

HEARD ISLAND

The 2016 Cordell Expedition

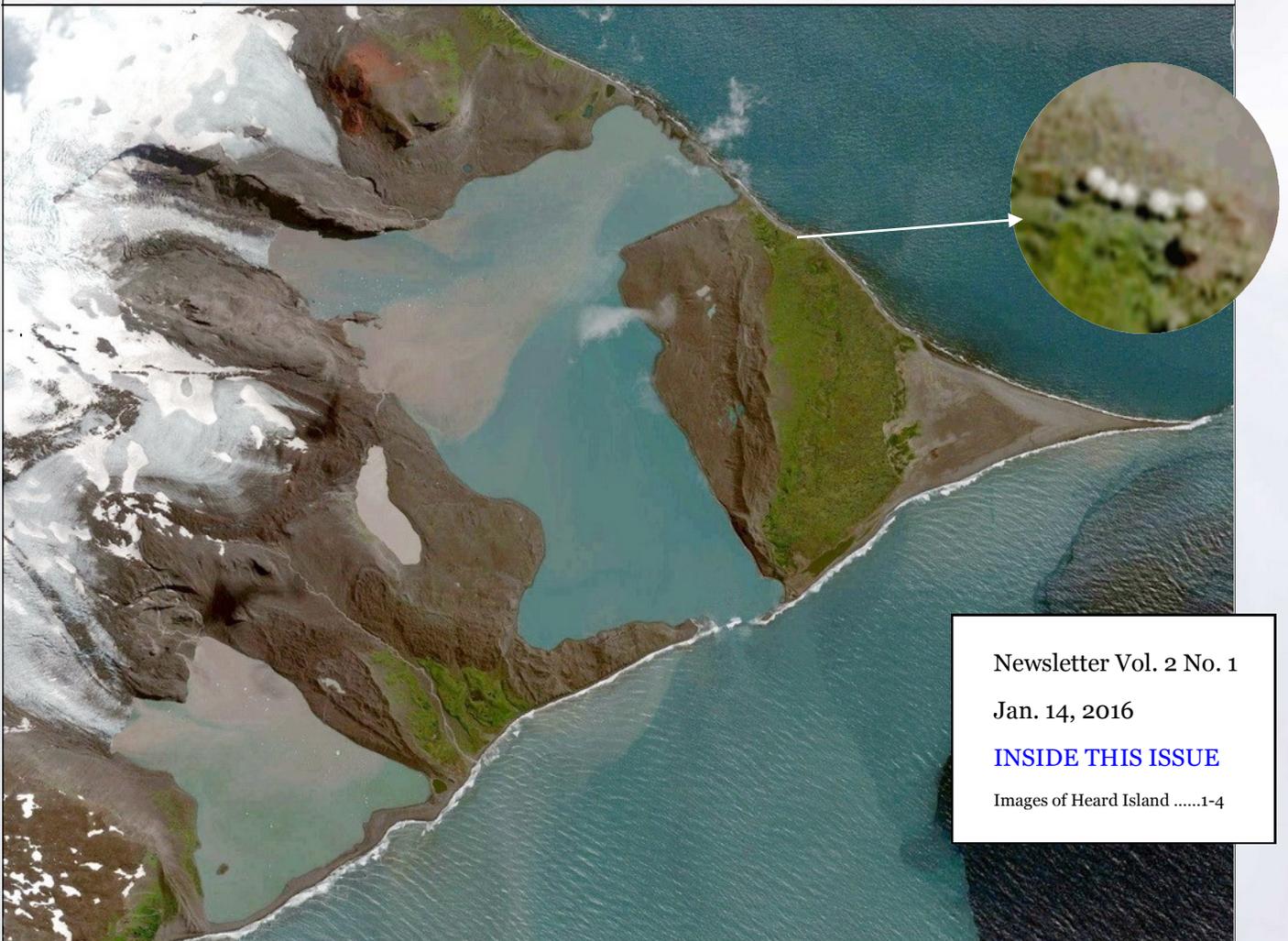
Photo: Eric Woehler

Discovering Life in the Extremes

VKØEK

Linking the Remote in Realtime

Amazing images of Heard Island stimulate research plans



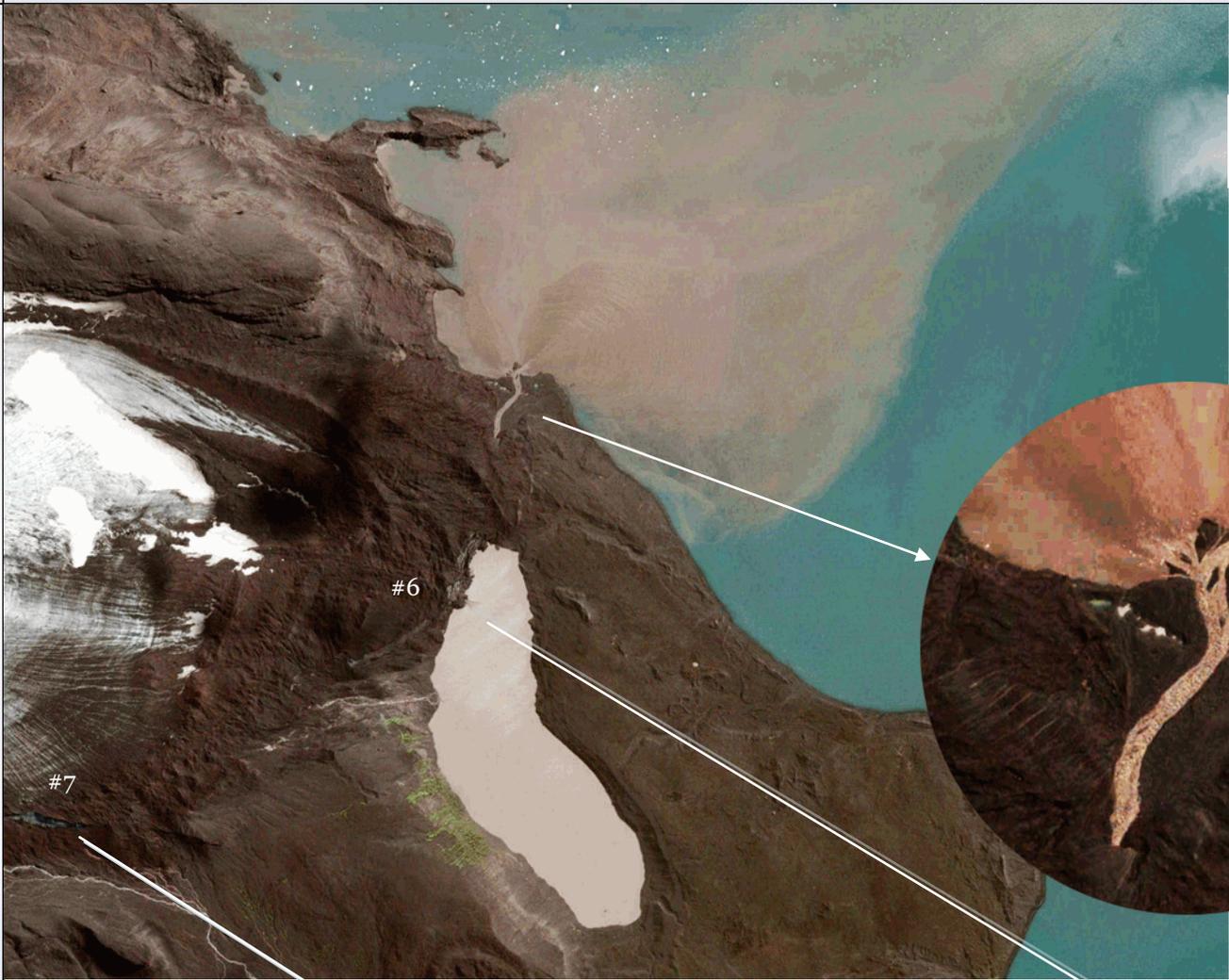
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INSIDE THIS ISSUE

Images of Heard Island1-4

In preparation for the expedition, we have explored Heard Island through the medium of satellite images. These images have a ground resolution of about 1 m., and cover almost all of the island. To our surprise and delight, our exploration has resulted in many significant discoveries, including underground rivers, removal of sediment exposing blue, layered ice of a previously unrecognized glacier, numerous streams that disappear underground and reappear hundreds of meters downstream, and major sediment transport from the upper slopes of Big Ben all the way to the lagoons and the ocean. The invasion of new areas by alien plants and animals is of prime interest, and we might find organisms currently unknown to science, thereby extending the known biodiversity. These images guide the plans for the scientific work during our visit.



8

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#7

#6



Front page: Refuge shelters placed on Heard Island in 2003 by the Australian Antarctic Division appear as white dots in the satellite images (insert)

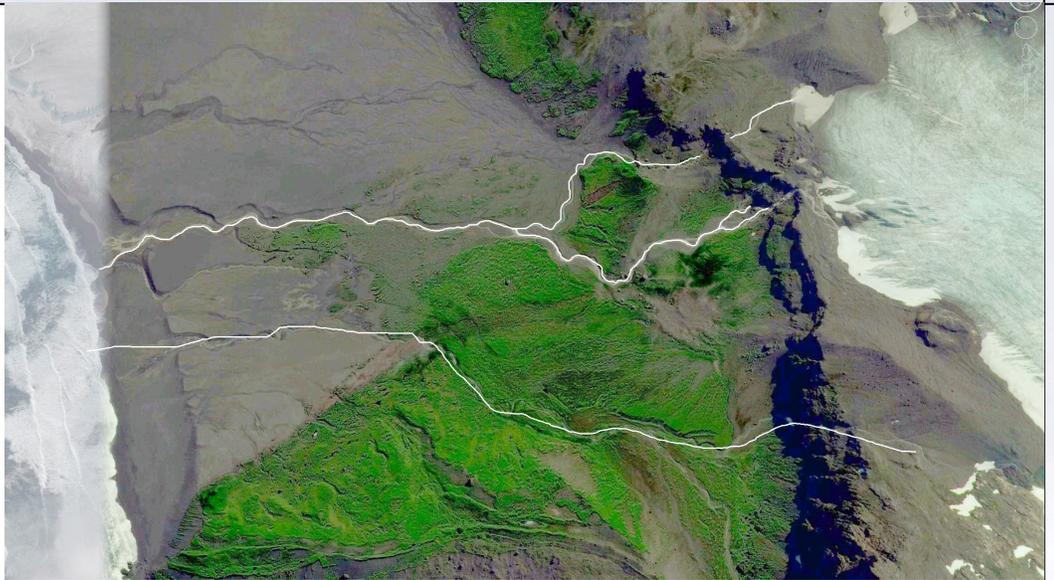


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(Clockwise from above)

1. A multi-branched stream delta inlet to the Brown Lagoon.
2. Traces of streams flowing from the Abbotsmith Glacier to the ocean.
3. Two streams flowing into the Brown Glacier, one of which disappears underground for 128 m and the reappears to flow into the lagoon.
4. A major stream emerges from a fissure in the rocks (Lavett Bluff).
5. Plan view of a complex braided floodplain near Saddle Point on the north side of the island. This area is very unstable, changing constantly.
6. Clear evidence of a major rockfall that created a large jet into the small glacial lake (tarn) near the Stephenson-Doppler Lagoon (cf. #8).
7. An amazing “gash” resulting from sediment downwash over the edge of a previously unrecognized glacier, exposing what appears to be blue layered ice. The gash is 700 ft. long, 100 ft. high. It moves upward at 1 ft./mo. as the sediment is washed from its upper margin to the lower.
8. A small muddy lake is fed by the inflow (cf. #6) and drains out an underwater channel carried underground for more than 100 m until it emerges and carries the sediment into the Stevenson-Doppler Lagoon (the delta). The “gash” (cf. #7) occurs just to the southwest of this rockfall.

3

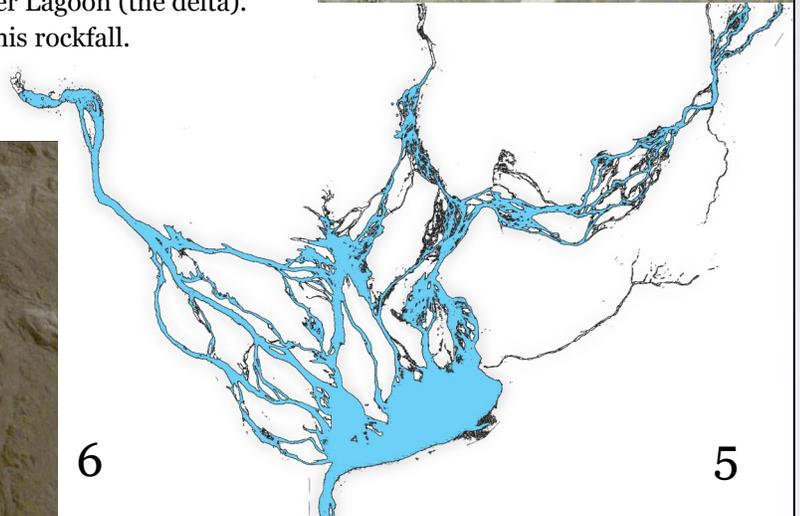


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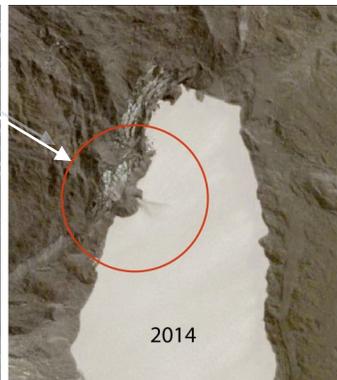


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2007



2014

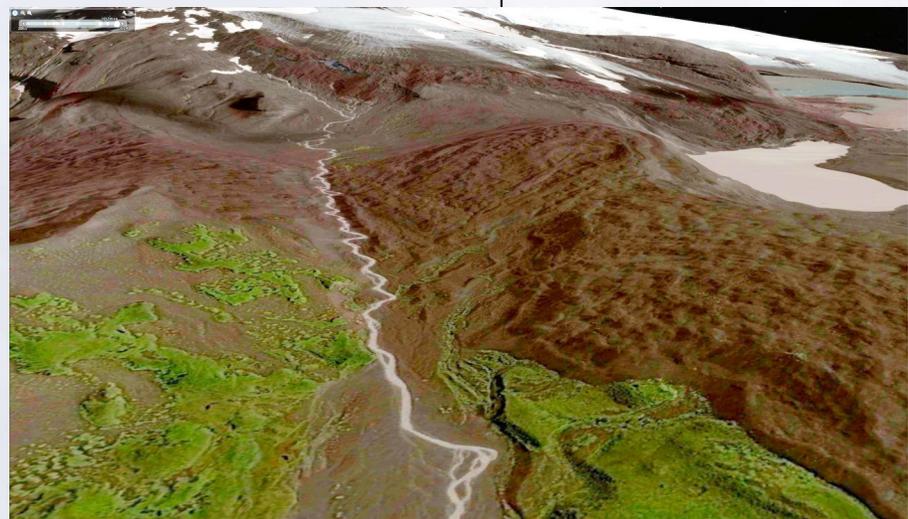
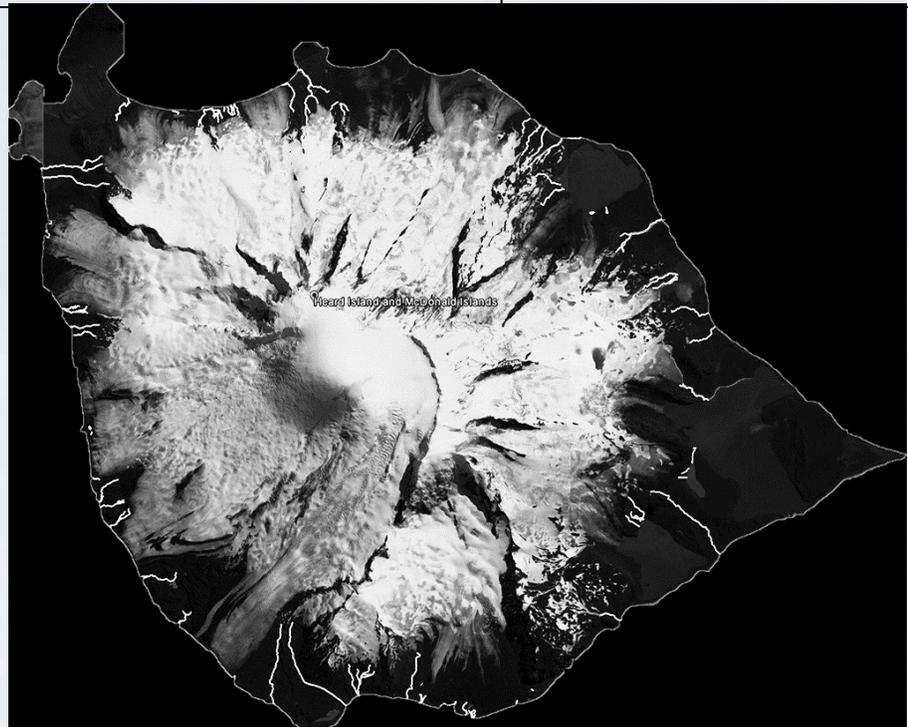


THE HEARD ISLAND PROJECT

The Heard Island Project is centered around an expedition to Heard Island, lying at 53°S 73°E in the Southern Ocean. The island is extremely isolated, and very seldom visited.

The project will include an ambitious amateur radio operation using the callsign **VKØEK**, and a variety of scientific investigations under the title “Discovering Life in the Extremes” and “Linking the Remote in Realtime.”

The expedition team of 14 will sail on or around March 10, 2016, from Cape Town, South Africa, spend up to 21 days on Heard Island, and end the voyage at Fremantle, Western Australia.



(Above) The streams on Heard Island are distributed roughly uniformly around the periphery. The longest run for 3 km, and many have multiple tributaries in drainage basins and complex delta where they flow into the lagoons or the ocean. These streams are of prime interest for our research.

“I HELPED MAKE IT HAPPEN!”

We are nearing full funding of **VKØEK**. You can help put us to the top with your contribution. Go to

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The rest is easy: just follow the easy instructions. We will gladly acknowledge your contribution ASAP .

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...and more issues coming soon!



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