

EMMA ROSE LOCATELLI, PH.D

AGI/AAAS Congressional Science Fellow

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EDUCATION

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- Yale University**, Department of Geology and Geophysics *New Haven, CT*
 Ph.D., Geology and Paleontology Defended May 2016
 • Doctoral Thesis Title: “The roles of decay and mineralization in leaf preservation: implications for the fossil record”
 M.Phil, Geology and Paleontology 2014
- Macalester College** *Saint Paul, MN*
 B.A., Double Major in Geology and Music 2011
 • Graduated *Magna cum laude*
 • Geology Honors Thesis Title: “Vegetation history of the Late Holocene in Glacier National Park, Montana: A paleoenvironmental study”
 • Study Abroad: University College Cork, Cork, Ireland, 2009

PEER-REVIEWED PUBLICATIONS (*invited paper, †denotes Ph.D. dissertation chapter)

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- Locatelli, E.R.**, Briggs, D.E.G., Briggs, Stemann, T., Portell, R.W., Means, H.G., James-Williamson, S.A. and Donovan, S.K. *Accepted*. Leaves in marine turbidites illuminate the depositional setting of the Pliocene Bowden shell beds, Jamaica. *Geology*
- †**Locatelli, E.R.**, McMahon, S., and Bilger, H. *Accepted*. It’s not just rust: biofilms mediate the preservation of leaf adpression fossils by aluminosilicate clays. *Palaaios*.
- Darroch, S.A.F., **Locatelli, E.R.**, McCoy, V.E., Clark, E.G., Anderson, R.P., Tarhan, L.G., and Hull, P.M. 2016. Taphonomic disparity in foraminifera as a paleo-indicator for seagrass. *Palaaios* 31: 242-258.
- †**Locatelli, E.R.**, Krajewski, L., Chochinov, A.V., and Laflamme, M. 2016. Taphonomic variance between marattialean ferns and medullosan seed ferns in the Carboniferous Mazon Creek lagerstätte, Illinois, USA. *Palaaios* 31: 97-110.
- McCoy, V.E., Saupe, E.E., Lamsdel, J.C., Tarhan, L.G., McMahon, S., Lidgard, S., Mayer, P., Whalen, C.D., Soriano, C., Finney, L., Vogt, S., Clark, E.G., Anderson, R.P., Petermann, H., **Locatelli, E.R.**, and Briggs, D.E.G. 2016. The Tully Monster is a vertebrate. *Nature*. doi:10.1038/nature16992
- *†**Locatelli, E.R.** 2014. The exceptional preservation of plant fossils: a review of taphonomic processes and biases in the fossil record. *In*: M. Laflamme, J.D. Schiffbauer, and S.A.F. Darroch (eds.), Reading and Writing of the Fossil Record: Preservational Pathways to Exceptional Fossilization. *Paleontological Society Papers* 20: 237–258.
- McNamara, M.E., Saranathan, V., **Locatelli, E.R.**, Noh, H., Briggs, D.E.G., Orr, P.J. And Cao, H. 2014. Cryptic iridescence in a fossil weevil generated by single diamond photonic crystals. *Proceedings of the Royal Society B: Interface* 11: 20140736.
- Locatelli, E.R.** 2013. Preservation potential of gecarcinid land crabs (Decapoda, Brachyura, Gecarcinidae) from San Salvador. *Palaaios*: 28: 867–874.
- McNamara, M.E., Briggs, D.E.G., Orr, P.J., Gupta, N.S., **Locatelli, E.R.**, Qiu, L., Yang, H., Wang, Z., Noh, H., And Cao, H. 2013. The fossil record of color illuminated by maturation experiments. *Geology* 41: 487-490.

CONFERENCE PROCEEDINGS (*denotes oral presentation; †denotes poster presentation)

- ***Locatelli, E.R.**, McMahon, S., and Bilger, H. 2016. It's not just rust: bacterial biolims, authigenic aluminosilicate clays, and leaf fossilization. *Geological Society of America Annual Meeting Abstracts with Programs* 48(7): 10.1130/abs/2016AM-283293.
- ***Locatelli, E.R.**, Briggs, D.E.G., Stemann, T., Portell, R.W., Means, H., and Donovan, S.K. 2015. Leaves from the sea: a flora from the Pliocene Bowden Formation of Jamaica. *Geological Society of America Annual Meeting Abstracts with Programs* 47(7): 634.
- MacGregor, K., Kutvirt, J., Rihimaki, C.A., Myrbo, A., **Locatelli, E.R.**, Bradtmiller, L. (2015) Holocene fire history and geomorphic response in eastern Glacier National Park, Montana, USA. *Geological Society of America Annual Meeting Abstracts with Programs* 47(7): 835.
- †**Locatelli, E.R.**, Chochinov, A.V., Krajewski, L., Pawar, K., Sundrelingam, V., Torres, J., Tsang, B., and Laflamme, M. 2014. Taphonomic variance between ferns and medullosan seed ferns from the Mazon Creek lagerstätten. *Palaeontological Association Annual Meeting*.
- †**Locatelli, E.R.**, Chochinov, A.V., Krajewski, L., Pawar, K., Sundrelingam, V., Torres, J., Tsang, B., and Laflamme, M. 2014. Taphonomic variance between ferns and medullosan seed ferns from the Mazon Creek lagerstätten. *Geological Society of America Annual Meeting Abstracts with Programs* 46(6): 330
- Locatelli, E.R.** 2014. Leaves in Iron: An exceptionally preserved flora from New Caledonia. Mid-continent Paleobotanical Colloquium.
- ***Locatelli, E.R.**, Darroch, S.A.F., McCoy, V.E., Anderson R.P., Clark, E.G., and Hull, P. 2014. Experimental taphonomy of foraminifera. *North American Paleontological Convention 2014*.
- ***Locatelli, E.R.** 2013. The exceptional preservation of leaves in iron-rich sediments from Oceania. *Geological Society of America Annual Meeting Abstracts with Programs* 45(7): 455.
- †**Locatelli, E.R.** 2012. Assessing the preservation potential of land crabs (Decapoda, Brachyura, Gecarcinidae) on San Salvador Island, the Bahamas. *Palaeontological Association Annual Meeting*.
- †**Locatelli, E.R.** 2012. Experimental taphonomy of decapod crustaceans: assessing the effects of pre-burial processes. *Geological Society of America Annual Meeting Abstracts with Programs*. 44(7): 275.
- ***Locatelli, E.R.** 2012. Assessing the preservation potential of gecarcinid land crabs (Decapoda, Brachyura, Gecarcinidae) from San Salvador, the Bahamas. *Geological Society of America Annual Meeting Abstracts with Programs* 44(7): 528.
- McNamara, M.E., **Locatelli, E.R.**, Kearns, S., Webb, S.M., Orr, P.J., Briggs, D.E.G. 2012. Chemical fingerprinting of pigment-based color in fossil insects. *Geological Society of America Annual Meeting Abstracts with Programs* 44(7): 443.
- McNamara, M.E., Briggs, D.E.G., Orr, P.J., Gupta, N.S., **Locatelli, E.R.**, Qiu, L., Yang, H., Wang, Z., Noh, H., Cao, H. 2012. The fossil record of insect color illuminated by maturation experiments. *Geological Society of America Annual Meeting Abstracts with Programs* 44(7): 374.
- ***Locatelli, E.R.**, Bradtmiller, L., Myrbo, A., MacGregor, K., Kutvirt, J., Rihimaki, C.A., and Brady, K. 2011. Vegetation history of the late Holocene in East Glacier National Park: A paleoenvironmental study. *Geological Society of America Annual Meeting Abstracts with Programs* 43(5): 179.
- Howes, T., Myrbo, A., Thompson, R., Drake, C., Woods, P., **Locatelli, E.R.**, Pellerin, H., Dalbotten, D., and Ito, E. (2011). Nanda-Gikendaasowin Naawij Gaa-Izhiwebakin Manoomini-Zaaga'Iganiing: Core-based research by native students on wild rice lakes in northern Minnesota. 2011. *Geological Society of America Annual Meeting Abstracts with Programs* 43(5): 563.

CONFERENCE PROCEEDINGS, CONT.

- MacGregor, K., Kutvirt, J., Myrbo, A., Riihimaki, C.A., Brady, K., and **Locatelli, E.R.** 2011. A 13,000 yr fire history at Swiftcurrent Lake, Glacier National Park, Montana, USA. *Geological Society of America Annual Meeting Abstracts with Programs* 43(5): 179.
- Misquadace, S., **Locatelli, E.R.**, Peterson, M.R., Weingart, M.S., Thompson, R., Sayers, J., Kochen, A., Howes, T., and Myrbo, A. 2011. Tracing the history of Fond du Lac reservation's wild rice (*Zizania palustris*) lakes through phytoliths. *Geological Society of America Annual Meeting Abstracts with Programs* 43(5): 619.
- Thompson, R., Myrbo, A., Misquadace, S., Peterson, M. R., Weingart, M., and **Locatelli, E.R.** 2011. Correlating phytolith and pollen data from wild rice lakes and designation of first occurrence – a cautionary note. *Geological Society of America Annual Meeting Abstracts with Programs* 43(5): 467.

FELLOWSHIPS AND GRANTS

- William L. Fisher Congressional Geoscience Fellowship**, *American Geosciences Institute* 2016-2017
- Society-sponsored fellowship as part of the AAAS Science and Engineering Congressional Fellowship Program
 - Placed in the office of Senator Udall (NM), working on issues related to climate, energy, natural resources, and the environment
- Council on Research and Exploration Grant 9622-14** (co-author), *National Geographic Society* 2014
- Crowdfunding Project: "Leaves in stone: does decay control the fossil record?"**, *experiment.com* 2014
- Twenhofel Fellow**, *Yale University* 2013-2016
- Small Grants Program**, *Yale Institute for Biospheric Studies* 2013
- James M. And Thomas J.M. Schopf Award**, *Paleontological Society* 2013
- Yale University Graduate Fellowship** 2011-2016
- Paleontological Society Scholarship** 2012
- Student/Faculty Summer Research Collaboration Fellowship**, *Macalester College* 2010-2011

AWARDS AND HONORS

- Estwing Hammer Prize for an Outstanding Graduate Student**, *Yale University* 2016
- Winifred Goldring Award**, *Association for Women Geoscientists* 2014
- Awarded to an outstanding female student of paleontology
- Best Graduate Student Talk**, *North American Paleontological Convention* 2014
- Council Poster Prize**, *Palaeontological Association* 2012
- Poster Award: Honorable Mention**, *Paleontological Society* 2012
- Bateman Award for Outstanding Undergraduate Achievement**, *Yale University* 2011
- Dean's List**, *Macalester College* 2007-2011
- DeWitt Wallace Distinguished Scholar Award**, *Macalester College* 2007-2011
- Samuel W. Raudenbush Memorial Endowed Prize**, *Macalester College* 2011
- Awarded to an outstanding woman in music

AWARDS AND HONORS, CONT.

- Ira L. Crawford Scholarship, *Macalester College*** 2011
 • Awarded to students with outstanding scholastic achievement
- Charles W. Ferguson Endowed Prize in Public Speaking, *Macalester College*** 2008, 2010
- Lowell Thomas Endowed Prize in Public Speaking, *Macalester College*** 2009
- Macalester College National Merit Scholarship, *Macalester College*** 2007-2008
- REcognized Achievement (REACH) Award, *YWCA Las Cruces*** 2007
 • Awarded to one young woman each year for outstanding contributions and demonstrated commitment to their community

SELECTED WORK EXPERIENCE

- Curatorial Assistant, *Yale Peabody Museum of Natural History*** 2013-2015
 • Organized, identified, and photographed fossil insects as part of the NSF-funded Fossil Insect Collaborative Digitization Project NSF-EF 1305066
- Laboratory Technician and Mentor, *National Lacustrine Core Facility*** 2011
 • Prepared samples from- and performed analyses on lake sediment cores
 • Mentor for native students on the Fond du Lac Reservation as part of the NSF Opportunities for Enhancing Diversity in the Geosciences (OEDG) Program, NSF-EAR 0949962
- Laboratory and Field Assistant, *New Mexico State University*** 2009
- Intern, *INFORM, Uppsala, Sweden*** 2006, 2008
 • Developed curriculum on online literature, database management, and navigating international information networks to assist librarians and researchers in developing countries

SCIENCE COMMUNICATION AND EDUCATION TRAINING AND DEVELOPMENT

- Yale Teaching Center** 2013-2016
 • Fundamentals of Teaching in the Sciences
 • Advanced Teaching Workshops attended: Course Design; Creating an Inclusive Classroom; Diverse Learning Styles and Abilities; Engaging Students through Active Learning; Gender Bias in the Classroom; Team Teaching
- Catalyzing Advocacy in Science and Engineering Workshop, *AAAS*** 2015
 • Selected as one of 2 Yale participants based on academic merit and demonstrated leadership
 • Participated in interactive workshops and seminars focused on policy-making, the federal budget process, and effective science communication and advocacy with members of Congress
- Scientific Teaching in the Physical Sciences, *Yale University*** 2015
 • Semester long course covering topics related to science education and scientific, evidence-based teaching methods
- Communicating with Congress Workshop, *American Geoscience Institute*** 2014, 2015
- Communicating the Value and Values of Science, *Yale University*** 2015
- Science Communication Short Course, *Yale University*** 2014
 • 4-week Workshop on effective science communication strategies for diverse audiences
- Certificate in Scientific Writing, *Yale University Carl Zimmer Science Writing Workshop*** 2014

SCIENCE COMMUNICATION, EDUCATION, AND OUTREACH EXPERIENCE

- Women in Science at Yale Undergraduate Mentor** 2015-2016
- Paleontology Advisor for ESRI GeoInquiries** 2015-2016
- Project currently unpublished, under development
 - Goal: develop map layers with significant fossil discoveries for use in K-12 classrooms
- Geoscience Advisor for ScienceQuanda/ScienceIsland: Question 106** 2015-2016
- Goal: develop electronic books, games, and activities to answer scientific questions from 4th grade students in Uganda
- On to the Future Mentor, Geological Society of America** 2014-2016
- Education and Outreach Volunteer, Yale Peabody Museum of Natural History** 2011 – 2016
- Teaching Fellow, Yale University, Department of Geology and Geophysics** 2011-2015
- Guest Speaker, Palaeocast Podcast** 2015
- Episode: “Geological Society of America Annual Meeting 2015”
- Moderator and Judge, Yale Peabody Museum of Natural History Paleo-knowledge Bowl** 2012-2015
- Invited Speaker, Paleontological Society Short Course** 2014
- Title: “The exceptional preservation of plant fossils: a review of taphonomic processes and biases in the fossil record”
- Invited Speaker, Sally Lanzi Volunteer Enrichment Program, Yale Peabody Museum of Natural History** 2014
- Title: “Fossils: how they form and why they matter”
- Royal Society Summer Science Exhibition** Summer 2013
- Presented research and led demonstrations about color in the fossil record at the UK’s largest public science event (20,000+ visitors in 2013)

LEADERSHIP AND SOCIETY SERVICE EXPERIENCE

- North-East Delegate Alternate, Association for Women Geoscientists Board** 2016-Present
- Harriet Evelyn Wallace Scholarship Selection Committee, American Geosciences Institute** 2015-Present
- Chair of Committee, 2015-2016 Cycle
- International Research Collaboration, USA and Jamaica** 2014-Present
- Leader of an international 7-person research team during an ongoing research project
 - Organizes logistics and managed a \$21,500 budget
- Leadership Forum, American Geosciences Institute** 2014, 2015
- Represented the Paleontological Society and offered a student perspective during day-long forums on diversity (2014) and the future of scientific societies (2015)
 - Contributing author of the AGI consensus statement on inclusivity in the geosciences
- Geosciences Congressional Visit Days (CVD), American Geosciences Institute** 2014, 2015
- Student Representative, Paleontological Society Council** 2013-2015
- Dana Club President, Yale Dept. Geology and Geophysics Dana Club (Graduate Organization)** 2013-2014
- Mediated discussions between graduate students and the Department Chair and Faculty
- Mock Trial Team, Macalester College** 2007-2011
- Co-captain 2008 – 2010
 - Student Coach 2010 – 2011