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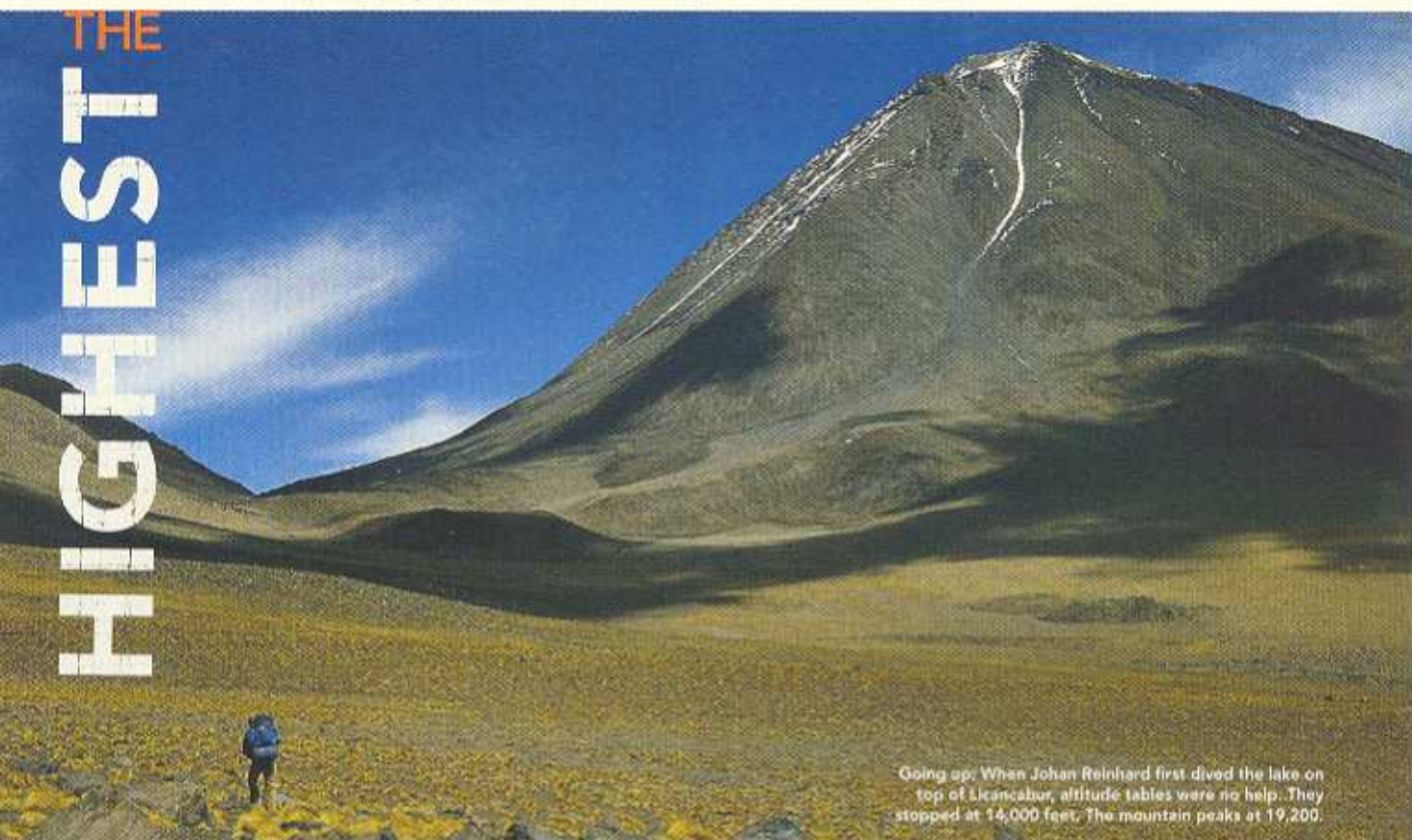
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THE HIGHEST



Going up: When Johan Reinhard first dived the lake on top of Licancabur, altitude tables were no help. They stopped at 14,000 feet. The mountain peaks at 19,200.

Licancabur

STRICTLY SPEAKING, AS A BODY OF WATER, the crater lake atop Licancabur volcano in Chile possesses all the scuba excitement of a YMCA lap pool. The lake's surface area isn't much bigger than that, its depth reaches a meager 20 feet, and unless you're a fan of zooplankton, there are no gape-worthy critters finning about in there. Still, it's hard to ignore the one damn-impressive feature about this place—Licancabur's water-filled crater sits high above the clouds at 19,200 feet, making it the loftiest dive site on record.

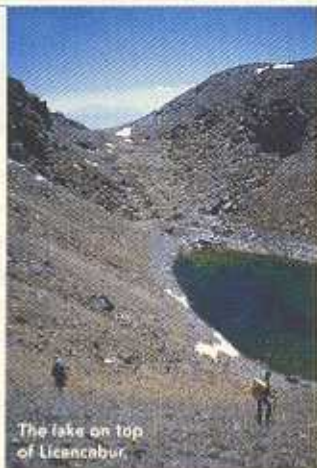
It earned that status in the early 1980s when Johan Reinhard, an explorer in residence for the National Geographic Society and a real-life Indiana Jones, scaled the volcano in his ongoing search for high-altitude Inca sacred sites. The mountain-climbing, scuba-diving archaeologist—noted particularly for his 1995 discovery at 20,000-plus feet of an Inca mummy dubbed the "Inca Ice Maiden"—had read about ruins along the rim of Licancabur, and he'd heard murmurings about something even more enticing. "There was this legend about a gold statue in the lake," he says, explaining that the Incas often made offerings into Andean lakes to appease various gods.

In April 1980, Reinhard summited the snow-covered mountain and saw the frozen lake for the first time. He returned during the summer in 1981 and made several free dives in the 40-degree water, although the oxygen-deprived mountain air made reaching the shallowish bottom a Herculean task, even for Reinhard, who free-dives to 50 feet in the ocean. Nevertheless, the lung-burning plunges

revealed brilliant clouds of red, yellow and brown zooplankton, a discovery that, along with the possibility of cultural artifacts, prompted Reinhard and four others to plot a return a year later with scuba gear and cameras.

Beginning at 4,900 feet, the team made three grueling trips up Licancabur's steep, rocky slopes, schlepping dry suits, regulators, lead weights and a rubber dinghy. They also hauled tanks of pure oxygen, as Reinhard figured they could enjoy the benefits the gas provided at altitude without running the risk of toxicity, given the shallow depth of the lake. Dive tables at the time provided bottom times only for dives up to 14,000 feet of altitude, so the team extrapolated the numbers to 19,200. Over four days, they made 11 dives,

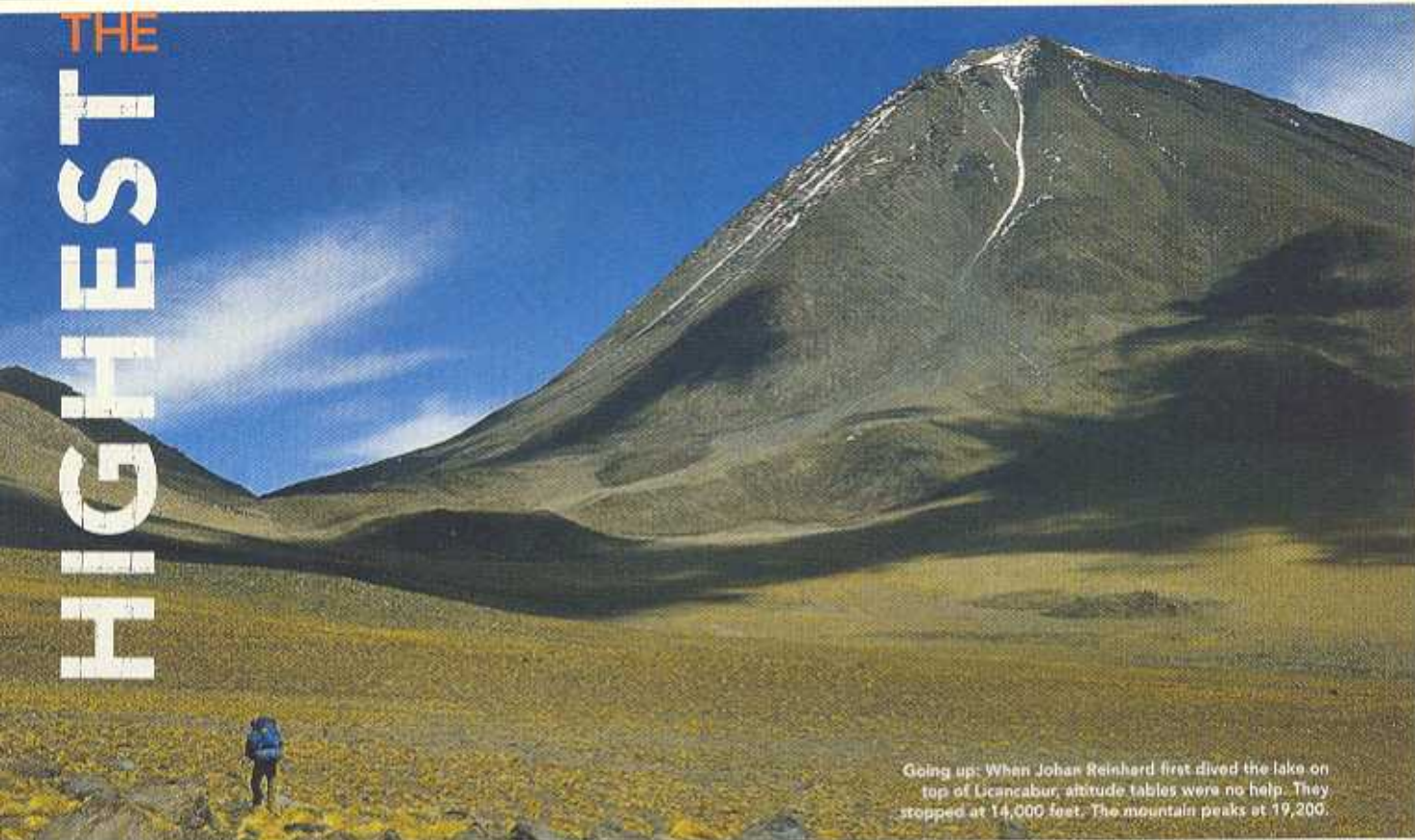
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The lake on top of Licancabur.

JOHAN REINHARD (ABOVE & LEFT)

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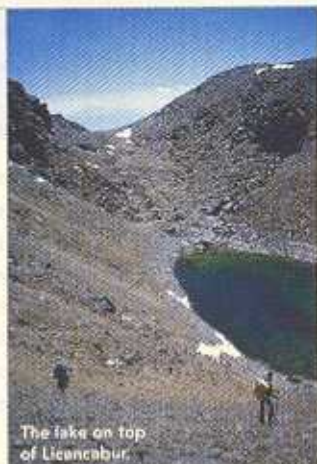
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methodically scouring the lake bottom with a metal detector. Alas, unlike his many gold and silver discoveries in other high Andean lakes, Reinhard found no submerged artifacts. Still, like any discovery-bound scientist, he did find satisfaction in one important, if obscure, find—a new species of zooplankton, carefully collected, sealed in formaldehyde and shuttled down the mountain.

Reinhard insists he climbs and dives only in pursuit of science, and while he reckons he'll dive Licancabur again to continue his research, he doesn't see himself diving above that. "I don't know of a higher body of water," he says, "let alone one with Inca ruins near it."

When Phillips and Meacham first strapped on tanks and dropped into a cenote, or sinkhole, deep in the jungle in 1998, they were hopeful. The Yucatan's porous limestone is pocked with more than 3,000 cenotes, many leading to subterranean complexes, and by 1998 other teams had already explored two vast systems nearby, Nohoch Nah Chich and Dos Ojos. At the bottom of Cenote Esmeralda, Phillips and Meacham discovered something tantalizing—a giant, fossil-littered thoroughfare they later named "The Mayan Skyway," 100 feet wide and 30 feet tall, with side passages branching off everywhere. Subsequently, over the course of several expeditions, the team pushed



Cenote Odyssey is just one access point to the 66 mapped miles of Ox Bel Ha, the world's longest flooded cave.

"WE STARTED DOING THIS FOR THE THRILL OF EXPLORATION," SAYS MEACHAM. "BUT NOW THERE'S A DIFFERENT CHALLENGE, AND IT'S HARD, TRYING TO PRESERVE SOMETHING THAT PEOPLE CAN'T SEE."

Ox Bel Ha

ON A MAP, THE FLOODED TUNNELS of Ox Bel Ha (*ohsh-bel-ha*) bear a frightening resemblance to Medusa's frenzied do—passages snaking wildly in all directions, looping, twisting and crisscrossing. For 66 miles they weave a tangled knot beneath the jungles and beaches of Mexico's Yucatan Peninsula, transporting fresh water from the interior to the sea and forming the world's longest underwater cave system. And divers have seen only half of it. "We've explored a fraction, maybe 45 percent," says Sam Meacham, co-founder of the eight-person team that literally put Ox Bel Ha on the map. "If that's the case, it's the second-longest cave in the world, wet or dry, after Mammoth Cave."

Despite its monster size, Ox Bel Ha has not consumed any of the explorers who've dared to map it, a remarkable feat given cave diving's reputation as the world's most dangerous sport (431 deaths since the 1960s, a significant number considering the relatively few practitioners). In cave diving, panic leads to death, and it's easy to panic in dark, water-filled crevices deep beneath the earth's surface. "It requires an almost hypnotic state to keep you focused," says co-founder Bil Phillips, whose team has made 350 dives in the system over six years. "You must move slowly. The introduction of adrenaline would be a killer. Fortunately, we've got an experienced group."

After 350 dives in the system, explorer Bil Phillips is still obsessed with Ox Bel Ha. To date, divers have mapped just 45 percent of the passages.



deeper and laid survey line, with individuals sometimes using six tanks to make seven-hour, two-and-a-half-mile dives. They later incorporated rebreathers and underwater scooters. For the most part, the experience has been scare-free, although there have been moments. "One day we were standing around a cenote, and we heard screams for help," recalls Fred Devos. "One of our divers was cruising across the cenote behind a scooter with a crocodile on her heels. I picked up a log, but I'm thinking, 'What am I going to do with a log?'" Fortunately, the croc finally lost interest.

These days the edgiest thing about Ox Bel Ha isn't its size or the