

Charlas divulgativas

**EXPO
MINER**

BARCELONA

2020

Del hielo al fuego: Volcanes en la Antártida

Adelina Geyer

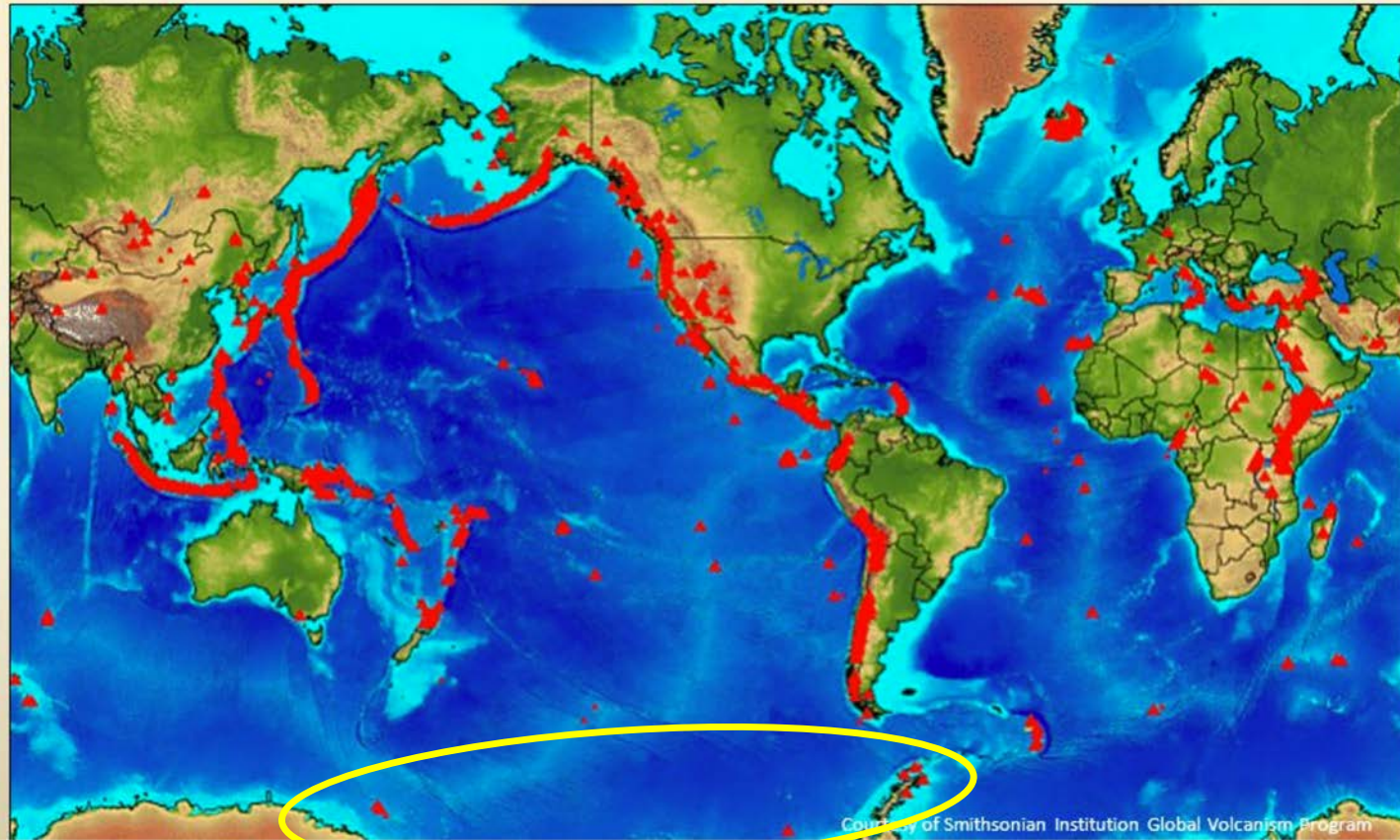
Geociencias Barcelona (Geo3Bcn-CSIC)
POLARCSIC

VOLCANES ANTÁRTICOS:

Smithsonian Institution Global Volcanism Program:
<https://volcano.si.edu/>

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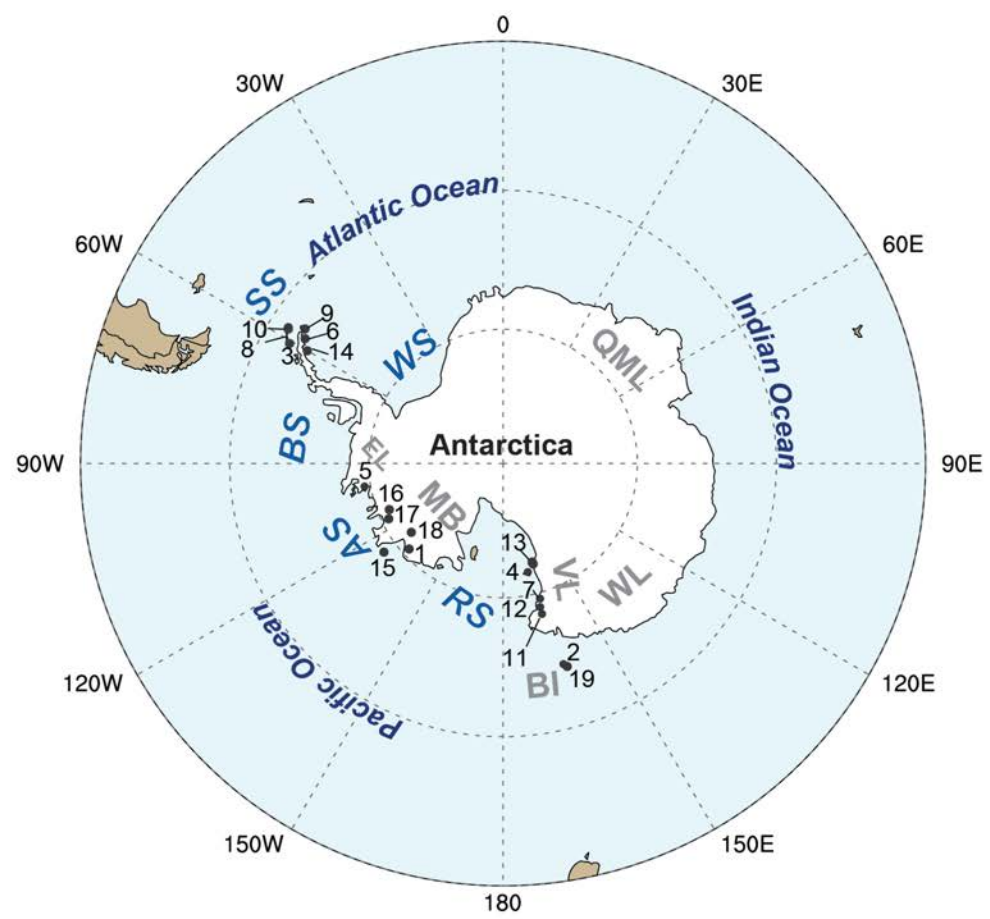
2020



Courtesy of Smithsonian Institution Global Volcanism Program

Volcanoes

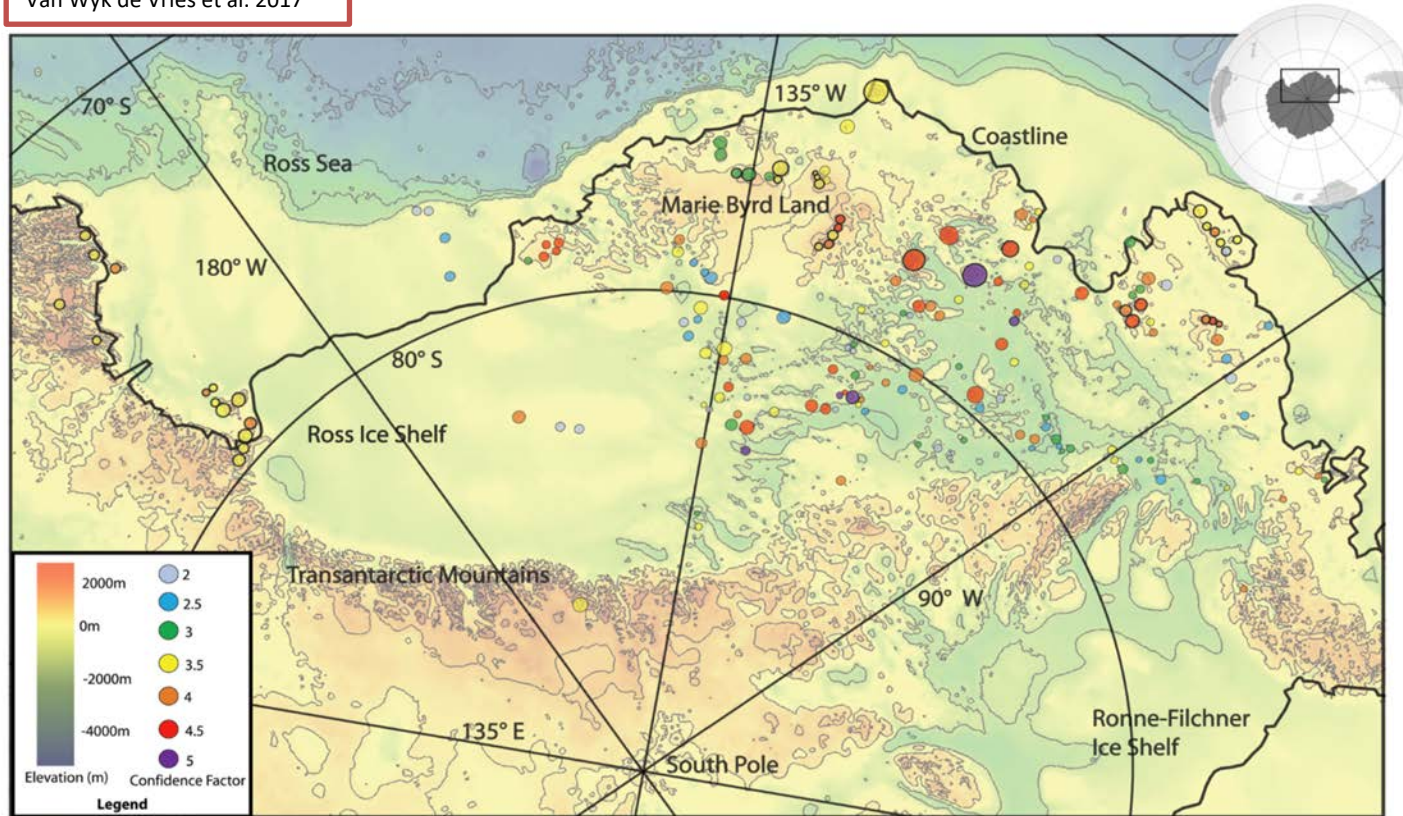
- | | |
|----------------------|-------------------------|
| 1. Berlin, Mt. | 11. The Pleiades |
| 2. Buckle Island | 12. Rittmann, Mt. |
| 3. Deception Island | 13. Royal Society Range |
| 4. Erebus, Mt. | 14. Seal Nunataks Group |
| 5. Hudson Mountains | 15. Siple, Mt. |
| 6. James Ross Island | 16. Takahe, Mt. |
| 7. Melbourne, Mt. | 17. Toney Mountain |
| 8. Melville Peak | 18. Waesche, Mt. |
| 9. Paulet Island | 19. Young Island |
| 10. Penguin Island | |



Geyer et al. 2017

VOLCANES ANTÁRTICOS:

Van Wyk de Vries et al. 2017

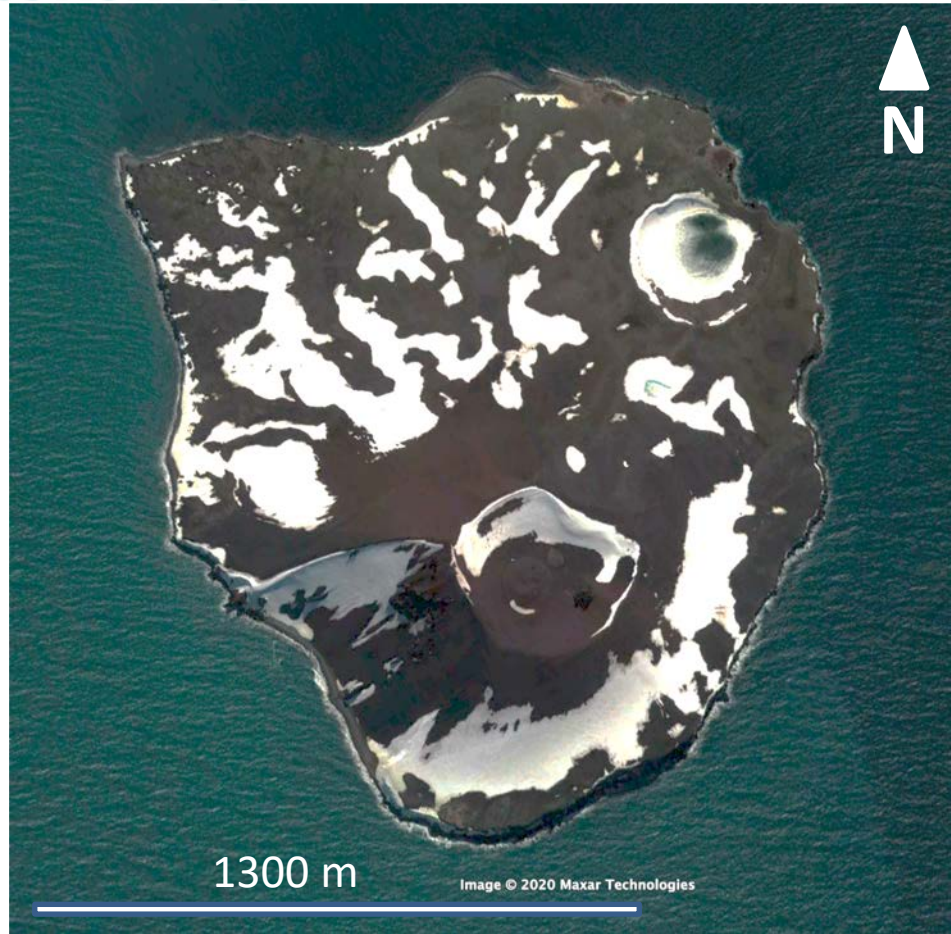
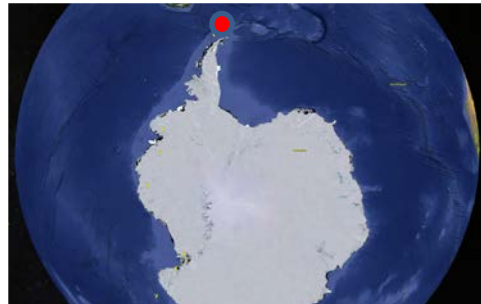


131 Volcanes se han identificado recientemente por métodos geofísicos (91 desconocidos hasta la fecha)

VOLCANES ANTÁRTICOS ACTIVOS:

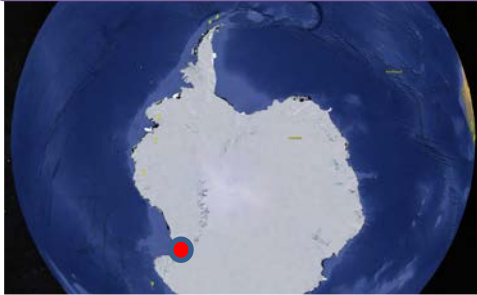
Penguin Island

Última erupción: 1905



Erebus

Última erupción: 2014

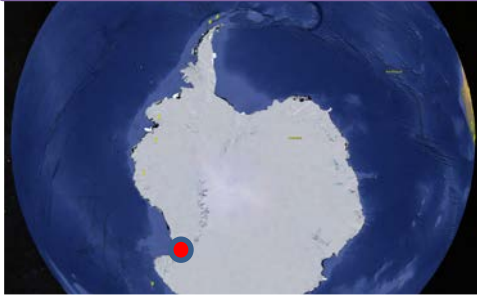


Source: Global Volcanism Program



Erebus

Última erupción: 2014



NATIONAL
GEOGRAPHIC
MAGAZINE
Photograph by Larsen Peter

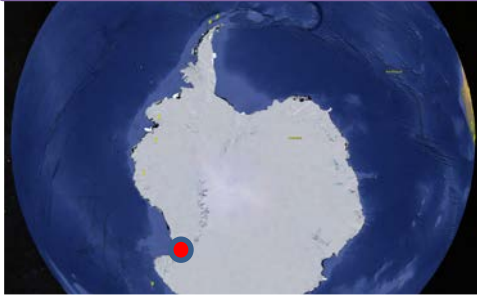
MOUNT EREBUS, JULY 2012
© COPYRIGHT 2012 NATIONAL GEOGRAPHIC SOCIETY. ALL RIGHTS RESERVED.

New Mexico Tech: <https://www.youtube.com/watch?v=Oo01FZnlLJ8>

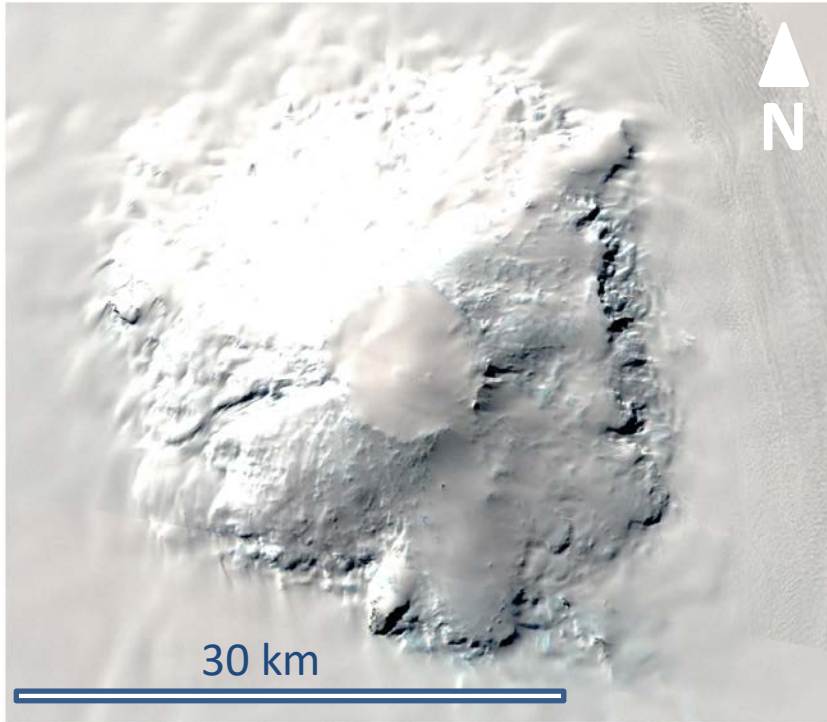
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Erebus

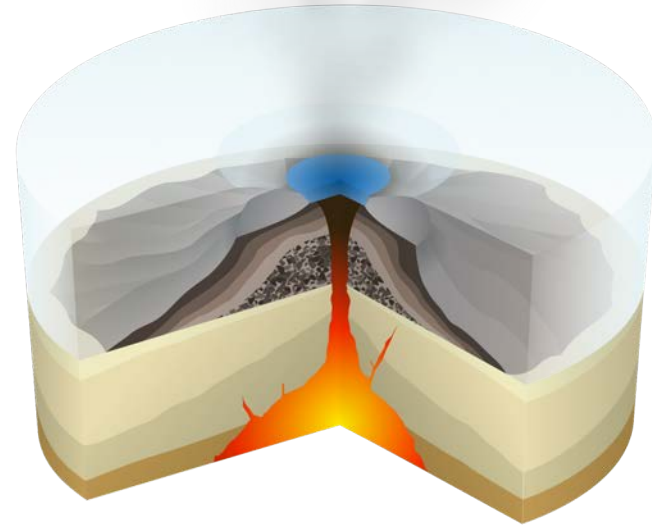
Última erupción: 2014



ERUPCIONES SUBGLACIARES



Google Earth satellite image of Mt Takahé.
Source: USGS / NASA / LANDSAT



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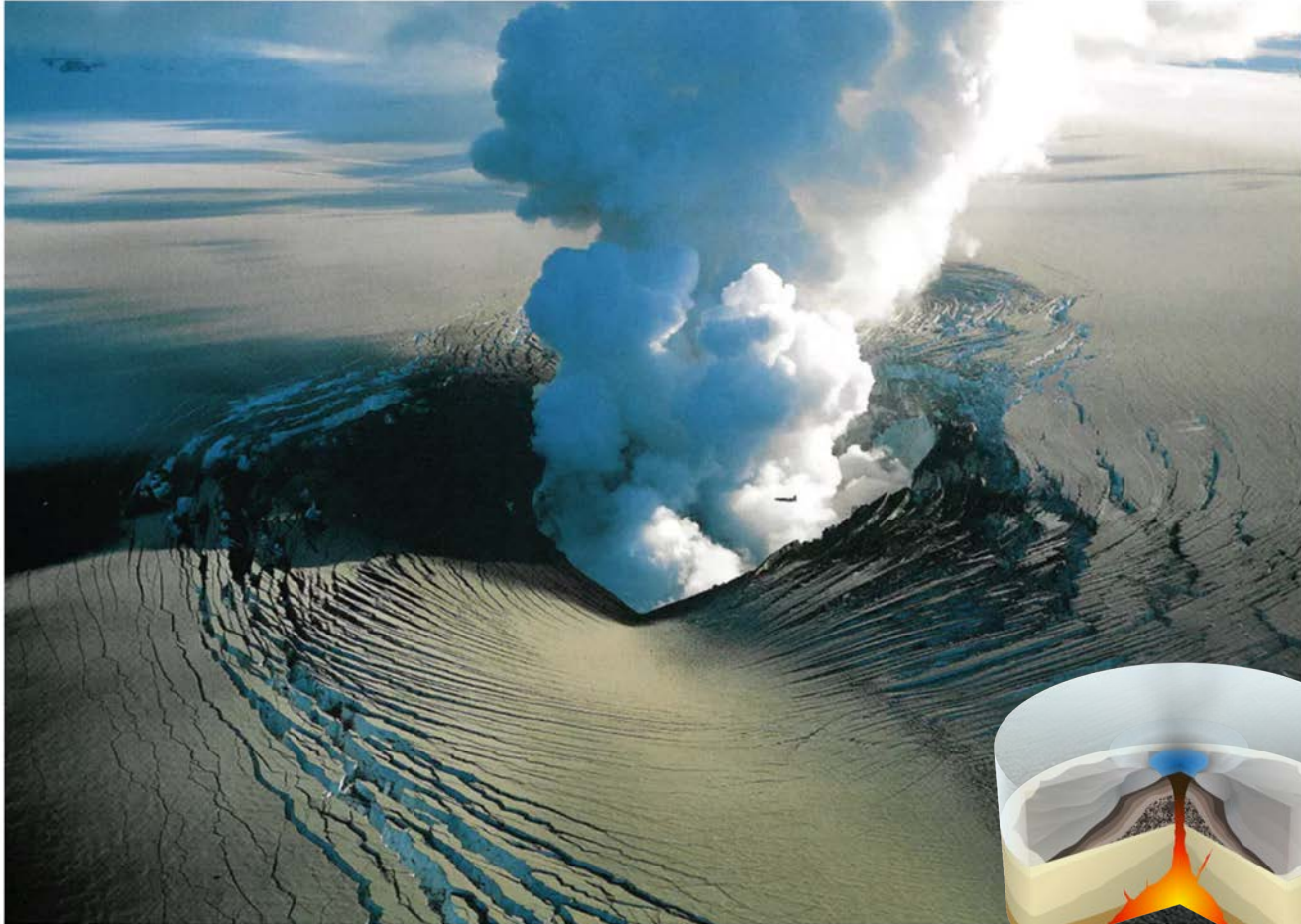
ERUPCIONES SUBGLACIARES



<https://volcano.si.edu/showreport.cfm?doi=10.5479/si.GVP.BGVN199609-373010>

Grímsvötn's N flank., 1 October 1996. R. Axelsson.

ERUPCIONES SUBGLACIARES



Subglacial Gjalp eruption in 1996. Páll Stefánsson, Iceland Geological Survey, CC BY

CUEVAS EN EL HIELO

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National Science Foundation



CUEVAS EN EL HIELO



Photo by [Cliff Wassmann](#)

CUEVAS EN EL HIELO



PHOTO: [Researchers say further investigation could unveil new species of plants and animals.](#) (Simon Mossman: AAP Image)

LA IMPORTANCIA DE ESTUDIAR LOS VOLCANES ANTÁRTICOS



https://nz5.architecturamedia.net/site_media/media/cache/e4/19/e41970004c5ae30bfdfe068e7d7c19f1.jpg

LA IMPORTANCIA DE ESTUDIAR LOS VOLCANES ANTÁRTICOS

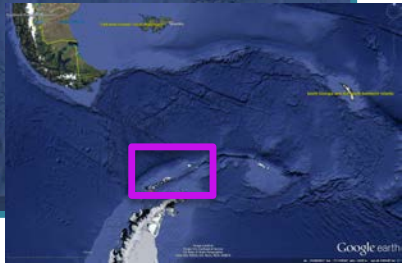
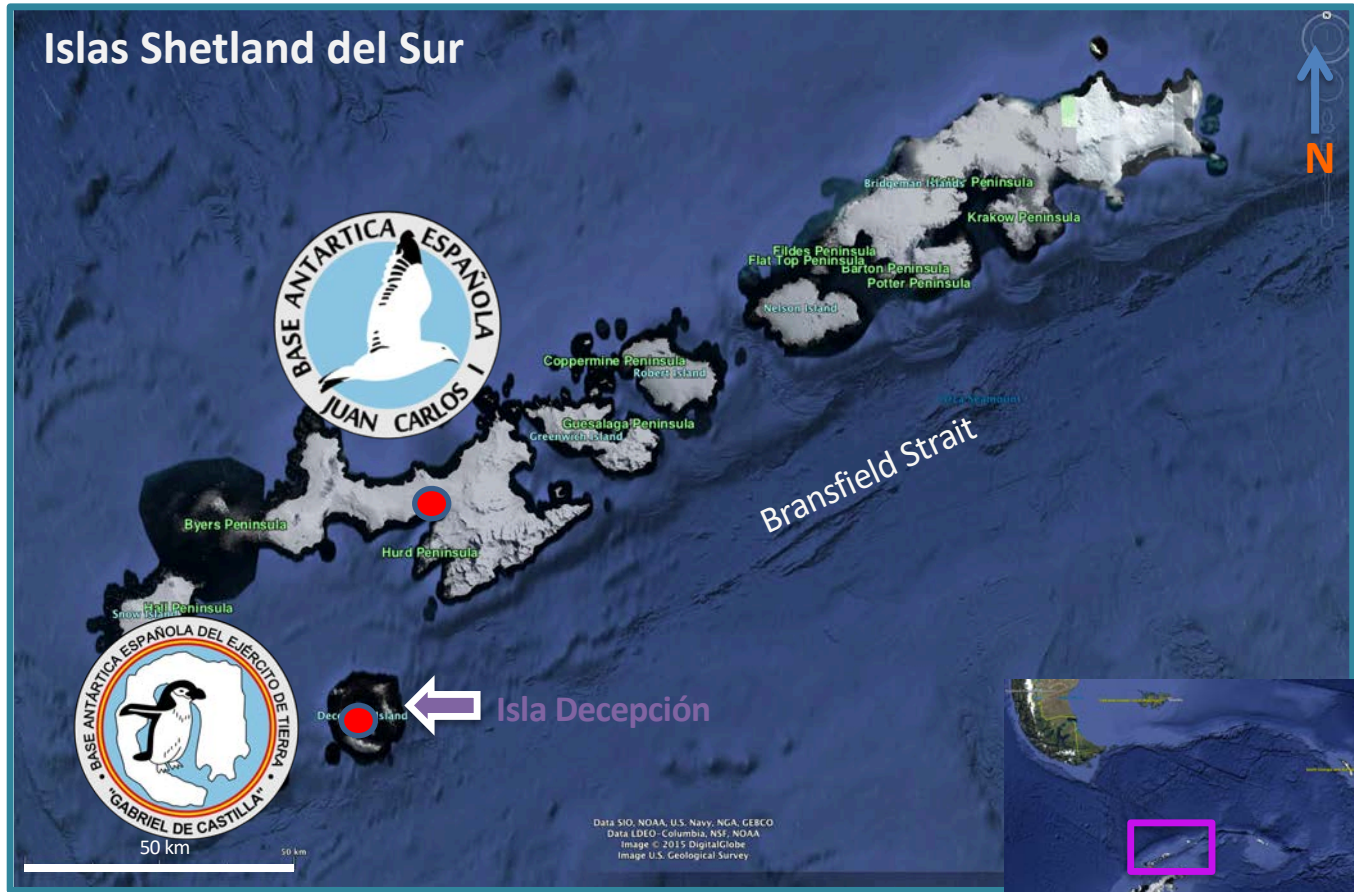


Base Juan Carlos I

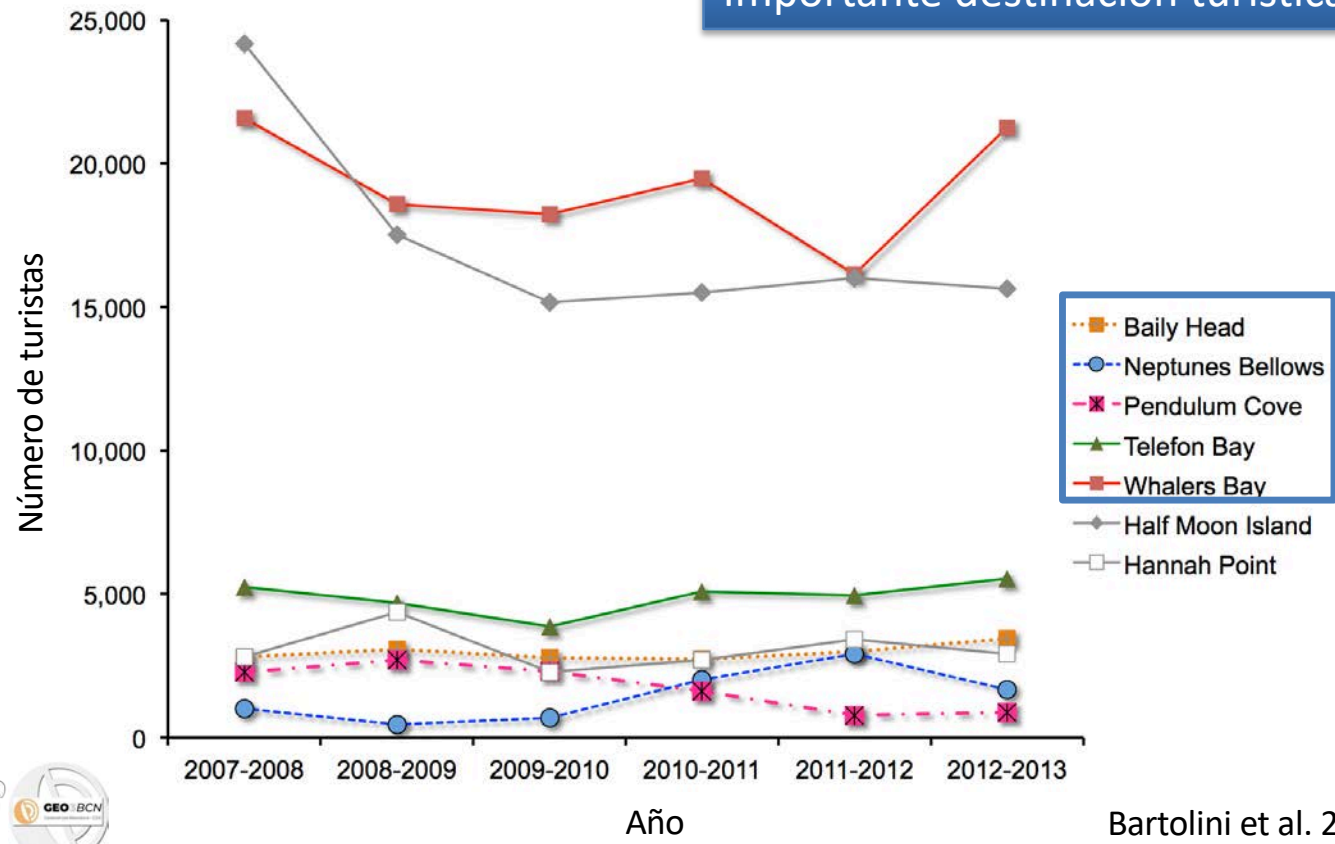
Base Gabriel de Castilla

https://nz5.architecturamedia.net/site_media/media/cache/e4/19/e41970004c5ae30bfdfe068e7d7c19f1.jpg

ISLA DECEPCIÓN (ISLAS SHETLAND DEL SUR)

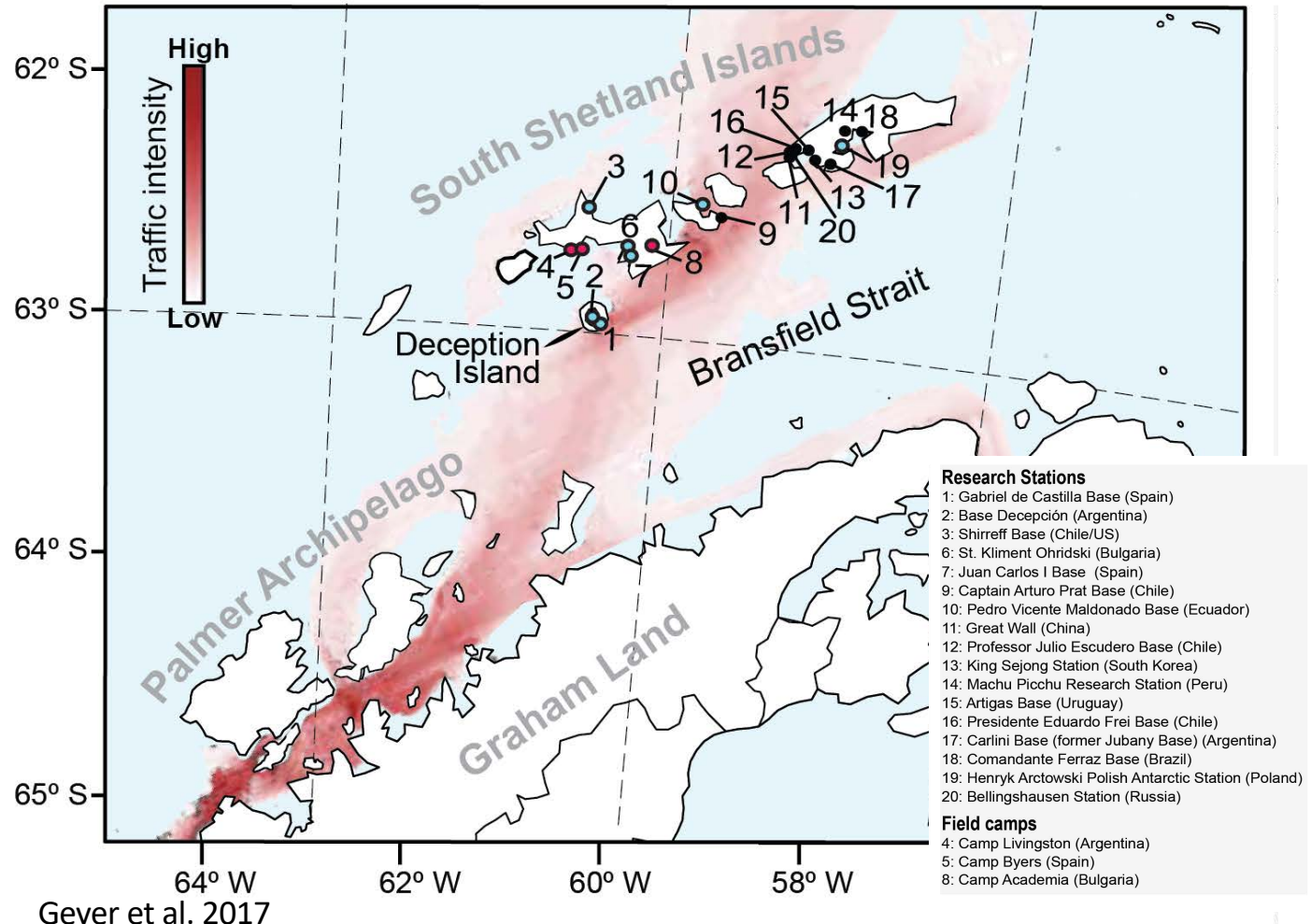


Importante destinación turística



Bartolini et al. 2014

IMPORTANCIA SOCIO-ECONOMICA DE ISLA DECEPCION



¿AUMENTO DE TEMPERATURA Y DESHIELO POR LA ACTIVIDAD VOLCÁNICA?

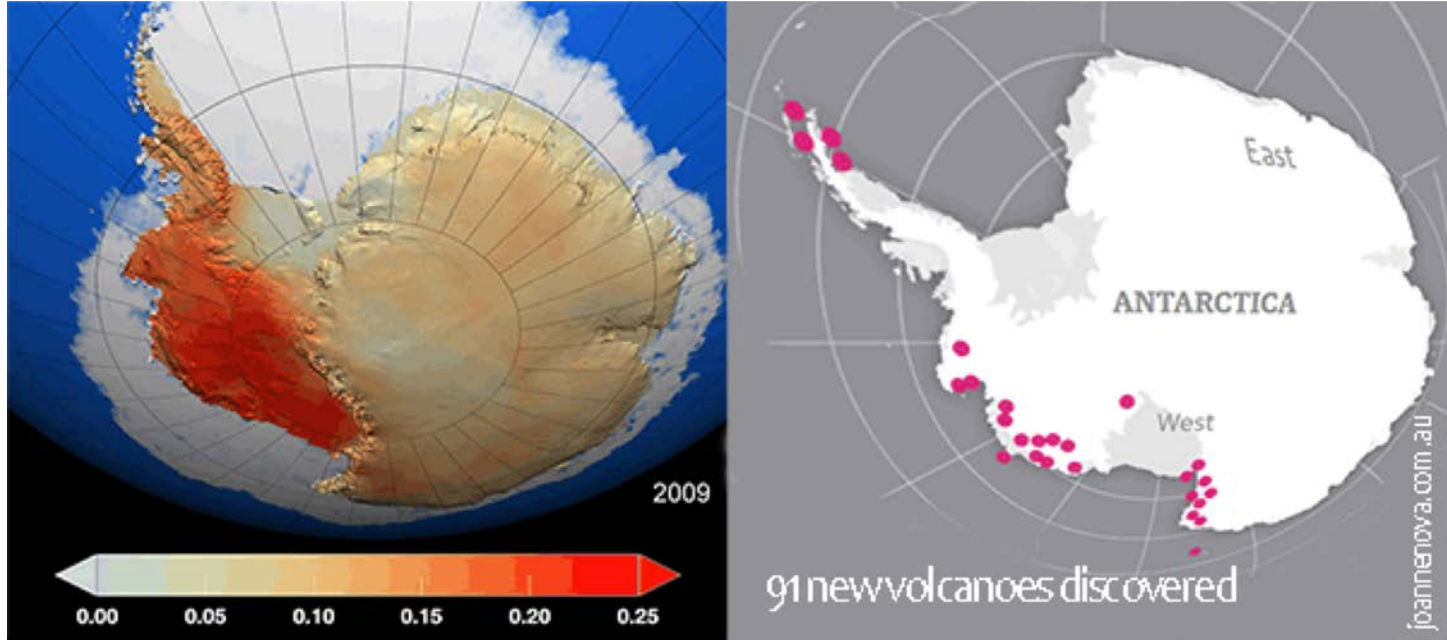
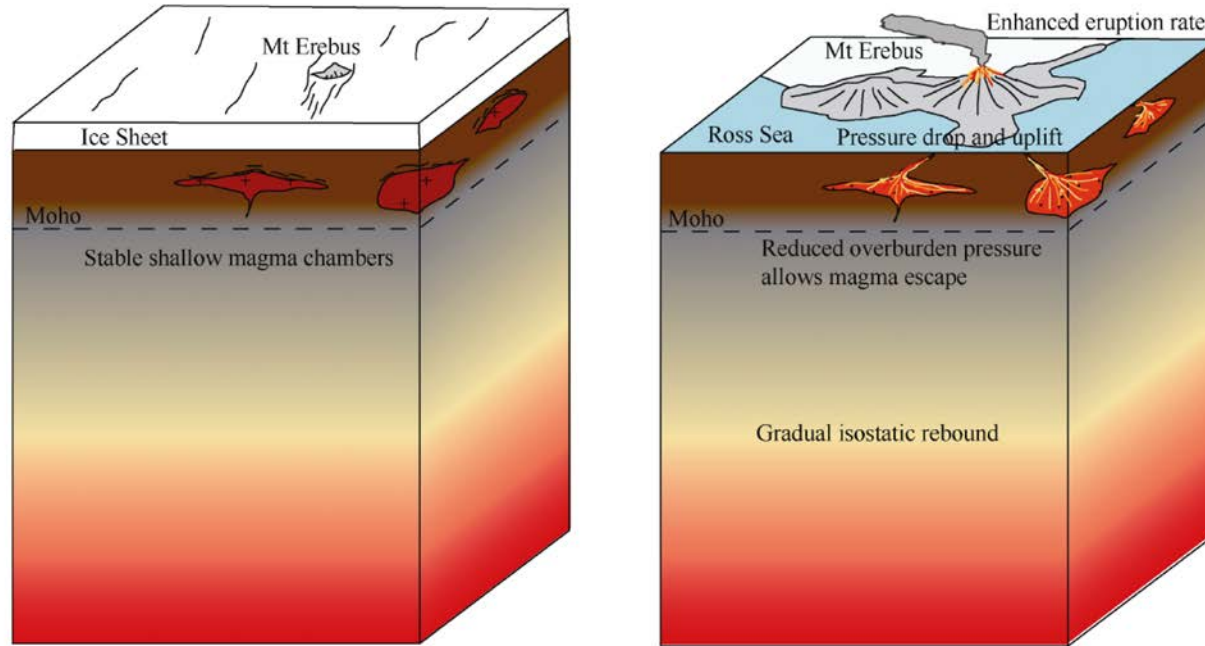


Imagen de joannenova.com.au

AUMENTO DE LA ACTIVIDAD VOLCÁNICA POR EL DESHIELO



a Glacial Period

b Shortly following deglaciation

doi: 10.13679/j.advps.2018.3.00165

VAN WY DE VRIES 2018

**Aunque los volcanes antárticos
están en lugares “remotos” ...**

**Suponen un peligro potencial
para nuestra sociedad**