

Curriculum Vitae

Dr. Thomas Michael Cullen

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

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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 Schröder-Adams
B.Sc Hon.	Earth Sciences	2010	Carleton University	Michael Ryan, Claudia Schröder-Adams

Academic Appointments & Professional Experience:

Dates	Institution	Position	Supervisor(s)
2021 - Present	Carleton University	NSERC Postdoctoral Fellow	Brian Cousens, Hillary Maddin
2021	Carleton University	Contract Instructor	-
2020 - Present	Field Museum of Natural History	Research Associate / Scientific Affiliate	-
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	Collections Technician	Kieran Shepherd, Jennifer Doubt
2008	Canadian Museum of Nature	Research Assistant	Stephen Cumbaa
2005-2009	City of Ottawa / Friends of Petrie Island	Park Monitor; Native Flora & Fauna Program	Allen Tweddle

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

Title	Agency / Organization	Value (Total)	Dates / Duration
Major Postdoctoral Awards/Grants			
NSERC Postdoctoral Fellowship	NSERC	\$90,000 CAD	2021-2023
Major Graduate Scholarships			
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
Awards & Honours			
Elected to the College of Fellows	Royal Canadian Geographical Society	-	2020
Featured Article & Subject of Series Blog	<i>Geology</i> (journal), Geological Society of America	-	2020
R.L. Carroll Prize (outstanding contribution by PhD student)	Canadian Society of Vertebrate Palaeontology	\$500 CAD	2018
Ramsay Wright Award (top PhD student), hon. men.	EEB Department, University of Toronto	-.	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 Experience:

Title / Position	Course Code	Course Name	Institution	Dates	
Contract Instructor	ERTH 1009	Earth System Through Time	Carleton U	2021	
	ERTH 1011	Evolution of the Earth	Carleton U	2021	
Guest Lecturer	EEB 466	Approaches to the Study of Biodiversity	U Toronto	2016-2017	
	ERTH 2401	Dinosaurs	Carleton U	2011, 2021	
	ERTH 3111	Vertebrate Evolution II	Carleton U	2021	
Workshop Instructor	-	Geometric Morphometrics Workshop	ROM	2015	
	-	Paleohistology Workshop	ROM	2013-2016	
	-	'PaleO' Workshop – Histology	Carleton U	2021	
	-	'PaleO' Workshop – Grant Writing	Carleton U	2021	
Laboratory Instructor	EEB 388	Diversity of Mammals	U Toronto	2017	
	EEB 390	Palaeontology: Major Transitions in Vertebrate History	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	Invertebrate Palaeontology	Carleton U	2011-2012	
	ERTH 3112	Vertebrate Palaeontology	Carleton U	2011	
	ERTH 2401	Dinosaurs	Carleton U	2011	
	ERTH 2314	Sedimentation & Stratigraphy	Carleton U	2010-2011	
	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 and Mapping	Carleton U	2011
		EEB 398/399	Research Excursion (Field Palaeo.)	U Toronto	2013-2015

Mentorship and Academic Supervision of Highly Qualified Personnel (HQPs):

Student / Intern	Program	Focus and/or Project Topic
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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, Apesteguía	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, Evans, Cullen	ROM	2017	Sustut Basin, BC [♦]
Evans, Cullen	ROM	2016	Hell Creek Fm., Montana & N Dakota [♦]
Cullen	ROM	2015, 2016	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=38: 5 virtual, 20 oral, 13 poster)

Conference	Format	Year	Author(s)	Title / Topic
International Societies				
Geological Society of America	Hybrid Oral	2021	Cullen	Intensive temporal/spatial-constrained multi-taxic palaeocommunity analyses
Geological Society of America	Hybrid Oral	2021	Nanglu, Cullen	Sources of bias in palaeocommunity analyses, data collection to inference
Society of Vertebrate Paleontology	Virtual	2021	Cullen , Zhang, Spencer, Cousens	Sr isotopes to examine vertebrate habitat use and spatial feeding patterns
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	Stable isotope analyses of extant and Cretaceous floodplain systems
Society of Vertebrate Paleontology	Poster	2018	Arbour, Evans, Simon, Cullen	Report on new fossils from northern BC
Society of Vertebrate Paleontology	Oral	2017	Cullen , Longstaffe, Wortmann, Goodwin, Huang, Evans	Modern analogue stable isotope analyses of coastal floodplains
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	Biostrat, extinction in Dinosaur Park Fm
Society of Vertebrate Paleontology	Poster	2014	Cullen, Evans, Ryan, Kobayashi, Currie	Ornithomimid osteohistology and variability
Society of Vertebrate Paleontology	Oral	2014	LeBlanc, Brink, Cullen , Reisz	Development 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	Coastal floodplain stable isotope ecology
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 Assoc. of Canada – Mineralogical Assoc. 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=15: 9 public, 6 academic)

Venue / Host	Event	Title/Topic	Year
Public			
NC Museum Nat. Sci.	Science Cafe	Reconstructing ancient 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 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			
Can. Museum of Nature	CMN Seminar Series	Skeletochronology & growth analyses	2021
Smithsonian NMNH	Paleobiology Guest Seminars	Stable isotope analyses of Cretaceous 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 Affiliations:

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

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

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

Public Outreach:

Organization / Institution	Year(s)	Activity
NC Museum of Natural Sciences	2020-2021	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, leading 'Make-A-Wish' tours
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

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
Society of Vertebrate Paleontology	Program Committee Member, reviewer for conference symposia and conference abstracts	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

Services as Peer-Reviewer:

Journal / Publication	# Reviewed	Journal / Publication	# Reviewed
<i>Paleobiology</i>	1	<i>Palaeogeog., Palaeoclimat., Palaeoecol.</i>	4
<i>Phil. Trans. of the Royal Society</i>	1	<i>Royal Society Open Science</i>	5
<i>Canadian Journal of Earth Sciences</i>	2	<i>Cretaceous Research</i>	2
<i>Biology Letters</i>	2	<i>Geological Society of America Bulletin</i>	1
<i>Historical Biology</i>	1	<i>Journal of Vertebrate Paleontology</i>	1
<i>Palaeontologica Electronica</i>	1	<i>Vertebrate Anatomy Morphology Palaeontology</i>	1
<i>The Dinosauria, 3rd Edition</i> (book volume).....	1	<i>Acta Palaeontologica Polonica</i>	1
<i>The Complete Dinosaur</i> (book volume).....	1		

Publications: (N = 29: 20 published, 3 in-press/accepted, 6 in-review/submitted; H-index: 10, 300 citations)

**In Prep
(near
submission)**

30. Nanglu, K., de Carle, D., **Cullen, TM.**, Castañeda, RA., Manglicmot, RC., Chang, LM., Massey, MD., Arif, S., Fellin, E., Anderson, E., Astudillo-Clavijo, V.
The nature of science: the fundamental role of natural history in ecology, evolution, conservation and education.
In Prep, Awaiting Response to Pre-Submission Inquiry

Submitted

29. Thompson, M., **Cullen, TM.**, Schröder-Adams, C., Evans, DC., Ryan, MJ.
Multi-proxy palaeoenvironmental and palaeoecological reconstruction of the Foremost Formation (Upper Cretaceous; Campanian) of Alberta
Submitted, *Palaeogeography, Palaeoclimatology, Palaeoecology*. (ms# D-21-00779)

In Review

28. Chinzorig, T., **Cullen, T.**, Phillips, G., Rolke, R., Zanno, LE.
Large-bodied ornithomimosaur inhabited Appalachia during the Late Cretaceous of North America
Submitted, *PLoS ONE*. (ms# PONE-D-22-08668)

27. Reisz, R., **Cullen, TM.**, Larson, DW., Witton, MP., Scott, D., Maho, T., Brink, KS., Evans, DC.
Theropod dinosaur facial reconstruction and the significance of soft tissues in paleobiology
In Review, *Science*. (ms# abo7877)

26. **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*. (ms# RSPB-192864)

25. Nanglu, K., **Cullen, TM.**
Across space and time: an empirical investigation and review of sampling and analytical biases in fossil data across macroecological scales
In Review *Ecological Monographs*. (ms# ECM21-0207)

24. Wilkinson, RD., **Cullen, TM.**, Avrahami, H., Currie, PJ. Zanno, L., Evans DC.
Paleontology and sedimentology of the *Acheroraptor* holotype locality, a multi-taxic bonebed in the Hell Creek Formation of Montana, USA.
In Review, *Palaios*. (ms# 21-052)

**In Press /
Accepted**

23. Canale, JI., Apesteguía, S., Gallina, PA., Mitchell, J., Smith, ND., **Cullen, TM.**, Shinya, A., Haluza, A., Gianechini, FA., Makovicky, PJ.
New giant carnivorous dinosaur from the Late Cretaceous of Argentina reveals convergent evolutionary trends in theropod arm reduction.
Accepted, *Current Biology* (ms# S-2022-00337)

**In Press/
Accepted
(cont'd)**

22. **Cullen, TM.**
Stable isotopic analyses of living and extinct crocodylians: implications for understanding their ecology, environments, and physiology.
In Press, invited chapter in: *Crocodylian Biology and Paleobiology*.
Edited by H Woodward and J Farlow. Indiana University Press.

21. **Cullen, TM.,** Dunn, R., Suarez, C., Chiba, K.
Chp.2.5: Approaches to Studying Ecosystems.
In Press, invited chapter in: *The Complete Dinosaur, 3rd Edition*.
Edited by L. Zanno, T. Holtz, and V. Arbour. Indiana University Press.

2022

20. **Cullen, TM.,** Zhang, S., Spencer, J., Cousens, B.
Sr-O-C isotope signatures reveal herbivore niche-partitioning in a Cretaceous ecosystem
Palaeontology. (ms# PALA-09-21-5151)
doi: <https://doi.org/10.1111/pala.12591>

19. Benson, R., Brown, CM., Campione, N., **Cullen, TM.,** Evans, DC., Zanno, L.
Comment on the influence of juvenile dinosaurs on community structure and diversity.
Science 375(657821)
doi: [10.1126/science.abj5976](https://doi.org/10.1126/science.abj5976)

2021

18. **Cullen, TM.,** Brown, CM., Chiba, K., Brink, KS., Makovicky, PJ., Evans, DC.
Growth variability, dimensional scaling, and the interpretation of osteohistological data
Biology Letters 17: 202110383.
doi: <https://doi.org/10.1098/rsbl.2021.0383>

17. **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.
Canadian Journal of Earth Sciences 58(9): 870-884
doi: <https://doi.org/10.1139/cjes-2020-0145>

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.
doi: <https://doi.org/10.1098/rspb.2020.2258>

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.
doi: <https://doi.org/10.1130/G47399.1>

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.
doi: <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>.

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
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

Winner of Taylor & Francis Award for best student paper in JVP, 2018

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 an invited 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.
doi:10.1186/s12862-014-0231-y
- [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.
'*Sauromitholestes*' *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.
<https://doi.org/10.1111/evo.12360>
- [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

Media Coverage & Appearances:

Source	Medium	Year	Topic
CBC Radio One	Radio	2022	Cullen et al 2022; niche partitioning in Cretaceous herbivores
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
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 (moderate oral/written/reading)

Workshop Completion:

- 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 (Macquarie University) (2014)
- Canadian Society of Petroleum Geologists – Student Industry Field Trip (2009)

Laboratory training/techniques/certifications:

- WHMIS (UToronto, FMNH, Carleton), stable isotope / laser safety (UWO, UToronto),
- Osteohistological thin-section production and imaging using microscope camera set-ups
- Screen-washing, grain-size analysis, and identification of vertebrate microfossil material
- Stable isotopic sample preparation and analyses:
 - Pretreatments of keratin for $\delta^{13}\text{C}$, $\delta^{18}\text{O}$, $\delta^{15}\text{N}$ analyses, bioapatite (enamel, dentine, bone) for $\delta^{13}\text{C}$, $\delta^{18}\text{O}$, $^{87}\text{Sr}/^{86}\text{Sr}$, and elemental concentration analyses
 - Analysis via MC-ICP-MS, LA-GC-IRMS, CF-IRMS, HT-EA CF-IRMS, LA-ICP-MS, ICP-MS, ICP-ES
- Additional analytical and imaging procedures in the earth sciences & paleontology:

- uCT and CT scanning, SEM, XRD, cathodoluminescence

Fieldwork training/techniques/certifications:

- Field geology, section-measurement, and stratigraphic data collection
- Geological mapping and ArcGIS/ArcMap
- Vertebrate macrofossil bonebed and isolated specimen ID, excavation, & quarrying.
- North American mammal, bird, amphibian, reptile ID (emphasis on eastern & northern taxa)
- Training & licensing in non-restricted firearms (Canada)
- Watercraft & outboard motor operation training & certifications (Canada)
- Trained & certified in Wilderness First Aid. (Canadian Red Cross)

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, 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:

- I document all field expeditions photographically, for use in publications, educational programs, and PR.
- I am proficient at specimen photography and the use of camera mounts / tripods.

Professional References:

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David C. Evans, Ph.D. (**doctoral supervisor**)

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