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References

Deeper, Darker, Colder – Exploring the South Sandwich Trench

By Heather Stewart

Bongiovanni, C, Stewart, HA, Jamieson, AJ. (In Review) High-resolution multibeam sonar bathymetry of the deepest place in each ocean. *Geoscience Data Journal*.

Caladan Oceanic LLC (2021): Five Deeps Expedition to map the South Sandwich Trench (spanning the Atlantic and Southern oceans). British Geological Survey. (Dataset). [10.5285/143e304e-b9d5-43bf-b323-f2ab517bc18b](https://doi.org/10.5285/143e304e-b9d5-43bf-b323-f2ab517bc18b)

Cook, J. (1777) A voyage to the South Pole and round the world performed in His Majesty's ships the *Resolution* and *Adventure* in the years 1772–1775, London, 244–230.

Debenham, F. (Editor) (1945) The Voyage of Captain Bellingshausen to the Antarctic Seas, 1819–1921,

250pp. (London: Hakluyt Society) [Translated from the Russian]

Heezen, BC, Johnson, GL. (1965) The South Sandwich Trench. *Deep-Sea Research*, **12**, 185–197.

Herdman, HFP. (1948) Report on soundings taken during the Discovery Investigations 1926–1932, *Discovery Report*, **25**, 39–106.

Howe, JA, Shimmield, TM, Diaz, R. (2004) Deep-water sedimentary environments of the northwestern Weddell Sea and South Sandwich Islands, Antarctica. *Deep-Sea Research Part II*, **51**, 4189–1514.

Maurer, H, Stocks, T. (1933) Wissenschaftliche Ergebnisse der Deutschen Atlantischen Expedition auf dem Forschungs- und Vermessungsschiff “Meteor” 1925–1927. Vol. 2, *Die Echolotungen des “Meteor”*, 1–309. (de Gruyter: Berlin) [in German]

Mayer, L, Jakobsson, M, Allen, G, Dorschel, B, Falconer, R, Ferrini, V, Lamarche, G, Snaith, H, Weatherall, P. (2018) The Nippon Foundation—GEOCO Seabed 2030 Project: The quest to see the world's oceans

completely mapped by 2030.
Geosciences, **8**, 63.

Ryan, WBF, Carbotte, SM, Coplan, JO, O'Hara, S, Melkonian, A, Arko, R, Weissel, RA, Ferrini, V, Goodwillie, A, Nitsche, F, Bonczkowski, J, Zemsky, R. (2009) Global Multi-Resolution Topography synthesis, *Geochemistry, Geophysics, Geosystems*, **10**, Q03014,

Smalley, R, Dalziel, IWD, Bevis, MG, Kendrick, E, Stamps, DS, King, EC, Taylor, FW, Lauría, E, Zakrajsek, A, Parra, H. (2007) Scotia arc kinematics from GPS geodesy. *Geophysical Research Letters*, **34**, L21308.

Smith, WHF, Sandwell, DT. (1997) Global seafloor topography from satellite altimetry and ship depth soundings. *Science*, **277**, 1957–1962.

Stewart, HA, Jamieson, AJ. (2019) The Five Deeps: the location and depth of the deepest place in each of the world's oceans. *Earth Science Reviews*, **197**, 102896.

Summerhayes, C, Lüdecke, C. (2013). A German Contribution to South Atlantic Seabed Studies,

1938-39. *Polarforschung*, **82(2)**, 93–101.

Weatherall, P, Marks, KM, Jakobsson, M, Schmitt, T, Tani, S, Arndt, JE, Rovere, M, Chayes, D, Ferrini, V, Wigley, R. (2015) A new digital bathymetric model of the world's oceans. *Earth and Space Science*, **2**, 331–345.

Big Geoscience for the Future

By John Ludden

The full Heriot Watt lecture can be found here:
<https://www.youtube.com/channel/UC2SNeFB1TTC1PqMzydvFPDw>

Link to gravity satellite such as ESA's GOCE satellite,
https://esa.int/Applications/Observing_the_Earth/GOCE/Gravity_satellite_to_benefit_future_missions

Links to the Swarm satellites (https://space.dtu.dk/english/Research/Earths_physics_and_geodesy/Magnetic_field).

Barrie, C.T. & Hannington, M.D. (1999). Classification of volcanic-

associated massive sulfide deposits based on host-rock composition *In*: Barrie, C.T. & Hannington, M.D. (eds) *Volcanic-Associated Massive Sulfide Deposits: Processes and Examples in Modern and Ancient Settings*. Society of Economic Geologists, *Reviews in Economic Geology*, 8, 1–11

Calvert, A., Sawyer, E., Davis, W. *et al.* Archaean subduction inferred from seismic images of a mantle suture in the Superior Province. *Nature* 375, 670–674 (1995).

<https://doi.org/10.1038/s41598-018-29016-2>

Earth Science Europe (2014). *Earth Science Europe – Developing Earth Science for Europe* [brochure], <https://www.bgs.ac.uk/earthScienceEurope/download/EarthScienceEuropeBrochure.pdf>

Heinson, G, Didana, Y, Soeffky, P, Thiel, S, Wise, T (2018) The crustal geophysical signature of a world-class magmatic mineral system *Scientific Reports* 8
<https://doi.org/10.1038/s41598-018-29016-2>

Ludden, J. Where is geoscience going? Geological Society, London, Special Publications, 499, 69-77, 23 July 2020, <https://doi.org/10.1144/SP499-2019-212>

Stephenson, M.H., Ringrose, P., Geiger, S., Bridden, M. & Scofield, D. 2019. Geoscience and decarbonization: current status and future directions. *Petroleum Geoscience*, 25, 501–508, <https://doi.org/10.1144/petgeo2019-084>

Zachos, J.C, Dickens, GR and Zeebe, RE
An early Cenozoic perspective on greenhouse warming and carbon-cycle dynamics
Nature 451 (7176), 279-283