

Curriculum Vitae

Dr. Thomas Michael Cullen

*NSERC Postdoctoral Fellow, Carleton University,
Research Associate, Field Museum of Natural History
Fellow, Royal Canadian Geographical Society*

Email: thomas.cullen11@gmail.com

Website: thomasmcullen.net

Citizenship: Canadian

Degrees / Education:

Title	Program	Year	Institution	Supervisor(s)
Ph.D.	Ecology and Evolutionary Biology	2017	University of Toronto	David Evans
M.Sc.	Earth Sciences	2012	Carleton University	Natalia Rybczynski, Claudia Shröder-Adams
B.Sc Hon.	Earth Sciences, concentration in vertebrate palaeontology and palaeoecology	2010	Carleton University	Michael Ryan, Claudia Shröder-Adams

Academic Appointments & Professional Training:

Dates	Institution	Position	Supervisors/Mentors
2021 - Present	Carleton University	NSERC Postdoctoral Fellow	Brian Cousens, Hillary Maddin
2020 - Present	Field Museum of Natural History	Research Associate / Scientific Affiliate	Kenneth Angielczyk
2020 - 2021	NC State University & NC Museum of Natural Sciences	Postdoctoral Research Scholar	Lindsay Zanno
2018 - 2019	Field Museum of Natural History	Postdoctoral Research Scientist	Peter Makovicky
2013 - 2017	University of Toronto	Research Assistant	David Evans
2010 - 2012	Carleton University	Research Assistant	Natalia Rybczynski, Claudia Schröder-Adams
2009, 2010	Canadian Museum of Nature	Summer Collections Technician	Kieran Shepherd, Jennifer Doubt
2008	Canadian Museum of Nature	Research Assistant	Stephen Cumbaa

Awards, Honours, and Grants: (detailed & itemized below, total value = ~\$292,000 CAD)

Title	Agency / Organization	Value (Total)	Dates / Duration
Major Postdoctoral Awards			
NSERC Postdoctoral Fellowship	NSERC	\$90,000 CAD	2021-2023
Presentation Awards & Honours			
Queen Elizabeth II / Dr. F.M. Hill Scholarship in Science and Tech	Government of Ontario / University of Toronto	\$15,000 CAD	2016-2017
Alexander Graham Bell Canada Graduate Scholarship (PhD)	NSERC	\$105,000 CAD	2013-2016
Ontario Graduate Scholarship (PhD)	Government of Ontario	\$15,000 CAD	2013 (declined after being awarded NSERC)
Alexander Graham Bell Canada Graduate Scholarship (MSc)	NSERC	\$17,500 CAD	2011-2012
Ontario Graduate Scholarship (MSc)	Government of Ontario	\$15,000 CAD	2011 (declined after being awarded NSERC)
Dr. George A. Jeletzky Memorial Scholarship	Dept. of Earth Sciences, Carleton University	\$5000 CAD	2010
Presentation Awards & Honours			
Featured Article & Subject of Series Blog	<i>Geology</i> (journal), Geological Society of America	-	2020
R.L. Carroll Prize (outstanding scientific contribution by PhD student)	Canadian Society of Vertebrate Palaeontology	\$500 CAD	2018
Ramsay Wright Award (best graduate student)	EEB Department, University of Toronto	Hon. Mention	2016
Editor's Pick Article, Top 10 Annual Highlight, & Subject of Series Blog	<i>BMC Ecology</i> (journal)	-	2016
Editor's Pick Article, Monthly Highlight, Best Figures of 2014	<i>BMC Evolutionary Biology</i> (journal)	-	2014
Article featured as journal issue cover	<i>Evolution</i> (journal)	-	2014
Undergraduate Research Day Award	Carleton University	-	2010
Dean's Honour List	Carleton University	-	2007-2012

Title	Agency / Organization	Value (Total)	Dates / Duration
Minor Scholarships			
Internal Restricted Award	EEB Department, University of Toronto	\$1000 CAD	2017
C.S. Rufus Churcher Award	EEB Department, University of Toronto	\$1974 CAD	2013
Frederick P. Ide Graduate Award	EEB Department, University of Toronto	\$826 CAD	2013
Dr. George A. Jeletzky Memorial Scholarship	Dept. of Earth Sciences, Carleton University	\$1000 CAD	2011, 2012
Departmental Graduate Scholarship 3	Dept. of Earth Sciences, Carleton University	\$2000 CAD	2010, 2011
Departmental Graduate Scholarship 2	Dept. of Earth Sciences, Carleton University	\$2100 CAD	2010, 2011
In-Course Scholarship	Carleton University	\$750 CAD	2007, 2009
SEAC Scholarship	Salaried Employees Alliance of Canada	\$1000 CAD	2008
Grants			
Student Project Grant	Dinosaur Research Institute	\$1000 CAD	2017
Student Project Grant	Dinosaur Research Institute	\$2000 CAD	2016
Rene Vandervelde Travel Award	Dinosaur Research Institute	\$1250 CAD	2014
Student Travel Grant	Society of Vertebrate Palaeontology / Jackson School of Geosciences	\$600 USD	2014
Harold Harvey Travel Grant	EEB Department, University of Toronto	\$400 CAD	2013
Student Project Grant	Dinosaur Research Institute	\$2300 CAD	2013
Northern Science Training Program Grant	Government of Canada (AANDC)	\$2000 CAD	2012
Donations for Antarctic Fieldwork / SOI Program	Gainey Foundation, JC Potvin, J Sullivan	\$5143 CAD	2011
Northern Science Training Program Grant	Government of Canada (AANDC)	\$2500 CAD	2010
W.H. Collins Fund	Dept. of Earth Sciences, Carleton University	\$1000 CAD	2010

Teaching:

Title / Position	Course Code	Course Name	Institution	Dates
Guest Lecturer	EEB 466	Approaches to the Study of Biodiversity	U Toronto	2016-2017
	ERTH 2401	Dinosaurs	Carleton U	2011
Workshop Instructor	-	Geometric Morphometrics Workshop	ROM	2015
	-	Paleohistology Workshop	ROM	2013-2016
Laboratory Instructor	EEB 388	Diversity of Mammals	U Toronto	2017
	EEB 390	Vertebrate Palaeontology	U Toronto	2016-2017
	EEB 466	Approaches to the Study of Biodiversity	U Toronto	2015-2017
	EEB 267	Animal Diversity	U Toronto	2013-2017
	ERTH 3113	Geology of Human Origins	Carleton U	2012
	ERTH 2312	Dinosaurs	Carleton U	2011-2012
	ERTH 3112	Palaeontology of Lower Vertebrates	Carleton U	2011
	ERTH 2401	Dinosaurs	Carleton U	2011
	ERTH 2314	Sedimentation & Stratigraphy	Carleton U	2010
	ERTH 2102	Mineralogy to Petrology	Carleton U	2010
	ERTH 1007	Exploring Planet Earth	Carleton U	2010
	ERTH 1006	The Dynamic Earth	Carleton U	2009-2010
	Field Instructor	ERTH 2802	Field Geology	Carleton U

Student and Intern Supervision:

Student / Intern	Program	Project Topic	Status
Haviv Avrahami	NCMNS Res. Assistant	Microsite Citizen Science Program	Data Collection
Raymond Cao	Field Museum Intern	Theropod Phalanx Morphometrics	Analyses Ongoing
Andrew Traynor	UChicago BSc research	Bonebed Palaeoecology / Taphonomy	Analyses Ongoing
Erin Todd	UofT BSc research	Theropod Frontal Morphometrics	Accepted
Talia Lowi-Merri	UofT BSc research	<i>Gryposaurus</i> Cranial Morphometrics	Published
Elizabeth Benner	UofT BSc research	Histology and Growth Variability in <i>Anzu</i>	Published
Adam Rego	UofT BSc research	Troodontid Species Description	Published

Fieldwork Experience:

Leader(s)	Institution(s)	Year	Locality*
Lund, Cullen	NCMNS	2020	Hell Creek Fm., Montana †
Evans, Cullen	ROM, FMNH	2019	Mattagami Fm., Ontario †
Arbour, Cullen	RBCM, FMNH	2019	Spatsizi Plateau, BC †
Makovicky	FMNH	2019	Neuquén Group, Patagonia, Argentina †
Makovicky	FMNH	2018	Ripley Fm., Missouri †
Cullen, Evans, Brinkman	ROM, FMNH, RTMP	2018	Oldman Fm., Alberta †
Makovicky	FMNH	2018	Cedar Mountain Fm., Utah †
Makovicky, Cullen	FMNH	2018	Hell Creek Fm., Montana †
Arbour	ROM	2017	Sustut Basin, BC †

*Locality Time Period: †Early-Mid Cretaceous, ‡Late Cretaceous, §Miocene, §Modern

Leader(s)	Institution(s)	Year	Locality*
Evans	ROM	2016	Hell Creek Fm., Montana & N Dakota †
Cullen	ROM	2015	Atchafalaya Basin, Louisiana §
Evans	ROM	2013, 2015	Judith River Fm., Montana †
Schröder-Adams	Carleton U	2012	Smoking Hills Fm., NWT †
Schröder-Adams	Carleton U, SOI	2011	Antarctic Peninsula †§
Rybczynski	CMN	2010	Haughton Fm., Devon Island, NU ‡
Evans, Ryan	ROM, CMNH	2009-2017	Belly River Group, Alberta †

*Locality Time Period: †Early-Mid Cretaceous, ‡Late Cretaceous, †Miocene, §Modern

Conference Presentations: (total N=35: 4 virtual, 18 oral, 13 poster)

Conference	Format	Year	Author(s)	Title / Topic
International Societies				
Society of Vertebrate Paleontology	Virtual	2020	Cullen , Zanno, Larson, Currie, Evans	Theropod biodiversity, biostratigraphy, morphometrics
Society of Vertebrate Paleontology	Virtual	2020	Wilkinson, Cullen , Evans	Palaeontology & sedimentology of Hell Creek Fm. multi-taxic bonebed
Society of Vertebrate Paleontology	Virtual	2020	Tsogtbaatar, Cullen , Phillips, Zanno	Mississippi ornithomimid biodiversity & palaeobiogeography
Society of Vertebrate Paleontology	Virtual	2020	Makovicky, Cullen , Darrough, Fix, Gorscak, McDonald, Saitta, Shinya, Stinchcombe, Wiersma	New hadrosauroid dinosaurs from Missouri, site sedimentology, microvertebrate palaeoecology
International Symposium on Paleohistology	Oral	2019	Cullen , Canale, Apesteguía, Smith, Makovicky	Osteohistology and body size evolution in large theropods
Society for the Preservation of Natural History Collections	Oral	2019	Cullen	Best practices for destructive sampling in palaeontology
Society for the Preservation of Natural History Collections	Oral	2019	Cullen	Specimen Spotlight – hard life of a young tyrannosaur
Society of Vertebrate Paleontology	Oral	2018	Cullen	Testing hypotheses of extant and Cretaceous floodplain forests using stable isotope analyses
Society of Vertebrate Paleontology	Poster	2018	Arbour, Evans, Simon, Cullen	Report on new dinosaurs from northern BC
Society of Vertebrate Paleontology	Oral	2017	Cullen , Longstaffe, Wortmann, Goodwin, Huang, Evans	Modern analogue stable isotope analyses of coastal floodplains to predict Cretaceous environments
Society of Vertebrate Paleontology	Poster	2016	Cullen , Longstaffe, Evans	Testing for primary signals in Oldman Fm stable isotope data
Society of Vertebrate Paleontology	Poster	2016	Benner, Cullen , Evans	Osteohistological variability in caenagnathid dinosaur skeleton
Society of Vertebrate Paleontology	Oral	2015	Cullen, Evans, Ryan, Currie	Biostratigraphy, turnover, extinction patterns in Dinosaur Park Fm
Society of Vertebrate Paleontology	Poster	2014	Cullen, Evans, Ryan, Kobayashi, Currie	Ornithomimid osteohistology and variability

Conference	Format	Year	Author(s)	Title / Topic
International Societies				
Society of Vertebrate Paleontology	Oral	2014	LeBlanc, Brink, Cullen , Reisz	Development and histology of thecodonty in amniotes
Society of Vertebrate Paleontology	Poster	2014	Larson, Cullen , Todd, Evans	Theropod frontal morphometrics
Society of Vertebrate Paleontology	Poster	2014	Cullen , Ryan, Capobianco, Newbrey, Evans	Palaeoenvironment and palaeoecology of Foremost Fm
International Symposium on Paleohistology	Poster	2013	Cullen , Ryan, Currie, Kobayashi, Evans	Ornithomimid multi-element histology
Society of Vertebrate Paleontology	Oral	2012	Cullen , Ryan, Schröder-Adams, Kobayashi, Currie	Ornithomimid multi-element histology
Joint Congress on Evolutionary Biology	Poster	2012	Cullen , Rybczynski, Schröder-Adams	Fossil pinniped taxonomy and evolution
International Polar Year Conference	Poster	2012	Cullen , Pugh, Schröder-Adams, Halfkenny, Rybczynski, Mitchell	Approaches to geoheritage outreach in the Canadian Arctic
Society of Vertebrate Paleontology	Poster	2011	Cullen , Rybczynski, Schröder-Adams	Fossil pinniped taxonomy & evolution
Society of Vertebrate Paleontology	Poster	2010	Cullen , Ryan, Schröder-Adams, Kobayashi, Currie	Ornithomimid bonebed description, taphonomy, and stratigraphy
National / Regional Societies				
Canadian Society of Vertebrate Palaeontology	Oral	2019	Cullen , Canale, Apesteguía, Smith, Makovicky	Osteohistology and body size evolution in large theropods
Canadian Society of Vertebrate Palaeontology	Oral	2019	Arbour, Evans, Simon, Cullen	Dinosaurs and fossil plants from Northern BC
Canadian Society of Vertebrate Palaeontology	Oral	2018	Cullen	Modern and Cretaceous stable isotope reconstruction of ecology and environment
Canadian Society of Vertebrate Palaeontology	Oral	2017	Evans, Cullen , Larson, Rego	New species of troodontid dinosaur
GAC Canadian Palaeontology Conference	Oral	2016	McFeeters, Cullen	Ornithomimid dinosaur caudal morphology & taxonomy
Canadian Society of Vertebrate Palaeontology	Oral	2016	Cullen	Environmental drivers of Belly River Group fossil vertebrate biodiversity
Canadian Society of Vertebrate Palaeontology	Oral	2016	Benner, Cullen , Evans	Morphology and histology of caenagnathid dinosaurs
GAC Canadian Palaeontology Conference	Oral	2014	Cullen	Intraspecific variation in osteohistology of ornithomimids
GAC Canadian Palaeontology Conference	Oral	2013	Cullen , Fraser, Rybczynski, Schröder-Adams	Evolution of sexual dimorphism in pinnipeds
GAC Canadian Palaeontology Conference	Poster	2012	Cullen , Ryan, Evans, Capobianco, Newbrey	Foremost Fm. microsite paleoecology & paleoenvironments
Geological Association of Canada – Mineralogical Association of Canada	Oral	2012	Cullen , Ryan, Evans, Currie, Kobayashi	Ornithomimid bonebed description, taphonomy, stratigraphy, histology
Canadian Society of Zoologists	Poster	2011	Cullen , Rybczynski, Schröder-Adams	Pinniped morphology and evolution

Invited Public & Academic Seminars: (total N=14: 9 public, 5 academic)

Venue / Host	Event	Title/Topic	Year
Public			
NC Museum Nat. Sci.	Science Cafe	Reconstructing dinosaur ecosystems	2020
Anne Arundel County Public Schools	‘Working from home with Mrs. Boltz’	What does a palaeontologist do? How does one become a palaeontologist?	2020
Earth Sci Club N Illinois	Holiday Lecture	Stable isotope studies of dinosaurs	2019
Royal BC Museum	Lunch Hour Lectures	Changing interpretations of dinosaurs	2019
Burpee Museum	21 st Annual Paleofest	Body size evolution in theropods	2019
Field Museum	A. Watson Armour Seminar	Multi-scale approaches to studying paleoecosystems	2018
Royal Ontario Museum	Fossil Fest Family Day	New dinosaur species from ROM collections	2017
Royal Ontario Museum	Dinosaurs Weekend	Cretaceous ecology & environments of Alberta	2015
Can. Museum of Nature	Antarctic Expedition Seminars	Antarctic ecosystems through deep-time	2011
Academic			
Smithsonian NMNH	Paleobiology Guest Seminars	Stable isotope analyses of dinosaur ecosystems	2020
U Washington	PaleoLunch Seminars	Palaeocommunity analyses in the Oldman Fm.	2020
Field Museum	Collections Forum	Curation & research needs in destructive analyses	2018
U Toronto	Atwood Colloquium	Quantifying variation in osteohistology	2015
U Ottawa	AESRC	Fossil pinnipeds & evolution of polygyny	2014

Professional Services to Museum Exhibits, Documentaries, and Education Programs:

Project	Institution/ Organization	Year	Role (*component of postdoctoral work)
Museum Exhibits			
Traveling SUE Exhibit (travelling)	Field Museum	2019-2020	<i>*Primary Advisor:</i> specimens, exhibit panel text, life-size <i>T. rex</i> reconstruction, murals
<i>Patagotitan</i> Mini-Exhibit (permanent)	Field Museum	2019	<i>Advisor:</i> environmental & taxon selection
Evolving Planet Exhibit (permanent)	Field Museum	2019	<i>Advisor:</i> panel images and text
SUE’s World Exhibit (permanent)	Field Museum	2018-2019	<i>*Primary Advisor:</i> exhibit design, panel images/text, specimens, reconstructions
Documentaries			
Prehistoric Road Trip w/ Emily Graslie	PBS / Window to the World Productions	2019-2020	<i>Consultant:</i> technical accuracy of scripts and interviews, interviewee/topic selection
Education Programs			
Microsite Citizen Science Program	NC Mus. Nat. Sci.	2020	<i>*Project Manager:</i> develop content, supervise staff, arrange contracts/services, collect data
‘Dino Box’, ‘Dinosaur Family Tree’	Field Museum	2019	<i>Consultant:</i> content for teacher training kits

Services for Academic Societies & Institutions:

Society/Institution/Event	Role	Year
Geological Society of America	Co-organizer, symposium on community paleoecology (sponsored by the Paleontological Society)	2021*
Canadian Society of Vertebrate Palaeontology	Co-Chair, Committee on Equity, Diversity, Inclusivity	2020-pres.
NC Museum Nat. Sci. / NC State University	Peer-mentor for graduate and undergraduate students	2020-pres.
Soc. for the Preservation of Nat. Hist. Collect.	Co-organizer, symposium on destructive analyses	2019
Canadian Society of Vertebrate Palaeontology	Postdoctoral Member-At-Large, Executive Committee	2018-2022
UToronto, Ecology & Evolution Graduate Students Association	Peer-mentor for graduate students	2016-2017
UToronto, Ecology & Evolution Graduate Students Association	Dept representative at UofT Grad Student Union, ROM students representative at EEB grad student society	2013-2016
UToronto Grad Student Union	Member of Civics Committee	2013
Advances in Earth Science Research Conference (AESRC)	Member of Executive Committee and 2011 conference Local Organizing Committee	2011-2012
Carleton University, Graduate Students in Earth Sciences Society (GRAESSOC)	President	2011-2012
Geological Association of Canada – Mineralogical Association of Canada	Moderator, symposium on Ottawa-Bonnechere Graben System	2011
Carleton Palaeontology & Evolution Journal Discussion Group	Co-organizer	2010-2012
Soc. for the Preservation of Nat. Hist. Collect.	Co-led field trip discussing geology of Burnt Lands Alvar	2010
Society of Vertebrate Paleontology	Volunteered with local organizing committee, assisting vendors	2006

* Symposium originally organized for 2020 GSA in Montreal (now postponed to 2021 Portland meeting)

Services as Peer-Reviewer:

Journal / Publication	# Reviewed	Journal / Publication	# Reviewed
Paleobiology.....	1	Cretaceous Research.....	1
Phil. Trans. of the Royal Society.....	1	Royal Society Open Science.....	1
Canadian Journal of Earth Sciences.....	2	Palaios.....	1
Biology Letters.....	1	Vertebrate Anatomy Morphology Palaeontology.....	1
Historical Biology.....	1	Canadian Society of Vert Palaeo Meeting Abstracts.....	16

Professional Affiliations:

Society	Tenure	Society	Tenure
Society of Vertebrate Paleontology.....	2006-pres	Geological Society of America.....	2019-pres
Canadian Society of Vertebrate Palaeontology.....	2013-pres	Royal Can. Geog. Soc. College of Fellows.....	2020-pres
Association of Polar Early Career Scientists.....	2011-pres	American Assoc. for Advancement of Science.....	2013-2017
Geological Association of Canada.....	2007-2015	Canadian Society of Ecology and Evolution.....	2010-2019
Society for the Study of Evolution.....	2010-2020	Canadian Society of Petroleum Geologists.....	2009-2017

Publications: (Total N = 21: 18 published/in-press/accepted, 2 in-review, 1 submitted)

Submitted

21. Wilkinson, RD., **Cullen, TM.**, Avrahami, H., Zanno, L., Evans DC.
Paleontology and sedimentology of the *Acheroraptor* holotype locality, a multi-taxic bonebed in the Hell Creek Formation of Montana, USA.
submitted, *Cretaceous Research*.

In Review

20. **Cullen, TM.**, Dunn, R., Suarez, C., Chiba, K.
Chp.2.5: Studying Ecosystems.
in review, invited chapter in: *The Complete Dinosaur, 3rd Edition*.
Edited by L. Zanno, T. Holtz, and V. Arbour. Indiana University Press.
19. **Cullen, TM.**, Longstaffe, FJ., Wortmann, UG., Huang, L., Evans, DC.
Dinosaur enamel ¹³C-enrichment reflects non-analogue environmental conditions in a 'vanished world'.
in review, *Proceedings of the Royal Society B* (manuscript RSPB-2019-2864).

In Press / Accepted

18. **Cullen, TM.**, Zanno, L., Larson, DW., Currie, PJ., Evans DC.
Anatomical, morphometric, and stratigraphic analyses of theropod biodiversity in the Upper Cretaceous (Campanian) Dinosaur Park Formation.
accepted, *Canadian Journal of Earth Sciences* (Dale Russell Special Volume).
17. **Cullen, TM.**
Stable isotopic analyses of living and extinct crocodylians: implications for understanding their paleobiology, paleoecology, and paleoenvironments.
in press, invited chapter in: *Crocodylian Biology and Paleobiology*.
Edited by H Woodward and J Farlow. Indiana University Press.

2020

16. **Cullen, TM.**, Canale, JI., Apesteguía, S., Smith, NS., Hu, D., Makovicky, PJ.
Osteohistological analyses reveal diverse strategies of theropod gigantism.
Proceedings of the Royal Society B 287: 20200258.
15. **Cullen, TM.**, Longstaffe, FJ., Wortmann, UG., Huang, L., Fanti, F., Goodwin, MB., Ryan, MJ., Evans, DC.
Large-scale stable isotope characterization of a Late Cretaceous dinosaur-dominated ecosystem.
Geology 48(6): 546-551.
Featured article & subject of a [GSA Series blog](#)

2020
(cont'd)

14. **Cullen, TM.**, Simon, DJ., Benner, EKC., Evans, DC.
Morphology and osteohistology of a large-bodied caenagnathid (Theropoda: Oviraptorosauria) from the Hell Creek Formation (Montana): implications for size-based classifications and growth estimation in theropods.
Papers in Palaeontology. <https://doi.org/10.1002/spp2.1302>.

2019

13. Arbour, VM., Evans, DC., Simon, DJ., **Cullen, TM.**, Braman, D.
Cretaceous flora and fauna of the Sustut Group near the Sustut River, northern British Columbia, Canada.
Canadian Journal of Earth Sciences 57(6): 671-680.
doi: <https://doi.org/10.1139/cjes-2019-0031>.
12. **Cullen, TM.**, Longstaffe, FJ., Wortmann, UG., Goodwin, MB., Huang, L. Evans, DC.
Stable isotopic characterization of a coastal floodplain forest community: a case-study for isotopic reconstruction of Mesozoic vertebrate assemblages.
Royal Society Open Science 6(2): 181210.
doi: [http://dx/doi.org/10.1098/rsos.181210](http://dx.doi.org/10.1098/rsos.181210).

2018

11. McFeeters, B., Ryan, MJ., and **Cullen, TM.**
Response to Brownstein (2018) 'Rebuttal of McFeeters, Ryan, and Cullen, 2018'.
Vertebrate Anatomy Morphology Palaeontology 6: 73-74.
doi: 10.18435/vamp29343

10. McFeeters, B., Ryan, MJ., and **Cullen, TM.**
Positional variation in pedal unguals of North American ornithomimids (Dinosauria; Theropoda): a response to Brownstein (2017).
Vertebrate Anatomy Morphology Palaeontology 5: 60-67.
doi: 10.18435/vamp29283

2017

9. LeBlanc, ARH., Brink, K., **Cullen, TM.**, and Reisz, R.
Evolutionary implications of tooth attachment versus tooth implantation: a case study using dinosaur, crocodylian, and mammal teeth.
Journal of Vertebrate Paleontology 37(5): e1354006.
doi: 10.1080/02724634.2017.1354006
8. Evans, DC., **Cullen, TM.**, Larson, DL., and Rego, A.
A new species of troodontid theropod (Dinosauria: Maniraptora) from the Horseshoe Canyon Formation (Maastrichtian) of Alberta, Canada.
Canadian Journal of Earth Sciences 54(8): 813-826.
doi: 10.1139/cjes-2017-0034

2016

7. **Cullen, TM.** and Evans, DC.
Palaeoenvironmental drivers of vertebrate community composition in the Belly River Group (Campanian) of Alberta, Canada, with implications for dinosaur biogeography. *BMC Ecology* 16(52): 1-35.
doi: 10.1186/s12898-016-0106-8.
[Editor's Pick and BMC Ecology top 10 highlight for 2016, and subject of a BMC Series blog](#)
6. McFeeters, B., Ryan, MJ., Schröder-Adams, C., and **Cullen, TM.**
A new ornithomimid theropod from the Dinosaur Park Formation of Alberta, Canada. *Journal of Vertebrate Paleontology* 36(6): e1221415.
doi:10.1080/02724634.2016.1221415
5. **Cullen, TM.**, Fanti, F., Capobianco, C., Ryan, MJ., and Evans, DC.
A vertebrate microsite from a marine-terrestrial transition in the Foremost Formation (Campanian) of Alberta, Canada, and the use of faunal assemblage data as a palaeoenvironmental indicator.
Palaeogeography, Palaeoclimatology, Palaeoecology 444: 101-114.
doi:10.1016/j.palaeo.2015.12.015

2014

4. **Cullen, TM.**, Ryan, MJ., Currie, PJ., Kobayashi, Y., and Evans, DC.
Osteohistological variation in growth marks and osteocyte lacunar density in a theropod dinosaur (Coelurosauria: Ornithomimidae).
BMC Evolutionary Biology 14(231): 1-14
[Editor's Pick and a BMC series highlight for November 2014, and included in list of the 12 best figures in BMC Evolutionary Biology for 2014](#)
3. Evans, DC., Larson, DW., **Cullen, TM.**, & Sullivan, RM.
'*Saurornitholestes*' *robustus* is a troodontid (Dinosauria: Theropoda).
Canadian Journal of Earth Sciences 51(7): 730-734.
doi: 10.1139/cjes-2014-0073
2. **Cullen, TM.**, Fraser, D., Rybczynski, N., and Schröder-Adams, C.
Early evolution of sexual dimorphism and polygyny in Pinnipedia.
Evolution 68(5): 1469-1484.
[Subject of the May 2014 cover of Evolution](#)

2013

1. **Cullen TM.**, Ryan MJ, Schröder-Adams C, Currie PJ, Kobayashi Y.
An Ornithomimid (Dinosauria) Bonebed from the Late Cretaceous of Alberta, with Implications for the Behavior, Classification, and Stratigraphy of North American Ornithomimids.
PLoS ONE 8(3): e58853.
doi:10.1371/journal.pone.0058853

Public Outreach:

Organization / Institution	Year(s)	Activity
NC Museum of Natural Sciences	2020-pres	In-person outreach in exhibits, specimen touch tables, donor events, guided tours for visitors, behind-the-scenes events
Field Museum of Natural History	2018-2019	In-person outreach in exhibits, specimen touch tables, donor events, guided tours for visitors, behind-the-scenes events
Science Borealis	2017-2020	Manage social media accounts as part of Outreach Team
Royal Ontario Museum	2014-2017	In-person outreach in exhibits, specimen touch tables, donor events, guided tours for visitors, behind-the-scenes events
Science Travels	2012	In-person science education workshops to school groups (ages 5-17) in remote towns and First Nations communities in N Ontario
Let's Talk Science	2012	In-person science education workshops to elementary school groups in Ottawa area
Canadian Museum of Nature	2010-2011	In-person outreach in exhibits, specimen touch tables, guided tours for visitors
Carleton University	2008-2012	Planning and in-person science outreach around Ottawa-Gatineau for annual 'Explore Geoheritage Day' events
Friends of Petrie Island	2005-2009	Provide in-person information and guided nature tours about local flora, fauna, and geology

Media Coverage & Appearances:

Source	Medium	Year	Topic
CNN	Newspaper	2020	Cullen et al 2020; theropod body size evolution
CBC	Newspaper	2020	Cullen et al 2020; theropod body size evolution
ThomsonReuters	Newspaper	2020	Cullen et al 2020; theropod body size evolution
Asharq News (Egypt)	Newspaper	2020	Cullen et al 2020; theropod body size evolution
Canadian Geographic	Magazine	2020	Cullen et al 2020; stable isotope palaeoecology
Daily Herald Tribune	Newspaper	2020	Cullen et al 2020; stable isotope palaeoecology
Insider	Website	2019	Technical accuracy of <i>The Land Before Time</i>
Cracked	Magazine	2019	Cullen et al 2019; use of roadkill in stable isotope research
Atlas Obscura	Website	2019	Cullen et al 2019; use of roadkill in stable isotope research
The Brain Scoop	YouTube	2019	Development of new Field Museum exhibit on <i>SUE</i> the <i>T. rex</i>
Ars Technica	Website	2019	Cullen et al 2019; use of roadkill in stable isotope research
Ben & Morey Show, Chicago SketchFest	Live Stage Interview	2019	My research, how I became a palaeontologist, new exhibits at the Field Museum
Leisure Opportunities	Website	2018	My work and contributions on Field Museum <i>SUE</i> exhibit
Christian Science Monitor	Newspaper	2018	Public impact of Jurassic Park
Phys.Org	Website	2016	Cullen and Evans 2016; vertebrate responses to environments
Discover Magazine	Magazine	2015	Discovery of new horned dinosaur species
CJSW	Radio	2015	Speculative / future evolution
History Channel: Dino Hunt Canada	Television	2014	Southern Alberta Dinosaur Project; new species of horned dinosaurs discovered
Live Science	Website	2014	Cullen et al 2014; seal fossils & mating system evolution
Nunatsiaq	Newspaper	2014	Cullen et al 2014; seal fossils & mating system evolution

Source	Medium	Year	Topic
TVO	Television	2013	Southern Alberta Dinosaur Project & ROM palaeontology
CKCU	Radio	2011	Public science outreach at the Canadian Museum of Nature
Ottawa Citizen	Newspaper	2011	Carleton / CMN / SOI Antarctic expedition
CBC Radio One	Radio	2011	Carleton / CMN / SOI Antarctic expedition

Other Skills / Training / Certifications:

Language: English (fluent oral/written/reading), French (intermediate oral/written/reading)

Workshop Participation:

- Active and Inquiry-Based Learning Strategies for Field and Classroom Educators (SVP meeting) (2020)
- Teaching Fundamentals Certificate Program (University of Toronto) (2014)
- FossilWorks Intensive Workshop in Analytical Paleobiology (2014)
- Canadian Society of Petroleum Geologists – Student Industry Field Trip (2009)

Laboratory training/techniques:

- Osteohistological thin-section production and imaging,
- Stable isotopic sample preparation and analyses
 - Pretreatments of bioapatite, keratin, for ^{13}C , ^{18}O analyses
 - LA-GC-IRMS,
 - bulk powder CF-IRMS, EA CF-IRMS, HT-EA CF-IRMS

Fieldwork training/techniques:

- Screen-washing and size-separation of vertebrate microfossil material
- Identification of vertebrate microfossil material
- Stratigraphic section measurement
- Vertebrate macrofossil bonebed and isolated specimen excavation & quarry mapping.
- North American mammal, bird, amphibian, reptile ID (emphasis on eastern & northern taxa)
- various wilderness training, remote camping/hiking, watercraft & outboard motor operation, etc
- Certified in Wilderness First Aid (Red Cross, 2017, 2014).

Collections training/techniques:

- Use of EMu / KE EMu collections management software (FMNH K EMu training workshops)
- SPNHC workshops on collections best practices, security & insurance in natural history collections, COVID-19 mitigation in museum and lab settings, use of collaborative databases & how to involve community groups and avocational palaeontology enthusiasts
- fossil casting/molding, 3D-scanning and 3D file manipulation, photogrammetry.
- Specimen repair and conservation, cataloguing
- vertebrate dissection/de-fleshing.

Photography:

- featured in museum exhibitions (e.g. Field Museum, Royal British Columbia Museum)
 - featured in a university textbook (Cornell Lab of Ornithology Handbook of Bird Biology, 3rd Edition)
 - won awards in photography competitions ('From the Lab' category in Canadian Science Publishing's 'Visualizing Science' photo contest; 'Flora' category in Society for Conservation Biology - Toronto).
 - used for educational or promotional purposes (Students on Ice)
- Selection of photos are hosted at <https://www.flickr.com/photos/tmcullen/>.