



JASON GULLEY / UNIS

Ken Mankoff, a University of California researcher, ascends an ice cave at Hansbreen this summer after a day of gathering data for a new type of 3D map of sub-glacial conduits.

## Look *inside* the cave

Researchers go high-tech spelunking to map glaciers' secrets

By MARK SABBATINI  
Editor

Leave it science to reveal all that stuff Plato wrote about the cave and fire is nonsense.

Turns out looking inside the cave reveals great knowledge, at least if you've got flash bulbs and 21st century 3D digital mapping technology instead of fire to create shadows. The philosopher just forgot to include ice among all of his objects.

Researchers descending into ice caves near Longyearbyen and Hornsund this summer gathered more than 5,000 images and 33 billion distance measurements to help them reveal little-known secrets of glaciers' inner hydrological systems. By studying draining and

**Donnish dino:** "Predator X" gets official, less cool, name

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other activities, they hope to learn more about sub-glacial activities both observable and inaccessible deep inside the ice.

"The objectives of this project were to test new mapping techniques and develop high-resolution 3D maps of sub-glacial conduits," wrote Kenneth Mankoff, a University of California researcher who authored the study.

Participants used a low-cost, short-range, high-resolution 3D camera known as a Kinect

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## Auction turns trash to treasure



MARK SABBATINI / ICEPEOPLE

Svalbard Lt. Gov. Lars Erik Alfheim, right, brings the gavel down on a sale during a fundraising auction Sunday at the Radisson Blu Polar Hotel.

Annual fundraiser reaps 443,000 kroner with items ranging from garbage to pristine expeditions

By MARK SABBATINI  
Editor

For 7,000 kroner it's possible to buy an aging snowmobile, take three round-trip flights to Oslo or get weekly pizza delivery for a year. Or you could spend three days picking up other people's trash.

The latter was the preference of a winning bidder

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# Unease about the east

After lots of talk and changes, proposed environmental plan still has wide range of groups upset

By MARK SABBATINI  
Editor

If a perfect compromise leaves everyone upset about something, the proposal for updating environmental restrictions in East Svalbard is a masterpiece document.

Objections by organizations ranging from science institutions to tour operators are being voiced as the deadline for comments about the plan ended this month. In addition to conflicting concerns about whether restrictions are too severe or lenient, there's also widespread dissatisfaction with the process followed by government officials.

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### Another inartful screwup

Due to our inability to distinguish an auction from a lottery, an article in some early editions of the Oct. 9 *Icepeople* listed an excursion with artist Olaf Storø as an item at last Sunday's fundraising auction. The group tour-and-painting excursion is among the items being raffled off next week for the same fundraiser. We're truly sorry (and apologize), and in an attempt to amend note tickets for the drawing are available at Svalbardbutikken through Saturday.

## Who's to blame and how to express your wrath

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## Copyright stuff

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## Corrections policy

When we screw up you'll know about it – on the front page. One of the big complaints about newspapers is they tend to bury corrections and clarifications deep inside where few people who read the original article see them. If we need to fix something, an alert box on the front page will state what story is in error and where the full correction is printed.

## Submitting material

Letters, columns, photos and other material are welcome, but we can't offer pay for published items since nobody here is getting paid at the moment. Submissions in electronic form (text, Word documents, JPEGs, etc.) are highly preferred, although typing and/or scanning of items will be considered on a per-case basis. We reserve the right to edit submissions for length, clarity, accuracy, libel and other reasons, but we will also make every reasonable effort to contact the author about any changes prior to publication.

## A lasting memorial, at last



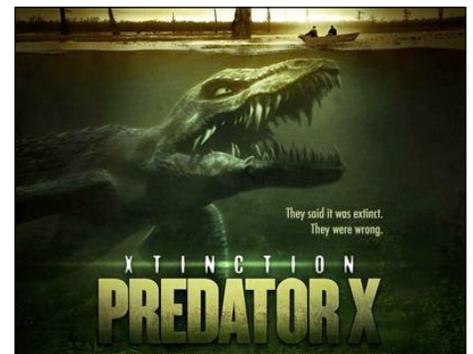
COURTESY OF NICO WIDERBERG

A memorial ceremony is scheduled at 1:30 p.m. Saturday at Svalbard Church to unveil a sculpture for Johannes Buø, 14, one of the youngest of 69 people killed in the July 22, 2011, attacks at an island youth camp on Utøya. The sculpture, shown above, was designed by Oslo artist Nico Widerberg and offered to the 56 municipalities where victims resided. Some cities rejecting the sculpture, citing varying concerns such as the undemocratic process in crafting them, but Buø's parents and Longyearbyen leaders said a permanent tribute to the teen who spent the last three years of his life in Svalbard is welcome. The municipal council approved the sculpture in June, but the unveiling was delayed until locals returned from summer activities elsewhere.

## Icesheet

*Random bits of the week's weirdness:*

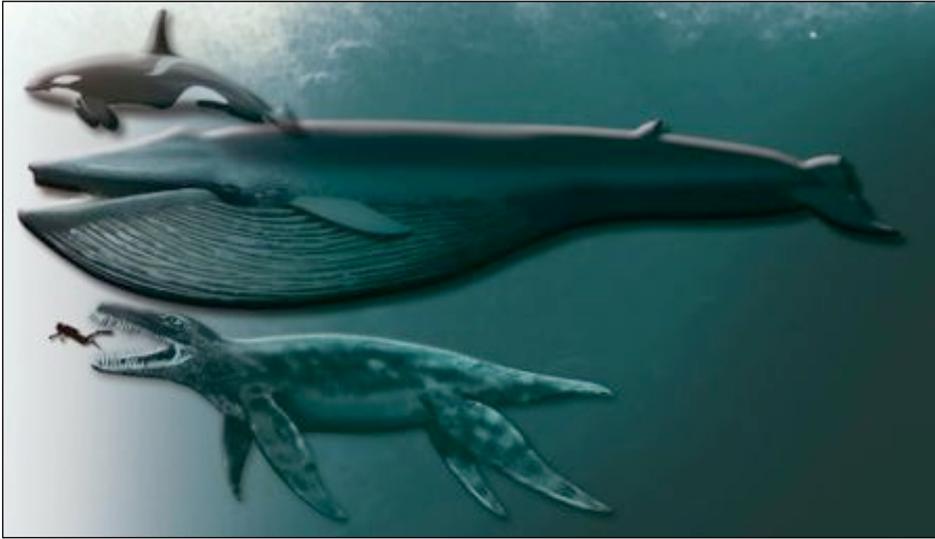
Remember the crushing disappointment of "some assembly required/batteries not included" when opening shiny new toys on Christmas morning as a kid? Grownups are getting to relive a megadose of it as **4G mobile broadband service is finally available to the proletariat 17 months after officially arriving in Longyearbyen, but almost nobody can actually use it because there aren't any cell phones compatible with it.** Right now the only devices able to receive it are a couple of Android tablet models and computers with 4G cards, according to *IT Avisen*. The iPhone 5 can receive 4G, but not at signal rate used in Norway. Some compatible Samsung and Nokia phones are expected to hit the market by the end of the year, so at least it's an opportunity to put more shiny battery-operated things on the Christmas list ... You know you're holding a killer issue of this recyclable bathroom paper because it features not one, but two pictures of local prehistoric mascot "Predator X" devouring people. We thought we were keeping up on the dirt with this recently uncovered fossil, so it was dismaying to see **one of the latest stories by an actual newspaper mentions the 2010 feature film "Xtinction: Predator X," which takes a double potshot at Svalbard by making it about the evils of genetic engineering.** The plot is about a woman who returns home to Louisiana after 20 years because her father is mysteriously missing and finds others acting suspiciously evil, including an ex-boyfriend buying up all the nearby swamp-



CATERS NEWS AGENCY

**Killer vacation, dude:** Maybe this is what the Brits were really sweating when they told people Svalbard's waters are too dangerous for cruisers.

land. Our heroine, Laura, starts leading boat tours to save the precious mosquito haven and on the first trip, to quote the plot summary, encounters "a cloned Pliosaur dinosaur, affectionately known as Predator X... Laura must save her tour from a prehistoric predator that is supposed to be extinct!" Shockingly, there aren't any reviews at the aggregate site Rotten Tomatoes, but a German horror film site actually finds "the story quite exciting and entertaining and the actors are implemented well." The only other critique we found quickly, also in German, calls it "trashy entertainment" and rates it five points out of ten, but gives it a seven on the "beer scale." It would, of course, be immoral to mention there seems to be little effort to police websites offering illegal screenings.



ATLANTIC PRODUCTIONS

An illustration compares a plesiosaur nicknamed "Predator X," bottom, to other life forms. The marine reptile discovered during a fossil excavation in Svalbard is now known as *Pliosaurus Funkei*.

## 'Predator X' gets less vicious name

*Famous sea reptile discovered in Svalbard now known by scientists as Pliosaurus Funkei*

Frankly, as a horror movie title, it stinks.

"Predator X," a Svalbard inhabitant believed to be the most fearsome marine creature of prehistoric times, was bestowed this week with the official name of *Pliosaurus Funkei*. The 14-meter plesiosaur gained worldwide fame in 2006 (and topped the

"tending now" list at Yahoo! this week) when paleontologists revealed its two-meter skull had a bite four times as powerful as *Tyrannosaurus Rex*.

The new species was one of nearly 40 specimens unveiled by Oslo paleontologist Jørn Hurum during nine of years of summer excavations on Spitsbergen that concluded this year.

**There's more! Visit [www.icepeople.net](http://www.icepeople.net) for the complete story.**

## Crawling the easy part of cave study

**SPENDING, from page 1**

that provided the billions of distance measurements, plus photographs that can be mapped in 3D with software.

"By 'calibrating' the GPR reflectors to known conduit morphologies, this study will help interpret GPR data from glaciers where conduit systems are not directly accessible (such as deep portions of the Greenland Ice Sheet)," wrote Jason Gulley, a Ph.D. student at The University Centre in Svalbard participating in the project.

The data and images will be used to simulate sub-glacier flows and to compare the Kinect mapping techniques with other methods such as hand-mapping, Mankoff wrote.

Participants at Hansbreen rappelled down a 25-meter deep moulin, where by crawling and walking they were able to access about 500 me-

ters of sub-glacier conduits, he noted. Demanding as that was while carrying high-tech gear, the biggest challenge was logistics.

"The planned boat transport was cancelled after the grant was awarded, and we could not increase the travel budget to cover the cost of a helicopter," Mankoff wrote. "We used external funds to pay for transport on the ship *Fram*."

"One other difficulty was the lack of lighting in the cave, making photography difficult. We overcame this with multiple headlamps and the camera flash."

Mankoff's visit was funded with an Arctic Field Grant from the Svalbard Science Foundation. Applications for 2013 grants are being accepted until Nov 28. Details are at <http://svalbardscienceforum.no/pages/arktistipend.htm>.

**There's more! Visit [www.icepeople.net](http://www.icepeople.net) for the complete story.**

### HEADLINES STOLEN FROM **SVALBARDPOSTEN** VERDENS NORDLIGSTE AVIS

#### **Snowmobile operators make big changes after big losses**

Consecutive losing years for some Longyearbyen snowmobile tour operators are resulting in management changes, plans to hire fewer employees and accusations some workers aren't getting paid promptly. The industry has been hurt by things such as a lengthy global recession and a 2010 volcano eruption that disrupted European air traffic for weeks. Svalbard Snøscooterutleie lost about 1.7 million kroner during the winter ending in 2010 and 1.6 million kroner in 2011, with preliminary figures for 2012 about the same, said John-Einar Lockert, the company's president. The company has received default notices on bills and some workers told *Svalbardposten* they have not been paid on time. Lockert acknowledged there were difficulties paying debts this summer, but said "everyone here has been paid." Also struggling is Ingeniør G. Paulsen, owned by Spitsbergen Travel, which lost 387,000 kroner during the 2010 season and 2.1 million kroner in 2011. A new manager was hired in April as the company ponders changes such more short tours for thrifty travelers and expanding retail products to help overcome a drop in snowmobile prices.

#### **Arctic marine technology classes at UNIS are red hot**

Interest in Arctic marine technology studies at The University Centre in Svalbard has grown geometrically, especially in recent years, due to rapidly expanding development in the region. Six students applied for courses in 1996, but this year more than 100 people applied for 60 available spaces. "We offer what the (oil) industry is looking for and we have noticed a huge craving for doctoral students," said Sveinung Løset, a professor in the department. "Many get jobs even before they finish studying."

#### **Burglary at Fruene unsolved**

The Svalbard governor's office is ending its investigation into an August burglary at Fruene after tips and video from a nearby camera failed to produce a suspect. A weekend's worth of cash was taken overnight on a Sunday, apparently by one or more persons with a key to the business.

## Weather forecast for Longyearbyen

Wednesday	Thursday	Friday	Saturday
Cloudy. NE winds to 22 km/h. High 1C (-3C wind chill), low -1C (-5C wind chill).	Cloudy. N winds to 22 km/h. High 1C (-3C wind chill), low -2C (-6C wind chill).	Partly cloudy. NW winds to 25 km/h. High -2C (-6C wind chill), low -3C (-7C wind chill).	Partly cloudy. Variable winds to 22 km/h. High -3C (-7C wind chill), low -6C (-9C wind chill).
Sunrise 9:48a; sunset 3:35p	Sunrise 9:59a; sunset 3:24p	Sunrise 10:10a; sunset 3:12p	Sunrise 10:21a; sunset 3:00p
<b>Extended forecast:</b> Sunday, p. cloudy, -6C (-9C), -7C (-10C), light 4:13h; Monday, cloudy, -5C (-9C), -7C (-11C), light 3:45h; Tuesday, snow, -2C (-7C), -6C (-11C), light 3:13h; Wednesday, cloudy, -5C (-14C), -11C (-17C), light 2:36h			
<b>Data provided by storm.no</b>			



MARK SABBATINI / ICEPEOPLE

Ero Stiberg Hansen, 4, attempts to scale part of the climbing tower at Kullungen kindergarten during an open day Saturday that was part of a month-long series of events to raise funds for Amnesty International's efforts to fight human rights abuses in foreign countries.

## Trips reap big bucks at auction

### BIDDING, from page 1

bidder during an annual fundraising auction Sunday at the Radisson Blu Polar Hotel. Naturally, it was motivated by a charitable heart.

"It's a gift for (my spouse)," said the bidder, who asked to remain anonymous so as not to ruin the Christmas surprise. "Last year I think it sold for 8,000 kroner, so this is a bargain."

It's not just any trashy job, of course, but a three-day trip with a group to the north tip of Spitsbergen for the governor's annual coastal cleanup. Most of the volunteers are selected in a lottery, so bidding was fierce for two spots auctioned off, with the second earning 6,000 kroner.

The trips weren't the only trash-to-treasure items at the auction. An art sculpture made of trash by local kindergarten students sold for 2,000 kroner. But it was the items involving travel that got the largest bids by far, with a 12-

day cruise around Spitsbergen with the Norwegian Polar Institute getting 75,000 kroner, an overnight trip to Ny-Ålesund for 14 earning 60,000 kroner and a day cruise for 35 aboard the governor's ship raising 50,000 kroner.

The 93 items sold for a total of 443,000 kroner, said Lene Villumsen, who is presiding over a month of fundraising events tied to the annual NRK telethon Sunday. This year's funds are donated to Amnesty International to aid their effort to combat human rights violations aboard.

Last year's auction raised 522,000 kroner, but that included a 100,000 kroner donation from Store Norske, she said. The mining company, going through a prolonged period of turmoil and financial struggle, abstained this year from the contribution it usually makes.

**There's more! Visit [www.icepeople.net](http://www.icepeople.net) for the complete story.**

## East Svalbard plan still has many unhappy

### REVISIONS, from page 1

Not surprisingly for groups so large and diverse, there's little chance of making them all happy when Norway's Ministry of the Environment issues its final revision plan.

The East Svalbard Management Plan sets regulations for a 77,000-square kilometer region established as a reserve in 1973. The proposed revisions establish five zones with various levels of restrictions. Some, for instance, are open to researchers but not tourists, while others are entirely off-limits for environmental or heritage reasons.

The main change in the new revision increases the areas where all human traffic is banned during warmer months.

New tourism restrictions are unsurprisingly getting objections from the Association of Arctic Expedition Cruise Operators, which in its final comments state a "lack of definition of 'reference area,' the low quality of important base

data, conflicts of roles and the lack of impartiality for some major stakeholders are continuing to disturb the process and the management plan as such. Some changes are needed to rebuild confidence in the management plan as well as the authorities."

The Norwegian Polar Institute, on the other hand, is heavily critical in its lengthy assessment about the relaxing of some visitor restrictions. The original revision proposed all but 16 locations be off-limits, which was altered when the tourism industry fiercely protested.

The governor's office stated in an updated revision that "traffic rules should not be stricter than necessary to protect natural values," but the NPI argues the "precautionary principle" mandated in the 1973 regulations isn't being adequately followed. Also, like AECO, the NPI states process is prevailing over practicality.

**There's more! Visit [www.icepeople.net](http://www.icepeople.net) for the complete story.**

## What's up

### Oct. 17

4-7 p.m.: Open day at Longyearbyen School with sales of student-made food and crafts. Benefit for NRK telethon.

6 p.m.: Movie: "Bachelorette," U.S. comedy, ages 11 and up. Kulturhuset.

### Oct. 19-21

Fifth anniversary celebration with special food and concerts. Svalbar.

### Oct. 20

1:30 p.m.: Unveiling ceremony for sculpture honoring Utøya victim Johannes Buø. Svalbard Church.

### Oct. 21

3-6 p.m.: Door-to-door requests for funds to support Amnesty International during annual NRK telethon.

6 p.m.: Movie: "Bachelorette," U.S. comedy, ages 11 and up. Kulturhuset.

8 p.m.: Movie: "Savages," U.S. drama/thriller, ages 15 and up. Kulturhuset.

### Oct. 22

11 a.m. Environmental and Industrial Committee meeting. Næringsbygget 3, Newtontoppen room.

8 p.m.: Trivia quiz. Kulturhuset cafe.

### Oct. 23

1 p.m.: Administration Committee meeting. Næringsbygget 3, Newtontoppen room.

### Oct. 24

6 p.m.: Movie: "Paranormal Activity 4," U.S. thriller/horror, ages 15 and up. Kulturhuset.

### Oct. 25-28

10th annual Dark Season Blues festival. Details at [svalbardblues.no](http://svalbardblues.no).

### Oct. 26

8 p.m.: Movie: "James Bond: Skyfall," U.S./U.K. action, no age limit specified. Kulturhuset.

### Oct. 27

4 p.m.: LAN data party for youths ages 13-20. Kulturhuset.

## What's online

**Icepeople.net** provides daily updates of news about Svalbard and the world's polar regions, plus extras for articles from the print edition. Among the latest news:

- *U.K.: Scientists, help Arctic oil industry*
- *Is Iceland an Arctic coastal nation?*
- *All-year Arctic sea route seen in 2013*
- *Horrors! Film shot in Antarctica a first*