Catlin Seaview Survey and NOAA Announce Collaboration to Record and Reveal Current State of America's National Marine Sanctuaries

Collaboration Starts with a Mission in Florida Keys' National Marine Sanctuary – Surveying the Degraded Billion Dollar Reefs and Leading Restoration Efforts

Surveying the Coral Restoration Foundation's coral nursery in Florida Keys National Marine Sanctuary with the SVII camera.
[photo credit: ONMS/Catlin Seaview Survey]

KEY LARGO, Fla. (August 13, 2014) – The Catlin Seaview Survey, a pioneering scientific expedition to study and reveal the world's coral reefs, sponsored by international insurer Catlin Group Limited, today announced a unique collaboration with the National Oceanographic and Atmospheric Administration's (NOAA's) Office of National Marine Sanctuaries (ONMS) to record and reveal America's marine sanctuaries.

The first joint expedition (operating out of Florida International University's (FIU) Aquarius Reef Base facility near Key Largo) focuses on surveying the reefs of the Florida Keys National Marine Sanctuary (FKNMS). It involves both Catlin Seaview Survey scientists from the University of Queensland in Australia and ONMS scientists.

"By bringing new technology to help with the mapping and recovery initiatives in Florida, we can help fast track the study and understanding of coral reef decline and recovery in the area," said Richard Vevers, project director of the Catlin Seaview Survey. "Florida is a leading region for reef restoration initiatives, which will become increasingly critical to combat the increasing impacts of climate change worldwide."

Select members of NOAA's Office of National Marine Sanctuaries (ONMS) staff are the first individuals outside of the Catlin Seaview Survey team to be trained to use the Survey equipment. This training, led by the scientific team from the Global Change Institute at The University of Queensland, allows for a major extension of the underwater surveying capacity.

“We are excited to begin a long and mutually beneficial partnership with the Catlin Seaview Survey,” says Mitchell Tartt, Chief of the Conservation Science Division of the ONMS. “Their unique technology will allow us to gather environmental information on the state of resources in national marine sanctuaries and document changes to these over time. The resulting images are also exceptional tools to engage the public and demonstrate what a national marine sanctuary looks like once you go below the ocean’s surface.”

With only five percent of climate change science focused on oceans, it is widely agreed that there is a substantial need for more research into the state of marine ecosystems. Changes to ocean environments could have many consequences, including a potential increase in tropical cyclones. These risks are especially relevant to Florida and the Southeastern US. Florida’s coral reefs offer protection from erosion and storm surges, reducing potential damage in surrounding areas.

Understanding how oceans are changing is vital for insurers such as Catlin to help clients in coastal regions better manage their risks.

“As a leading insurer and reinsurer, we believe that further factual research into climate change is essential to the insurance industry’s ability to continue helping our clients manage risks in the years to come,” says Stephen Catlin, chief executive of Catlin Group Limited. “The impartial scientific data gathered by Catlin-sponsored research programs aim to strengthen our understanding of how changes in the oceans may impact the rest of the planet.”

To mark the significance of the survey, Sylvia Earle, a world-leading marine conservationist and former chief scientist at NOAA, joined the team for the opportunity to dive with the survey’s revolutionary 360-degree panoramic camera, the SVII. Sylvia has been a supporter of the Catlin Seaview Survey since its inception and has been an irreplaceable mentor to the team.

Scaling Ocean Science

The ONMS and the Catlin Seaview Survey are continuing to collaborate on expeditions to other national marine sanctuaries (the Florida Keys National Marine Sanctuary is one of 14 protected marine areas that make up the National Marine Sanctuary system). The next expedition will be conducted in the National Marine Sanctuary of American Samoa in September 2014.

In addition to groups and individuals highlighted above, the FKNMS survey expedition also includes significant contributions from:

- The Global Change Institute (GCI) at The University of Queensland in Australia, the chief scientific partner for the Catlin Seaview Survey
- Professor Ove Hoegh-Guldberg, chief scientist for the Catlin Seaview Survey and Director of GCI
- Google
- Scripps Institution of Oceanography at UC San Diego
- The International Union for Conservation of Nature (IUCN)
- Florida International University’s Aquarius Reef Base facility

As well as training ONMS staff, the mission will significantly build on the Catlin Global Reef Record. Launched in September 2013, the Catlin Global Reef Record is a dynamic visual database that enables scientists around the world to collaborate on understanding changes to coral reefs and related marine environments resulting from over-exploitation, pollution and

climate change. The 360-degree photography collected during the survey in the FKNMS is also being made available soon to the public worldwide through Street View in Google Maps.

The Florida Equation

In recent years Florida has emerged as one of the world's leading regions for coral recovery initiatives, making it a perfect proving ground to combine the Catlin Seaview Survey's marine technology and methods with NOAA's long track record of expertise and experience in science and management of ocean environments.

In terms of scientific potential, Florida is unique because it is the only state in the continental United States to have extensive shallow coral reef formations near its coasts – it has the third largest barrier reef ecosystem in the world. The filming and research is being conducted under a FKNMS research permit, which allows the team to work on the seafloor and in protected zones.

Beyond science, the Florida Keys National Marine Sanctuary is a center for strong local economies and has economic value reaching far beyond the corals. Millions of residents and vacationers enjoy scuba diving, snorkelling, and fishing on south Florida's coral reefs. According to ONMS, tourism in the area accounts for 58 percent of the local economy and $2.3 billion in annual sales. Without healthy coral reefs, many of the more than 33,000 jobs in the Florida Keys, which are supported by ocean recreation and tourism, could be affected.

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Images:
High-resolution photographs are available for download at a Zenfolio site:
http://catlinseaviewsurvey.zenfolio.com/florida

Google Maps 360 degree views of Florida survey available here:
https://www.google.com/maps/views/profile/108517873237526057594?gl=us

B-Roll:
High-resolution videos are available for download here:
https://www.hightail.com/download/ZUcxMFhnYTIxUUJ1a3NUQw



Additional Information

Climate Change and Oceans

Globally, coral reefs are facing major challenges due to overfishing, pollution, ocean warming and acidification. As a result, coral reefs are deteriorating at the rate of one to two percent per year. The Caribbean region alone has seen the most dramatic decline, with roughly 80 percent of coral coverage lost over the past 30 years.

“Coral reefs, like those of the Florida Keys, are under threat from a range of local and global stressors. The recent IPCC report on the oceans has highlighted that these changes are likely to worsen over the coming decades,” said Professor Ove Hoegh-Guldberg, Coordinating Lead Author of the Oceans Chapter in the latest report. “It is important that we understand these human derived stresses, so that we can respond by better targeting management.”

About NOAA’s Office of National Marine Sanctuaries

NOAA's Office of National Marine Sanctuaries serves as trustee for a system of 14 marine protected areas, encompassing more than 170,000 square miles of America's ocean and Great Lakes waters. Through active research, management, and public engagement, national marine sanctuaries sustain healthy environments that are the foundation for thriving communities and stable economies.

NOAA's mission is to understand and predict changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources.

About the Catlin Seaview Survey

The Catlin Seaview Survey is a pioneering scientific expedition revealing the impact of environmental changes on the world’s coral reefs. The Survey aims to significantly expand the data available to scientists about global coral reef systems. The Catlin Seaview Survey is currently focusing on the Coral Triangle, in the Asia-Pacific region, having previously completed groundbreaking scientific studies of the Great Barrier Reef and the Caribbean. The images are captured in order to provided a vital scientific baseline study of the world’s coral reefs. These images monitor change, reveal it to the world through Street View in Google Maps - in partnership with Google. More information about the Catlin Seaview Survey can be found here: http://www.catlinseaviewsurvey.com

You can also engage with the Catlin Seaview Survey and its 3.5 million followers on Google+ here: https://plus.google.com/+CatlinSeaviewSurvey/posts

About Catlin

Catlin Group Limited is a global specialty property/casualty insurer and reinsurer operating worldwide through six underwriting hubs: London, Bermuda, the United States, Asia-Pacific, Europe and Canada. The Catlin Seaview Survey is the second major scientific project sponsored by Catlin. The Catlin Arctic Survey (2009-2011) investigated the impact of environmental changes in the Arctic. Catlin believes that insurers must take a leading role in improving the understanding of potential changes to our environment, changes that could

affect how risks are managed in the future. Catlin's contribution is to sponsor independent, impartial research that is freely distributed to the world's scientific community. http://www.catlin.com/

About The Global Change Institute

The Global Change Institute at The University of Queensland (UQ), Australia, was established in 2010 as an independent source of game-changing research, ideas and advice for addressing the challenges of global change. GCI advances discovery, develops solutions and advocates responses that meet the challenges presented by climate change, technological innovation and population change. UQ is one of the world's premier teaching and research institutions. It is consistently ranked in the top 100 in four independent global rankings. With more than 48,000 students and 6,500 staff, UQ's teaching is informed by research, and spans six faculties and eight research institutes. www.gci.uq.edu.au

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