



# Subterranean Wonders



Kateryna Medvedyeva, an enthusiastic speleologist, world champion in cave exploration techniques, invites the readers to join her on a tour of some of those Crimean caves which are accessible to regular tourists with no special cave exploration training.

**H**uman beings are curious creatures. Some climb the mountains, braving the dizzying heights, subzero temperatures, treacherous snow and unfriendly winds; others go high into the air in planes and then jump from these planes with parachutes to enjoy several minutes of unpowered flight; still others go underwater to the silent and scary depths. There are those who look for caves — the deeper the better, and when they discover them, they put on pounds upon pounds for cave exploration gear and equipment, and descend in the bowels of the earth.

Is there a rational answer to the question, why they all do it? I don't know whether there is, though of course, some rational reasoning can be sought and provided to ease the mind of those who regard such "extreme sports" as foolishness.

There is something in us that drives to commit such "foolishness," and that makes us explore the unknown or previously inexperienced. Anyway, you are guaranteed a great adrenalin rush.

### Caves and humans

It is generally believed that at certain times of their development, the early humans lived in caves which offered protection against the inclemency of the weather, and from powerful predators (in some cases, the humans had to compete for cave dwellings with mighty bears and even mightier cave lions).

As the humans were getting brainier and brainier, they learnt how to make more comfortable abodes to live in, and they seem to have lost any interest in caves. But in the nineteenth century, human curiosity, which seems to be fathomless, revived an interest in caves, but not as places for dwelling, but as places to explore — for fun or for scientific reasons.

The French geographer Edouard-Alfred Martel (1859–1938), is believed to have been the founder of speleology in 1890s. His pioneering work on the physiography and accessibility of caves provides the foundation for the science of speleology (Latin *spelum*, from Greek *spe-laión*). He explored the limestone caves of Cevennes and, with others, made descents into previously unknown caves of France, Ireland, Austria, Majorca, and Greece. In 1895 he founded the Society of Speleology in France. For some reason, the French were the first to blaze the trail — literally and metaphorically — in cave ex-

ploration and study. Other nations did not tarry too much to follow their lead (incidentally, Ukrainian speleologists have some impressive speleological achievements to their credit too).

Speleology is now a subdivision of geology, and it has furthered our knowledge in mineralogy, hydrodynamics, archaeology, biology, and many other formal disciplines. Speleologists use many special contrivances and methods in exploring caves. One technique is the use of dye stains to reveal the outlets of complicated

Plateau Karabi in the Crimea, is a mecca for Ukrainian speleologists; the deepest cave in Ukraine, Soldatska (about 500 meters deep), is located there.



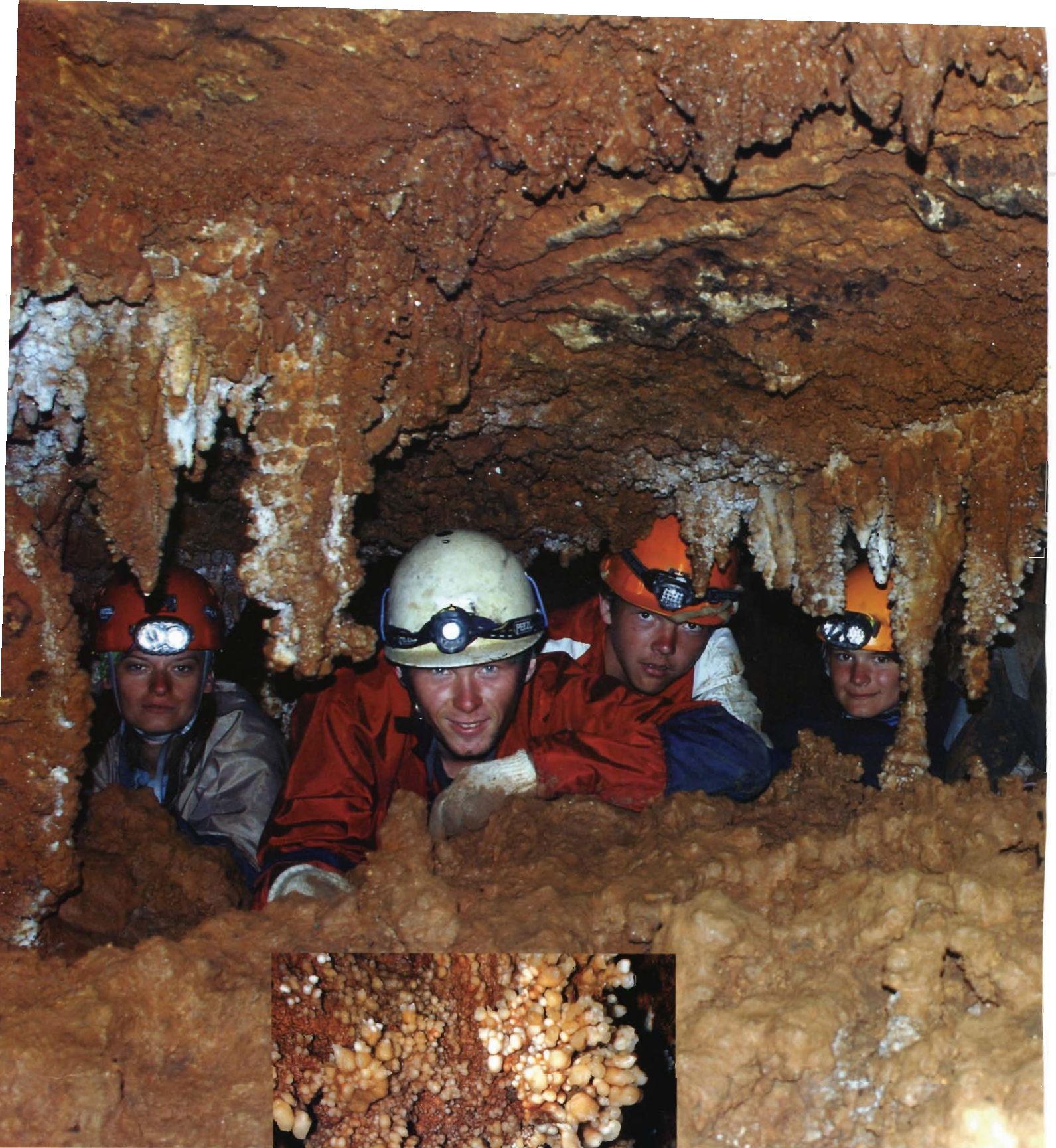
underground-stream systems. Use of special shoes, safety helmets, flexible ladders and cables, and dependable lamps enables present-day speleologists to explore the recesses of large caves much more thoroughly than was formerly possible. Cave explorers occasionally stay underground for days, mapping and studying an extensive area. Much work is done on the chemical solution of limestone, rates of formation of stalagmites and stalactites, the influence of groundwater and hydrologic conditions generally, and on modes of cave development has been accomplished within this discipline. Speleology requires, essentially, the application of geological and hydrological knowledge to problems associated with underground cavern systems. Incidentally, amateur exploration of caves, as a hobby, is usually called spelunking.

### Crimean caves

The caves I suggest you may visit on your trip to the Crimea do not require any special speleological knowledge or any special training, or any equipment or contrivances, except, may be, hard hats. ▶

Speleologists don't really mind looking "not quite clean" after a descent into the bowels of the earth.





In the caves one encounters all kinds of amazing curios, the formation of some of which are not easy to explain.

The Crimean plateau Chatyr Dag is particularly rich in caves — there are more than 160 of them.

There are several places in the Crimea where caves are accessible to tourists. One of such places is situated about ten miles from Simferopol, not far from the highway to Yalta, near the village of Mramorne.

The major tourist attraction there is *Mramorna pechera* — Marble Cave. One



This place in the cave known as *Dvisti rokiv Simferopolyu*, has been nicknamed *Zuby drakona* — A Dragon's Teeth.

med of various minerals deposited from solution by slowly dripping water. A stalactite hangs like an icicle from the ceiling or sides of a cavern. A stalagmite appears like an inverted stalactite, rising from the floor of a cavern. A drop on the tip of a growing stalactite leaves a deposit only around its rim.

Stalagmites have thicker proportions and grow up on the bottom of a cavern from the same drip-water source, the mineral from which is deposited after the water droplet falls across the open space in the rock. Not every stalactite has a complementary stalagmite, and many of the latter may have no stalactite above them. The dominant mineral in such deposits is calcite (calcium carbonate), and the largest displays are formed in caves of limestone and dolomite.

*Mramorna Cave* and its corridors are over three kilometers in length but the tourists are allowed to take a look at about



of its "halls" is the biggest of its kind in the Crimean caves — it is as big as a half of a football pitch! It was discovered and explored in 1989 and it got nicknamed *Perestroika* (*Perebudova* or Restructuring; the 1980s were the time of *perestroika* — economic and political reforms in the Soviet Union; if anything, *perestroika* precipitated the collapse of the Soviet Union). You can join a guided tour that will take

you to the most interesting and picturesque sights and places in the vast underground system of this cave. One of the most stunning sights in the cave is its stalactites and stalagmites which look like fanciful creations of human hands rather than a whimsy of nature.

They grow very slowly, about one millimeter a year and so they take thousands of years to grow to big sizes. They are for-

one kilometer of the cave's wonders. Most of the stalactites have been given names — *Tsarivna* (Czarina), *Zhaba* (Frog or Toad) or *Mamontenya* (Baby Mammoth) to name but a few fancier ones. Probably there is something in the shape of these stalactites that prompted the name-givers to come up with such names.

It is rather chilly and damp in the cave — the temperature is more or less constant

at + 8 or 90 Centigrade, so it may be advisable to wear a jacket on a trip to the cave.

In the vicinity of *Mramorna*, there is another cave which is worth paying a visit to. It is called Emine-Bair-Khosar. In addition to amazing stalactites, the cave boasts crystal-clear underground lakes.

They say that Emine-Bair-Khosar in Tartar means *The Well of a Girl Named Emine*. There is a local legend which has it that once upon a time there was a young woman who was in love and wanted to marry her handsome but poor beloved; she was refused the blessing of her parents — they wanted her to marry a rich man — and seeing no future without her beau, she threw herself into the cave to die there.

One of the stalactites got supposedly named after the desperate girl.

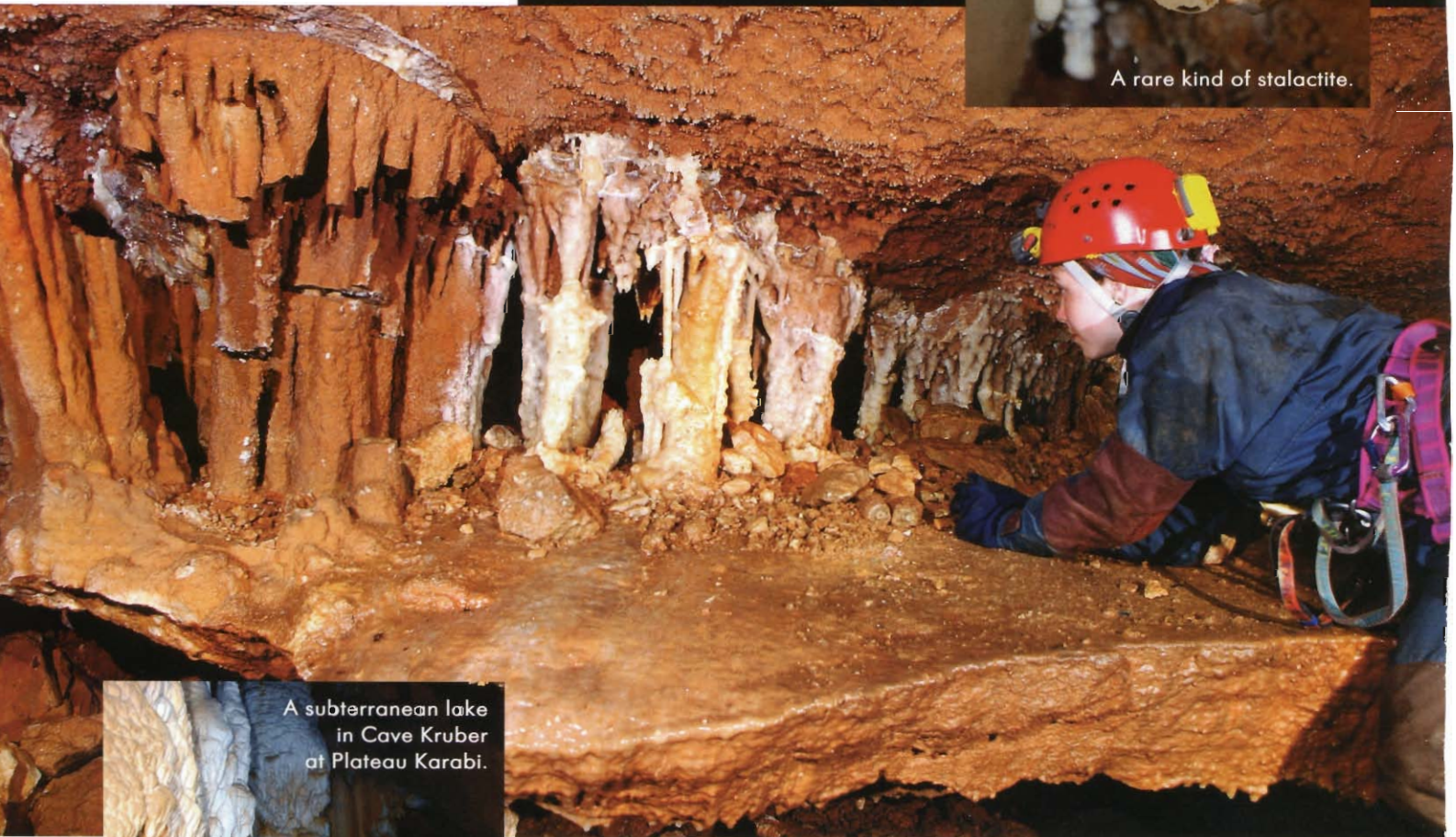
Another cave that is popular with tourists is Kizil Koba (Tartar for Red Cave), which is situated at *Dolhorukivska yayla* 22 kilometers from Simferopol.

The cave has been known since the early nineteenth century and by now all of its sixteen kilometers of corridors and halls have been explored. Only a section of the cave is open for tourists but what they see is impressive enough to constitute a memorable experience.

In addition to being a tourist attraction, caves have been proven to provide some features which can be good for your health. The ionized air, constant temperature and humidity contribute to the improvement of



A rare kind of stalactite.



A subterranean lake in Cave Kruber at Plateau Karabi.

breathing and to doing away with some respiratory problems, provided, of course, you stay in the cave for a prolonged period of time.

Also, the quiet, solitude and silence of the cave are very soothing on the nerves (though, of course, being with a tourist group you are not likely to enjoy the quiet and solitude of the cave).

On a visit to a cave one has to be careful not to damage its fragile environment by littering or trying to break off a piece of stalactite or scrape something from the wall.

Even if a visit to the cave does not turn you into a cave exploration enthusiast, the memory of the visit to a very special world of underground wonders is likely to stay with you for a long time.

The Crimea does offer a wide choice of caves for the curious. Some of the caves are close to the shore so after a dip and a spell of sunbathing, you can freshen up in the subterranean coolness of a cave. ■

*You can learn more about caves in the Crimea at [www.crimea.edu/friends/onix](http://www.crimea.edu/friends/onix) which is the website of the Speleotourism Center Oniks Tour, Simferopol*