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In Croatia, Explorers Make a Deep Discovery

By MARK GLASSMAN

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ASHINGTON, Aug. 16 - Earlier this month, as thousands of Olympians trained to compete in Athens, a small team of Croatian cavers set a new benchmark that went largely unnoticed. They found the world's deepest hole.

There was no medal ceremony awaiting Darko Baksic, the expedition leader, or any of his dusty colleagues when they reached the bottom of the 1,693-foot pit. Just a long climb back up.

The pit, which is at the back of a dark cave in the Velebit mountains, southwest of Zagreb, is about 217 feet deeper than the former record holder in Austria known as Hollenhohle.

Sophisticated mapping has left very little room for dumb luck in surface exploration. But maps do not chart what lies beneath the land or the ocean floor.

"I'm not at all surprised that we're still making these sorts of discoveries," said Lisa R. Gaddis, the program chief of the United States Geological Survey's astrogeology team, said, "I think we have perhaps a better global picture of some other terrestrial planets, like Mars, than we have of some of the more remote areas on Earth."

When it comes to caves, noted David E. Smith, chief of NASA's Laboratory for Terrestrial Physics, "we can't see anything from space." He added, "You can't really say very much, if anything at all, about below the surface."

The new find is not the deepest cave on Earth. That title still belongs to the Krubera Cave in Abkhazia, which descends 5,130 feet (almost a mile), albeit more steadily, without such a sharp drop.

Cavers define a hole, or pit, as a straight vertical drop, sometimes interrupted by ledges, that is too steep to walk down.



Darko Baksic

While exploring a cave in Croatia, spelunkers discovered the world's deepest hole, a pit nearly 1,700 feet deep.

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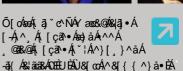
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"Until the era of modern speleology, pits often stopped incursions into caves," according to The Atlas of the Great Caves of the World. Today, most pits are explored by shimmying down ropes.

Mr. Baksic's team, which is now converting its field drawings into precise maps for publication, found the record-setting hole while exploring another cavern nearby.

"People don't tend to go and search for these things," Mr. Smith said. "They tend to find them more or less by accident, while exploring."

The underworld remains a kind of last frontier for explorers looking for new discoveries. "It takes a special kind of person who is willing to walk, crawl a mile underground in pitch black," Mr. Smith said.

Cave explorers are among the last amateurs. "For me, it's like a profession," said Andrej Stroj, a member of the team that found the record-setting abyss in Croatia, "but for others, it's mostly a hobby."

Jim Chester, a fellow of the Explorers Club in New York, received the National Speleological Society's highest award for cave exploration last year for his work charting caverns in Montana. But caving does not pay his bills.

"All the stuff I do with caves is on the weekends or vacation," said Mr. Chester, 60. During the week, he is a postman.

The caving society's official list of the world's deepest pits is maintained by Bob Gulden, a Maryland engineer. Mr. Gulden is a member of a local caving club called the Gangsta Mappers, a network of guerrilla cartographers who remap previously explored caves, but with more care and in greater detail.

"Every cave they remap," Mr. Gulden said, "they always find new passage."

Cavers do not have the technology available to scientists like Mr. Smith or Ms. Gaddis.

"You've got to physically do it," Mr. Gulden said. Ground-penetrating radar could detect the presence of an underground cavity, he said, but that equipment is too expensive and impractical for ordinary cavers.

Cavers rely on old tricks to find new caves, like hunting for depressions in the snow or tracing the passage of water through a mountain. Mr. Chester said his group occasionally takes aerial scouting trips in the winter to search for "smoking entrances," or pockets of steam rising from the snow that could indicate warm air rising through a cave system.

"We do not know what the deepest cave on this planet is," Mr. Chester said, "and unless there is some big breakthrough, like a CAT scan for the Earth, we may never know."

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