Google
Developers

Underwater Streetview

Google Maps and Catlin Seaview Survey

Jenifer Austin Foulkes, Google Ocean Manager

Richard Vevers, Director, Catlin Seaview Survey

http://youtu.
be/7syWPIZt9B4

Our goal: make Google Maps more comprehensive

Launched Underwater Street View

Google™ Official Blog

Insights from Googlers into our products, technology and the Google culture

Search

Dive into the Great Barrier Reef with the first underwater panoramas in Google Maps

September 25, 2012 774

Today we're adding the very first underwater panoramic images to Google Maps, the next step in our quest to provide people with the most comprehensive, accurate and usable map of the world. With these vibrant and stunning photos you don't have to be a scuba diver—or even know how to swim—to explore and experience six of the ocean's most incredible living coral reefs. Now, anyone can become the next virtual Jacques Cousteau and dive with sea turtles, fish and manta rays in Australia, the Philippines and Hawaii.

Get up close and personal with sea turtles at Heron Island, Great Barrier Reef

Starting today, you can use Google Maps to find a sea turtle swimming among a school of fish, follow a manta ray and experience the reef at sunset—just as I did on my first dive in the

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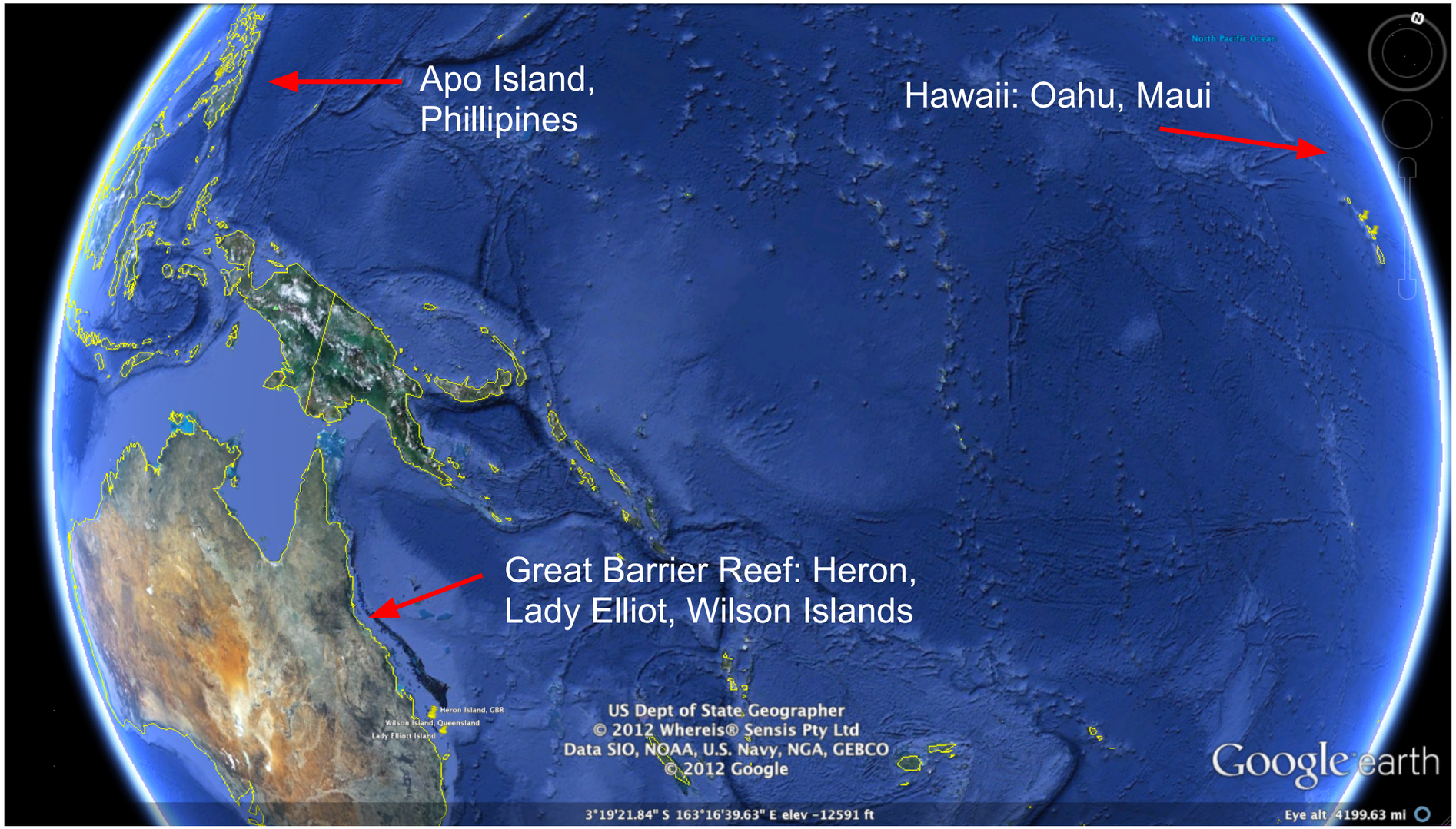
Taking you from your home to a turtle's home

maps.google.com/preview

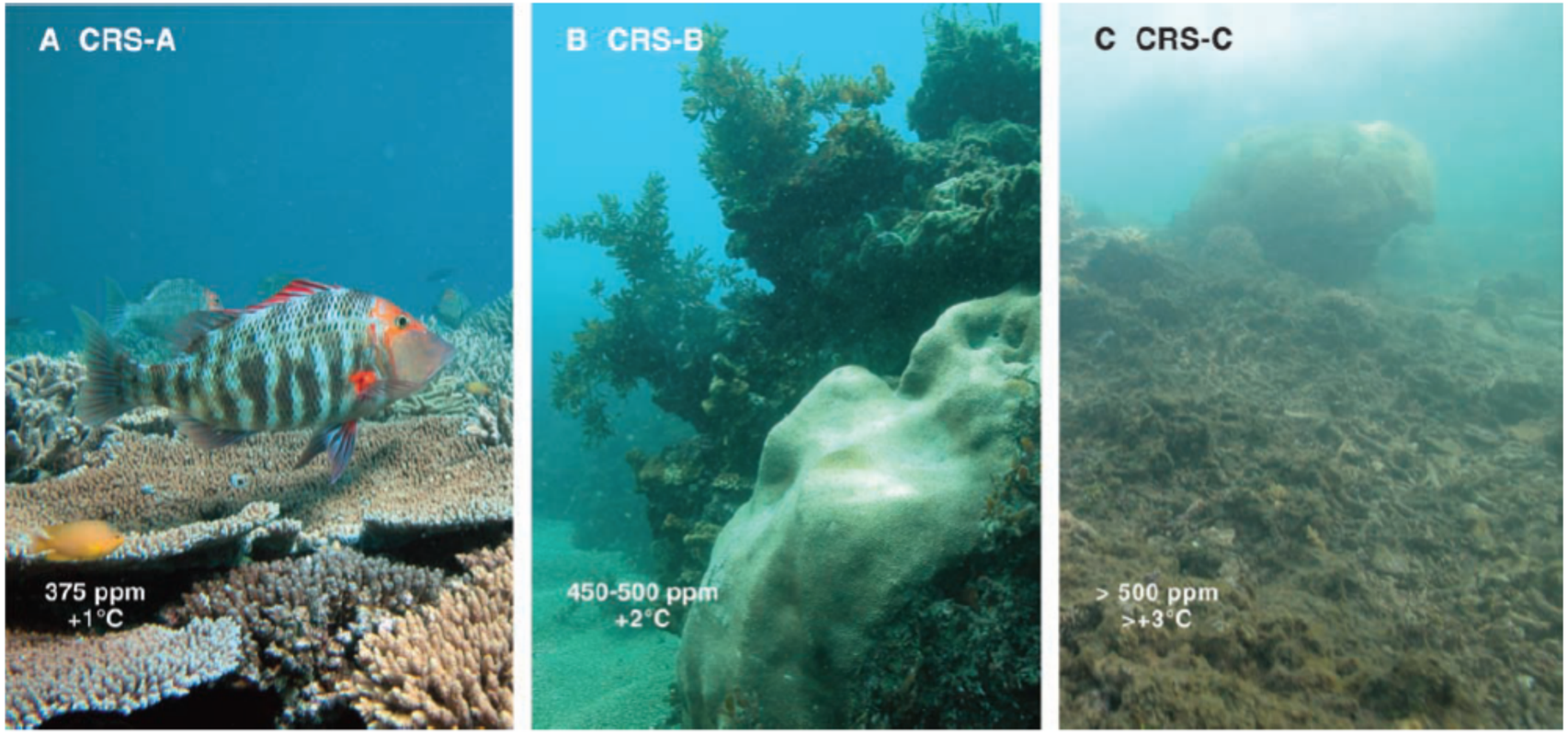
Just the beginning...six places so far



Reefs at risk

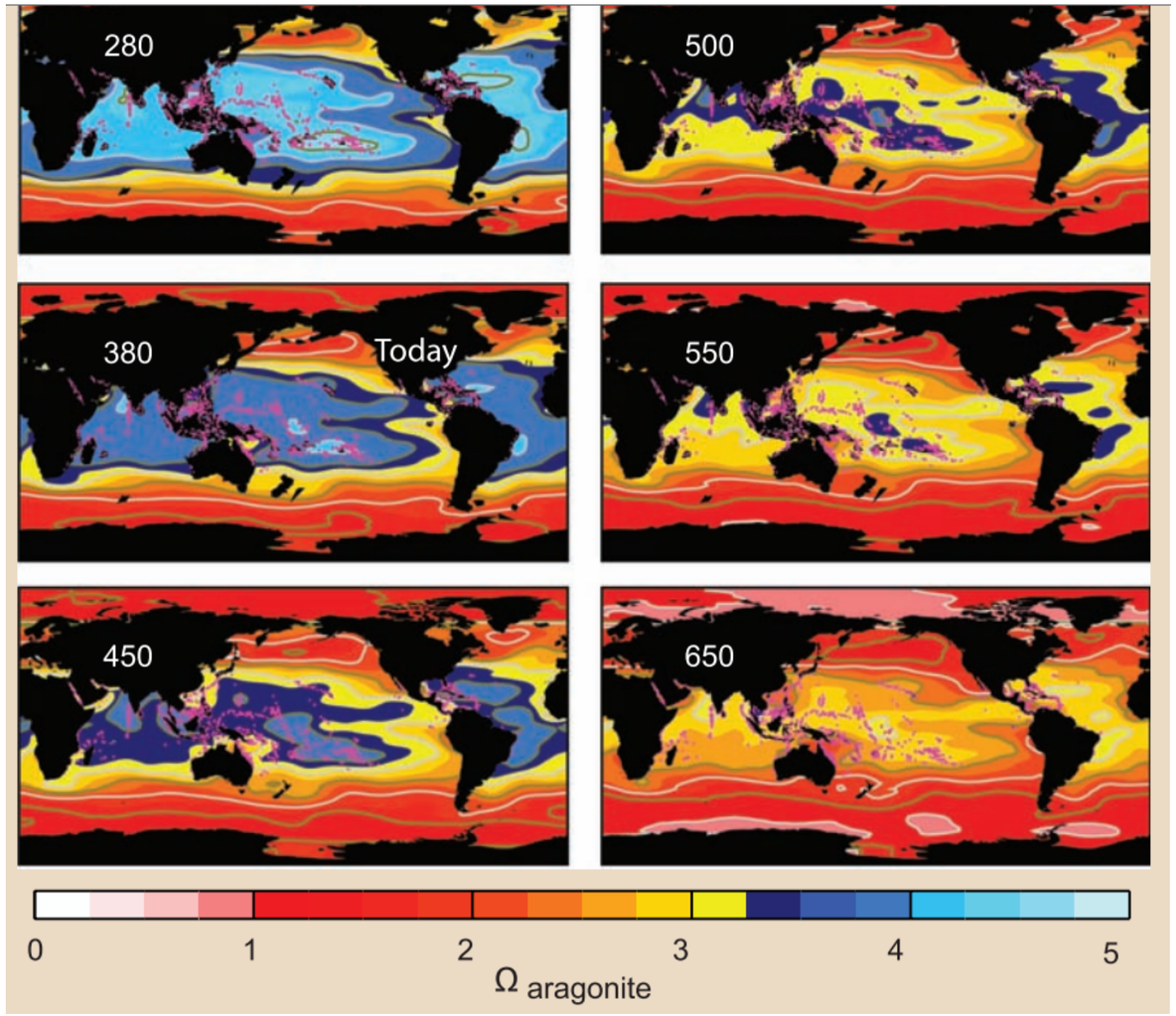
- 90% of the big fish are gone.
- Half of corals are gone. Ocean is warmer, more acidic.
- Major coral reef death expected to continue.

Most corals could die in next 40 years



O. Hoegh-Guldberg et al. "Coral Reefs Under Rapid Climate Change and Ocean Acidification." Science. 2007.

Most coral could die in next 40 years



O. Hoegh-Guldberg et al. "Coral Reefs Under Rapid Climate Change and Ocean Acidification." Science. 2007.

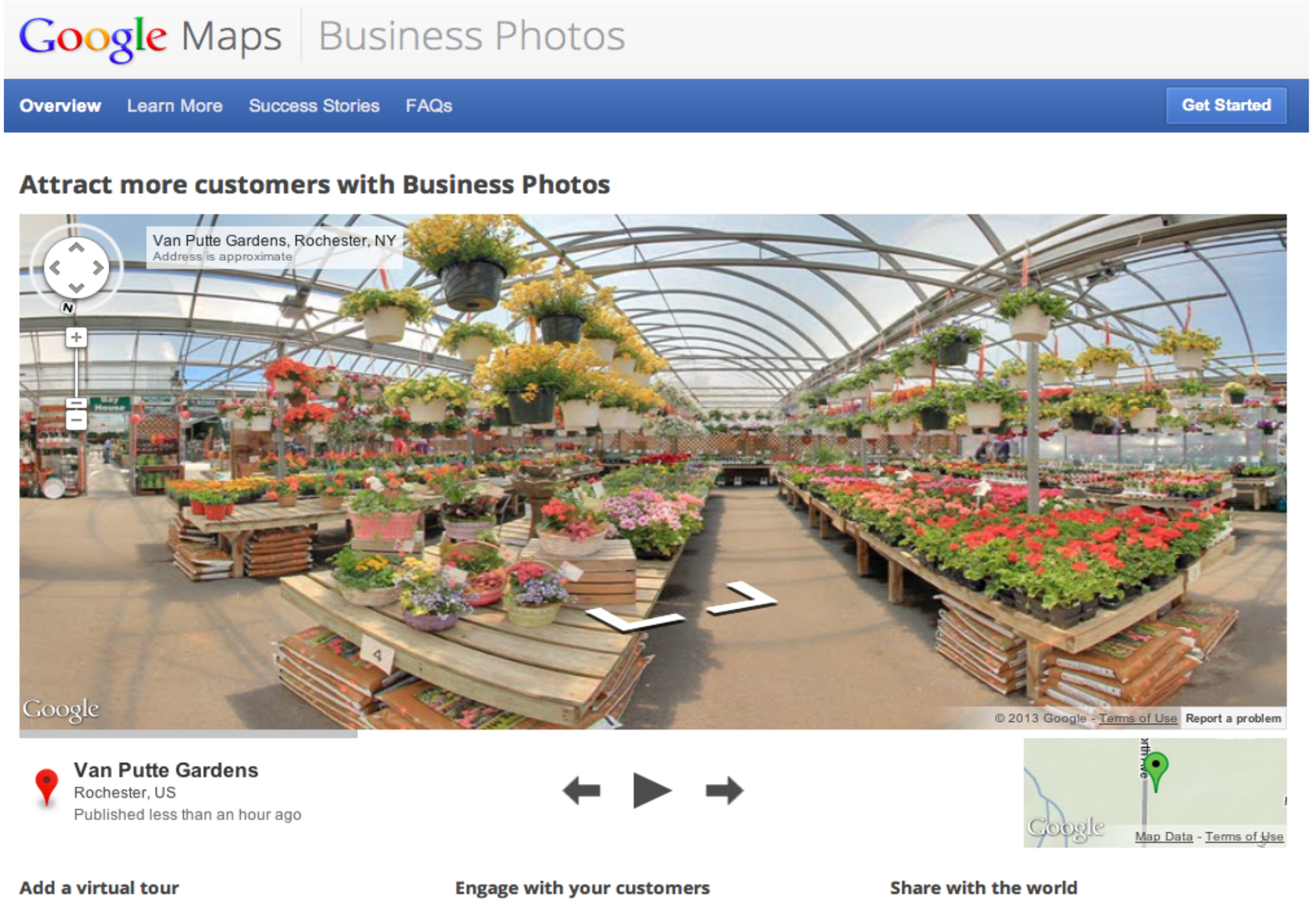
This is the critical decade for our oceans

Revealing the reefs of the world

Images taken every 3 seconds - 2km per dive

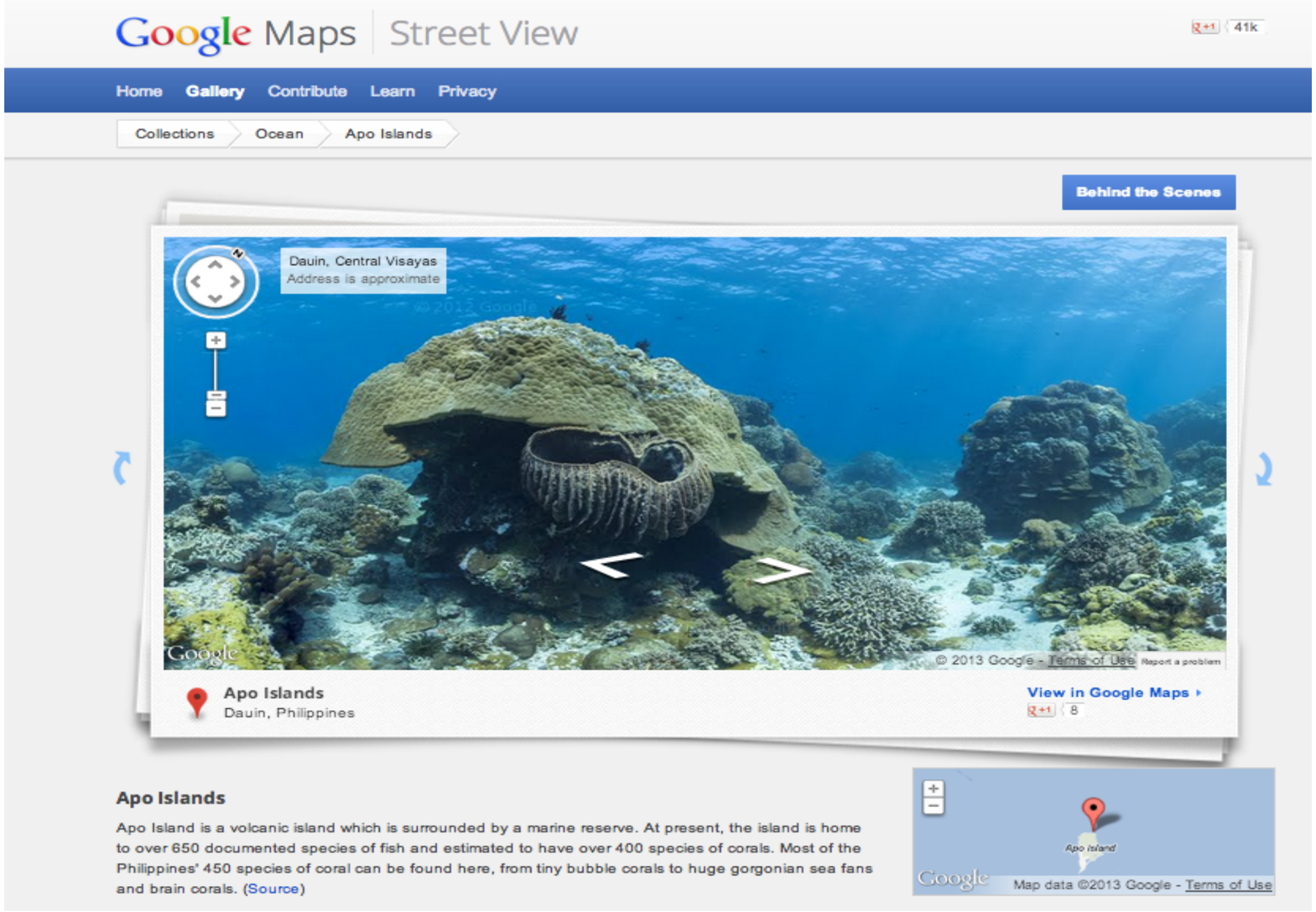
Immersive 'virtual dive' experience

Add imagery with the Business Photos tool



http://maps.google.com/businessphotos

Embed Street View api on your own website



maps.google.com/ocean

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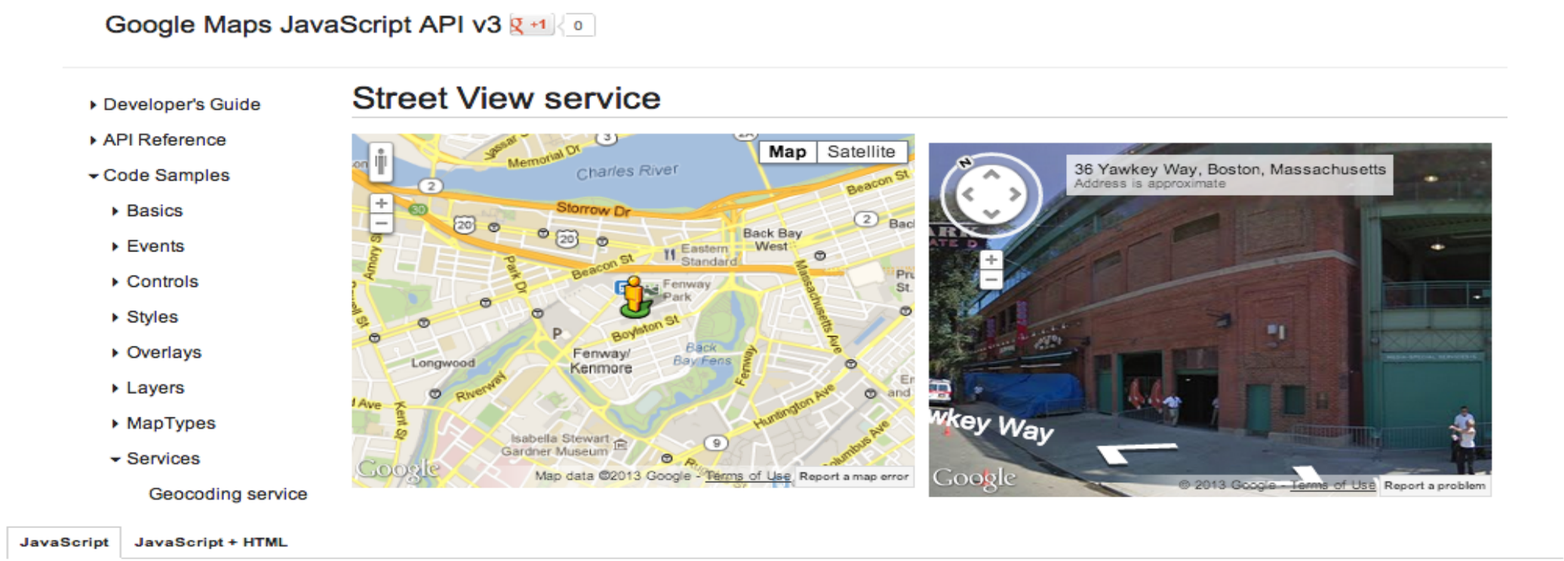


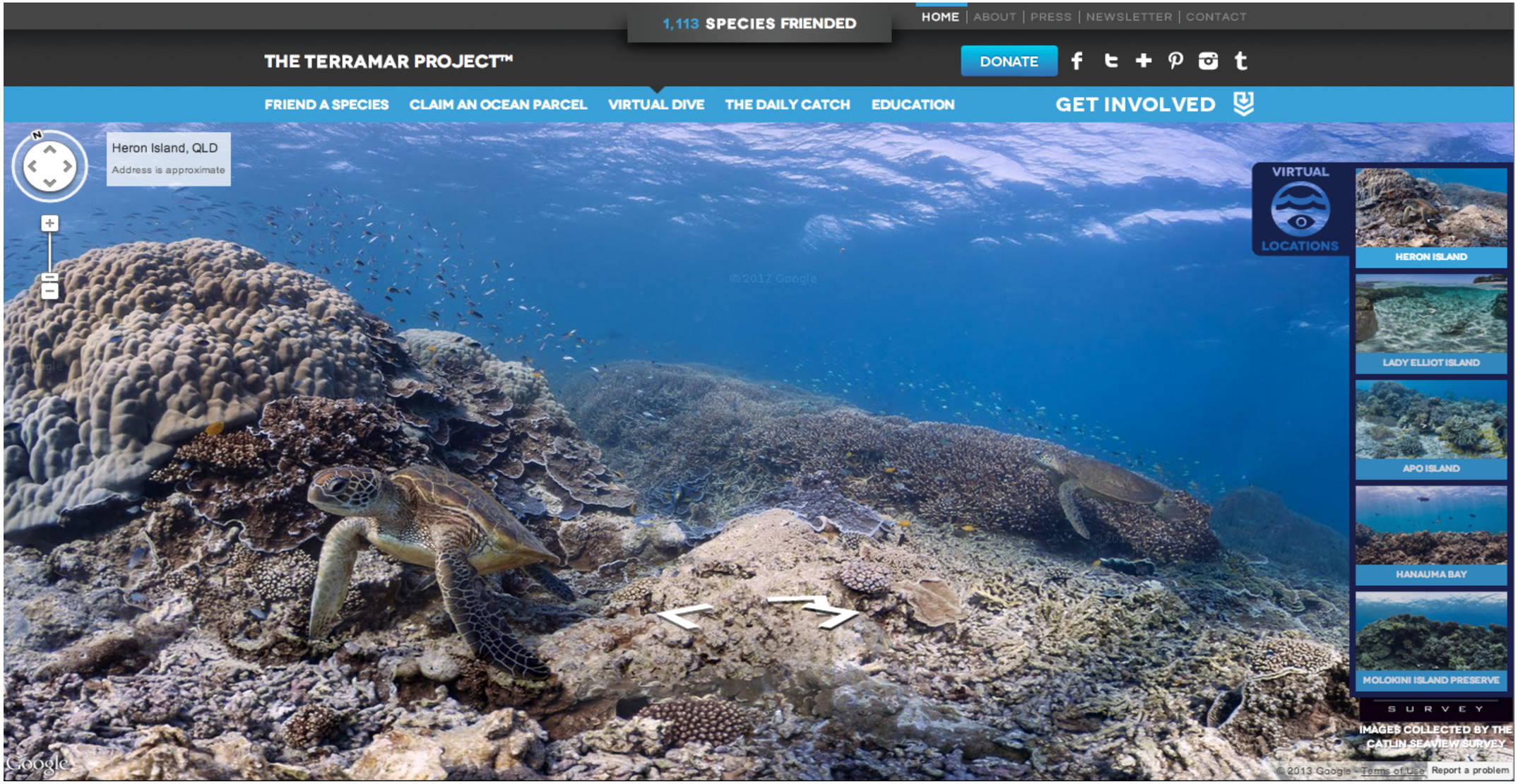
JavaScript | JavaScript + HTML

```
function initialize() {
  var fenway = new google.maps.LatLng(42.345573,-71.098326);
  var mapOptions = {
    center: fenway,
    zoom: 14,
    mapTypeId: google.maps.MapTypeId.ROADMAP
  };
  var map = new google.maps.Map(
      document.getElementById('map-canvas'), mapOptions);
  var panoramaOptions = {
    position: fenway,
    pov: {
      heading: 34,
      pitch: 10
    }
  };
  var panorama = new  google.maps.StreetViewPanorama(document.getElementById('pano'),panoramaOptions);
  map.setStreetView(panorama);
}

google.maps.event.addDomListener(window, 'load', initialize);
```

developers.google.com/maps/documentation/javascript/examples/streetview-simple

Embed Street View api on your own website



theterramarproject.org/virtualdive

A global reef record for monitoring change

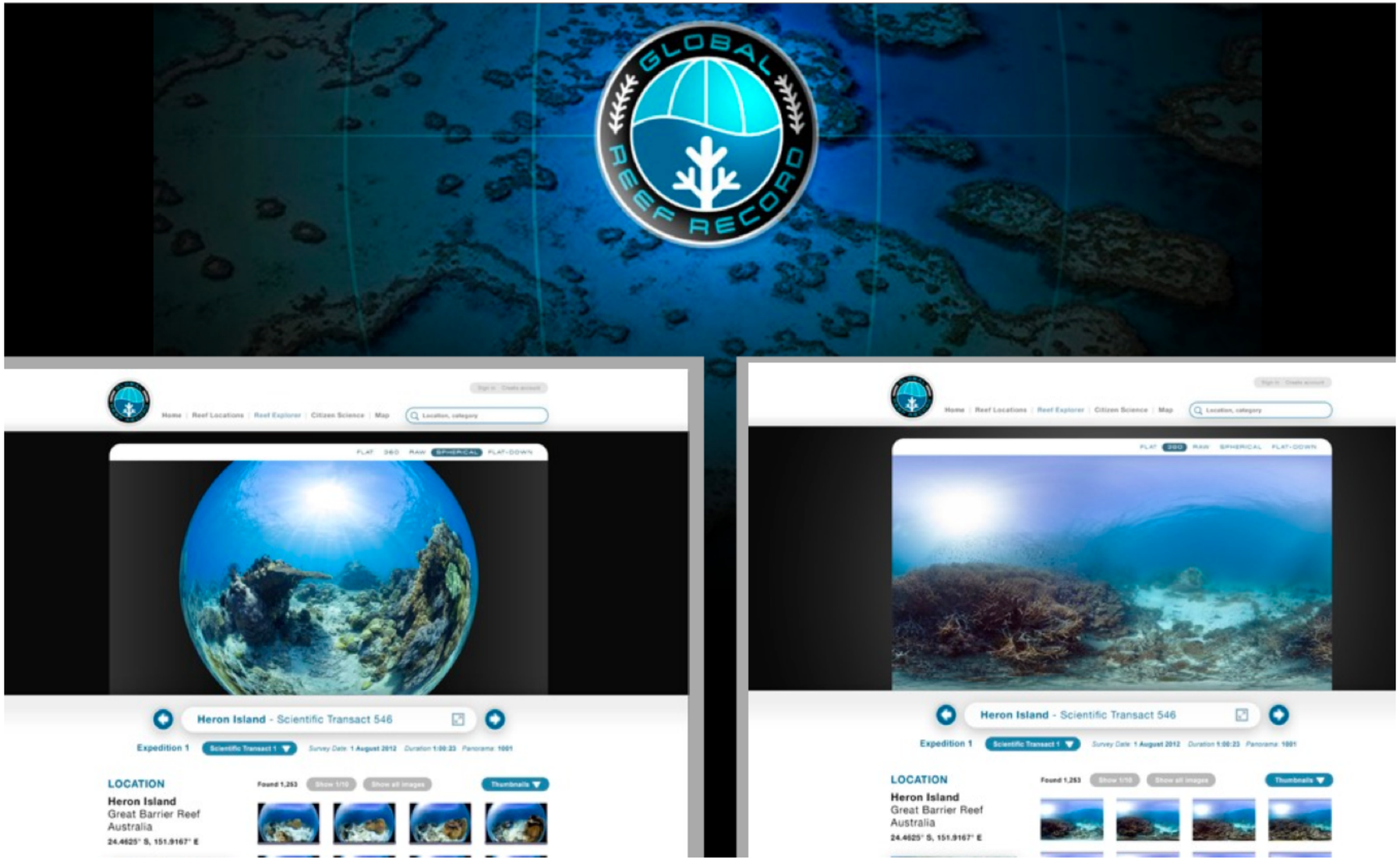
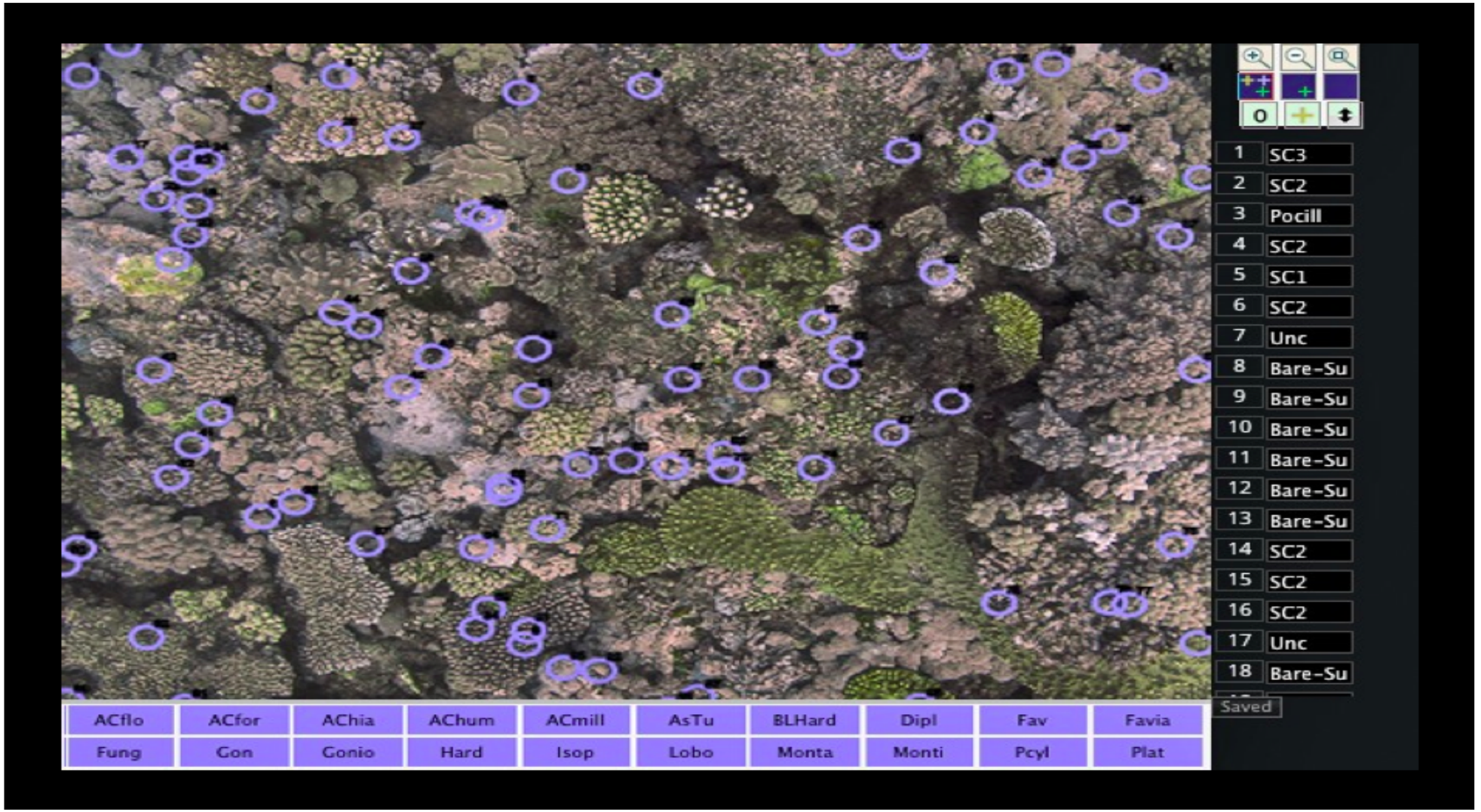
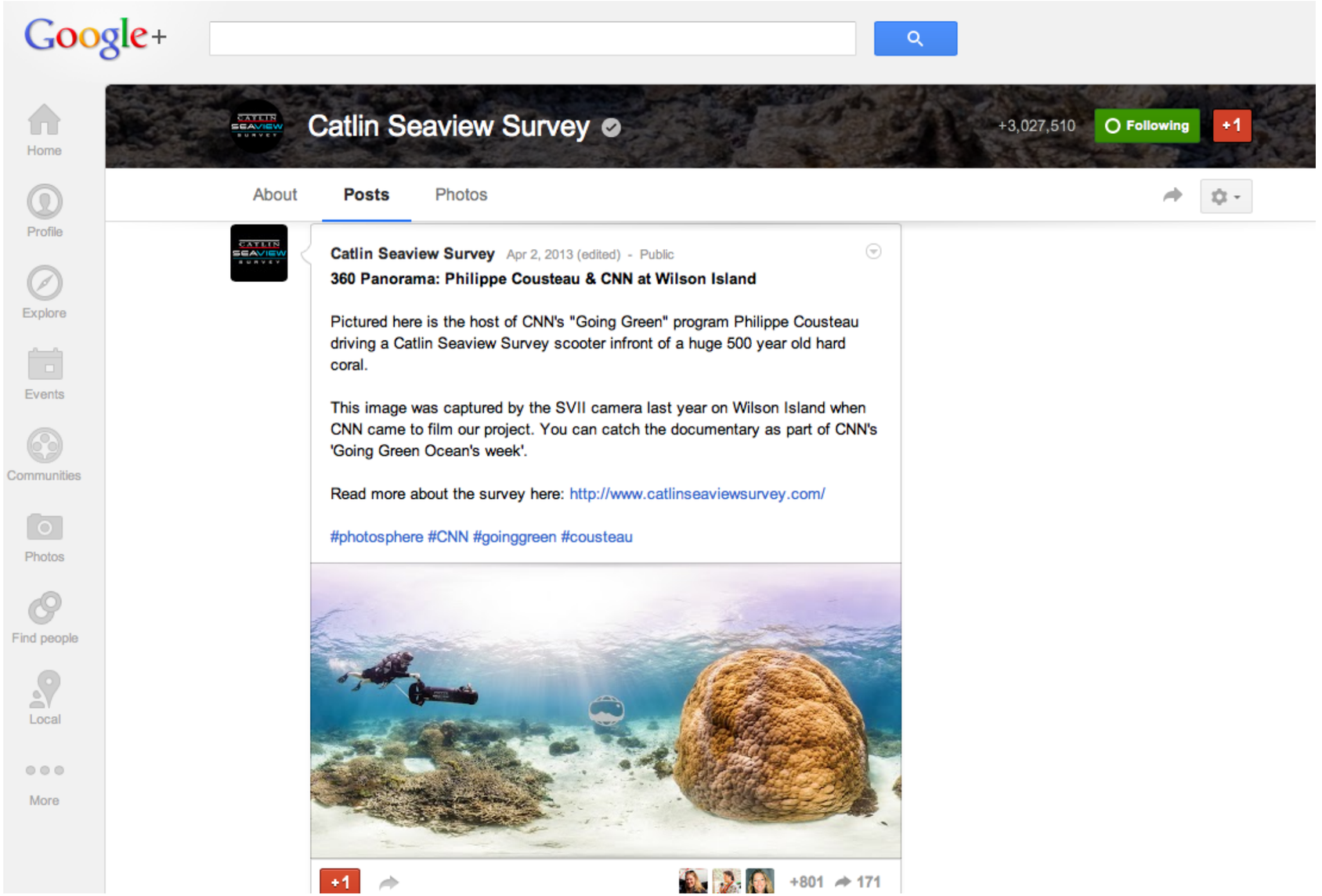


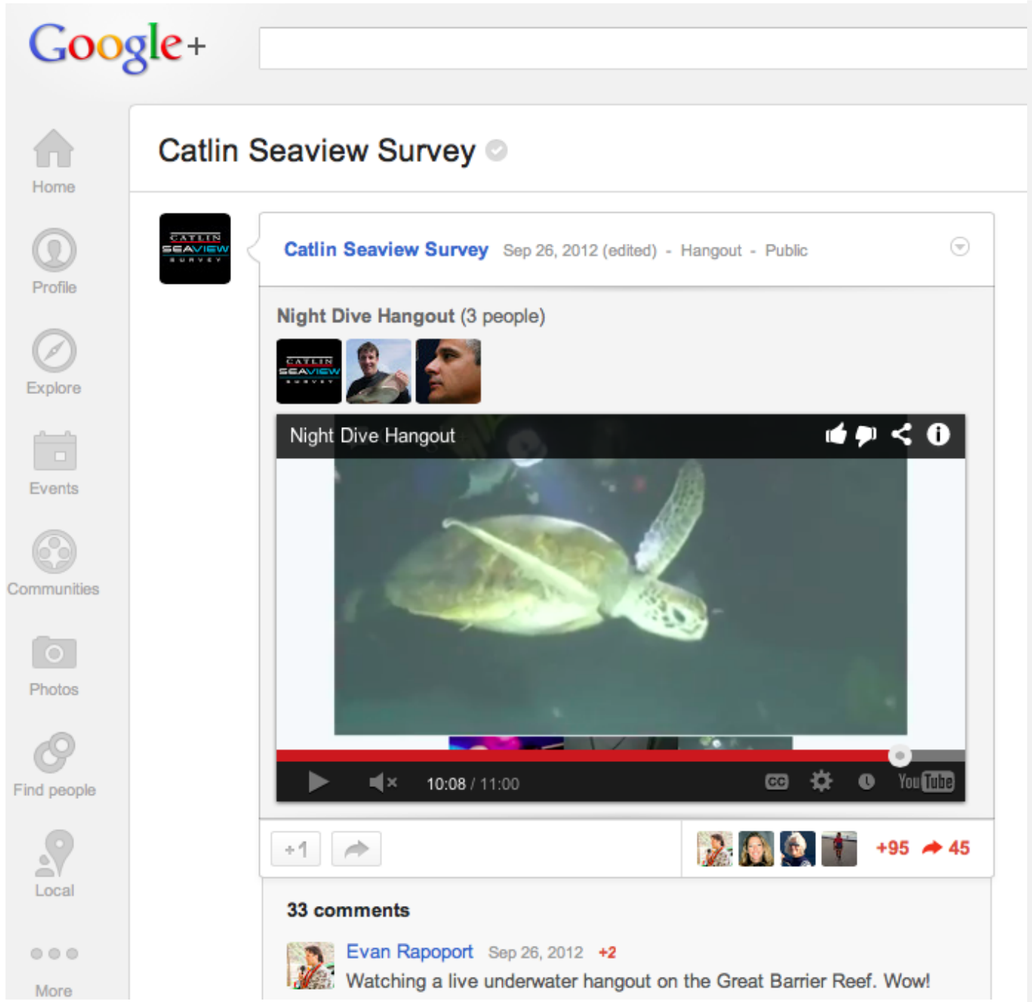
Image analysis - species recognition

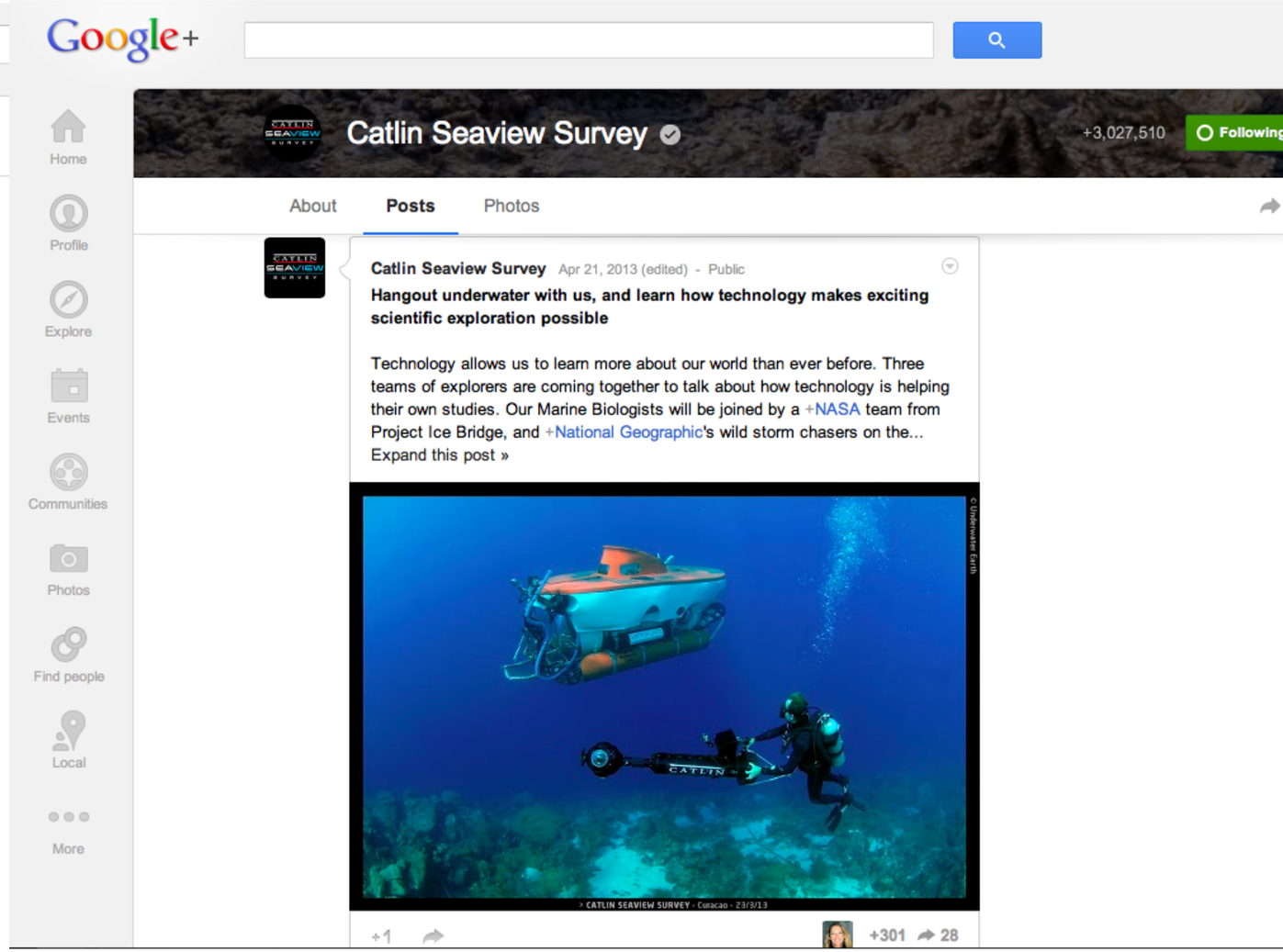


Over 3 million people following on Google Plus

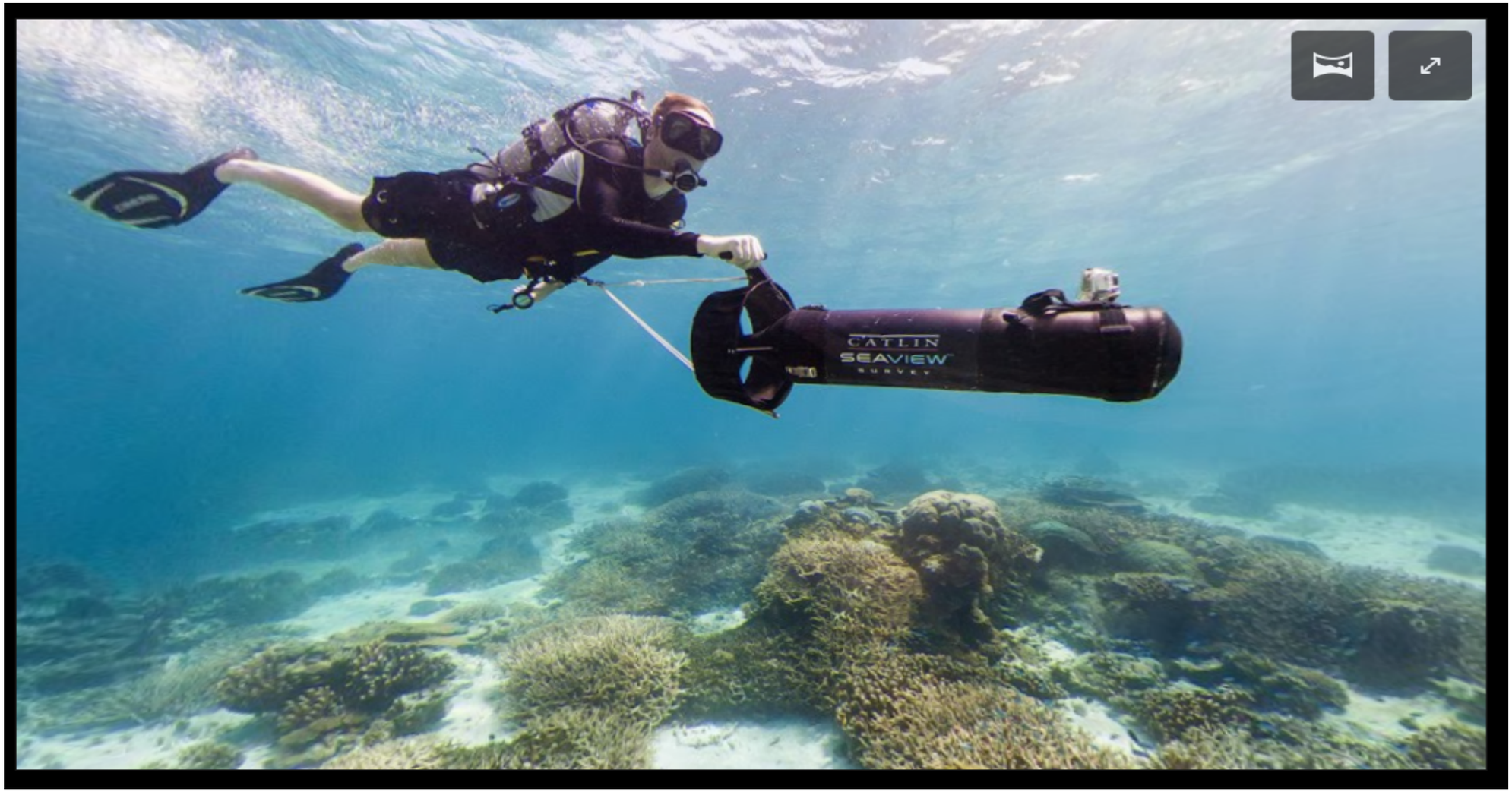


Engage with live Google Plus hangouts on air



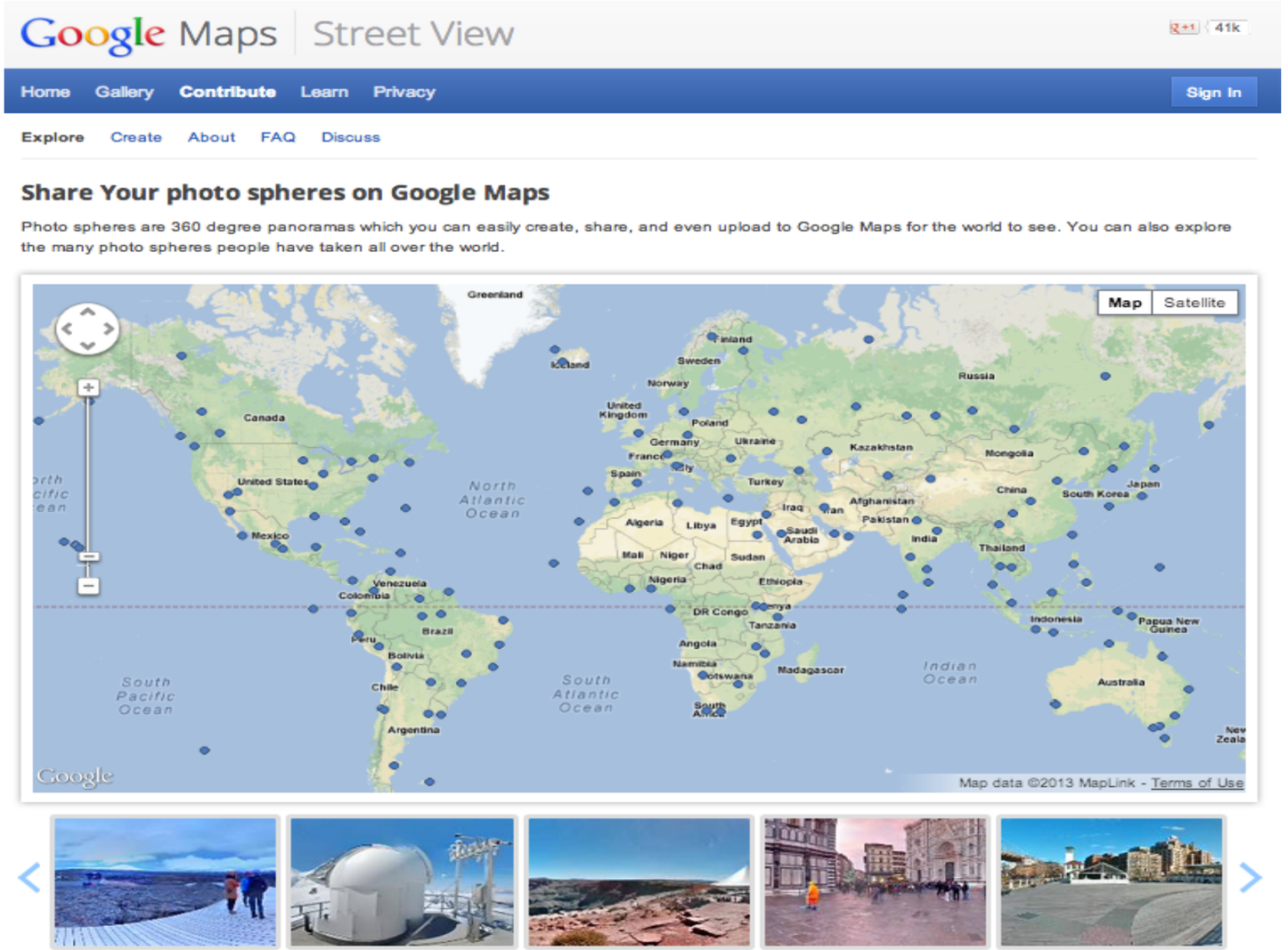


Immersive Photo Spheres



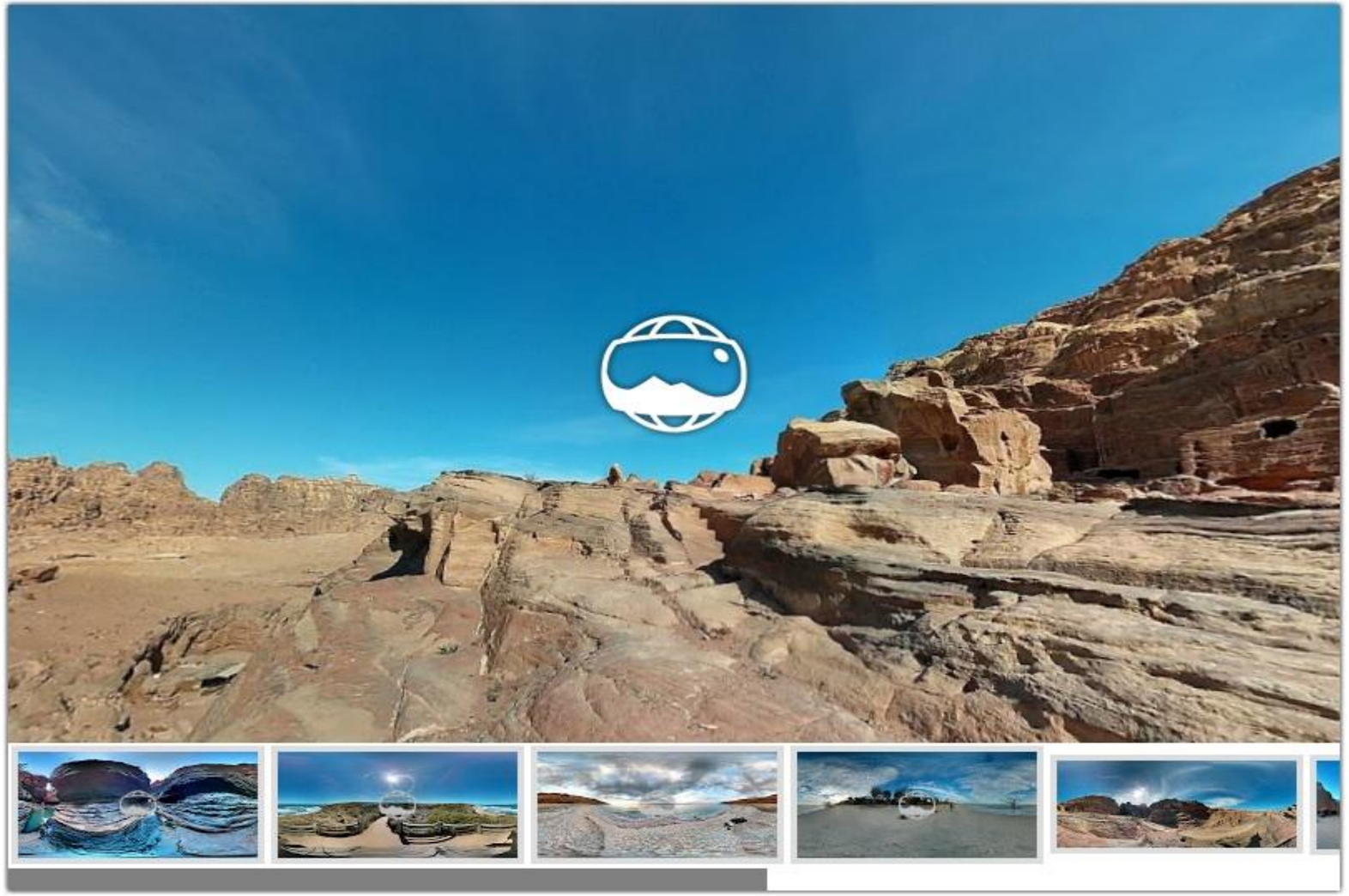
https://plus.google.com/u/1/+CatlinSeaviewSurvey/posts/7qGQNtqPMRH

Upload Photo Spheres of the world to Maps



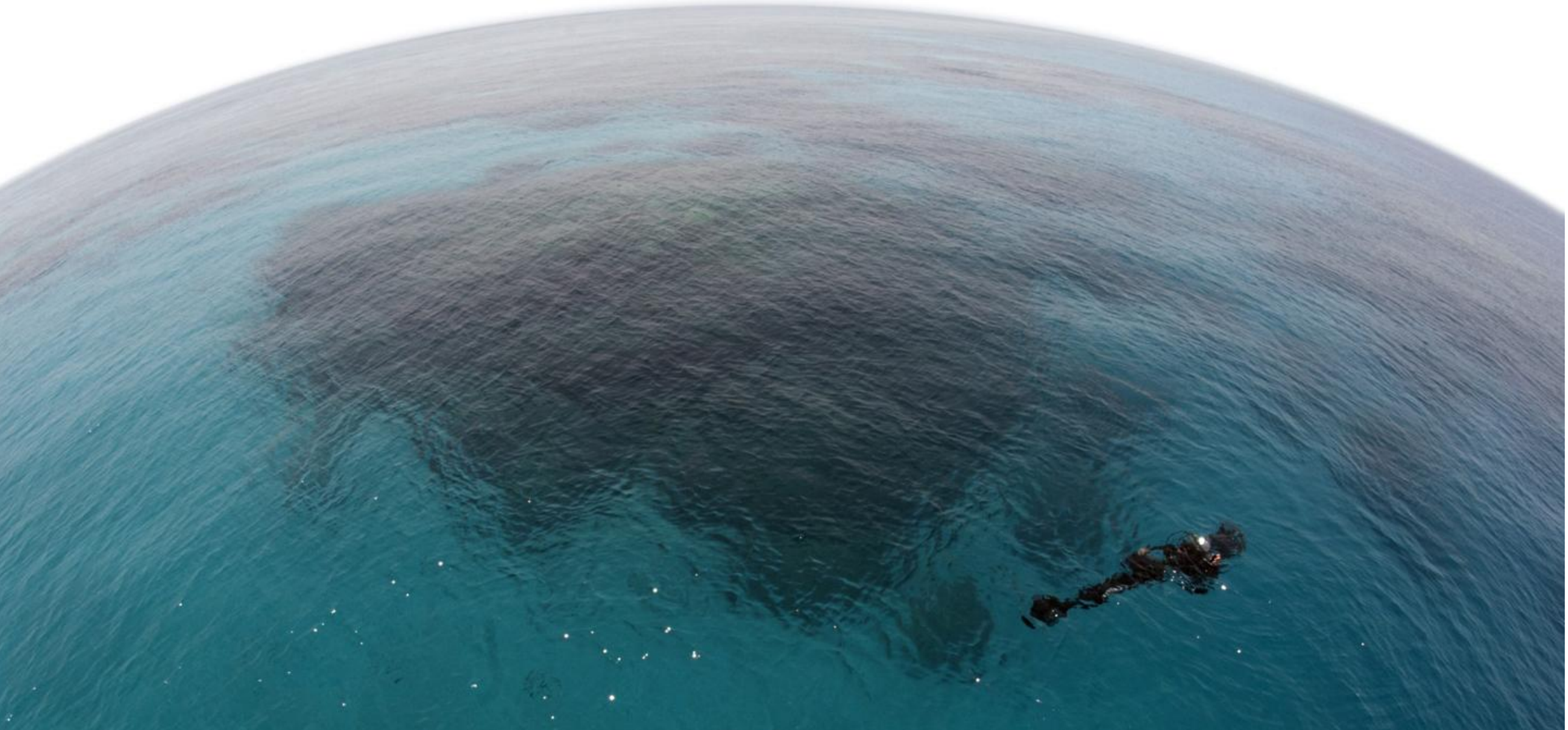
http://g.co/photosphere

Add Photo Spheres to any website



developers.google.com/panorama/web/

A race against time to record and reveal coral reefs



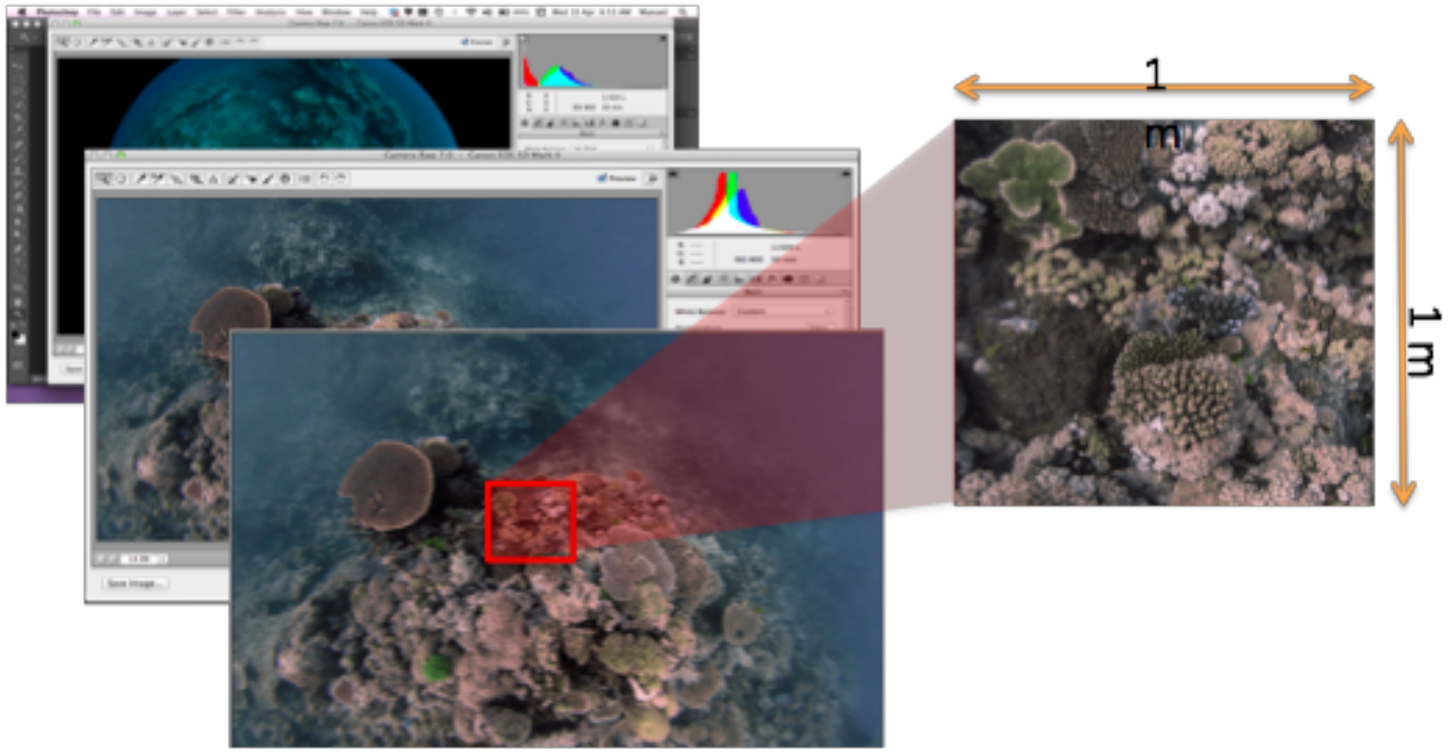
Developers are needed - technology is the solution

Underwater Android!

http://g.co/photosphere

Get involved: develop reef recognition algorithms

- Diversity, textures, colors, variability in light and exposure.



Help develop the solution +catlinseaviewsurvey

Contact: catlinseaviewsurvey.com

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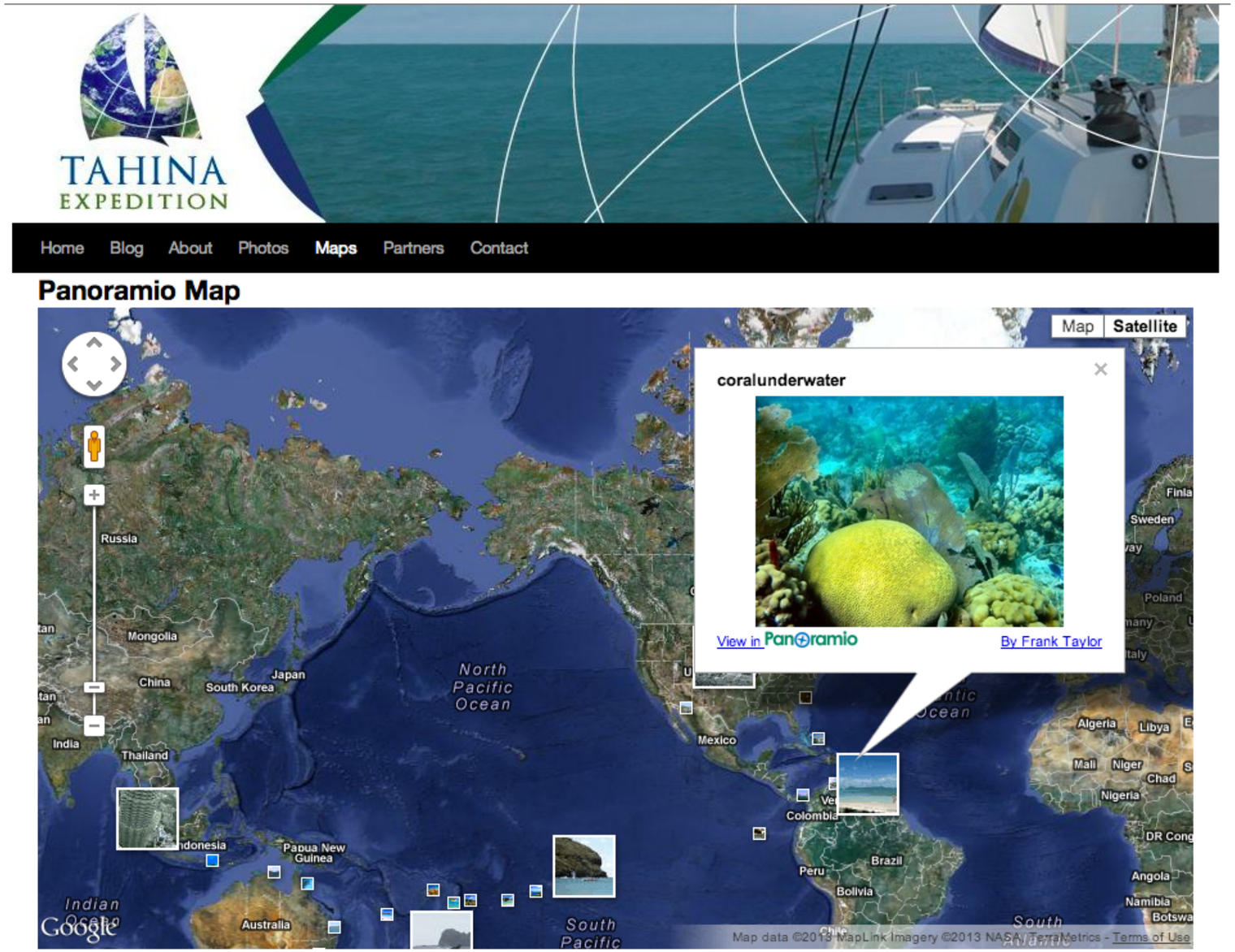
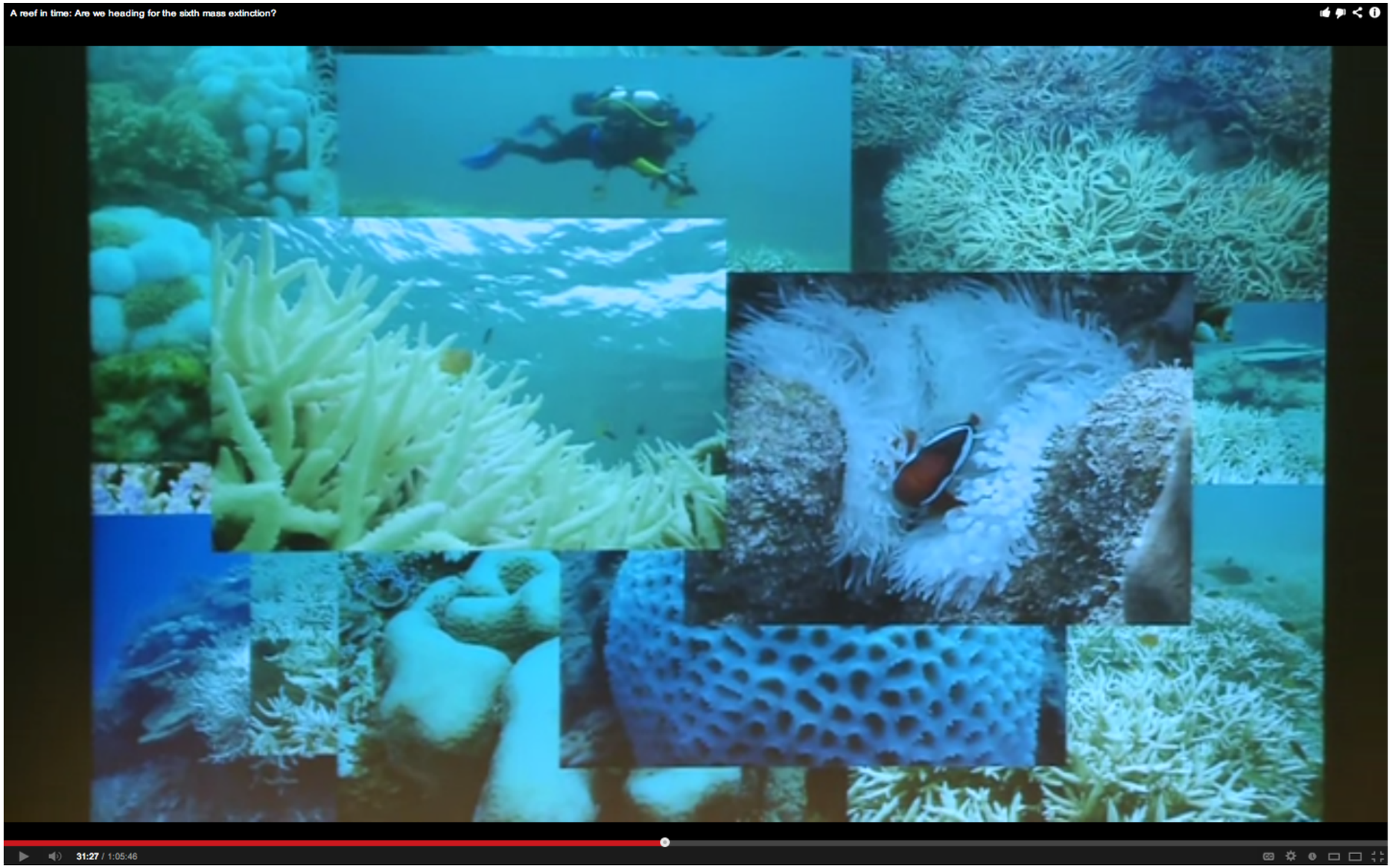


http://www.tahinaexpedition.com/map2.html



Charlie Veron: "A reef in time: are we heading for the sixth mass extinction?" http://youtu.be/7NAowjg8qFk

Add place photos to Panoramio - feature with maps api

developers.google.com/maps/documentation/javascript/examples/layer-panoramio