply of Devnya and Varna, the third largest city in Bulgaria	<p style="text-align: center;">S, H, E, A, Ec</p> <i>Devnya springs are the largest group of springs in Bulgaria. They are the main drainage area of the largest karst aquifer in Bulgaria - the Upper Jurassic-Lower Cretaceous aquifer. There are about 25-30 springs, out of 19 are in precisely defined locations, with a concentrated groundwater outflow. The Devnya springs were used since ancient times. A large Thracian settlement arose near them, which the Roman emperor Trajan conquered in 1st century AD. The Roman capture facilities discovered during the current capture of the springs speak of an almost complete use of spring water for supplying the ancient city of Marcianopolis. The water supply group does not include only „The Magic spring“ which is left as an attraction, as well as other smaller scattered springs. An elliptical wall, about 4-5 m high, was built around “The Magic Spring”. It created a waterfall used by the nearby mill. The great natural wealth and the beauty of Devnya Springs attract lots of tourists.</i>	Boyka Mihaylova
	2. Iskrets (Peshta)	N 42°59' 49.66" E 23°14' 13.70" Z= 550 m asl Iskrets, Sofia Region	120/2200 /54900 (6 l/s at rare discharge interruptions) Tapped for Svoge settlement and several villages	<p style="text-align: center;">S, E, Ec, A, H</p> <i>The barrier type of spring, water issuing from Triassic limestone in highly karstified area with wide distribution of dolines, uvalas and sinking streams connected to spring. The spring complex also includes the Dushnika Cave (length 877 m), which is a temporary overflow., but in high water period at the cave entrance, sometimes is flowing over 10-15 m³/s. An interesting phenomenon is the sharp interruptions of the outflow of the spring from a few hours to 2-3 days after some earthquakes or for no significant reason, after which there is a sudden significant increase in the amount of water flowing out. The first detailed descriptions of the spring were given by the brothers Herman and Karel Shkorpil (1898). The rich stygofauna found in the karst waters is of scientific and ecological interest. Part of the spring water is used for domestic drinking water supply in the town of Svoge and the surrounding villages. The remaining waters are used for fishponds. The catchment area is included in the NATURA 2000 habitat zone.</i>	Aleksy Benderev

	3. Musina	N 43° 09' 03.52" E 25° 25' 39.60" Z = 108 m asl Musina village, Veliko Tarnovo	25 / 445 / 10000 Ancient intake, not actually used	<p style="text-align: center;">H, A, Ec, E, S</p> <i>The karst system of Lower Cretaceous age with numerous dolines and potholes. The water is issuing from the active Musina cave, that has two entrances and has been explored up to 532 m, ending with a sump. Roman capture was built in time of Roman Emperor Trajan at the beginning of the 2nd century in honour of the victory over the Dacians north of the Danube River. The intake has a perfect octagonal shape with an internal diameter of 4.23 m. It was a source of drinking water for the great Roman city of Nicopolis and Istrum. The spring was connected to the city by a 28 km aqueduct, the remains of which are preserved in some places. The first data on the Musina spring were published in the newspaper "Pravo" (1872) and by the Austrian scientist and traveller Felix Kanitz (1877). The ecological importance of the Musina spring is complemented by the presence of a significant bat colony in the Musina cave. The Musina cave was declared a protected natural landmark by order of the Ministry of Environment and Water since 1972.</i>	Konstantin Kostov
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MIKAS - Devnya



The Devnya's Magic spring (photo by B. Mihaylova)



Plan of Marcianopolis by Heinrich Hartl, 1898



Springwater flowing into the Devnya River (photos by A. Benderev)

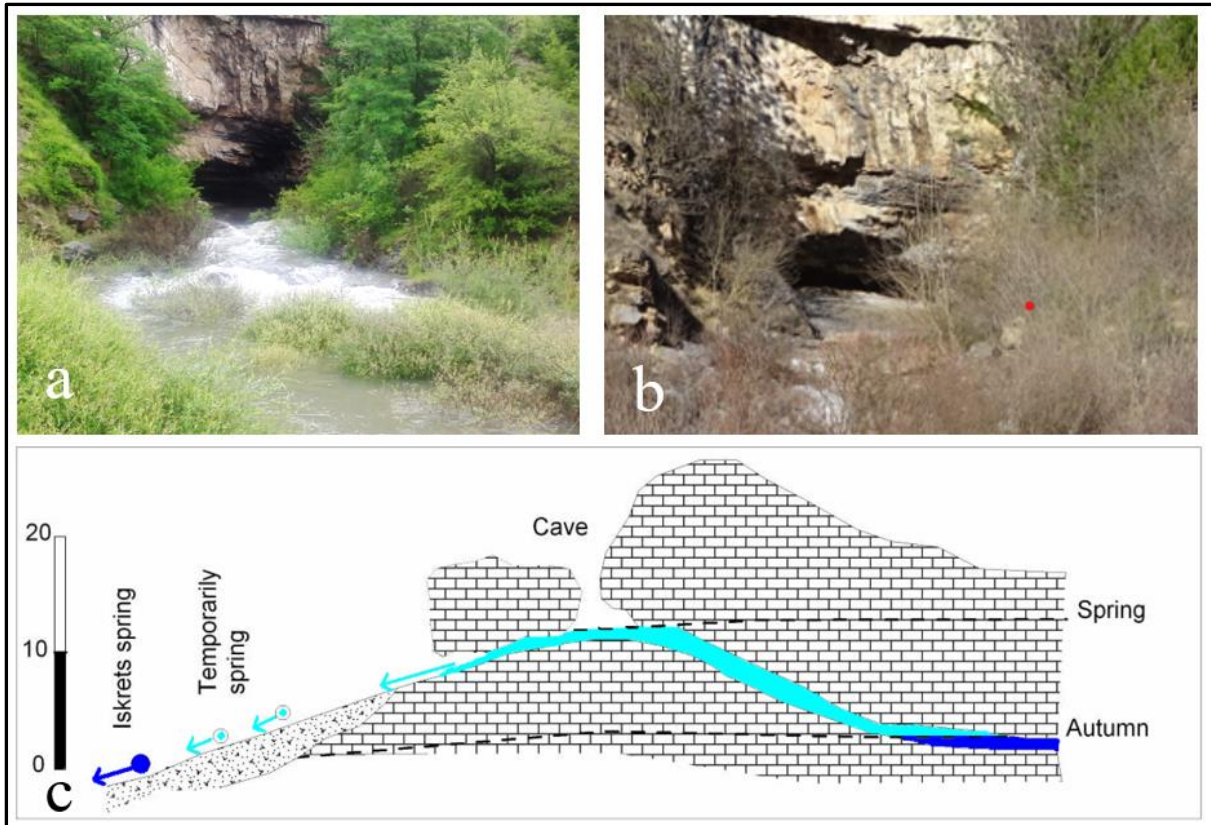
MIKAS - Iskrets (Peshta)



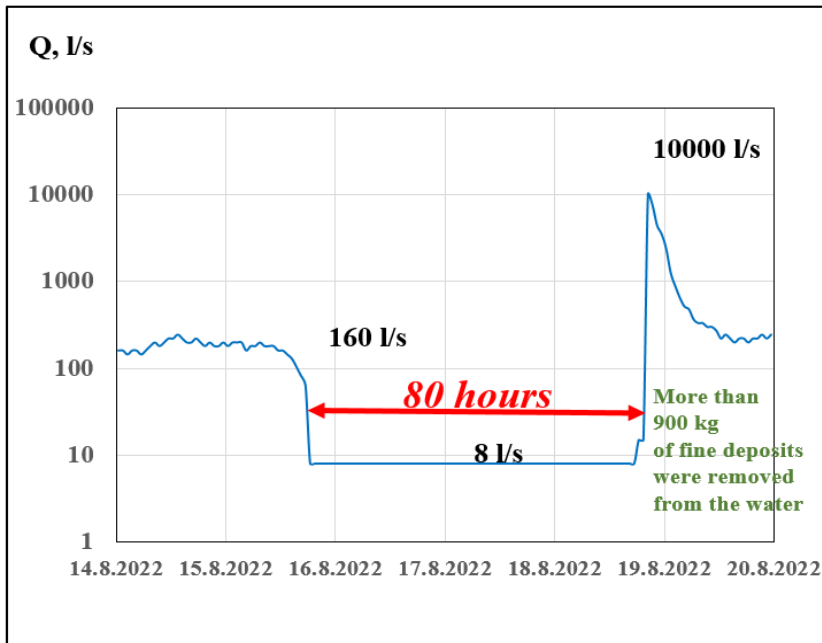
Iskrets spring general view (photo by A. Benderev)



Surface negative karst forms: a – dolines; b– blind valley in Iskrets catchment (photos by A. Benderev)



Entrance of Dusnika Cave in: a – spring; b – autumn and c - cross section of Iskrets Spring and cave with amplitude of water level (Stevanovic et al., 2015)

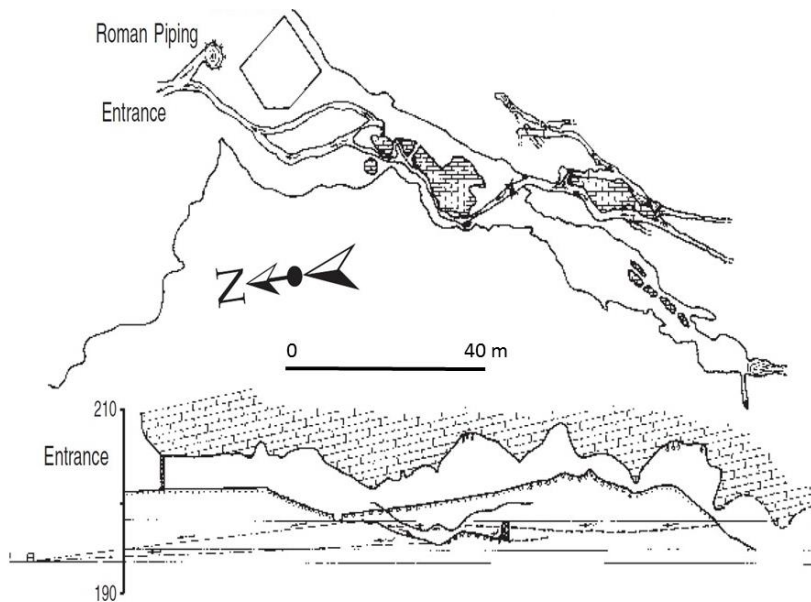


Outflow interruption at Iskrets Spring from 16 to 18/08/2022 (after Benderev et al., 2022)

MIKAS - Musina



Aerial view of the area of the Musina spring and Musina cave (photo by Daniel Yordanov)



Map and longitudinal profile of the Musina cave up to the first siphon (after Beron et al. 2006)



The water issuing from entrance of Musina cave



Musina spring Roman capture (photo by Kalin Chakarov)