

Luke Strotz BSc (Hons) PhD

CURRENT POSITION AND CONTACT DETAILS

Professor of Palaeontology (since April, 2019)

Department of Geology, *Northwest University, China*

Email: lukestrotz@ku.edu

Web: <https://www.lukestrotz.com>

RELEVANT EMPLOYMENT HISTORY (reverse order)

- 2016 – 2018 **Postdoctoral Associate** – Department of Ecology & Evolutionary Biology and Biodiversity Institute, *University of Kansas, USA*.
- 2016 **Postdoctoral Associate** – Department of Geology and Geophysics, *Yale University, USA*.
- 2013 – 2014 **Lecturer** – Department of Biological Sciences, *Macquarie University, Australia*.
- 2010 – 2013 **Research Fellow** – Department of Biological Sciences, *Macquarie University, Australia*.
- 2008 – 2010 **Research Fellow** – School of Biological, Earth and Environmental Sciences (BEES), *University of New South Wales, Australia*.
- 2006 – 2008 **Collections Officer** – *Australian Museum, Australia*.
- 2001 – 2005 **Technical Officer** – Department of Earth and Planetary Sciences, *Macquarie University, Australia*.

EDUCATION

- 2003 – 2009 **PhD in Palaeontology** – Aspects of agglutinated foraminiferal faunas from the estuarine and tropical shelf environments: ecological conservatism over the last 275 million years *Macquarie University, Australia*. Advisor: Glenn Brock
- 1998 – 2002 **BSc (Hons – First Class) in Palaeontology** *Macquarie University, Australia*.

PART ONE – RESEARCH ACTIVITIES

INTERESTS AND EXPERTISE

Who am I and what do I do?

- My work integrates concepts and methods from ecology, evolutionary biology and paleobiology to answer the question ‘what historical factors shape the structure of communities?’
- Expert in palaeoecology, macroevolution and multivariate statistics
- The goals of my work are to:
 1. Identify the processes that influence and control community composition in marine systems
 2. Quantify environmental change over varying time scales
 3. Establish links between multiple disciplines to address macro-scale questions in the bio- and geosciences;

Research Interests

- **Marine Ecology/Palaeoecology** (ecological distinctness of assemblages through time, ecological controls on species and trait distribution)
- **Evolutionary Biology** (macroevolutionary dynamics, speciation mechanisms and evolutionary innovations)
- **Community Resilience to Natural Hazards** (interpreting marine inundation events using palaeoecological data)
- **Marine and Coastal Geology / Coastal Processes** (coastal evolution and change, contemporary shoreline processes, palaeoenvironmental reconstruction)

Skills and Expertise

- Data compilation and multivariate statistics
- R programming language
- Sample processing – including foraminifera, ostracods, molluscs, brachiopods, chitinozoans and pollen
- Scientific writing and publication
- Education & training

Field Experience and Techniques

- International fieldwork program that includes: eastern Australian coastline; Great Barrier Reef; Flinders Ranges; Gulf of Papua; Pacific Islands; Kansas; northern Utah and China.
- Field experience in siliciclastic marine environments, tropical carbonate environments, deep-ocean environments, freshwater lakes, cool temperate settings and arid inland settings.

PUBLICATIONS

A up-to-date list of my publications is available on Google Scholar:
<https://scholar.google.com.au/citations?user=1u3axhQAAAAJ&hl=en>

REFEREED INTERNATIONAL JOURNAL PUBLICATIONS

Strotz, L.C., and Lieberman, B.S. 2021. The names don't matter but the numbers do: searching for stability in Carboniferous brachiopod paleocommunities from the North American Midcontinent. *Paleobiology* 47: 68-85

Zhang, Z., Zhang, Z., Ma, J., Taylor, P.D., **Strotz, L.C.**, Jacquet, S.M., Skovsted, C.B., Chen, F., Han, J., and Brock, G.A., (2021) Fossil evidence unveils an early Cambrian origin for Bryozoa. *Nature*

Zhang, Z., Topper, T.P., Chen, Y., **Strotz, L.C.**, Chen, F., Holmer, L.E., Brock, G.A. and Zhang, Z., 2021. Go large or go conical: allometric trajectory of an early Cambrian acrotretide brachiopod. *Palaeontology* 64: 727-741

Zhang, Z., **Strotz, L.C.**, Topper, T.P., Chen, F., Chen, Y., Liang, Y., Zhang, Z., Skovsted, C.B. and Brock, G.A., 2020. An encrusting kleptoparasite-host interaction from the early Cambrian. *Nature Communications* 11: 1-7

Kimmig, J., **Strotz, L. C.**, Kimmig, S. R., Egenhoff, S. O., & Lieberman, B. S. (2019). The Spence Shale Lagerstätte: an important window into Cambrian biodiversity. *Journal of the Geological Society* 176: 609-619

Strotz, L.C., Saupe, E.E., Kimmig, J., and Lieberman, B.S. (2018) Metabolic rates, climate and macroevolution: A case study using Neogene molluscs. *Proceedings of the Royal Society of London B: Biological Sciences* 285: 20181292

Note: The paper is in the top 5% of all research outputs tracked by Altmetric and the results were featured extensively in the global media e.g. BBC, Washington Post, The Guardian etc. (<https://royalsociety.altmetric.com/details/46815024>)

Strotz, L.C., Simões, M., Girard, M., Breitzkreuz, L., Kimmig, J., and Lieberman, B.S. (2018) Getting Somewhere with the Red Queen: Chasing a Biologically Modern Definition of the Hypothesis. *Biology Letters* 14: 20170734

Elder, L.E., Hsiang, A.Y., Nelson, K., **Strotz, L.C.**, Kahanamoku, S.S., and Hull, P.M. (2018) Sixty-one thousand recent planktonic foraminifera from the Atlantic Ocean. *Scientific Data* 5: 180109

Kimmig, J. and **Strotz, L.C.** (2017) Coprolites in middle Cambrian (Series 2-3) Burgess Shale-type deposits of Utah and Nevada and their ecological implications. *Bulletin of Geosciences* 92: 297–309

Kimmig, J., **Strotz, L.C.**, and Lieberman, B.S. (2017) The stalked filter feeder *Siphusauctum lloydguntheri* n. sp. from the middle Cambrian (Series 3: Stage 5) Spence Shale of Utah: Its biological affinities and taphonomy. *Journal of Paleontology* 91: 902-910.

Topper, T.P., **Strotz, L.C.**, Skovsted, C.B., and Holmer, L.E. (2017) Do brachiopods show substrate-related phenotypic variation? A case study from the Burgess Shale. *Palaeontology* 60: 269-279

Strotz, L.C., Mamo, B.L., and Dominey-Howes, D. (2016) Effects of cyclone-generated disturbance on a tropical reef foraminifera assemblage. *Scientific Reports* 6: 24846

Strotz, L.C. (2015) Spatial patterns and diversity of foraminifera from an intermittently closed and open lagoon: Smiths Lake, Australia. *Estuarine, Coastal and Shelf Science*, 164: 340-352

Topper, T.P., **Strotz, L.C.**, Holmer, L.E., and Caron, J-B. (2015) Survival on a soft seafloor: life strategies of brachiopods from the Cambrian Burgess Shale. *Earth-Science Reviews*, 151: 266-287

Topper, T.P., **Strotz, L.C.**, Holmer, L.E., Zhang, Z., Tait, N.N., and Caron, J-B. (2015) Competition and mimicry: the curious case of chaetae in brachiopods from the middle Cambrian Burgess Shale. *BMC Evolutionary Biology*, 15: 42

Strotz, L.C. and Allen, A.P. (2013) Assessing the role of cladogenesis in macroevolution by integrating fossil and molecular evidence. *Proceedings of the National Academy of Sciences of the United States of America*, 110: 2904-2909

Note: this paper is a 'recommended article' on Faculty of 1000 (<http://f1000.com/>) and cited in the textbooks *Evolution* (<http://www.sinauer.com/evolution-853.html>) and *Macroevolution* (<http://link.springer.com/book/10.1007/978-3-319-15045-1>)

Strotz, L.C. and Allen, A.P. (2013). Reply to Aze et al.: Distinguishing speciation modes based on multiple lines of evidence. *Proceedings of the National Academy of Sciences of the United States of America*, 110: E2974

Strotz, L.C. (2012) Foraminiferal Fauna and Biotopes of a Barrier Estuary System: St Georges Basin, New South Wales, Australia. *Journal of Foraminiferal Research*, 42: 369-382

Switzer, A.D., Mamo, B.L. Dominey-Howes, D., **Strotz, L.C.**, Jones, B.G., Haslett, S.K. and Everett, D.M. (2011). On the possible origins of an unusual (mid-late Holocene) coastal deposit, Old Punt Bay, southeast Australia. *Geographical Research* 49: 369-382

Chagué-Goff, C., Schneider, J.-L., Goff, J.R., Dominey-Howes, D. and **Strotz, L.** (2011). Expanding the proxy toolkit to help identify past events: Lessons from the 2004 Indian Ocean Tsunami and the 2009 South Pacific Tsunami. *Earth-Science Reviews* 107: 107-122

Note: Frequent citation of this paper places it in top 1% of geoscience papers published in 2011 (InCites Essential Science Indicators)

Jaffe, B., Buckley, M., Richmond, B., **Strotz, L.**, Etienne, S., Clark, K., Watt, S., Gelfenbaum, G., and Goff, J. (2011). Flow speed estimated by inverse modelling of sandy sediment deposited by the 29 September 2009 tsunami near Satitua, east Upolu, Samoa. *Earth Science Reviews* 107: 23-37

Richmond, B., Buckley, M., Etienne, S., Chagué-Goff, C., Clark, K., Goff, J., Dominey-Howes, D., and **Strotz, L.** (2011). Deposits, flow characteristics, and landscape change resulting from the September 2009 South Pacific tsunami in the Samoan islands. *Earth Science Reviews* 107: 38-51

Etienne S., Buckley M., Paris, R., Nandasena, A.K, Clark, K., **Strotz L.**, Chagué-Goff C., Goff J.R. and Richmond B. (2011). The use of boulders for characterising past tsunamis: Lessons from the 2004 Indian Ocean and 2009 South Pacific tsunamis. *Earth Science Reviews* 107: 76-90

Goff, J., Lamarche, G., Pelletier, B., Chague-Goff, C., and **Strotz, L.** (2011). Predecessors to the 2009 South Pacific tsunami in the Wallis and Futuna archipelago. *Earth Science Reviews* 107: 91-106

Strotz, L.C., Mamo, B.L., Topper, T.P., and Bagnato, C. (2010) The highest southern latitude record of a living *Tridacna gigas*. *Malacologia* 53: 155-159

Goff, J.R., Pearce, S., Nichol, S.L., Chagué-Goff, C., Horrocks, M. and **Strotz, L.** (2010). Multi-proxy records of regionally-sourced tsunamis, New Zealand. *Geomorphology* 118: 369-382

Nichol, S.L., Chagué-Goff, C., Goff, J.R., Horrocks, M., McFadgen, B.M. and **Strotz, L.C.** (2010). Geomorphology and accommodation space as limiting factors on tsunami deposition: Chatham Island, southwest Pacific Ocean. *Sedimentary Geology*, 229: 41-52

Mamo, B., **Strotz, L.C.** and Dominey-Howes, D. (2009) Tsunami deposits and their foraminiferal assemblages. *Earth Science Reviews* 96: 263-278

Strotz, L. (2003) Holocene Foraminifera from Tuross Estuary and Coila Lake, south coast, New South Wales: a preliminary study. *Proceedings of the Linnean Society of New South Wales* 124: 163-182

POPULAR SCIENCE PUBLICATIONS

Brock, G.A., and **Strotz, L.C.** The bryozoan mystery: a new look at an old fossil reveals the origin of these tiny coral-like creatures. *The Conversation*, October 28th, 2021

Strotz, L.C. A 515 million-year old freeloader: this nutrient-stealing marine worm is the oldest known parasite. *The Conversation*, June 3rd, 2020

Strotz, L.C. What makes some species more likely to go extinct? *The Conversation*, August 22nd, 2018

RESEARCH GRANT INCOME

RMB\$10,000,000 – 2019. Using metabolic rate to link the Cambrian Substrate Revolution to the Cambrian Radiation. *Thousand Talents Program*.

AU\$24,500 – 2015. Identifying the frequency of speciation modes in the fossil record. *Endeavour Research Fellowship*

AU\$48,000 – 2015. Biodiversity and biogeography of benthic foraminifera from the Great Barrier Reef World Heritage Area. *Australian Biological Resources Study*.

AU\$105,000 – 2011. Speciation mechanisms in planktic Foraminifera, *Macquarie University Research Project*.

AU\$75,000 – 2009. Using microfossils to identify palaeo-tsunami. *University of New South Wales Research Centre Project*.

AU\$1,000 – 2006. Agglutinated foraminifera from inner neritic sand and mud facies of the Papuan lagoon New Guinea. *Australian Biological Resources Study*.

US\$1,000 – 2006. Holocene foraminifera from the reefs surrounding Viti Levu, Fiji Islands: a test of the FORAM Index. *Cushman Foundation for Foraminiferal Research*.

AU\$5,500 – 2003. Extant Foraminiferal Faunas from Estuarine Deposits in Eastern Australia: analogues for faunas from Australia's Permian and Cretaceous Inland Seas. *Macquarie University*.

AU\$54,000 – 2003. Distribution of agglutinated Foraminifera from modern estuarine environments: analogues for faunas from Australia's Permian and Cretaceous seas. *Australian Postgraduate Award*.

AU\$1,200 – 2002. Foraminifera of Tuross Estuary and Coila Lake; Indicators of Estuarine Evolution. *Betty Mayne Scientific Research Fund for Earth Sciences*.

INTERNATIONAL COLLABORATIONS AND ACTIVITIES

I have ongoing collaborations with the following researchers:

Northwest University, China: Zhifei Zhang

University of Kansas, USA: Bruce Lieberman

Pennsylvania State University, USA: Julien Kimmig

University of Missouri, USA: Sarah Jacquet

University of New England, Australia: John Paterson, Marissa Betts

Macquarie University, Australia: Glenn Brock, Zhiliang Zhang

Naturhistoriska riksmuseet, Sweden: Timothy Topper, Christian Skovsted

Uppsala University, Sweden: Lars Holmer

CONFERENCE PRESENTATIONS

Strotz, L.C., and Lieberman, B.S. Ecological stability despite environmental disruption-searching for ecological rules governing Carboniferous brachiopod assemblages from the North American Mid-continent. *EGU General Assembly Conference*, 2020, Vienna, Austria

Strotz, L.C., Saupe, E.E., Kimmig, J., and Lieberman, B.S. Metabolic rates, climate and macroevolution: A case study using Neogene molluscs. *International Palaeontological Congress*, 2018, Paris, France

Strotz, L.C., Saupe, E.E., Kimmig, J., and Lieberman, B.S. Relating ecology to macroevolution using metabolic rates of neogene mollusc communities. *Geological Society of America Annual Meeting*, 2017, Seattle, USA

Kimmig, J., **Strotz, L.C.**, Kimmig, S.R., Egenhoff, S.E., and Lieberman, B.S. The middle Cambrian Spence Shale (Series 3: Stage 5) Lagerstätte: a key Cambrian ecosystem. *International Palaeontological Congress*, 2018, Paris, France

Kimmig, J., **Strotz, L.C.**, Kimmig, S.R., Egenhoff, S.E., and Lieberman, B.S. The middle Cambrian Spence Shale (Series 3: Stage 5) Lagerstätte: a new look at an old ecosystem. *International Conference on Ediacaran and Cambrian Sciences*, 2018, Xi'an, China

Strotz, L.C., Saupe, E.E., Hsiang, A.Y., Elder, L.E., Heim, N.A., Dowsett, H.J., and Hull, P.M. Geographic variations in body size for the northern Atlantic pelagic biome. *Geological Society of America Annual Meeting*, 2016, Denver, USA

Elder, L., Hsiang, A., Kahanomoku, S., Nelson, K., **Strotz, L.**, and Hull, P. Use of High-throughput imaging to extract morphometrics of recent planktonic foraminifera communities from the North Atlantic. *International Conference of Paleoceanography*, 2016, Utrecht, The Netherlands

Strotz, L.C., Modern estuaries as analogues for Permian and Cretaceous intracratonic seas. *International Palaeontological Congress*, 2014, Mendoza, Argentina

Topper, T.P., Holmer, L.E., **Strotz, L.**, Tait, N, Zhang, Z. and Caron, J.B. The curious case of chaetae in brachiopods from the Middle Cambrian Burgess Shale. *Palaeontological Association Annual Meeting 2014*, Leeds, UK

Strotz, L., Mamo, B., Wilson, K., Chague-Goff, C., Goff, J., Dominey-Howes, D., Richmond, B., Buckley, M. and Etienne, S. Foraminiferal signature of the September, 2009 South Pacific Tsunami, *FORAMS 2010*, Bonn, Germany

Mamo, B., **Strotz, L.**, and Brock, G., Benthic Foraminiferal assemblages from the Capricorn Bunker Group, Great Barrier Reef, Australia: initial results and implications, *FORAMS 2010*, Bonn, Germany

Goff, J., Dominey-Howes, D., Chagué-Goff, C., **Strotz, L.**, Anning, D., Bird, D., Calgareo, E., Courtney, C., Dall'Osso, F., Gero, A., Mamo, B., Roman, C., Tarbotton, C. and Veland, S. Determining the magnitude, frequency and source of prehistoric events - Is there a Holy Grail? *European Geophysical Union Annual Meeting*, 2010, Vienna, Austria

Dominey-Howes, D., Alam, E., Anning, D., Bird, D., Calgareo, E., Chagué-Goff, C., Courtney, C., Dall'Osso, F., Jardine-Coom, L., Gero, A., Méheux, K., Mamo, B., Roman, C., **Strotz, L.**, Tarbotton, C., Veland, S. and Goff, J. Using the Coupled Human-Environment Systems Framework' for exploring issues of hazard and risk. *International Geographic Union Regional Conference*, 2010, Tel Aviv, Israel

Courtney, C., Dominey-Howes, D., Goff, J., Chagué-Goff, C. and **Strotz, L.** Testing the Australian Megatsunami Hypothesis. *European Geophysical Union Annual Meeting*, 2010, Vienna, Austria

Courtney, C., Dominey-Howes, D., Goff, J., Chagué-Goff, C. and **Strotz, L.** Testing the Australian Megatsunami Hypothesis. *International Geographic Union Regional Conference*, 2010, Tel Aviv, Israel

Anning, D., Bird, D., Calgareo, E., Chagué-Goff, C., Courtney, C., Dall'Osso, F., Gero, A., Mamo, B., Roman, C., **Strotz, L.**, Veland, S., Goff, J. and Dominey-Howes, D. Using the coupled 'human-environment systems framework' for exploring issues of hazard and risk? *Institute of Australian Geographers Conference*, 2009, Cairns, Australia

Courtney, C., Goff, J., Dominey-Howes, D., Chagué-Goff, C. and **Strotz, L.** Megatsunami myth and reality revisited: An exercise in geomorphology. *7th International Conference on Geomorphology*, 2009, Melbourne, Australia

Etienne S., Goff, J., Chagué-Goff C., **Strotz L.**, Dominey-Howes D., Richmond B., Buckley M., Wilson K. and Sale M. Cartographie des impacts géomorphologiques du tsunami du 29 Septembre 2009 aux Iles Samoa. Aspects méthodologiques. *Séminaire GEPASUD Université de la Polynésie Française*, 2009, Tahiti

Etienne S., Richmond B., Buckley M., Goff, J., Dominey-Howes D., Chagué-Goff C., **Strotz L.**, Wilson K. and Sale M. Cartographie des impacts géomorphologiques du tsunami du 29 Septembre 2009 aux Iles Samoa. Aspects méthodologiques. *Séminaire GEOLAB Université de Clermont-Ferrand*, 2009, France

Strotz L.C., and Mamo, B. (2009) Can Foraminifera be used to Identify Storm Deposits in Shallow-Water Tropical Reef Settings?: Examining the Impact of Cyclone Hamish on the Foraminiferal Assemblages of Heron Island, Great Barrier Reef, Australia. *American Geophysical Union Fall Meeting*, 2009, San Francisco, USA

Goff, J., Chague-Goff, C., Etienne, S., Lamarche, G., Pelletier, B., Richmond, B., **Strotz, L.**, Buckley, M., Wilson, K., Dudley, W., Urban, G., Sale, M. and Dominey-Howes, D. Identifying precursors to the 2009 South Pacific tsunami? *American Geophysical Union Fall Meeting*, 2009, San Francisco, USA

Mamo, B., **Strotz, L.** and Dominey-Howes, D. Tsunami sediments and their foraminiferal assemblages. *American Geophysical Union Fall Meeting, 2009*, San Francisco, USA

Veland, S., **Strotz, L.**, Roman, C., Mamo, B., Gero, A., Dall'Osso, F., Courtney, C., Chagué-Goff, C., Calgaro, E., Bird, D., Anning, D., Dominey-Howes, D. and Goff, J. Coupled human-environment systems in prehistory? *Institute of Australian Geographers Conference, 2009*, Cairns, Australia

Strotz, L.C., and Brock, G.A. Holocene foraminifera from the reefs surrounding Viti Levu, Fiji Islands: a test of the FORAM Index. *FORAMS 2006*, Natal, Brazil

Strotz, L.C., and Haig, D.W. Agglutinated foraminifera from inner neritic sand and mud facies of the Papuan lagoon, New Guinea. *FORAMS 2006*, Natal, Brazil

Strotz, L., Foraminifera from Tuross Estuary and Coila Lake: Indicators of Estuarine Evolution. *First International Palaeontological Congress, 2002*, Sydney, Australia

INVITED LECTURES

2019	Natural History Museum of Los Angeles County
2019	Northwest University
2017	University of Kansas
2017	Friedrich-Alexander-Universität Erlangen-Nürnberg
2010	Macquarie University
2007	Australian Museum
2003	Geological Survey of New South Wales
2003	Geological Survey of New South Wales

PART TWO – TEACHING EXPERIENCE

Names of courses listed in bold followed by subject topics I covered in that course. For each topic, both lectures and practical classes were provided. Course names marked with a * represent courses where I was the sole unit coordinator (exclusively responsible for all unit content development, delivery and assessment).

MACQUARIE UNIVERSITY

BIOL 261/GEOS 235 Palaeontology*

Introduction to the History of Life; Modes of Preservation; Fossilisation; Taxonomy and Classification; Taxonomic Principles; The Precambrian Fossil Record; The Cambrian Explosion; Trilobites; Brachiopods; Molluscs; Functional Morphology; Graptolites; Biostratigraphy; Mass Extinctions; Foraminifera; Diatoms; Palaeoecology; Milestones in Plant Evolution; Milestones in Vertebrate Evolution; Dinosaurs

BIOL262 Evolution*

What is Evolution; History of Evolutionary Biology; Species; Speciation; Origin of Genetic Diversity; Variation; Genetic Drift; Natural Selection and Adaptation; The Genetic Theory of Natural Selection; Phenotypic Evolution; The Evolution of Life Histories; The Geography of Evolution; Sex and Reproductive Success; Conflict and

Cooperation; Coevolution; Evolution and Development; Evolutionary Science and Society

BIOL373 Marine Ecology

Foraminifera Biology

BIOL379/GEOS428 Reef Evolution and Dynamics (Field Course)

Tropical Reef Foraminifera; Evolution and Biology of Tridacna; Photosymbiosis; Anthropogenic Impacts on Coral Reef

BIOL399 Special Interest Topics in Biology

Evolution of Photosymbiosis

BIOL381/ GEOS312 Invertebrate Palaeontology

Microfossils

BIOL382/GEOS397 Applied Palaeontology and Biogenic Sediments*

Introduction to Applied Palaeontology; Introduction to Multivariate Methods in Palaeontology; Palaeoclimate and Climate proxies; Palaeoenvironmental Reconstructions; Micropalaeontology and Extreme Event Deposits; Carbonates and Fossils in Thin Section; Biostratigraphy and the Search for Resources; Fossils and Palaeobathymetry; Palaeobiogeography and Latitudinal Gradients; Palaeo Techniques; Vertebrates in Applied Palaeontology

UNIVERSITY OF KANSAS

Biology 225 Evolution and the History of Life

The End-Cretaceous Extinction; Paleobiogeography

NORTHWEST UNIVERSITY

The Use of Statistics in Paleontology*

Developing a Question; Introduction to R; Visualizing data; Exploratory Analysis; Testing Hypotheses; Regression; Multivariate Analysis; Building a Model; Statistics in Evolution; Statistics in Paleoecology

PART THREE – SERVICE, ADMINISTRATION, OUTREACH & MEDIA

SERVICE TO THE UNIVERSITY (MY EMPLOYER)

- 2013 – 2014 **Coordinator** – Macquarie University Macrobiotic Journal Club.
- 2012 **Coordinator** – Macquarie University Honours/Master Theme Topic Workshops
- 2009 **Website Developer** – Australia Pacific Tsunami Research Centre, University of NSW.
- 2006 – 2008 **Website Content Developer** – Australian Museum.

SERVICE TO MY DISCIPLINE

UNESCO-IOC International Tsunami Survey Team – I was the group palaeoecologist for the 2009 Samoa UNESCO Intergovernmental Oceanographic Commission (IOC) post-tsunami survey team

Editorial Roles: I am a Review Editor in Palaeontology for the journals *Frontiers in Earth Science* and *Frontiers in Ecology and Evolution*

Manuscript Peer Review: Recent journals I have reviewed manuscripts for include *Biological Reviews*, *iScience* and *Progress in Physical Geography*

Grant Application Review: Recent grant schemes I have reviewed for include the National Science Foundation (NSF) and the Austrian Science Fund (FWF)

Conference Organising: Member of organising committee for the first International Palaeontological Congress (IPC) (2002); Member of organising committee for first Palaeo Down Under (PDU) conference (2000)

OUTREACH

2007 – 2013 **Scientists in Schools Program**– Scientist partner for the Australian government’s Scientists in Schools program

2007 – 2008 **Science in the City**– Scientist and Activity Developer for Australian Museum/Sydney University Science in the City Program

2003 – 2017 **Abbotsleigh Girls High School Coral Reef Program**– Coordinator and lecturer for field based coral reef course for high school students

2002 **Festival of Fossils**– Lecturer and workshop co-ordinator for the festival of fossils short course for high school teachers

MEDIA COMMUNICATION

I have provided commentary on my own research, on palaeobiology as a science and on aspects of undergraduate teaching for the following media:

2020	New Scientist
2020	The Conversation (Australia Edition)
2018	The Conversation (US Edition)
2018	3AW Melbourne (Australian radio)
2018	British Broadcasting Corporation (United Kingdom radio)
2018	Capetalk (South African radio)
2018	Chronicle Herald (Canadian newspaper)
2018	CNN (United States television)
2018	Haaretz (Israeli newspaper)
2018	National Public Radio (United States radio)
2018	La Repubblica (Italian newspaper)
2018	Lawrence Journal World (United States newspaper)

2018 The Conversation (United States media website)
2018 Washington Post (United States newspaper)
2013 The Sun-Herald (Australian newspaper)
2009 Australian Broadcasting Corporation (Australian radio)
2006 Daily Telegraph (Australian newspaper)
2006 Today Show; Channel 9 (Australian television)
2006 Totally Wild, Channel 10 (Australian television)