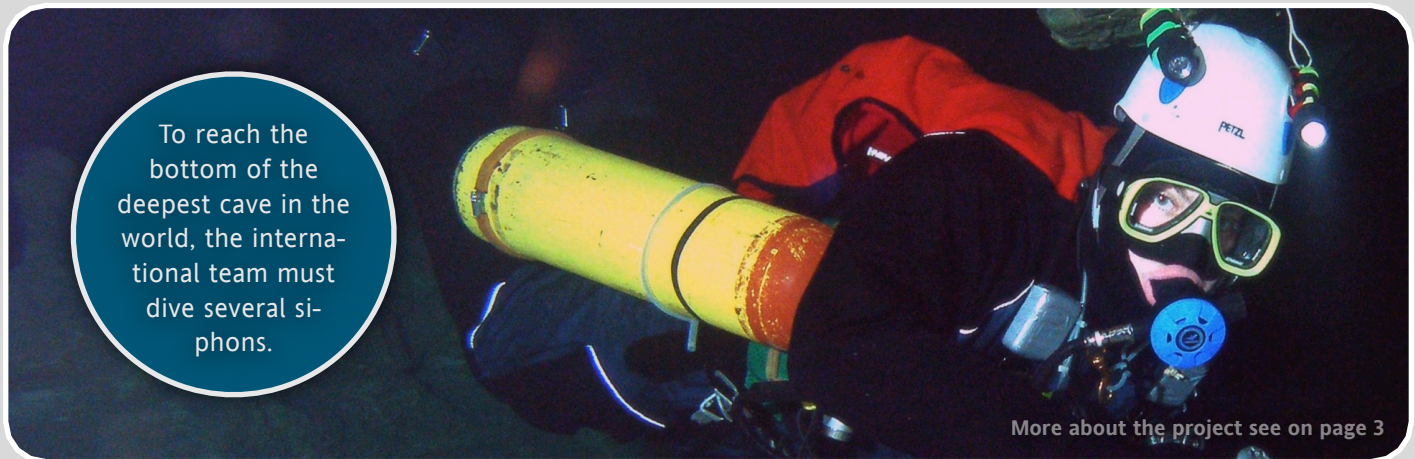


TOWARDS

the Centre of the Earth



To reach the bottom of the deepest cave in the world, the international team must dive several siphons.

More about the project see on page 3

Descent of Krubera-Voronja, the Deepest Cave in the World International Expedition to Explore and Extend the Deepest Cave on Earth

Most of the lands and oceans on earth have been explored and charted. There are few places left to discover in the 21st Century.

However, the underground world conceals plenty of potential geographic discoveries – still unrevealed caves and caverns. Spelaeology (“caving”) is a science that explores caves and related phenomena.

In summer 2009, the Lithuanian caving club “Aenigma” is organizing an international expedition to the deepest cave in the world. At -2,191 metres, Krubera-Voronya

cave, sometimes called the Underground Everest or the Bottom of the World, is the only cave on the Earth deeper than 2 km.

The expedition “Towards the Centre of the Earth” draws together expert cavers from Lithuania, Spain, Ireland, Ukraine, Hungary and the United Kingdom. The main objectives are to descend to the bottom of the cave and to push the current limits of exploration.

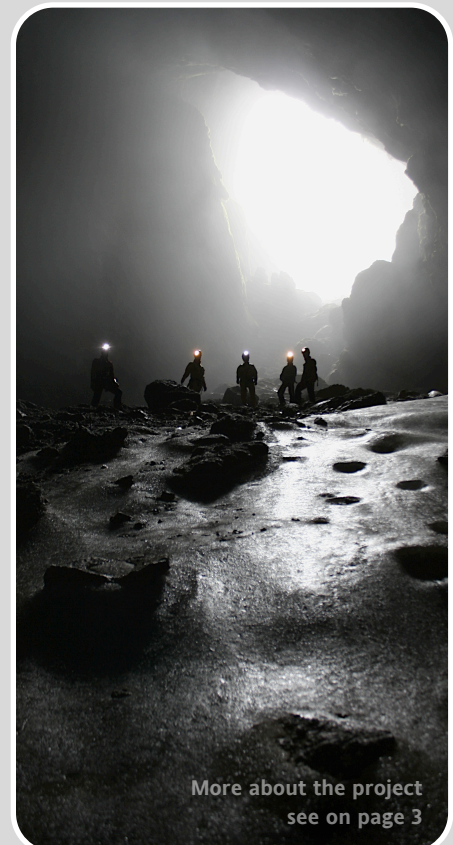
The team will also install measurement devices to record water level fluctuations in the lower parts of the cave.

**Underground secret
that joins us together.**

Spelaeology explores the depths of the Earth.



More about Spelaeology see on page 2



More about the project
see on page 3

Images of caves and karst



The beauty of caves is difficult to describe.



Water is the main factor in forming of the caves and their formations.



Cave pearls are rare and delicate formations that only few have seen.

Photos from National Geographic

Karst landscape riddled with the sinkholes



ABOUT SPELAEOLOGY

Spelaeology (Greek “*Spelaion*”: cave + “*Logos*”: study/science) is a science that explores caves and other underground cavities, and everything related to them. Caves are usually formed by water dissolving soluble bedrock, in a process called karstification.

Karst topography is a landscape shaped this process – usually carbonate rock such as limestone or dolomite. The karstification of a landscape may result in a variety of large or small scale features both on the surface and beneath.

The term “*karst*” is derived from the German name for Kras, a region of the Dinar Mountains in Slovenia partially extending into Italy where it is called Carso and where the first scientific research of a karst topography was made. Prior to the mid-nineteenth century, the scientific value of caves was considered

only in its contribution to other branches of science, and cave studies were considered part of the larger disciplines of geography, geology or archaeology. Only few cave-specific studies were undertaken prior to the work of Édouard-Alfred Martel

(1859-1938), the 'Father of modern spelaeology', who through his extensive and well-publicized cave explorations introduced the concept of spelaeology as a distinct area of study. In 1895 Martel founded the Société de Spéléologie, the first organization devoted to cave science

in the world. The growth of spelaeology is directly linked with the caving, both because of the stimulation of public interest and awareness, and the fact that most speleological fieldwork has been conducted by cavers.

SPELAEOLOGY

is a science that explores underground cavities and related phenomena. In other words – underground geography.



The grandeur of a glacial cave.

Above the abyss.



ABOUT THE PROJECT

Nowadays, when the highest mountains and the deepest oceans have been discovered and explored, there is only one place on the Earth left where geographic discoveries are still possible: the underground world. Cave exploration is difficult and dangerous because all work must be done in a dark, wet and cold environment. This activity demands great physical strength, good psychological preparation and special equipment. Speleology is one of the most dangerous fields of science and extreme sports.

The expedition "Towards the Centre of the Earth" is organised by the Lithuanian club "Aenigma", and unites approximately 20 highly experienced cavers from 6 different countries.

The aim of the expedition is to reach the bottom of the deepest cave on Earth – Krubera-Voronya.

The team will travel to the region of Abkhazia, close to the Black Sea and the border between Russia and Georgia. From here, they will climb into the mountains and establish a base camp on the Arabika plateau, at a height of +2,250 metres. The

cave entrance lies on this plateau.

The team will split into groups, in order to relay equipment and supplies gradually deeper into the cave. The groups will:

- set up a series of underground camps;
- descend to the bottom (approx. -2,150 metres);
- replace worn out equipment (ropes, rock anchors);
- install digital water level loggers, to measure the fluctuations of water level in the cave and thus enhance the safety of future expeditions;
- take specimens of cave insects for identification & habitat study;
- extend the current limits of exploration and map new discoveries;
- taken photographs and video footage of exploration.

During the expedition the team will adhere to strict ecological requirements and will strive to do minimal harm to the cave's ecosystem: they will use only electric lightning systems, and will carry out the waste from their own and also from previous expeditions.



In the depths of the Earth.

The moments from the club's life



Spain, the Pyrenees. Rigging the cave in the cave system of Arañonera.



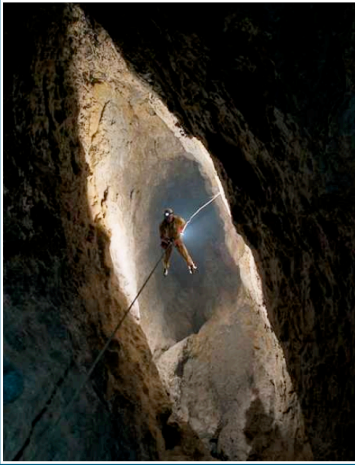
Abkhazia, the West Caucasus. Exploration of the cave system of V. Ilyukhina.



Lithuania, the karstic region of Birzai-Pasvalys. In the Cow's Hole.

Pictures from speleo.lt

Views from Voronya cave



The impressive first pit of Krubera-Voronya

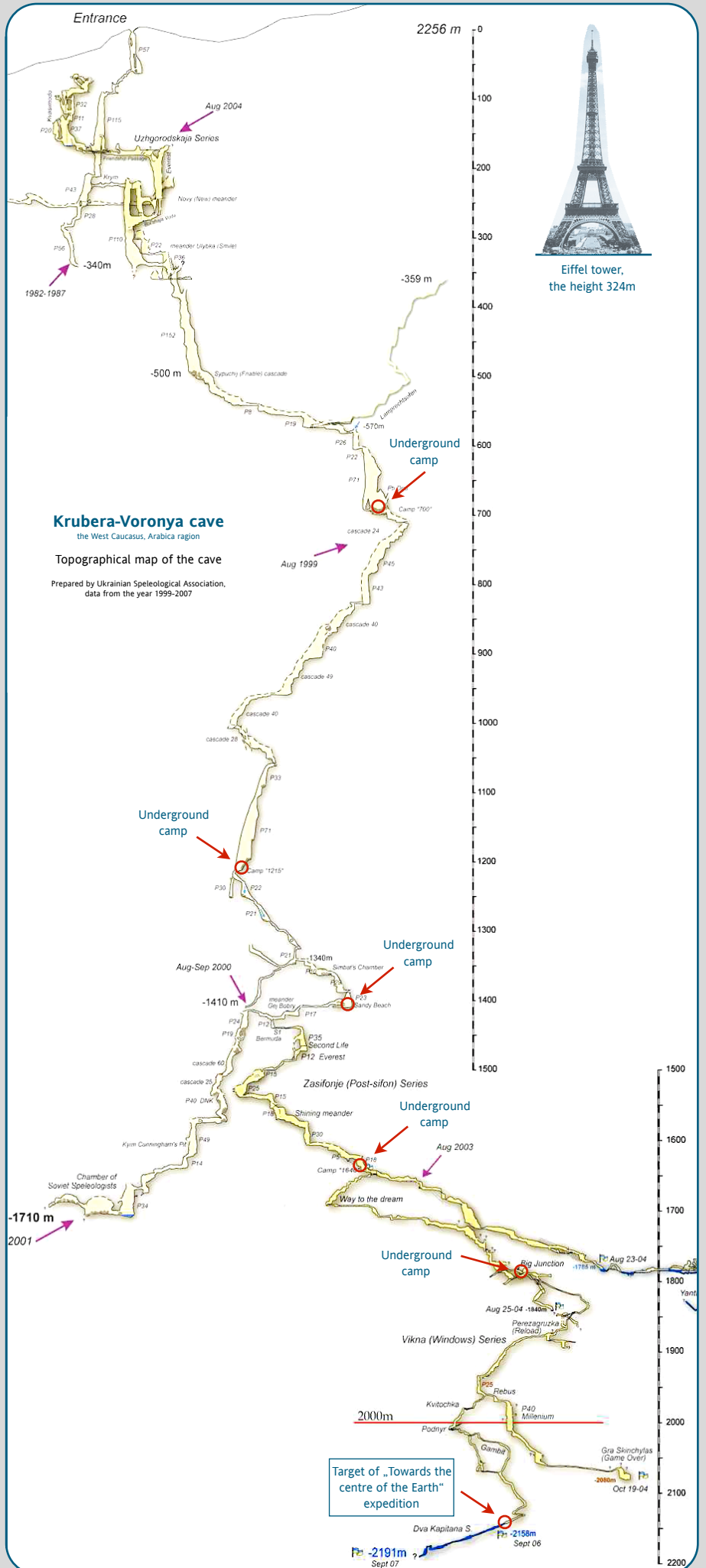


The camp at the depth of -1200 m gives a shelter from cold and water.



At -1500m, flooding is an ever-present danger.

Pictures from National Geographic





The sun is a rare guest on the massif of Arabika

EXPEDITION BUDGET

Preparation for the expedition:

Preparatory activities in 2008	Budget, EUR	Preparatory activities in 2009	Budget, EUR
The courses of diving, Vilnius	3 000	Preparatory expedition, the Caucasus	10 000
Reconnaissance expedition, Abkhazia	3 000	Courses on cave rescue, Ukraine	5 000
Caving school	1 500	Refinement of diving skills, Russia	5 000
Total in 2008	7 500	Total in 2009	20 000

The budget of the preparation for the expedition: 27,500 EUR

Estimated budget of the expedition "Towards the Centre of the Earth":

Subject	Comments	Budget, EUR
1. Travel cost	19 persons, 1,000 EUR per person	19 000
2. Water level gauges	6 items, 500 EUR per item	3 000
3. Caving equipment: ropes, carabiners, bags etc.	1 km of rope, 300 carabiners etc.	2 000
4. Diving equipment	3 sets, 2,000 EUR per set	6 000
5. Photo and video equipment	Protection for the equipment	5 000
6. Communication expenses	Data transfer	500
7. Other costs		1 500
Total		37 000

N.B. The budget of the expedition does not include the preparation costs.

Start of the expedition: First week of August 2009; **End of the expedition:** First week of September 2009;

Duration: 4 weeks

The main sponsors:

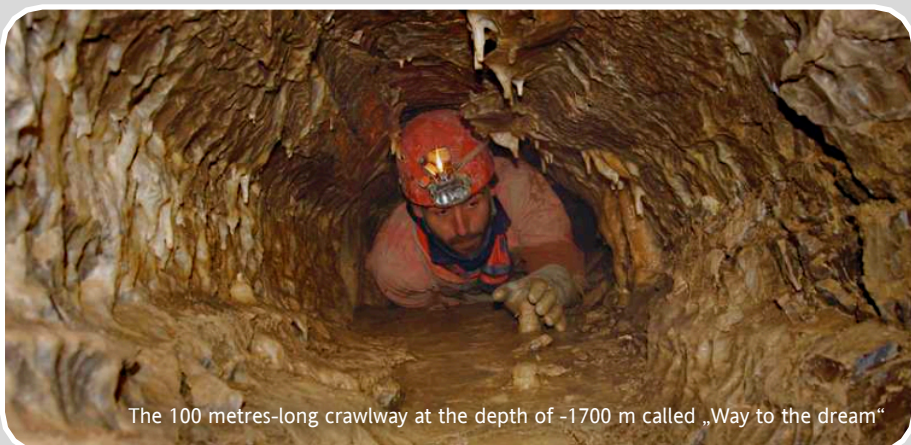
- General sponsor of the expedition: 10,000 EUR;
- Sponsors of the expedition: from 2,000 to 3,000 EUR;
- Informational promoters (mass media);

The logos of the main sponsors will be placed on the expedition equipment. Also the main sponsors will be mentioned and their logos will be shown during advertising campaign of the expedition in mass media.

Other sponsors:

We will be glad to receive support of all kinds: financial, equipment, services.

The logos of all the sponsors will be placed on websites www.speleo.lt (Lithuanian, Russian, English profiles) and www.gilyn.lt (Lithuanian).



The 100 metres-long crawlway at the depth of -1700 m called „Way to the dream“

The impressions of the 2008 expedition



Yuriy Kasyan, the leader of the expedition, is descending to Voronya cave.



The studying of the cave map in the underground camp of -700 m.



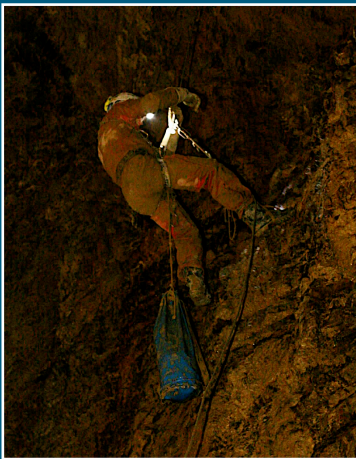
The descent to the chamber of the Soviet Speleologists at -1710 m.

Pictures from speleo.lt and National Geographic

The impressions of the 2008 expedition



The entrance to the deepest cave is located at 2256 m. above the sea level



It is physically demanding to ascend 2000 metres.



Ukrainian diver Genady Samokhin emerges from a siphon in Voronya.

Pictures from speleo.lt and National Geographic

Arabika massif, the West Caucasus



ABOUT THE REGION

The West Caucasus may be called the caver's paradise. In the region there are 4 caves deeper than 1.5 kilometres. These caves are Krubera-Voronya cave (-2191 m), the cave system of Ilyuziya-Mezhonogo-Snezhnaya (-1753 m), the cave Sarma (-1543 m) and the cave of V. Pantyukhin (-1508 m). All these caves are within the top ten deepest caves in the world.

ABOUT VORONYA CAVE

The cave Krubera-Voronya (Rus: Крубера-Воронья) at this moment is the deepest cave in the world.

Its depth is 2191 (±9) metres. It is the only cave in the world deeper than 2 kilometres. The entrance to the cave is 2256 metres above sea level. The cave is located in the mountains of West Caucasus, Gagra range (Abkhazia), Arabika massif. The cave belongs to the cave system of Arabika. The coordinates of the cave are 43° 24' 35" N, 40° 21' 44" E.

Until 1983 Voronya was known by the name of Sibirskaya. In the beginning of 80's the cave was explored to the depth of 340 metres and was forgotten for almost three decades. In 1999 intensive explorations were restarted after the Ukrainian expedition found a new passage on the depth of 230 metres and reached the depth of 700 metres.

History of exploration

2000 August: Team of Ukrainian cavers explored the cave down to -1200 m.

2000 September: Ukrainian Speleological Association (UkrSA) and MTDE teams continued the exploration down to -1440 m.

2001 January: UkrSA and Cavex teams discovered two new passages that led to -1710m.

2003 August: Cavex and Kiev Club team dived the sump at -1410 m (also known as Sump 1), discovered new passages and reached the depth of -1680 m.

2004 July: Cavex team continued the explorations in the new passage until they encountered a new sump at -1775 m.

2004 August: UkrSA team discovered a side passage at -1680 metres that led to another sump at -1840 m.

2004 October: UkrSA team continued the explorations down to -2080 metres. For the first time in the history of speleology this team crossed -2000 metre limit.

2005 July: Cavex team dived the sump at the depth of -1980 m and explored 160 metres down past the sump. This led to a depth of -2140 metres. During this exploration 3 sumps were passed below -2000 metres.

2007 September: A member of UkrSA and an experienced diver Genadiy Samokhin dived 50 metres into the "Two Captains" sump and reached -2191 m, which is the current world depth record.

We invite you to become our sponsor!

Your input to the project will help the team to descend the deepest cave in the world and further the research and exploration of the unique underground world. Please contact us if you would like to learn more.

AENIGMA
CAVING CLUB

Organizer: Caving club „Aenigma“
E-mail: info@speleo.lt
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European Speleological
Federation (FSE)

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