

ROWAN C. MARTINDALE

CURRICULUM VITAE

ASSISTANT PROFESSOR (INVERTEBRATE PALEONTOLOGY), UNIVERSITY OF TEXAS AT AUSTIN

Department of Geological Sciences
Jackson School of Geosciences
2275 Speedway Stop C9000
Austin, TX 78712-1722

Office: JSG 3.216A
E-mail: martindale@jsg.utexas.edu
Phone: 512-475-6439
Website: www.jsg.utexas.edu/martindale/

ACADEMIC APPOINTMENTS

Assistant Professor, University of Texas at Austin

August 2014 to Present

Postdoctoral Researcher, Harvard University

August 2012 to July 2014

Department of Organismic and Evolutionary Biology; Mentor: Dr. Andrew H. Knoll.

EDUCATION

Doctorate, University of Southern California

2007 to 2012

Dissertation: “Paleoecology of Upper Triassic reef ecosystems and their demise at the Triassic-Jurassic extinction, a potential ocean acidification event”.

Advisor: Dr. David J. Bottjer, degree conferred August 7th 2012.

Bachelor of Science Honors Degree, Queen’s University

2003 to 2007

Geology major with a general concentration in Biology (Geological Sciences Medal Winner).

PEER-REVIEWED PUBLICATIONS [H-INDEX = 7 (01/2017)]; * = UT STUDENT; ** = UT POSTDOC

15. **Martindale, R.C.** and Aberhan, M. 2017. Response of macrobenthic communities to the Toarcian Oceanic Anoxic Event in northeastern Panthalassa (Ya Ha Tinda, Alberta, Canada). *Palaeogeography, Palaeoclimatology, Palaeoecology*. *In Press*, doi: 10.1016/j.palaeo.2017.01.009
14. **Martindale, R.C.**, Them, T.R. II, Gill, B.C., Marroquín, S.M.*, Knoll, A.H., 2017. A new Early Jurassic fossil Lagerstätte from Ya Ha Tinda, Canada (~183 Ma). *Geology*, March 2017, v. 45, p. 255-258, doi: 10.1130/G38808.1.
13. Them, T.R., Gill, B.C., Caruthers, A.H., Gröcke, D.R., Tulskey, E.T.T., **Martindale, R.C.**, Poulton, T.P., Smith, P.L., 2017. High-resolution carbon isotope records of the Toarcian Oceanic Anoxic Event (Early Jurassic) from North America and implications for the global drivers of the Toarcian carbon cycle. *Earth and Planetary Science Letters*, 459, 118–126.
12. **Martindale R.C.**, Strauss, J.V., Sperling, E.A., Johnson, J.E., Van Kranendonk, M.J., Flannery, D., French, K., Lepot, K., Mazumder, R., Rice, M.S., Schrag, D.P., Summons, R., Walter, M., Abelson, J., and Knoll, A.H. 2015. Sedimentology, chemostratigraphy, and stromatolites of lower Paleoproterozoic carbonates, Turee Creek Group, Western Australia. *Precambrian Research* 266, 194–211.
11. Corsetti, F.A., Ritterbush, K.A., Bottjer, D.J., Greene, S.E., Ibarra, Y., Yager, J.A., West, A.J., Berelson, W.M., Rosas, S., Becker, T.W., Levine, N.M., Loyd, S.J., **Martindale R.C.**, Petryshyn, V.A., Carroll, N.R., Petsios, E., Piazza, O., Pietsch, C., Stellmann, J.L., Thompson, J.R., Washington, K.A., and Wilmeth, D.T. 2015. Investigating the

- Paleoecological Consequences of Supercontinent Breakup: Sponges Clean Up in the Early Jurassic. *The Sedimentary Record*, 13 (2), 4–10.
10. **Martindale R.C.**, Corsetti, F.A., James, N.P., and Bottjer, D.J., 2015. Paleogeographic trends in Late Triassic reef ecology from northeastern Panthalassa. *Earth Science Reviews*, 142, 18–37.
 9. **Martindale R.C.**, Krystyn, L., Corsetti, F.A., and Bottjer, D.J., 2013. From fore reef to lagoon: Evolution of the Upper Triassic Dachstein carbonate platform on the Tennengebirge (Salzburg, Austria). *Palaios*, 28, 755–770. **2013 Outstanding Paper in Palaios*
 8. **Martindale R.C.**, Krystyn, L., Bottjer, D.J., Corsetti, F.A., Senowbari-Daryan, B., and Martini, R. 2013. Depth transect of an Upper Triassic (Rhaetian) reef from Gosau, Austria: Microfacies and community ecology. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 376, 1–21.
 7. **Martindale R.C.**, Berelson, W.M., Corsetti, F.A., Bottjer, D.J., and West, A.J. 2012. Constraining carbonate chemistry at a potential ocean acidification event (the Triassic-Jurassic boundary) using the presence of corals and coral reefs in the fossil record. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 350–352, 114–123.
 6. **Martindale, R.C.**, Corsetti, F.A., Bottjer, D.J., and Senowbari-Daryan, B. 2012. Microbialite Fabrics and Diminutive Skeletal Bioconstructors in Lower Norian Summit Point Reefs, Oregon, U.S.A. *Palaios*, 27, 489–508.
 5. Greene, S.E.*, **Martindale, R.C.***, Ritterbush, K.A., Bottjer, D.J., Corsetti, F.A., and Berelson, W.M. 2012. Recognizing ocean acidification in deep time: an evaluation of the evidence for acidification across the Triassic-Jurassic boundary. *Earth Science Reviews*, 113, 72–93. **Both authors contributed equally to the paper*
 4. Hönisch, B., Ridgwell, A., Schmidt, D.N., Thomas, E. Gibbs, S.J., Sluijs, A., Zeebe, R., Kump, L., **Martindale, R.C.**, Greene, S.E., Kiessling, W., Ries, J., Zachos, J.C., Royer, D.L., Barker, S., Marchitto, T.M., Moyer, R., Pelejero, C., Ziveri, P., Foster, G.L., and Williams, B., 2012. The Geological Record of Ocean Acidification. *Science*, 335, 1058–1063.
 3. **Martindale, R.C.**, Bottjer, D.J., and Corsetti, F.A., 2012. Platy Coral Patch Reefs from Eastern Panthalassa (Nevada, USA): Unique reef construction in the Late Triassic. *Palaeogeography, Palaeoclimatology, Palaeoecology* 313–314. 41–58.
 2. **Martindale, R.C.**, Zonneveld, J.P., and Bottjer, D.J. 2010. Framework of Upper Triassic (Carnian) Patch Reefs from Williston Lake, British Columbia, Canada. *Palaeogeography, Palaeoclimatology, Palaeoecology* 297. 609–620.
 1. James, N.P., **Martindale, R.C.**, Malcolm, I., Bone, Y., and J. Marshall. 2008. Surficial sediments on the continental shelf of Tasmania, Australia. *Sedimentary Geology*, 211, 33–52.

OTHER PUBLICATIONS (BOOK SECTIONS AND FIELD GUIDES)

2. Zonneveld, J.P., Gingras, M.K., Beatty, T.W., Bottjer, D.J., Chaplin, J.R., Greene, S.E., Martindale R.C., Mata, S.A., McHugh, L.P., Pemberton, S.G., and Schoengut, J.A. 2012. Chapter 26: Mixed Siliciclastic/Carbonate Systems. In: *Trace Fossils as Indicators of Sedimentary Environments*. Knaust, D. and Bromley, R.G. (eds.). *Developments in Sedimentology*, Vol. 64. Elsevier. 924 p.

1. Richoz, S., Krystyn, L., von Hillebrandt, A., and Martindale R.C., 2012. End-Triassic crisis events recorded in platform and basin of the Austrian Alps. The Triassic/Jurassic and Norian/Rhaetian GSSPs. Field Trip Guide for the 29th IAS Meeting of Sedimentology in Schladming/Austria. *Journal of Alpine Geology* 55. S.321–374.

RESEARCH GRANTS AS PRIMARY INVESTIGATOR AT UT AUSTIN

- NSF EAR Assessing the Paleoeology and Taphonomy of the New Early Jurassic Ya Ha Tinda Lagerstätte (Canada) and the Significance of the Toarcian Ocean Anoxic Event. PI: Rowan Martindale, Total Award: \$335,580 (06/2017 to 05/2020).
- NSF Digitization TCN: Collaborative Research: The Cretaceous World: Digitizing Fossils to Reconstruct Evolving Ecosystems in the Western Interior Seaway. PIs: Ann Molineux, Rowan Martindale, Matthew Brown. UT Portion of Award: \$240,528 (07/2016 to 06/2019).
- NSF CSBR: Natural History: Critical infrastructure upgrades and expanded digital access to Non-vertebrate Paleontology Collections at the University of Texas at Austin. PIs: Ann Molineux, Rowan Martindale. Total Award: \$495,880 (08/2015 to 07/2018).
- University of Texas at Austin, College of Natural Sciences Catalyst Grant. PIs: Rowan Martindale (Geological Sciences) and Mikhail Matz (Integrative Biology). Total Award: \$50,000 (11/2015 to 11/2016).
- University of Texas at Austin, Jackson School of Geosciences, Surface and Hydrologic Processes Research Seed Grant (\$16,829 Awarded 2015)
- University of Texas at Austin, Jackson School of Geosciences, Climate, Carbon, and Geobiology Research Seed Grant (\$15,555 Awarded 2015)
- University of Texas at Austin, Jackson School of Geosciences, Climate, Carbon, and Geobiology Research Seed Grant (\$15,000 Awarded 2014)

SCHOLARSHIPS AND AWARDS (2012 – PRESENT)

- *2013 Outstanding Paper in Palaios award from SEPM*: Martindale et al. 2013 doi: 10.2110/paleo.2013.016
- *2013 Agouron Post doctoral Research Fellowship* (alternate fellow)
- *2012 Humboldt Post doctoral Research Fellowship* (declined)
- *2012 Scripps Institution of Oceanography Postdoctoral Scholar* (declined)
- *Canadian Society of Petroleum Geologists Graduate Thesis Award*: The best Ph.D. thesis from a Canadian university or dealing with a Canadian sedimentary/petroleum geology topic (Honorable Mention, 2012).
- *USC Ph.D. Achievement Award*: Awarded to five USC graduates for exceptional achievements as a doctoral student, including significant publications, job offers, major awards, and other markers of excellence (2012).

TEACHING EXPERIENCE

Professor, University of Texas at Austin Department of Geological Sciences

Evolution of Reef Ecosystems (GEO 391, graduate-level course) Spring 2015, Fall 2016

Life Through Time (GEO 405, lower-level undergraduate course) Spring 2016, 2017

Transitions in the History of Life (GEO 371T & 391, upper-level undergraduate and graduate-level course) Fall 2015

The Interactive Ocean: History, Science, and People on the Blue Planet (UGS 302, undergraduate signature course) Fall 2015

Exceptional Fossilization (GEO 391, graduate-level course) Spring 2015

Teaching Assistant, University of Southern California Earth Sciences Department
Oceanography (general education course) Fall 2010 *Best Teaching Assistant Award
Surficial Processes and Stratigraphic Systems (third-year course) Spring 2010 *Best
Teaching Assistant Award
Climate Change (general education course) Spring 2008

Teaching Assistant, Queen's University Geology Department
Engineering Geology (first-year engineering course) Fall 2005 & 2006
Terrain Evaluation (third-year course) Spring 2006 & 2007

STUDENTS AND POSTDOCTORAL RESEARCHERS MENTORED

Postdoctoral Researchers

William J. Foster, JSG Distinguished Postdoctoral Fellow (2015-2017)

Graduate Students (Primary Advisor)

Anna M. Weiss (Ph.D., expected 2019)
Hannah M. Brame (Ph.D., expected 2021)
Nicholas P. Ettinger (MSc, expected 2017)
Kelly E. Hattori (MSc, expected 2017)
Selva M. Marroquín (MSc, completed Spring 2016)
Chiara Tornabene (MSc, completed Spring 2016)

Graduate Students (Committee Member)

Benjamin Breeden (MSc, advisor: Tim Rowe): Thesis committee 2014-2015
Mohammed Fallatah (MSc, advisor: Charles Kerans): Thesis committee 2016-Present
Rachel Bernard (Ph.D., advisor: Whitney Behr): Qualifying exam committee 2015
Joshua Lively (Ph.D., advisor: Chris Bell): Qualifying exam committee 2015
Sarah Barfield (Ph.D. advisor: Mikhail Matz): Qualifying exam committee 2015
Mahmoud Al-Nazghah (Ph.D., advisor: Charles Kerans): Qualifying exam committee 2015
Benjamin Smith (Ph.D., advisor: Charles Kerans): Qualifying exam committee 2015-Present
William Gelnaw (Ph.D., advisor: Chris Bell): Thesis committee 2015-Present
James Proffitt (Ph.D., advisor: Julia Clarke): Thesis committee 2015-Present
Charles Withnell (Ph.D., advisor: Chris Bell): Qualifying exam committee 2016-Present
Simon Scarpetta (Ph.D., advisor: Chris Bell): Qualifying exam committee 2016-Present
Natasha Piatrunia (Ph.D., advisor: Tim Shanahan): Qualifying exam committee 2016-Present

Undergraduate Students

Maria Reistroffer (BSc, expected Spring 2017): Undergraduate thesis advisor
Walker Wiese (BSc, expected Spring 2017): Undergraduate thesis advisor

PROFESSIONAL SERVICE (LAST 5 YEARS)

GSA division executive committee **October 2014 to Present**
Executive committee member [Vice President (2016-Present), Secretary (2014-2016)], GSA
Geobiology and Geomicrobiology division.

STEPPE Consortium Board of Directors **January 2016 to Present**
Four-year advisory term and service on a committee.

Science Advisor for the Paleontological Society of Austin **November 2015 to Present**
Advise the PSA about scholarships and provide content for outreach events and fossil shows.

- Journal Article Reviewer** **Ongoing**
 Journals include: Geology; Science; Palaeogeography, Palaeoclimatology, Palaeoecology; Sedimentology.
- DGS ESSL annual performance review committee** **Spring 2017**
 Part of the annual performance review committee (headed by Dr. David Mohrig) for the Department of Geological Sciences Earth Surface, Subsurface, and Life Program.
- Faculty Host for Visiting Speakers** **Fall 2015 to Spring 2017**
 Organized schedules and coordinated the visits of multiple visiting speakers: Dr. Jean Hsieh (Fall 2015), Dr. Rachel Wood (Spring 2016), Dr. Andrew Knoll (Spring 2016), Dr. Jocelyn Sessa (Spring 2017), and Dr. Jonathan Payne (Spring 2017).
- GSC Loose Ends Committee** **Fall 2016 to Spring 2017**
 Member of the JSG Graduate Studies Committee “Loose-ends” ad-hoc committee.
- Coordinator for prospective student visits** **Spring 2014 to 2017**
 Organized schedules and coordinated the visits of multiple paleontology prospective students during the prospective student weekend at UT Austin.
- Jackson School Student Poster Symposium Judge** **February 2015 & 2016**
 Judged various sections of the Jackson School of Geosciences student poster symposium.
- IAS Annual Meeting Session Chair** **Fall 2015 to Spring 2016**
 Organized a session at the International Association of Sedimentologists Annual Meeting.
- DGS Hiring Committee** **Spring to Fall 2015**
 The early-career member of the chair hiring committee (2015) and the joint UTIG-DGS hire (2015-2016) for the JSG Department of Geosciences.
- AGU Outstanding Student Presentation Judge and Session Liason** **December 2015**
 Judged posters and talks for several disciplines at the 2015 Fall AGU meeting.
- AGU Annual Fall Meeting Session Chair** **Fall 2015**
 Organized and chaired a session at the 2015 American Geophysical Union Annual Meeting.
- Caribbean Coral Reefs at Risk Session Chair** **September 2015**
 Chaired a session at the 2015 Caribbean Coral Reefs at Risk Symposium at UT Austin organized by Carlos Ramos-Scharron (Department of Geography).
- GSA Annual Meeting Topical Session Chair** **Fall 2013 & 2014**
 Organized and chaired topical sessions at the 2013 and 2014 Geological Society of America Annual Meetings.

OUTREACH AND VOLUNTEER ACTIVITIES

- Science Advisor for the Paleontological Society of Austin** **November 2015 to Present**
 Advise the PSA about scholarships and provide content for outreach events and fossil shows.
- Darwin Day Outreach** **February 2017**
 Organized and manned an interactive dinosaur trackway activity for public outreach; kids put on “dino shoes”, made a track, and measured their stride to determine speed and side.
- Hot Science-Cool Talks Science Fair Outreach** **January and October 2016**
 Organized and manned a Paleontology booth for public outreach. 01/2016: display of Cretaceous fossils and the K-Pg extinction. 10/2016: interactive dinosaur trackway; kids put on “dino shoes”, made a track, and measured their stride to determine speed and side.
- Guest Lecturer** **November 2014, February 2017**
 Lectured in UT Austin classes (11/ 2014 Mass Extinctions; 02/2017 Modern reefs and Corals)

ADDITIONAL FIELD AND LABORATORY EXPERIENCE

“On the Cutting Edge” Workshop for Early Career Faculty **June 2014**

Participated in five day workshop focused on helping new faculty members become better teachers, colleagues, mentors, and researchers with the ultimate goal of helping them successfully navigate the tenure process.

Agouon Institute Advanced Geobiology Course **June 2012**

An eighteen-day field campaign in the Pilbara of Western Australia. Field work included mapping, measuring stratigraphic sections, and collecting samples from Paleoproterozoic carbonate rocks and Iron Formations.

GSA Short Course: Sequence Stratigraphy for Graduate Students **October 2009**

Two-day short course designed to teach the principles, concepts, and methods of sequence stratigraphy. Exercises included case studies, outcrop, core, well-log, and seismic data.

Southwest USA Mineral Exploration Field Trip **May 2007**

A seventeen-day trip across the SW USA with a focus on the geological evolution of the states, and mining along the Colorado Mineral Belt (Queen’s University).

Modern and Pleistocene Carbonate Sediments **September 2006**

One week field trip in Bermuda focused on modern and Pleistocene carbonate sediments, water chemistry, phytoplankton ecology, and coral reef species (Queen’s University).

CSPG Student Industry Field Trip **May 2006**

Selected for the society-sponsored, two-week field trip of the Canadian Petroleum Industry. Focused on the structural origin of the Rocky Mountains, well logging, reservoirs, seismic imaging, and stratigraphy.

Safety Courses **1999 to Present**

PADI SCUBA diving Open Water Diver, UT Lab Safety Training (2016 most recently), Lifesaving I, Emergency First Aid and CPR Training (2004), Valid Texas Driver’s License.

OTHER ACADEMIC EMPLOYMENT

NSERC USRA **May to August 2006**

Analyzed sediment samples and created a facies map (correlated with oceanography) of the Tasmanian shelf and Bass Straight. Supervisor: Dr. Noel P. James, Queen’s University.

NSERC USRA **May to August 2005**

Created an Ediacaran fossil database and was a field assistant for the NAPC Newfoundland field trip. Supervisor: Dr. Guy Narbonne, Queen’s University.

INVITED PRESENTATIONS

2017 Paleontological Society of Austin seminar

2016 Texas A&M University, Ecology and Evolutionary Biology research seminar

2015 University of Texas, San Antonio, Department of Geological Sciences seminar

2015 Paleontological Society of Austin seminar

2014 University of Texas at Austin, Jackson School of Geosciences Tech Session talk

2014 Bryn Mawr College, Department of Geology seminar

2014 Kent State University, Department of Geology colloquium

2013 University of Texas at Austin, Jackson School of Geosciences special seminar

2013 MIT, Department of Earth, Atmospheric, and Planetary Sciences special seminar

2012 Harvard University Department of Earth and Planetary Sciences seminar

2012 Massachusetts Institute of Technology, Chemical Oceanography and Geobiology seminar

2012 Harvard University, Organismic and Evolutionary Biology colloquia

RECENT FIRST AUTHOR CONFERENCE PRESENTATIONS (THE LAST FIVE YEARS)

- Martindale** et al. 2016. Authigenic Carbonate Fans from Lower Jurassic Marine Shales (Alberta, Canada). Abstract PP13D-07, 2016 AGU Fall Meeting, San Francisco, California, USA.
- Martindale** et al. 2016. Faunal response of macrobenthic assemblages to the Early Jurassic (Toarcian) Oceanic Anoxic Event in Alberta, western Canada. SEPM Conference on Oceanic Anoxic Events Oct. 31 to Nov. 3, 2016, Austin, TX.
- Martindale** et al. 2016. Evolutionary and ecological dynamics of macrobenthic communities across the Toarcian Oceanic Anoxic Event in northeast Panthalassa (Ya Ha Tinda, Alberta, Canada). GSA Abstracts with Programs, Vol. 48, No. 7
- Martindale** et al. 2016. Response of the benthic community to the Toarcian Oceanic Anoxic Event in the Ya Ha Tinda Lagerstätte (Alberta, Canada). 32nd International Meeting on Sedimentology, Marrakech, Morocco, 23rd-25th May, 2016.
- Martindale** et al. 2015. Response of shallow-water carbonates and reef systems to the Toarcian Ocean Anoxic Event (183 MA) on the Dinaric Carbonate Platform (Slovenia). Abstract PP33C-2324, 2015 AGU Fall Meeting, San Francisco, California, USA.
- Martindale** and Košir 2015. Response of shallow-water carbonates and reef systems to the Toarcian Ocean Anoxic Event (183 MA) on the Dinaric Carbonate Platform (Slovenia). GSA Abstracts with Programs, Vol. 47, No. 7: 67.
- Martindale** et al. 2014. A New Jurassic Lagerstätte from Alberta, Canada, preserved during the Toarcian Ocean Anoxic Event. GSA Abstracts with Programs, Vol. 46, No. 6: 279.
- Martindale** et al. 2013, Sea-floor carbonate fans from the Early Jurassic (Pliensbachian-Toarcian): a sedimentological signature of carbon cycle perturbation in deep time. Abstract PP23B-1951, 2013 AGU Fall Meeting, San Francisco, California, USA.
- Martindale** et al. 2013, Reef corals with evidence of photosymbiosis and the evolution of the Upper Triassic Tennenengebirge carbonate platform (Salzburg, Austria). GSA Abstracts with Programs, Vol. 45, No. 7: 534.
- Martindale** et al. 2012, The evidence for ocean acidification across the Triassic-Jurassic boundary. Abstract PP21D-07, 2012 AGU Fall Meeting, San Francisco, California, USA.
- Martindale** et al. 2012, The Gosausee reef (Austria): New insights into Ecological zonation of Upper Triassic (Rhaetian) reef communities. GSA Abstracts with Programs, Vol. 44(7): 627.
- Martindale** et al. 2012, New perspectives on Upper Triassic (235-201 Ma) reef ecology from northeastern Panthalassa. 34th International Geological Congress, Brisbane, Australia, Abstract reference: 34IGC12-3525

PROFESSIONAL AFFILIATIONS (NATIONAL AND INTERNATIONAL)

American Geophysical Union (AGU)
American Association of Petroleum Geologists (AAPG)
Geochemical Society (GS)
Geological Society of America (GSA)
International Association of Sedimentologists (IAS)
International Palaeontological Association
Paleontology Society
Society for Sedimentary Geology (SEPM)

REFERENCES

Dr. Andrew H. Knoll

Organismic and Evolutionary Biology
Harvard University

Phone: (617) 495-9306

Email: aknoll@oeb.harvard.edu

Dr. David J. Bottjer

Earth Sciences
University of Southern California

Phone: (213) 740-6100

Email: dbottjer@usc.edu

Dr. Frank A. Corsetti

Earth Sciences
University of Southern California

Phone: (213) 740-6123

Email: fcorsett@usc.edu

Dr. Noel P. James

Geological Sciences

Queen's University

Phone: (613) 533-6170

Email: james@geol.queensu.ca

Dr. William M. Berelson

Earth Sciences

University of Southern California

Phone: (213) 740-5828

Email: berelson@usc.edu