VIDEO FROM ARCTIC - 'EXTREME FIELD WORK' IS TOUGH SAY SCIENTISTS BUT EXPEDITION BRINGING REWARDS SAY ARCTIC TEAM

TV NEWS DESKS

We have received recent footage from the Ice Base of the Catlin Arctic Survey of the scientists showing them working in the harsh winter/spring conditions. There are some interview clips and footage of the conditions and work they are doing. The material was sent using a special uplink system allowing us to shoot and transmit video despite the high latitude which is normally beyond the reach of broadcast satellite coverage.

The file - titled EASTER SCIENCE SURVEY2010 can be downloaded from http://filestore.indigopapa.tv/CatlinArcticSurvey2010

It is free to us but please provide an on-screen credit to 'Catlin Arctic Survey'

A STORY AND SHOTLIST IS ATTACHED

For more information please call Rod Macrae on 0781 402 9819 or email rod@catlinarcicsurvey.com

CATLIN arctic survey

File: EASTER_SCIENCE_SURVEY2010
STORY
http://filestore.indigopapa.tv/CatlinArcticSurvey2010

Footage is released by Catlin Arctic Survey for broadcast and news purposes. Please provide an on-screen credit: "Catlin Arctic Survey video"

ALL FOOTAGE FILMED AT THE ICE BASE ON THE FLOATING SEA ICE IN THE HIGH ARCTIC AT 78° 42' 11.2"N, 104° 47' 43.5"W
File containing Interviews with scientists and footage of their research expedition at a floating ice base on the Arctic Ocean

STORY:
'EXTREME FIELD WORK' IS HARD BUT BRINGING REWARDS SAY ARCTIC MISSION TEAM

An international team of scientists are currently experiencing extreme conditions with temperatures frequently below minus 35° Celsius whilst they live and work on the floating sea ice of the Arctic Ocean. In video footage released today, they say that despite the inhospitable environment, they are delighted with what they are achieving. In the first three weeks of the expedition they have been buffeted by harsh storms and battled to maintain a programme that is looking into how CO2 is impacting on the Arctic Ocean.

Projections of the level of CO2 absorbed by the ocean suggest a significant change in future which could have serious affects on marine life around the world, but the Arctic Ocean is thought to be a bellwether for the global changes.

Their work with Catlin Arctic Survey is only possible because of the unique collaboration with explorers, whose skills can keep them safe as they battle against the harshness of early spring weather and the risk of polar bears at an Ice Base.

Speaking at the Ice Base Dr. Laura Edwards from Bangor University said: "The Arctic Ocean has experienced some large changes over recent years: reduction is sea ice and warming temperatures. So looking at Ocean Acidification in this area may give us information about what might happen in future as these changes continue to occur."

The team of four scientists is living in a tented camp on the sea ice where luxuries extend to nothing more than shelter from the wind, stoves to keep warm and a support team to provide food. They are sleeping in small small tents.

"Scientists told us there is very little data on carbon dioxide from the Arctic in winter and wanted to know a good deal more as well as see how this changes through the very rapid springtime" says Survey Director and explorer Pen Hadow. "So we have created a facility this season that enables them to come and work in a place that would be otherwise close to impossible by any other means.

With a tent placed over the sampling point, the team has been able to cast a line with bottles attached to take water samples at different levels under the ice. With a special net they can trawl through the hole to trap tiny marine creatures.

Surrounded by equipment at the tented laboratory, Dr. Ceri Lewis, University of Exeter said

"So we've just got back from sampling at our ice hole. This time we were looking for zooplankton and we found this beautiful krill. She's absolutely stunning. It looks like she's breeding some eggs and this is exactly what we are looking for. And we have also found some *'copopods'*. We're going to be trying to identify the different species we found and set up some experiments. We want to expose them to the predicted pH at the end of the century andmeasure their response. It's a way of finding out how the creatures under the ice will respond to ocean acidification."

Ceri Lewis is one of three women scientists in the team. Dr. Helen Findlay from Plymouth Marine Laboratory and Dr. Laura Edwards from Bangor University are working closely with her in an intensive.

Dr. Tim Cullingford, Catlin Arctic Survey's Science Manager says "At this stage of the season, phytoplankton appear dormant due to the cold, and this may explain why zooplankton, that would otherwise rise to the surface to feed on the phytoplankton, are locating fairly deep."

"It is such an important time of year for this group of scientists. They are going to be able to observe the marine system beneath the ice coming alive from a winter state through the very rapid Arctic springtime."

The research in their tented Arctic lab will be followed by more analysis after the expedition ends in late April. ENDS

SHOT LIST:

1. Scientist Laura Edwards talks inside the Laboratory ten during a storm about the work they are doing. Interview clip. Dr. Laura Edwards of Bangor University, Wales saying*: "The Arctic Ocean has experienced some large changes over recent years: reduction is sea ice and warming temperatures. So looking at Ocean Acidification in this area may give us information about what might happen in future as these changes continue to occur."*

"We're looking at carbon dioxide fluxes within the atmosphere which we're taking measurements of. We're also taking water samples to look at the chemistry of the seawater. We're doing 'trawls' to look at the biology within the seawater. We're doing ice cores to look at the concentration of CO2 within the ice. And hopefully with all that data we can also look at 'flux' of CO2 between the sea and the atmosphere or vice verse and ultimately to create some kind of picture of what's happening within the arctic ocean."

"You've got very cold temperatures and strong winds and the opportunity given to us by the Catlin Arctic Survey to do this research at this time of year is fantastic."

Filmed 02.04.10
Duration: 1'08"

2. Flying into the Ice Base - view from the air of the newly-established Ice Base as the DC-3 Basler makes a fly-by of the site prior to landing.
Filmed 15.03.10
Duration 11"

4. Scientists walking out to the sampling location 1.5 kilometres from the Ice Base.
Filmed 15.03.10

Duration 33"

5. Interview Clip: Dr. Glenn Cooper, Department of Fisheries and Oceans at the Institute of Ocean Sciences in Sydney, British Columbia saying *"We just returned from drilling the sample hole. It's probably the most physical day of the trip so far. It was extremely demanding, but we got it….and that's great. And it's huge and we're now in action."*

6. Inside tent over sampling hole through the sea ice. Dr. Ceri Lewis and Dr. Glenn Cooper working next to the winch. Camera looks down into deep hole.
Filmed 15.03.10
Duration 20"

7. Dr. Helen Findlay works with Glenn Cooper to draw off captured seawater samples
Filmed 18.03.10
Duration 15"

8. Team walking back to camp through a wind storm
Filmed 18.03.10
Duration 22"

9. Dr. Ceri Lewis (Exeter University) talks about the first samples and proudly shows off the first marine animal to be brought back to camp.
Saying *"We got samples and it went really well. Smooth as clockwork. We've got some proper data now."*
Filmed 18.03.10
Duration 13"

10. Ceri Lewis with a krill in a tank. Talks about what they are doing and how such samples will help their research. Saying: *"So we've just got back from sampling at our ice hole. This time we were looking for zooplankton and we found this beautiful krill. She's absolutely stunning. It looks like she's breeding some eggs and this is exactly what we are looking for. And we have also found some 'copopods'. We're going to be trying to identify the different species we found and set up some experiments. We want to expose them to the predicted pH at the end of the century and measure their response. It's a way of finding out how the creatures under the ice will respond to ocean acidification."*
Filmed 28.03.10
Duration 32"

11. Dr. Helen Findlay and Dr. Ceri Lewis recovering samples from a small hole through the ice they use to keep samples fresh outside their Laboratory Tent.
Filmed 28.03.10
Duration 28"

12. Working with samples inside the laboratory tent. Samples need to be fresh for most studies, so care is taken to make sure they are kept in good condition.
Filmed 28.03.10
Duration 27"

13. Dr. Ceri Lewis talking about experiments with marine life they have sampled to test the impact of CO2 absorbed by the seawater from the atmosphere.
Interview Clips saying*: "We're running a series of experiments here at the Ice Base with the copepods we've been collecting with the zooplankton 'trawls'. What we're doing is running ocean acidification experiments to see how the copepods will respond to the predicted acidification of the*

oceans. What we're doing is using some of the IPCC predictions as to what the acidification rates will be.

"We're using 1 rate for 100 years time and another pH prediction for 300 years time. There are others but they're further into the future so they're less accurate so we're sticking to these two for now."
Filmed 30.03.10
Duration 33"

More information about the expedition can be seen at
www.catlinarcticsurvey.com