

# Erica Barlow

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## Education

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**PhD Candidate - Geobiology, University of New South Wales (UNSW), Australia** 2015-Present  
Thesis topic: *Microfossils of the Paleoproterozoic Turee Creek Group, Western Australia.*  
Supervisor: Prof. M. Van Kranendonk

**Honours - Geology (1st Class), UNSW** 2013-2014  
Thesis title: *Life's adaptation to the oxygen revolution? Litho-stratigraphic analysis of a stromatolite-thrombolite reef from the Paleoproterozoic Turee Creek Group, Western Australia.*  
Supervisor: Prof. M. Van Kranendonk

**B. Environmental Science - major in Earth Science, UNSW** 2010-2013

## Publications

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Barlow EV, Van Kranendonk MJ (2018) Snapshot of an early Paleoproterozoic ecosystem: Two diverse microfossil communities from the Turee Creek Group, Western Australia. *Geobiology* 16(5), 449–475. DOI: 10.1111/gbi.12304

Barlow EV (2017) Conveying the importance of stromatolites to self-guided tourists in Nettle Cave, Jenolan, NSW. In: *Proceedings of the 17th International Congress of Speleology (Ed. 2)* (eds. Moore K, White S). Sydney, Australia, pp. 129–133.

Barlow E, Van Kranendonk MJ, Yamaguchi KE, Ikehara M, Lepland A (2016) Lithostratigraphic analysis of a new stromatolite-thrombolite reef from across the rise of atmospheric oxygen in the Paleoproterozoic Turee Creek Group, Western Australia. *Geobiology* 14(4), 317–343. DOI: 10.1111/gbi.12175

## Conference Presentations

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Barlow EV, Van Kranendonk MJ (2018) Turee Creek Group microfossils highlight early-Paleoproterozoic diversity and complexity. *Goldschmidt*, Boston, USA, 12–17th August. Oral

Barlow EV, Van Kranendonk MJ (2018) Records of early life: context and preservation are key. *Astrobiology Australasia Meeting (AAM)*, Rotorua, New Zealand, 25–26th June. Oral

Barlow EV, Van Kranendonk MJ (2017) Towards an understanding of life on early Earth: Microfossils from the 2.4 Ga Turee Creek Group, Western Australia. *Franco-Australian Astrobiology and Exoplanet (FAAbExo) Workshop*, Canberra, Australia, 16–20th December. Oral

Barlow EV, Van Kranendonk MJ (2017) Microfossils of the Paleoproterozoic Turee Creek Group: Biological evolution resulting from atmospheric change? *ARC CoE for Core to Crust Fluid Systems (CCFS) Annual Meeting*, Cairns, Australia, 27–29th November. Oral

Barlow EV, Van Kranendonk MJ (2017) Physical artefacts or biological structures? The difficulty in interpreting Precambrian fossils. *Geological Society of Australia Earth Science Student Symposium (GESSS)*, Sydney, Australia, 10th November. Oral

Barlow EV (2017) Conveying the importance of stromatolites to self-guided tourists in Nettle Cave, Jenolan, NSW. *17th International Congress of Speleology (ICS)*, Sydney, Australia, 23rd–29th July. Oral

Barlow EV, Van Kranendonk MJ (2017) Preservation of a 2.4 Ga ecosystem in the Kazput Formation of the Turee Creek Group, Western Australia. *Astrobiology Science Convention (AbSciCon)*, Mesa, USA, 24–28th April. Oral

Barlow E, Van Kranendonk MJ (2016) Microfossils of the Paleoproterozoic Turee Creek Group, WA. *ARC CoE for Core to Crust Fluid Systems (CCFS) Annual Meeting*, Sydney, Australia, 21st–22nd November. Oral

Barlow E, Van Kranendonk MJ (2016) Diversification of early life: microfossils of the c. 2.4 Ga Turee Creek Group, Western Australia. *35th International Geological Congress (IGC)*, Cape Town, South Africa, 27th August – 4th September. Poster

Barlow E, Van Kranendonk MJ (2016) A ~2.4 billion-year-old microfossil community from the rise of atmospheric oxygen in the Turee Creek Group, Western Australia. *Astrobiology Australasia Meeting (AAM)*, Perth, Australia, 10–12th July. Oral

Barlow E, Van Kranendonk MJ (2015) Biological evolution resulting from atmospheric and environmental change, Paleoproterozoic Turee Creek Group, Western Australia. *ARC CoE for Core to Crust Fluid Systems (CCFS) Annual Meeting*, Sydney, Australia, 22nd–23rd October. Oral

Van Kranendonk MJ, Barlow E, Walter M, Schopf J (2014) A thriving Proterozoic biosphere at the rise of atmospheric oxygen: Evidence from the c. 2.3 Ga Turee Creek Group, Western Australia. *Australian Earth Sciences Convention (AESC)*, Newcastle, Australia, 7–10th July.

## Invited Talks

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Palaeontology, Geobiology and Earth Archives (PANGAEA) Research Centre seminar (September 2016): *Did the GOE cause the diversification of early life, or is the increase in microfossil form at ~2.4 Ga simply due to an incomplete fossil record?* UNSW, Australia.

Invited seminar (June 2016): *Diversification of early life: A ~2.4 Ga microfossil community from the Turee Creek Group, Western Australia.* Department of Geosciences, Penn State University, USA.

## Teaching Experience

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**Earth Science Teaching Assistant & Lab Coordinator, UNSW** 2012-2018

Responsible for preparing and coordinating lab classes, setting and grading tests, and running both single-day and week-long field trips in the following first, second and third year courses:

GEOS1111: Fundamentals of Geology (~100 students)

GEOS1211: Earth and Environmental Science (~100 students)

GEOS2131: Field Methods and Mapping (~20 students)

GEOS3321: Fundamentals of Petroleum Geology (~30 students)

GEOS3171: Earth Structures (~20 students)

## Professional Memberships

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Australasian Institute of Mining and Metallurgy (AusIMM)

Student member

2014-Present

Geological Society of Australia (GSA)

Student member

2013-Present

UNSW Geoscience Society (GeoSoc)

Student member

2010-Present

President

2017

Secretary

2016

Events Coordinator

2015

## Grants

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School of Biological, Earth and Environmental Sciences (BEES) conference support: \$800	2018
PANGEA Research Centre Student Grant: \$810	2018
Postgraduate Research Support Scheme (PRSS) recipient: \$2600	2018
PANGEA Research Centre Student Grant: \$1000	2016

## Awards

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Australian Speleological Federation Award to attend 17th International Congress of Speleology, Sydney	2017
'Outstanding seminar contribution to MG3 Life & Landforms session', and 'Best presentation with a fieldwork component', Geological Society of Australia Earth Science Student Symposium (GESSS)	2017
Geohost Award to attend 35th International Geological Congress, Cape Town, South Africa	2016
Phil Creaser CREATE Australian Palaeontological Prize	2015
Best Honours Earth Science Presentation, Geological Society of Australia - NSW Division	2014
Queen's Scout Award Recipient - highest youth award available in the Scouting Movement	2010

## Training

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CPR Certificate - Allens Training	2018
'Raman Revealed' workshop - Renishaw plc, University of New South Wales, Sydney	2018
Intro to R course, University of New South Wales, Sydney	2018
First Aid Certificate - Medilife	2017
4WD Course: drive and recover a 4WD vehicle - Getabout Training Services (code: SISODRV302A)	2013

## Referees

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Professor Martin Van Kranendonk PhD Supervisor School of BEES, University of New South Wales	Telephone: +612 9385 2439 Email: martin.vankranendonk@unsw.edu.au
Professor Malcolm Walter Emeritus Professor of Astrobiology School of BEES, University of New South Wales	Telephone: +614 2811 1251 Email: malcolm.walter@unsw.edu.au
Mira van der Ley Technical Officer and Associate Lecturer School of BEES, University of New South Wales	Telephone: +614 0071 9861 Email: m.vanderley@unsw.edu.au