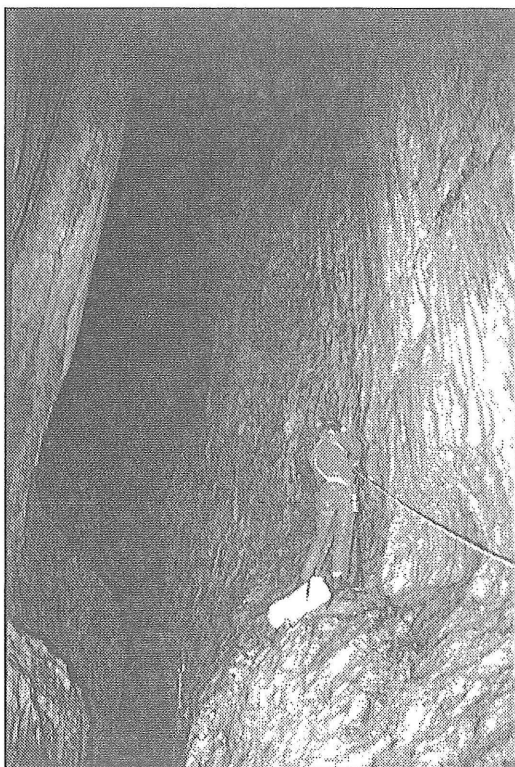


# EKSPEDICIJE LUKINA JAMA 1994-95

Branko Jalžić

Zanos koji je pratio spektakularne i neočekivane uspjehe ekspedicije u Lukinu jamu 1993, ostao je prisutan u sudionicima ekspedicije i bio pokretačka snaga pri organiziranju akcije u 1994. godini.

Preostali posao nakon prvog istraživanja valjalo je završiti. Plan buduće ekspedicije bio je usmjeren na istraživanje bočnih kanala, ronjenje u podzemnim jezerima i istraživanje jama blizu Lukine jame radi otkrivanja višeg ulaza u nju. Značajni rezultati iz 1993. pridonijeli su velikoj medijskoj popularnosti koja nam je omogućila razna sponzorstva i potporu brojnih tvrtki. Postupno je pribavljena potrebna oprema, hrana i dovoljno novaca. U dogovoru sa slovačkim speleolozima koji su svoj boravak



Na -600 m dubine  
At -600 m depth

Foto: Z. Gregurić

na Velebitu započeli prije službenog početka ekspedicije, (1.8.1994.), obavljena su istraživanja jame Trojame otkrivene 1993. Ona su potvrdila točnost pretpostavke da Lukina jama ima viši ulaz od poznatoga.

Slovački su speleolozi istraživanjem Trojame uspjeli prodrijeti u Lukinu jamu, što je bio izvanredan uspjeh. Visinska razlika između ulaza Trojame i Lukine jame iznosi 37 m i tako je dubina ovog sustava povećana na -1387 m.

Službeno je ekspedicija počela 1. 8. 1994. godine. U speleološkom radu sudjelovalo je ukupno 113 speleologa. Najznačajniji je rezultat ekspedicije bio uspješno ronjenje u sifonu na dnu Lukine jame. Ovim je podvigom, koji su izveli Zoran Stipetić i Teo Barišić, povećana dubina jame za daljnjih 5 m, pa je ukupna dubina sustava sada 1392 m. Ronioci su uspjeli prodrijeti 50 m horizontalnim potopljenim pukotinskim kanalom do manje dvorane na kraju sifona. Kanal se i dalje nastavlja, ali zbog hladnoće vode (4°C) napredovanje je prekinuto. Obavljena su istraživanja bočnih kanala od kojih je najvažniji prodor u nove prostore na dubini od 1100 m, gdje je istražena bočna jama duboka 200 m.

Geolozi su za boravka u podzemlju upotpunili broj uzoraka stijena, a uzeti su i uzorci tla za pedološke analize te voda za kemijske analize.

U Lukinoj jami izuzetno je otkriće Ane Sutlović. Ona je pronašla novu vrstu *stygobiontne pijavice*, što svakako predstavlja jedno od najznačajnijih biospeleoloških otkrića u dinarskom krasu do danas.

Tijek ekspedicije pratio je filmskim zapisom splitski alpinist Stipe Božić, koji se i sam spustio do dna jame.

Osim u Lukinoj jami, velika se aktivnost odvijala i na površini, gdje su geodetski određivane kote ulaza (J. Posarić) te izrađena skica terena u mjerilu 1:5000 kao podloga za ucrtavanje istraženih objekata u blizini Lukine jame.

Dobro pripremljene ekipe imale su po izlasku iz Lukine jame volje i snage da opreme i ponovno topografski snime Ledenu jamu u Lomskoj dulibi do -437 m dubine.

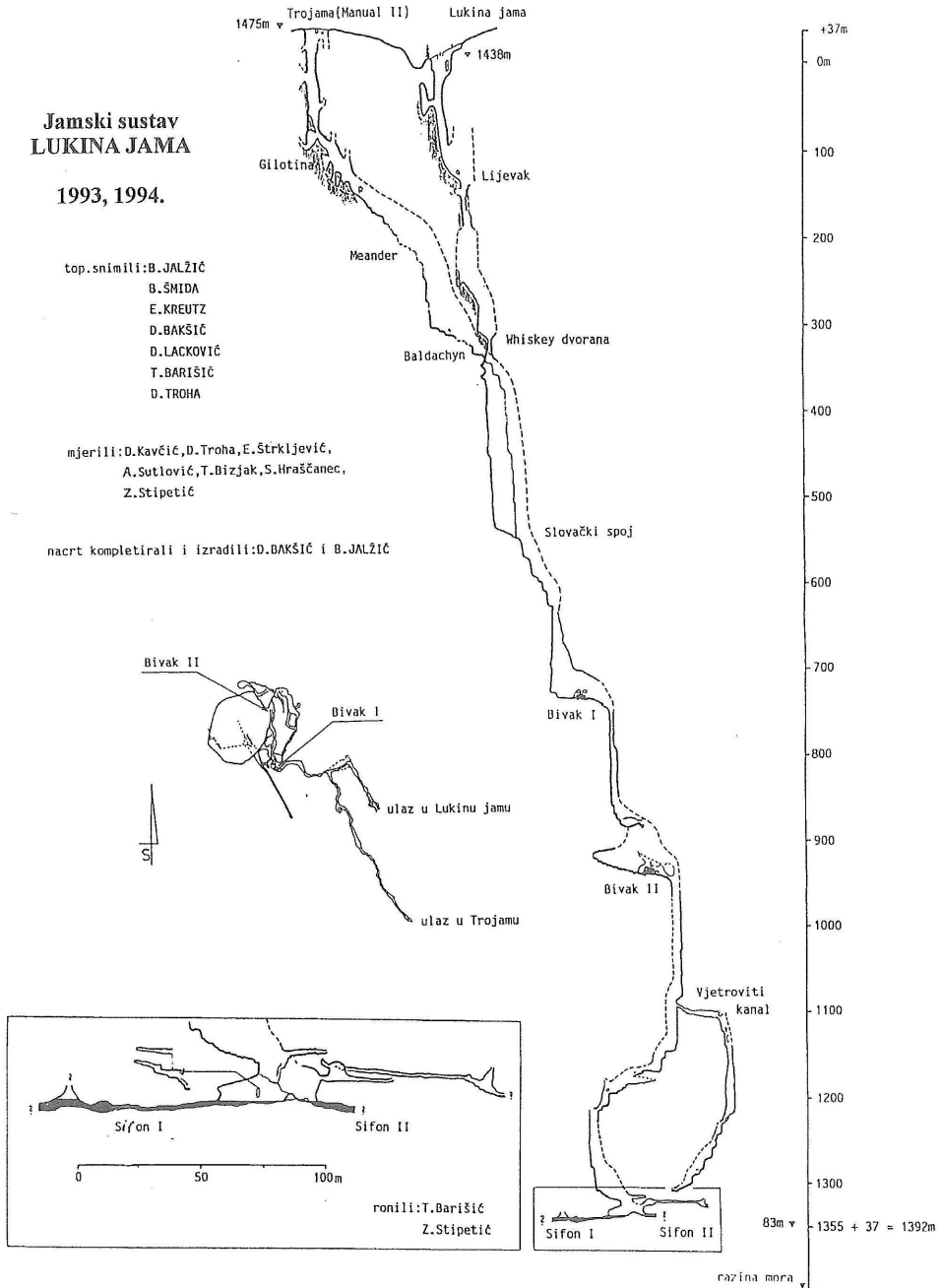
# Jamski sustav LUKINA JAMA

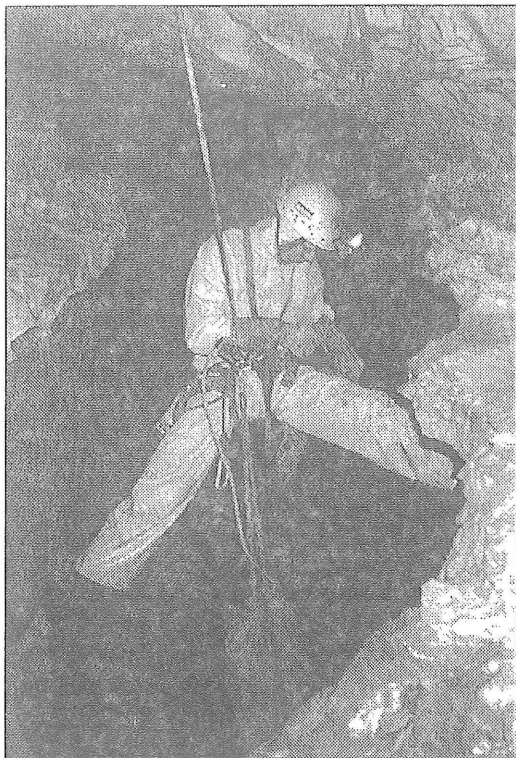
1993, 1994.

top. snimili: B. JALŽIĆ  
B. SMIDA  
E. KREUTZ  
D. BAKŠIĆ  
D. LACKOVIĆ  
T. BARIŠIĆ  
D. TROHA

mjerili: D. Kavčić, D. Troha, E. Štrkljević,  
A. Sutlović, T. Bizjak, S. Hraščanec,  
Z. Stipetić

nacrt kompletirali i izradili: D. BAKŠIĆ i B. JALŽIĆ





Zadnja vertikala  
Ultimate shaft

Foto; A, Sutlović

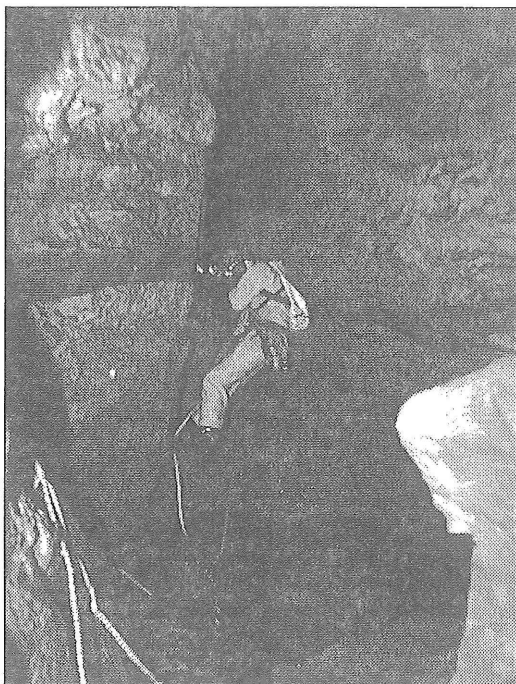
Pregledom uske pukotine na njenom dnu potvrđena je pretpostavka Slovaka da je daljnje napredovanje moguće samo proširivanjem uskog dijela jame miniranjem.

Izvanredni rezultati što smo ih postigli tijekom ove ekspedicije praktično su planove za ekspediciju 1995. sveli na istraživanja u sifonima na samom dnu jame, detaljnija biospeleološka istraživanja, provjeru topografskog nacрта s obzirom na razliku rezultata dobivenih mjernom vrpcom i topofilom, snimanje novih fotografija velikih prostora jame i ronjenje.

Ovakav plan nije bio dovoljan za ozbiljniju motivaciju sudionika nove ekspedicije u 1995. godini, ali je nakon brojnih diskusija odlučeno je da se ona ipak organizira. Osnovni je problem bio opremanje ronilačke momčadi. Zahvaljujući finacijskoj potpori Ministarstva znanosti, nabavljena je potrebna ronilačka oprema za dva ronioaca. Na žalost, prije samog početka ekspedicije doznalo se da ronioci neće moći sudjelovati u ekspediciji.

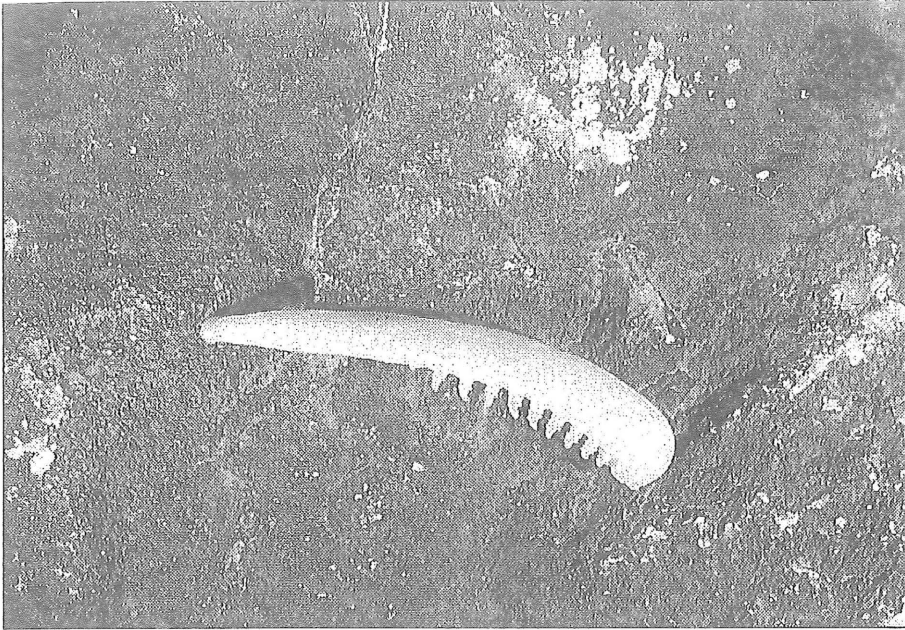
U međuvremenu su se speleolozi "velebitaši" odlučili za ekspediciju u Južnu Ameriku, a Karlovčani u Španjolsku. Zbog toga je termin ekspedicije bio pomaknut na mjesec srpanj. Izuzetno loše vremenske prilike tijekom lipnja nisu dopuštale poduzimanje predakcija. Ipak je do početka ekspedicije jama opremljena do dubine od -240 m.

Ekspedicija je trajala od 8. do 22. srpnja. Sudjelovalo je 98 ljudi. Problema oko postavljanja jame bilo je od samog početka. Unatoč velikom broju speleologa, osjećao se nedostatak iskusnih ljudi. Ledena lavina koja je zatrpala užeta na -150 m dubine, ozbiljno je usporila napredovanje. Zbog slabe fizičke i tehničke pripremljenosti ekipe, na dno jame uspjeli su se spustiti samo Damir Lacković i Robert Erhardt. Oni su prikupili potrebne biološke uzorke i raspemili jamu do bivka II. Narednih je dana jama u cjelosti "preparirana": užeta su u vrećama iznad vertikala, a spitovi označeni vijcima i bijelim trakama. Sav ovaj posao znatno će olakšati postavljanje jame pri narednim ekspedicijama.



Priječenje jezera  
Crossing the lake

Foto B. Jalžić



Hrvatska meštroljjeva škrgavica (*Croatobranchnus mestrovi*)

Foto: B. Jalžić

Od zacrtanog plana, ekspedicija je u 1995. učinila vrlo malo. U daljnjem radu prioritet i nadalje ostaje istraživanje sifona gdje je jedino moguće direktno postići veću dubinu cijelog sustava. Možda će se to riješiti angažiranjem inozemnih speleologa. Osim rada u Lukinoj jami, svakako će biti vrlo zanimljiv nastavak istraživanja u jami Ledenici, koja također ima veliku perspektivu daljnjeg napredovanja.

### Expedition "Lukina jama 1994-95"

by Branko Jalžić

The enthusiasm following the spectacular and unexpected achievements of the expedition "Lukina jama 1993" remained among its participants and became an initial force for organization of further actions in 1994.

After the first exploration a lot of things had to be finished. A plan of future

expedition was aimed to explore the side channels, to dive in underground lakes and to explore pits in the surrounding of Lukina jama in order to find an entrance on higher elevation. Significant results from 1993 expedition gave the great popularity in the media that enabled various sponsorships and support from many companies. Equipment, food and money have been gradually collected. In coordination with Slovakian speleologists who came on Velebit before the official expedition started (1. 8. 1994), exploration of the Trojama pit, found in 1993, was carried out. That confirmed the expectation that Lukina jama has a higher entrance. The Slovakian speleologists succeeded to enter Lukina jama during exploration of the Trojama pit. Elevation difference between Trojama pit and Lukina jama is 37 m which makes the depth of this system to be 1387 m.

The expedition officially started on 1st August 1994. 113 speleologists took part in speleological exploration. The most important result of the expedition was the successful dive through a syphon at the bottom of Lukina jama.

This courageous deed of Zoran Stipetić and Teo Barišić increased the depth of Lukina jama for 5 m so the total depth is now 1392 m. The divers were able to penetrate for 50 m through a horizontal, drowned fracture-channel towards a small chamber at the end of the syphon. Channel extends further on but due to very low water temperature (4°C) diving was stopped.

Exploration of side channels was carried on and resulted in penetration to new chambers at depth of 1100 m where a side pit 200 m deep was explored.

Geologists took new rock-samples and also the soil- and water-samples.

A great discovery was a new species of stygobiont leech found by Ana Sutlović. This surely represents the most significant discovery in the Dinaric karst so far.

The expedition was filmed by Alpinist Stipe Božić from Split who made it to the very bottom of Lukina jama.

Besides in Lukina jama, there was a lot of activity on the surface where the entrance was geodetically measured and terrain sketch in scale 1:5000 for location of explored objects in the vicinity of Lukina jama was made.

The well trained team, after coming out from Lukina jama, was still in good condition to draw the topographical map of Ledena jama (Ice pit) in Lomska dolina down to 437 m of depth.

They checked the narrow fracture on the bottom and confirmed that further penetration would be possible only by making the passage wider using explosive.

The outstanding results that we achieved during this expedition conducted plans for expedition '95 which was after all aimed primarily to exploration of syphons at the bottom of the pit, to detailed biospeleological investigation, to reconnaissance of the topographical maps (because of difference between the measuring rope and topofil) and to taking photographs of Lukina jama and diving activities.

Such plan was not sufficient to motivate the participants of the expedition '95. Most of the participants of the former expeditions felt lack of motivation for the new one. Nevertheless, after many discussions the conclusion was to organize the expedition '95. The main problem was to supply the diving team.

With thanks to the Ministry of Science and Technology for the financial support, we managed to get the necessary diving equipment for two divers. To our regret, just before the expedition we found out that divers are not able to join the expedition.

In the meantime, speleologists from "Velebit" decided to organize expedition to the South America and speleologists from Karlovac went to Spain. For that reason the term for our expedition was postponed for July. Very bad weather during June disabled any preparations in the field. Anyway, the pit was prepared to the depth of 240 m.

The expedition '95 lasted from 8th to 22nd of July with 98 participants. From the very beginning there were problems with preparations. Despite of a large number of speleologists there was a lack of high quality people. An ice avalanche which buried the ropes at depth of 150 m seriously slowed down activities. Due to poor physical and technical conditions of the team, only Damir Lacković and Robert Erhardt descended down to the bottom. They collected biological samples and put down the bivouac II. The following days the pit was completely "prepared". Ropes were placed in bags above vertical sections, spits were marked with screws and white ribbons. All this will make it easier for the next expedition.

The expedition '95 ended with very few results out of expected. The priority of further explorations are still the syphons which may enlarge the depth of the whole system. Maybe, this problem will be solved by engagement of foreign speleologists. Besides activities in Lukina jama, it is very important to continue exploration of Ledena pit which has a great perspective.