

**JAMA NA POTI IN ZGUBA JAMA**

THE CAVES JAMA NA POTI AND ZGUBA JAMA

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**Izvleček**

UDK 551.442 (497.12 Postojna)

**Šebela, Stanka: Jama na poti in Zguba jama**

Martel omenja v svojem delu *Les Abîmes* (1894) tudi dve jami in sicer Jama na poti (dolžina 65 m) in Zguba jama (dolžina 122 m), ki ležita jugovzhodno od Črne jame in severno od Pisanega rova Postojnske jame. Obe jami ležita v severovzhodnem krilu Postojnske antiklinale in sicer severno od znanih rovov Postojnske jame.

Ključne besede: Postojnski jamski sistem, geologija, Jama na poti, Zguba jama, Martel, Slovenija

**Abstract**

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Martel in his book *Les Abîmes* (1894) refers to two caves, namely Jama na Poti (65 m long) and Zguba Jama (122 m long), lying SE from Črna jama and N from Pisani rov of Postojnska jama. Both caves are in northeastern Postojna anticline limb and north from known passages of Postojnska jama.

Key words: Postojna cave system, geology, Jama na poti, Zguba jama, Martel, Slovenia

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## INTRODUCTION

In the area above Postojnska jama cave system there are, according to the Cave Register 35 smaller or bigger caves, potholes and rock shelters. Most of them are about 10 m or less long, some of them, Zguba jama f.i. are more than 100 m long.

In 1993 hundred years passed since E.A. Martel's explorations in our caves. This was the reason that according to Martel's informations in his book *Les Abîmes* (1894) we again located the two caves which Martel refers to, among others, namely Jama na poti (cad. no. 583, page 449) and Zguba jama (cad. no. 6290 on page 448). The caves are interesting as they are situated between the known passages of Postojnska jama cave system (Fig. 1) and between Planinska jama.

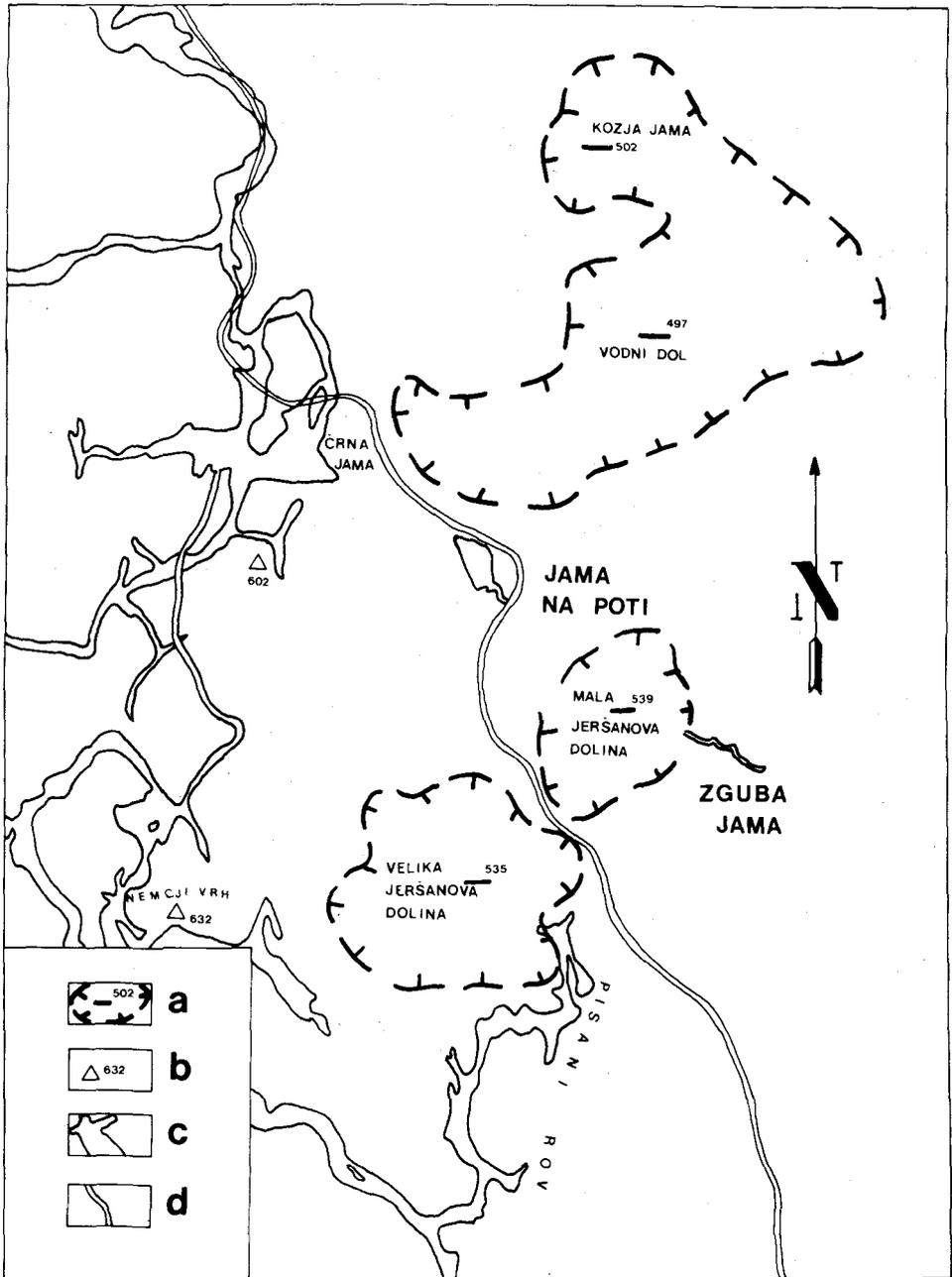
## THE RESEARCHES OF JAMA NA POTI

Martel is the first to mention (1894) the Jama na poti cave. The entrance (568 m a.s.l. according to Martel) is 1 m wide and was discovered on the forest road (between the road Ljubljana - Postojna and Črna jama) in 1889 during the winter as a blowing hole. Some soil only was dug out and one could enter the cave developed along the bed planes and, according to Martel (1894) richly decorated. Northwestern part of the cave is transformed by breakdown and probably genetically connected to the origin of huge depressions in the vicinity. The length of the cave should be about 60 m (Martel 1894).

The entrance to the cave Jama na poti developed, referring to Martel (1894) in a fissure widened by the infiltration water. The flowstone and the block-fall must originally had the connection with one of the nearby caves. The cave was interesting to Martel because of its shape, as it developed from a simple joint to a rather spacious cave in the interior. Obviously two erosions complement each other - the external and the internal one (Martel 1894).

In the Cave Register the ground plan and the longitudinal section of the Jama na poti (Fig. 2) by A. Sartori is kept. According to these data the cave is 32,5 m deep and 65 m long. According to the Italian VG Cave Register the cave is 40 m deep and 65 m long.

According to the Cave Register of the Karst Research Institute on February 23, 1954 a part of the entrance was reopened. In a circle of about 5 m of diameter around this hole the snow melted and entering could be possible by some digging. The participants of this visit were Habe, Hribar, Modrijan and Savnik.



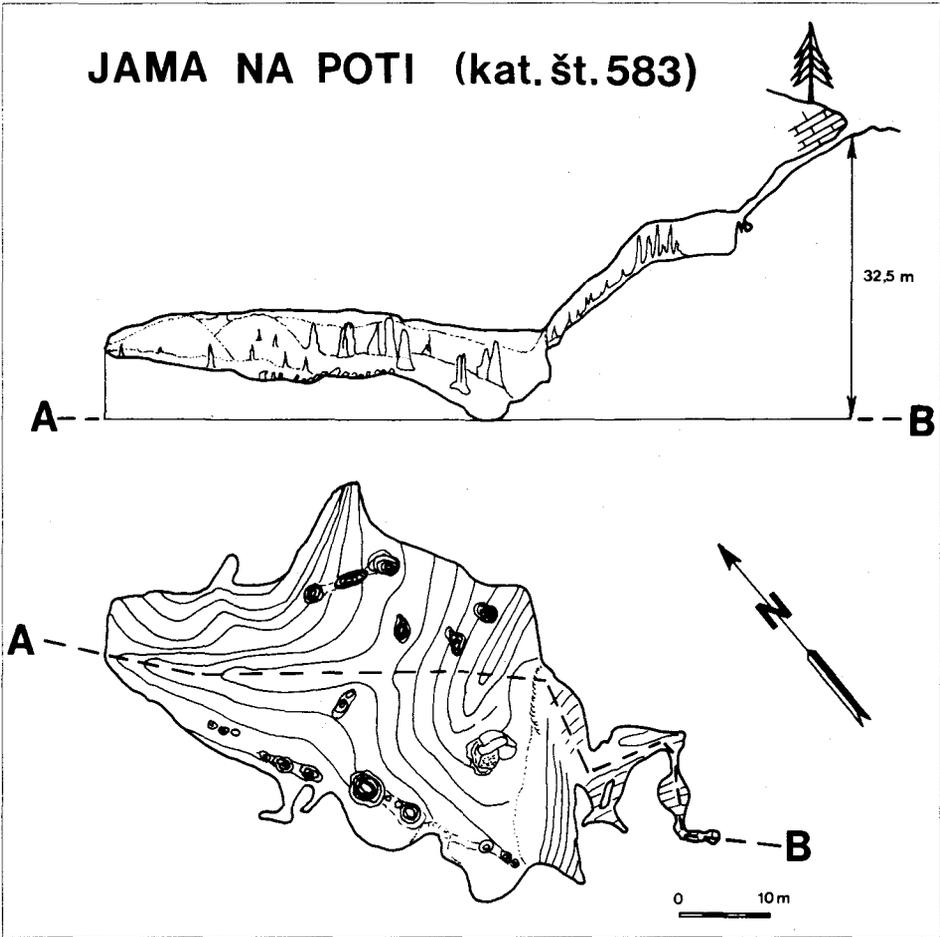


Fig. 2: Ground plan and longitudinal section of Jama na poti (according to A. Sartori, Cave Register)

Sl 2: Tloris in vzdolžni profil Jame na poti (po A. Sartori-ju, Kataster jam).

Fig. 1: Situation of Jama na poti and Zguba jama.  
 a-collapse doline  
 b-height above sea level  
 c-ground plan of cave passages  
 d-road

Sl. 1: Položaj Jame na poti in Zguba jame.  
 a - udornica  
 b - hrib z nadmorsko višino  
 c - tloris jamskih rovov  
 d - cesta.

From December the 7<sup>th</sup>, 1954 (Cave Cadastre) originate the data that the cave was in the past time named Pivčanova jama referring to the owner Vilhar, Veliki Otok 4 near Postojna. The cave was found by the Vilhar's children.

In the Postojnska jama cave system and in other near caves Gospodarič performed a lot of researches.

Among others he refers to Jama na poti where like in Postojnska jama the flood loam was known. It was deposited in the time when the collapse doline did not yet interrupt Pisani rov. This is a reliable proof that the Velika Jeršanova dolina was the most deepened after the sedimentation of the flood loam (Gospodarič 1969).

During the researches in Čarobni vrt in Postojnska jama this important speleological process was dated to the first Würm glacial (Gospodarič 1967, 27).

Gospodarič supposes (1969) that Jama na poti is the former continuation of Pisani rov towards north, northwest respectively.

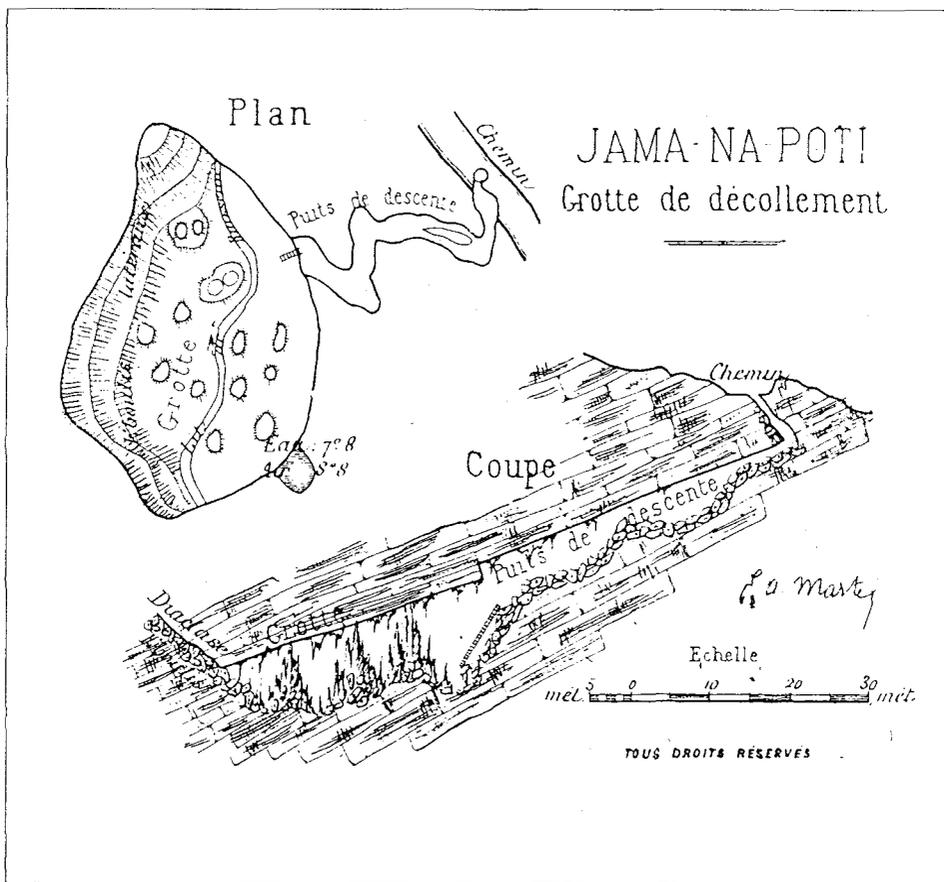


Fig. 2a: Martel's plan of Jama na poti (Les Abîmes 1894)

Sl. 2a: Martelov načrt Jame na poti (Les Abîmes 1894)

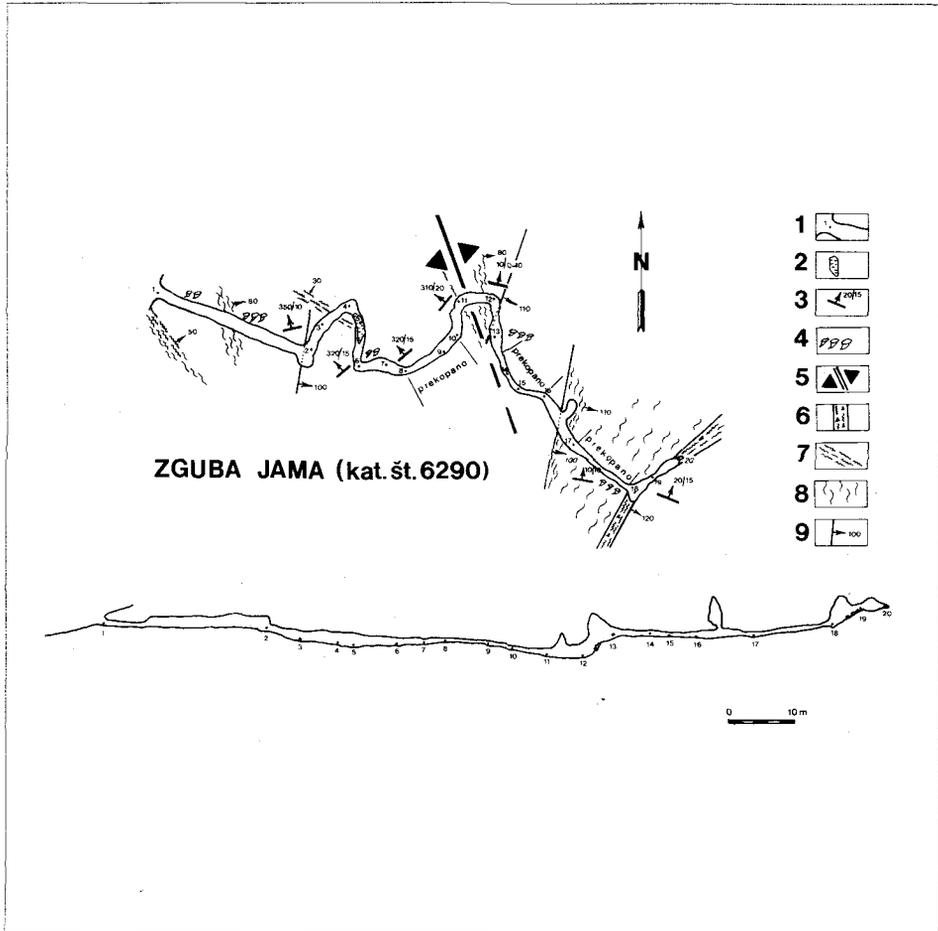


Fig. 3: Geological conditions of Zguba jama

- 1 - ground plan of the cave passage with denoted survey points
- 2 - stagnant water
- 3 - geological elements of Upper Cretaceous limestone
- 4 - remains of the rudists
- 5 - anticlinal knicked layers
- 6 - crushed zone
- 7 - broken zone
- 8 - fissured zone
- 9 - fault plane with geological elements

Sl 3: Geološke razmere Zguba jame.

- 1 - tloris jamskega rova z oznakami meritvenih tok
- 2 - stoječa voda
- 3 - geološki elementi zgornje krednega apnenca
- 4 - rudistni ostanki
- 5 - antiklinalno upognjene plasti
- 6 - zdrobljena cona
- 7 - porušena cona
- 8 - razpoklinska cona
- 9 - prelomna ploskev z geološkimi elementi

In spite of precise situation according to the Cave Register the Jama na poti is not accessible today as it was completely filled up at the construction of the road.

### **SPELEOLOGICAL DATA ON ZGUBA JAMA**

In 1993 at detailed researches of the area above Postojnska jama we rediscovered Zguba jama (the name means the Lost Cave) (VG 583, cad. no. 6290) which had, according to the Italian VG Cave Register wrong co-ordinates.

It must be mentioned that at searching the cave entrance we used the Martel's survey (1894) which was proved to be correct. Otherwise the first to discover the cave was M. Kraiger and company (Martel 1894) on the eastern side of the Mala Jeršanova dolina. According to Martel the cave is about 100 m long.

Zguba jama (Fig. 3) is 122 m long and 4 m deep. The entrance to the cave is about 1 m high and 1.5 m wide. After some 6 m the roof of the cave elevates to 1.4 m and one can walk almost upright. After 25 m at the point 1 the passage is 2 m high already. At the point 3 there is the first pond with surface of 3 m<sup>2</sup>. At the point 7 the passage is less than half a meter high and this is the height dug by the first explorers of the cave. Here the passage was entirely filled up by the sediment. It is the flysch deposit of reddish orange colour. After some 2 or 3 m the passage is higher again. Among the points 12 to 15 and 16 to 17 the passage was dug again. Between the points 15 and 16 there is on the northern side of the passage a chimney, about 2.5 m wide and at least 4 m high. At the point 17 the breakdown at the tectonically crushed zone started and closed the continuation of the cave.

Zguba jama lies at 561 m a.s.l. which is 26 m higher than the level of the nearest part of Postojnska jama, it is Pisani rov (point 25 lies at 535 m a.s.l.). Thus this caves developed on a higher level and probably presents a fossil cave.

The cave passage displays well preserved phreatic features. In respect to numerous scallops we may infer to the direction of the water flow from southeast towards northwest. In the cave there is a thick (2 m) sediment in the lower part of the passage of mostly red-brown colour. The upper layer of the sediment is probably flysch deposit. It is hard to assume from which direction the sediments were deposited into the cave. It is sure that after the sedimentation the layers were somewhere entirely (probably by the vertical percolation too) removed by the water flow which etched between the sediment and the rock the wall flutes.

In the cave there are two smaller ponds (about 1 to 3 m<sup>2</sup>) where the water accumulates by vertical infiltration, out of chimneys mostly.

50 m from the entrance inside the cave the influence of the external temperature is still felt. There is no drought in the cave, at our visits during the survey the spaces became a bit misty.

Mostly at the entrance, but also some 60 m inside there is a lot of spiders, grass-hoppers and some Leptodirus as well. The cave is a genuine biological laboratory.

Hundred years ago already the explorers of Postojnska jama tried to realize a wish, not yet fulfilled, to join Postojnska jama and Planinska jama. During these efforts they discov-

ered on the surface above Pisani rov among others also Zguba jama. The traces of digging in front of the cave and the excavated sediments in the cave evidence great wish and will that the cave would be as long as possible and that maybe even its continuation would be found.

At our visit we found the signature of Matija Vilhar from 1939 and an unrecognized signature from 1934.

## **TECTONIC-LITHOLOGICAL CONDITIONS IN ZGUBA JAMA**

According to the Basic geological map, sheet Postojna (Buser, Grad & Pleničar 1967) the cave is built in Upper Cretaceous limestone. In the eastern part of the cave the limestone beds dip northeastwards ( $10-15^{\circ}$ ) (Fig. 3). Between the points 11 and 12 the beds are gently knicked according to anticline and they dip in the western part of the cave northwestwards ( $10-20^{\circ}$ ). One meter inside the cave one could observe on the roof extremely rich remains of rudists. Inside the cave there are a lot of rudists again, one may talk about lumachelle. Somewhere they stick out of the rock due to corrosional water activity. The thickness of the bed is half a meter in average.

Tectonically crushed zones are less distinctly expressed in the cave, partly due to phreatic passage shape where the geological basis are rather blurred.

The most distinctive is the fault zone 120/90 in the extreme southeastern part of the cave. The width of crushed to broken zone is up to 1 m. In this part the break-down boulders fallen off the fault zone blocked the supposed continuation of the passage.

Up to point 12 one may observe 25 m wide fissure zone 110-120/90, parallel to crushed zone or making an angle from  $10$  to  $20^{\circ}$ .

Between the points 10 and 12 broken and fissured zone 60/90 and 80/90 prevail being parallel to the axis (making an axis respectively) of anticlinal knicked layers.

Between the points 1 and 2 a distinguished broken zone 80/90 lies.

At the entrance to the cave on the surface I established prominent broken zone 50/90 which is one of the most marked in the area and thus the crushed zones, found in the cave are actually secondary deformations.

## **CONCLUSION**

The entrance to now buried cave Jama na poti lies 565 m a.s.l. (according to Italian data), 568 m according to Martel (1894), and 574-575 m according to data from 1954 and about 570 m according to topographic map in a scale 1:5.000. According to Italian and Martel's data the cave is 32.5 m deep and reaches (if we take the altitude of 570 m) 537.5 m in the depth.

Jama na poti lies about 300 m to the northwest of the last point in the Pisani rov. The point 25 in the Pisani rov is 535 m a.s.l., Jama na poti at 537.5 m and it shows a certain connection, namely possible continuation of the Pisani rov (before the formation of the

collapse doline Velika Jeršanova dolina) towards north-west, or more precisely the continuation of this part of the system of the Postojnska jama in the northeastern limb of the Postojna anticline.

Zguba jama lies 561 m a.s.l. (the survey from 1993) which means 26 m at the entrance and 30 m at the end higher as is the level of Pisani rov. One of probable explanations would be that Zguba jama is linked with the Pisani rov, f.e. as its higher right passage, or that it presents the fossil level of the channel which was or was not linked with the level of the passages in the Pisani rov. Mala Jeršanova dolina probably interrupted the connection between Zguba jama and Pisani rov.

In 1967 a polygon above the Pisani rov was made. At that occasion the bottom of Velika Jeršanova dolina was defined to be at 519 m a.s.l. At the end of Pisani rov (Hill 531 m, the points 25 535.5 m respectively) they stopped digging after this survey as according to their opinion they could not reach a new passage but will hit after 10 m the middle of the southern slope of Velika Jeršanova dolina and thus the surface. The collapse doline Velika Jeršanova dolina thus interrupted the passage and deepened to the Hill 519, which is 16 m lower than Pisani rov (Gospodarič 1969).

To have a precise comparison of the geological setting of the surface and the cave the workers of the Karst Institute on March 31, 1993 resurveyed the polygon above Pisani rov. By laser theodolite NICON the Hill in the bottom of Velika Jeršanova dolina was established at 535 m, while on the map 1: 5.000 it lies at 539.5 m. According to these two data the bottom of Velika Jeršanova dolina lies some meters higher only than Pisani rov, or at the same altitude respectively.

Translated by Maja Kranjc

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## JAMA NA POTI IN ZGUBA JAMA

### Povzetek

Na površju nad Postojnskim jamskim sistemom se po podatkih Katastra jam nahaja 35 manjših ali večjih jam, brezen in spodmolov. Izmed teh jih je večina dolgih okrog 10 m in manj, nekatere, kot na primer Zguba jama, pa presežejo tudi 100 m.

Po Martelovih (1894) zapiskih v knjigi "Les Abîmes" smo ponovno določili položaj dveh jam, in sicer Jame na poti (kat. št. 583) in Zguba jame (kat. št. 6290), ki ju Martel omenja na strani 448 (Zguba jama) in 449 (Jama na poti). Jami sta zanimivi tudi zato ker ležita med znanimi rovi Postojnskega jamskega sistema (slika 1) in Planinske jame.

Vhod v danes zasuto Jamo na poti je v n.m.v. 565 m (po italijanskih podatkih), 568 m po Martelu (1894), 574-575 m po podatkih iz leta 1954 in okrog 570 m po topografski karti 1:5000. Po italijanskih podatkih, kot tudi po podatkih Martela (1894), je jama globoka 32.5 m in je tako v globini (če upoštevamo podatek 570 m) 537.5 m.

Jama na poti leži okrog 300 m severozahodno od zadnje točke Pisanega rova. Točka 25 v Pisanem rovu je v n.m.v. 535 m, Jama na poti pa 537,5 m, kar kaže na določeno povezavo, to je na možno nekdanje (pred oblikovanjem Velike Jeršanove doline) nadaljevanje Pisanega rova proti severozahodu, oziroma pravilneje nadaljevanje dela sistema Postojnskih jam tudi v severovzhodnem krilu Postojnske antiklinale.

Zguba jama leži v n.m.v. 561 m (merjenje iz leta 1993), kar je 26 m na vhodu in 30 m na koncu jame višje kot je nivo Pisanega rova. Ena od možnih razlag bi bila, da je Zguba jama bila povezana npr. s Pisanim rovom kot višji desni rov, oziroma da predstavlja star nivo rovov, ki je bil, ali pa ne, povezan z nivojem rovov Pisanega rova. Mala Ješanova dolina je verjetno prekinila zvezo med Zgubo jamo in Pisanim rovom.

Leta 1967 so opravili poligon nad Pisanim rovom. Pri tem so dno Velike Jeršanove doline določili na 519 m. Na koncu Pisanega rova (kota 531 m oz. v točki 25 535,5 m) so po tem merjenju končali s kopanjem, saj po njihovem mnenju ne bi dosegli novega rova, ampak bi že po 10 m zadeli v sredino južnega pobočja Velike Jeršanove doline in tako dosegli površje. Koliševka Velika Jeršanova dolina naj bi tako prekinila rov in se poglobila do kote 519, kar je 16 m nižje kot Pisani rov (Gospodarič 1969).

Zaradi natančne primerjave geološke zgradbe površja in jame smo 31.3.1993 sodelavci IZRK ZRC SAZU ponovno izmerili poligon nad Pisanim rovom. Z laserskim teodolitom znamke NICON je bila določena kota v dnu Velike Jeršanove doline 535 m, medtem ko je na karti v merilu 1:5000 dno na koti 539,9 m. Po teh dveh podatkih je dno Velike Jeršanove doline le nekaj metrov višje kot je Pisani rov, oziroma v isti višini.