

EDUCATION

PH.D.	THE UNIVERSITY OF QUEENSLAND	2009 – 2014
The palaeoenvironment of the Upper Cretaceous (Cenomanian-Turonian) portion of the Winton Formation, central-western Queensland, Australia		
GRAD. CERT. ARTS	THE UNIVERSITY OF QUEENSLAND	2008 – 2009
Philosophy, specifically focusing on the logic and philosophy of science		
GRAD. CERT. COMMUNICATION	THE UNIVERSITY OF QUEENSLAND	2008 – 2009
Science communication, with a focus on communication of science to the public		
B.SC. HONS. FIRST CLASS	THE UNIVERSITY OF QUEENSLAND	2006 – 2007
New pterosaur fossils from the Early Cretaceous (Aptian–Albian) of Western Queensland, Australia		
B.Sc.	THE UNIVERSITY OF QUEENSLAND	2003 – 2006
In the field of Zoology, with four final year subjects as research projects		

RESEARCH EXPERIENCE

2021–	Marie Skłodowska-Curie Action, Individual Fellowship – University of Leeds PReP – Palaeoclimate Reconstruction Project
2019–2021	President’s International Fellow, Chinese Academy of Sciences – Institute of Applied Ecology, Shenyang. Implications of Arctic Palaeoclimate and Palaeofire records for Earth System Models.
2017–2018	Post-Doctoral Fellow, University of Nevada, Reno–University of Montana, Missoula Fire and vegetation as long-term feedbacks to Arctic amplification
2015–2018	Post-Doctoral Researcher, University of Montana, Missoula. Investigation of arctic amplification of temperature during the Pliocene warm period.
2009–2014	Ph.D. Research, University of Queensland, Brisbane. Reconstructing the palaeoenvironment of the Upper Cretaceous Winton Formation in central-western Queensland.
2006–2007	Honours Research, University of Queensland, Brisbane. Description and biogeographic implications of pterosaur fossils from western Queensland.
2005–2006	Undergraduate research subject Histology of leatherback turtle and crocodilian osteoderms

AWARDS AND GRANTS

- 2021** Marie Skłodowska-Curie Action, Individual Fellowship (PI €224,933.76)
- 2020** European Research Council Seal of Excellence f
- 2019** President's International Fellowship Initiative – CAS (PI 520,000 RMB)
European Research Council Seal of Excellence
- 2017** Endeavour Research Fellowship (PI \$23,000 AUD)
- 2016** National Geographic Committee for Research and Exploration (PI \$25,000 USD)
- 2016** Polar Continental Shelf Program Field Support (Field Team, ~\$57,000, CAD)
- 2014** University of Queensland – 2014 Future Leader Award
- 2013** University of Queensland, School of Biological Sciences 3-minute Thesis competition Winner (\$300 AUD)
University of Queensland, Faculty of Science 3-minute Thesis competition runner-up
- 2009-2014** Australian Postgraduate Award Scholarship (PI ~\$87,000 AUD Stipend + fee waiver)
- 2012** UQ, Graduate School International Travel Award (\$5000 AUD)
UQ, School of Biological Sciences International Conference Travel Grant (\$1,200 AUD)
UQ, School of Biological Sciences Conference Travel Grant (\$400 AUD)
- 2011** UQ School of Geography Field Support (\$1,400 AUD)
- 2008** Smart Women, Smart State Undergraduate Awards – Short-listed
Commonwealth Supported Postgraduate Coursework Scholarship (~\$2,400 AUD)
Dean's Commendation for High Achievement Faculty of Social & Behavioural Sciences
- 2003–2006** Dean's Commendation for High Achievement Faculty of Biological & Chemical Sciences

PUBLICATIONS

Fletcher, T., Eble, C., Sinninghe Damsté, J.S., Brown, K.J., Rybczynski, N., Gosse, J., Liu, Z., Ballantyne, A., In Review. Widespread wildfire across the Pliocene Canadian Arctic Archipelago. *Palaeogeography, Palaeoclimatology, Palaeoecology*.

Jiao, K. Liu, Z, Wu, S., **Fletcher, T.** 2021. Revealing climatic impacts on the temporal and spatial variation in vegetation activity across China: Sensitivity and contribution. *Advances in Climate Change Research*, In Press. <https://doi.org/10.1016/j.accre.2021.04.006>

Barendregt, R.W., Matthews Jr, J.V., Behan-Pelletier, V., Brigham-Grette, J., Fyles, J.G., Ovenden, L.E., McNeil, D.H., Brouwers, E., Marincovich, L., **Fletcher, T.**, Accepted. Biostratigraphy, age, and the paleoenvironment of the Pliocene Beaufort Formation on Meighen Island, Canadian Arctic Archipelago. *Geological Society of America Special Publications*.

Fletcher, T.F., Telka, A., Rybczynski, N., Matthews Jr, J., 2021. Neogene and early Pleistocene flora from Alaska and Arctic/Subarctic Canada: new data, intercontinental comparisons and correlations. *Palaeontologica Electronica*. v. 24, no. 1, p. a07. doi: <https://doi.org/10.26879/1121>

Fletcher, T., Lepley, K., Rouini, N., Bloye, R., Tremarelli, C., Peña, K., Meko, D., Touchan, R. 2019. Two reconstructions of August–July precipitation for central northern Arizona from tree-rings, *Tree-Ring Research*. 75:116-126. <https://doi.org/10.3959/TRR2018-7>

Fletcher, T., Warden, L., Sinninghe-Damste, J., Brown, K.J., Rybczynski, N., Gosse, J., Ballantyne, A.P. 2019. Evidence for fire in the Pliocene Arctic in response to amplified temperature. *Climate of the Past* 15, 1063-1081. <https://doi.org/10.5194/cp-2018-60>.

Fletcher, T., Csank, A., Ballantyne, A.P. 2019. Identifying bias in cold season temperature reconstructions by beetle mutual climatic range methods in the Pliocene Canadian High Arctic, *Palaeogeography, Palaeoclimatology, Palaeoecology* 514, 672-676 <https://doi.org/10.1016/j.palaeo.2018.11.025>

Feng, R., Otto-Bliesner, B, Yangyang, X., Brady, E., **Fletcher, T.**, Ballantyne, 2019. Contributions of aerosol-cloud interactions to mid-Piacenzian seasonally sea ice-free Arctic Ocean, *Geophysical Research Letters*, 46, 9920–9929. <https://doi.org/10.1029/2019GL083960>

Fletcher, T., Moss, P., Salisbury, S. W. 2018. Palaeoenvironmental Reconstruction of the Upper Cretaceous (Cenomanian-Turonian) portion of the Winton Formation, central-western Queensland, Australia, *PeerJ*, 6:e5513 <https://doi.org/10.7717/peerj.5513>

Fletcher, T., Feng, R., Telka, A. M., Matthews, J.V., Ballantyne A. B. 2017. Floral dissimilarity and the influence of climate in the Pliocene High Arctic: Biotic and abiotic influences on five sites on the Canadian Arctic Archipelago, *Frontiers in Ecology and Evolution: Paleoecology*, 5, 19. <https://doi.org/10.3389/fevo.2017.00019>

Gosse, J.C., Ballantyne, A.P., Barker, J.D., Csank, A.Z., **Fletcher, T.L.**, Grant, G.W., Greenwood, D.R., MacPhee, R.D., Rybczynski, N. 2017. PoLAR-FIT: Pliocene Landscapes and Arctic Remains—Frozen in Time. *Geoscience Canada* 44, 47–54. <https://doi.org/10.12789/geocanj.2017.44.116>

Feng, R., Otto-Bliesner, B, **Fletcher, T.**, Tabor, C., Ballantyne, A. Brady, E. 2017. Amplified Late Pliocene terrestrial warmth in northern high latitudes from greater radiative forcing and closed Arctic Ocean gateways, *Earth and Planetary Science Letters*, 466, 129–138 <https://doi.org/10.1016/j.epsl.2017.03.006>.

Fletcher, T.L., Moss, P.T., Salisbury, S.W. 2015. Wood growth indices as climate indicators from the Upper Cretaceous (Cenomanian–Turonian) portion of the Winton Formation, Australia. *Palaeogeography Palaeoclimatology Palaeoecology*, 417, 35–43. <https://doi.org/10.1016/j.palaeo.2014.10.012>

Fletcher, T.L., Greenwood, D.R., Moss, P.T., Salisbury, S.W. 2014. Palaeoclimate of the Late Cretaceous (Cenomanian–Turonian) portion of the Winton Formation, central-western Queensland, Australia: new observations based on CLAMP and Bioclimatic Analysis. *Palaios* 29, 121–128. <https://doi.org/10.2110/palo.2013.080>

Fletcher, T.L., Cantrill, D.J., Moss, P.T., Salisbury, S.W. 2014. A new species of *Protophyllocladoxylon* from the Upper Cretaceous (Cenomanian–Turonian) portion of the Winton Formation, central-western Queensland, Australia. *Review of Palaeobotany and Palynology* 208, 43–49. <https://doi.org/10.1016/j.revpalbo.2014.05.004>

Fletcher, T.L., Salisbury, S.W. 2014. Probable oribatid mite (Acari: Oribatida) tunnels and faecal pellets in silicified conifer wood from the Late Cretaceous (Cenomanian–Turonian) portion of the Winton Formation, central-western Queensland, Australia. *Alcheringa* 38, 541–545. <https://doi.org/10.1080/03115518.2014.912557>

Fletcher, T.L., Moss, P.T., Salisbury, S.W., 2013. Foliar physiognomic climate estimates for the Late Cretaceous (Cenomanian–Turonian) Lark Quarry fossil flora, central-western Queensland, Australia. *Australian Journal of Botany* 61, 575–582. <https://doi.org/10.1071/BT13197>

Delfino, M., Scheyer, T.M., Chesi, F., **Fletcher, T.L.**, Gemel, R., Macdonald, S., Rabi, M., Salisbury, S.W. 2013. Gross morphology and microstructure of type locality ossicles of *Psephophorus polygonus* Meyer, 1847 (Testudines, Dermochelyidae). *Geological Magazine*. 150, 767–782.

Fletcher, T., Salisbury, S. W. 2010. New pterosaur fossils from the Early Cretaceous (Albian) of Queensland, Australia. *Journal of Vertebrate Paleontology*, 30(6), 1747–1759. <https://doi.org/10.1080/02724634.2010.521929>

CONFERENCE PRESENTATIONS

Fletcher, T., Csank, A., Gosse J., Rybcynski, N., Brown, K., Eble, C., Ballantyne, A. 2020. Fire under ice: evidence for extensive geographic and temporal range of wildfire in the Pliocene High Arctic. *Geological Society of America Connects Online*, 26th–30th October.

Csank, A.Z., **Fletcher, T.**, Gosse, J.C., 2020. Past futures: Reconstructing the fire history of the Pliocene Arctic, 1st Tree Ring Society Virtual Symposium, 29th May.

Fletcher, T., Rybczynski, N., Telka, A., Matthews, J.V. 2020. Neogene Plant Macrofossils from Alaska and Arctic/Subarctic Canada: New Data, Intercontinental Comparisons and Correlations, 2nd Palaeontological Virtual Congress, 1st–15th May.

Fletcher, T., Barendregt, R.W., Matthews, Jr. J.V., Behan-Pelletier, V., Brigham-Grette, J. Fyles, J.G., Ovenden, L.E., McNeil, D., Brouwers, E., Marincovich L. 2020. Biostratigraphy, Age, and the Paleoenvironment of the Pliocene Beaufort Formation on Meighen Island, Canadian Arctic Archipelago, *2nd Palaeontological Virtual Congress*, 1st–15th May.

Csank, A.Z., **Fletcher, T.**, Gosse, J.C., 2019. It Was Always Burning, Fire Scars from Subfossil Wood Reveal Fire Return Intervals in a Mid-Pliocene Arctic Forest, *52nd Fall Meeting of the American Geophysical Union*, San Francisco, USA, 9th–13th December.

Fletcher, T., Feng, R., Brown, K., Warden, L., Csank, A., Higuera, P., Rybczynski, N., Otto-Bliesner, B., Ballantyne, A. 2017. Vegetation and Fire: Feedbacks to Pliocene Arctic Climate, *Geological Society of America Abstracts with Programs* 49 (6) doi: 10.1130/abs/2017AM-298574. Seattle, USA, 22nd–25th October.

Feng, R., Otto-Bliesner, B., **Fletcher, T.**, Ballantyne, A., Brady, E. 2017. Contributions to Pliocene Arctic warmth from a clean atmosphere and enhanced forest fire emissions, *PAST Global Changes 3rd Young Scientist Meeting*, Morillo de Tou, Spain, 7–9th May.

Fletcher, T. 2017. Outside of Now: Informing Arctic Climate Predictions with Fossil Floras. 3rd *Association of Polar Early Career Scientists International Online Conference*, 20th March.

Fletcher, T., Brown, K., Warden, L., Csank, A., Feng, R., Higuera, P., Rybczynski, N., Ballantyne, A. 2016. Climate-Vegetation-Fire Interactions: Pieces in the Pliocene Polar Puzzle, *Abstract #PP53C-2390, 49th Fall Meeting of the American Geophysical Union*, San Francisco, USA, 12–16th December.

Feng, R., Otto-Bliesner, B., **Fletcher, T.**, Ballantyne, A., Brady, E. 2016 Contributions to Pliocene Arctic warmth from removal of anthropogenic aerosol and enhanced forest fire emissions. *49th Fall Meeting of the American Geophysical Union*, San Francisco, USA, 12–16th December.

Fletcher, T. 2012. Paleoclimate of the dinosaur-bearing, mid-Cretaceous Winton Formation, central-western Queensland, Australia: new observations based on Leaf Margin Analysis, Climate Leaf Analysis Multivariate Program, Bioclimatic Analysis and fossil wood growth indices. *72nd Annual Meeting of the Society of Vertebrate Paleontology*, Raleigh, USA, 32, 94–95.

Fletcher, T., Moss, P., Salisbury, S. 2012: Palaeoclimate of the mid-Cretaceous Winton Formation, central-western Queensland, Australia: new observations based on Leaf Margin Analysis, CLAMP, Bioclimatic Analysis and fossil wood growth indices. *34th International Geological Congress*, Brisbane, Australia, 5th–10th August.

Delfino, M., Scheyer, T., Chesi, F., **Fletcher, T.**, Gemel, R., MacDonald, S., Rabi, M. and Salisbury, S., 2012. Ossicle gross morphology and microstructure of *Psephophorus polygonus* Meyer, 1847 (Testudines, Dermochelyidae), p. 18 In: *Program and Abstracts - Symposium on Turtle Evolution* 48 pp, June 1st–4th, University of Tübingen, Germany.

Fletcher, T., Berrell, R.W., Geddes, K., Salisbury, S.W., 2009. Acid preparation of vertebrate fossils (Teleostei and Dinosauria) from the mid-Cretaceous Winton Formation of Isisford, central-western Queensland, Australia. In: Truillon, K.J., Worthy, T.H., Hand, S.J. and Creaser, P. (ed), *Conference on Australian Vertebrate Evolution, Palaeontology and Systematics*, 2009. *Geological Society of Australia, Abstracts*, 93, p.74, June 22nd–25th, Sydney, Australia.

Fletcher, T., Salisbury, S.W., Cook A.G., 2007. New pterosaur fossils from the Early Cretaceous (Aptian-Albian) of western Queensland, Australia. *Flugsaurier: Pterosaur conference in honour of Peter Wellnhofer*, September 10th–14th, Munich, Germany

Fletcher, T.L., Salisbury, S.W., Cook, A.G. 2007. New pterosaur fossils from the Early Cretaceous (Aptian-Albian) of western Queensland, Australia. In: Warren, A. (ed), *Conference on Australian Vertebrate Evolution, Palaeontology and Systematics*, 2007. *Geological Society of Australia, Abstracts*, 85, p. 26, 10th–13th April Melbourne, Australia.

PROFESSIONAL DEVELOPMENT

- 2017** Dendroclimatology Intensive Workshop, Laboratory of Tree Ring Research, University of Arizona, 15th May –3rd June.
Dendrology and Wood Anatomy, University of Montana NFC.
- 2016** Climate Science and Modeling, University of Chicago via CourseRA
Wilderness First Aid Certificate with Aerie Backcountry Medicine.
- 2015** Framing: Creating Powerful Political Messages, DelfX via edX
- 2014** Senior First Aid and CPR
4WD Training - Sand
- 2012** Computing for Data Analysis with John Hopkins University via CourseRA
- 2004–2012** Research assistant in the Vertebrate Palaeontology and Biomechanics laboratory
- 2011** Introducing R workshop with Simon Blomberg, UQ
- 2010–2011** Tutor development modules taught by the School of Biology, UQ
- 2008** 4WD Training – ‘Bush’
- 2005** Peer Assisted Study Sessions Leadership Training

COMMUNITY ENGAGEMENT

- 2020** Your Forest Podcast, 'The Evolution of the Boreal Forest'
- 2017** Science News article, 'What the Pliocene epoch can teach us about future warming on Earth'
- 2015** ABC Radio Adelaide, 9 June
ABC Radio Gold Coast, 8 June
The Conversation article, "Before we build Jurassic World we need to study recent extinctions" 8 June
- 2014** Longreach Leader article, "Longreach mayor happy to go down in history as petrified wood" 4 July
ABC regional radio, 1 July
Dinosaur Chat by APN News and Media on 'Coveritlive.com' 3 June
ABC Science article, "Leaves reveal ancient Queensland was warm" 7 April
Speed-date a Scientist; National Youth Science Forum and University of Queensland Faculty of Science Youth Science Forum
- 2010, 2013** Three-minute thesis competition

PROFESSIONAL ENGAGEMENT

- 2016–2017** Committee for the Association of Polar Early Career Scientists
Nordic Research Council Report lead
- Journal Referee:** Palaeogeography Palaeoclimatology Palaeoecology
Geological Magazine
Cretaceous Research
Canadian Journal of Earth Sciences
Earth & Environmental Science Transactions of the Royal Society of Edinburgh
- Scientific Societies:** International Organisation of Palaeobotany
Association of Polar Early Career Scientists
Geological Society of America
PoLAR-FIT working group

INVITED PRESENTATIONS

- 2018** Geography colloquium – University of Nevada
- 2017** PaleoEcology and Fire Ecology Lab – University of Montana
Paleoecology Lab – Montana State University
- 2015** Geosciences Colloquium – University of Montana
- 2014** Rockhampton Girls Grammar senior archeology classes, guest speaker
- 2013** Guest lecture for University of Queensland course, 'BIOL2201 – Evolution'
- 2009–2010** Brisbane state primary school visits, prep to grade 2

TEACHING EXPERIENCE

- 2014** Lecturing BIOL2201 – Evolution, 'Mass Extinctions' and 'The Origin of Tetrapods'
Field Tutoring BIOL2001 – Australia's Terrestrial Environment
- 2010–2014** Demonstrating and lecturing for the second-year course, 'BIOL2201 – Evolution'
- 2013** Demonstrating for 'BIOL1030 – Global challenges in the Environment'
- 2008–2012** Undergraduate 'preparation laboratory' volunteer supervision
- 2009** Tutor to an ESL student in the first-year course, 'PHIL1110 – Critical Reasoning'
- 2004–2006** Peer Assisted Study Sessions leader for the first-year course 'Animal Biology'

DIGITAL IDENTIFIERS

Web of science researcher ID: i-3107-2019

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REFEREES**UNIVERSITY OF MONTANA – SUPERVISOR**

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ACADEMY OF SCIENCES – HOST**

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CANADIAN MUSEUM OF NATURE – COLLABORATOR

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PHD – SUPERVISOR

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