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EDUCATION

2003 Ph. D. Curriculum and Instruction, Geoscience Education, Louisiana State University
1998 M. Ed. Curriculum and Instruction, Science Education, University of Louisiana at Lafayette
1997 M.S. Geology, University of Louisiana at Lafayette
1983 B. S. Chemistry, University of Louisiana at Lafayette

Additional Certifications

2010 Distance Learning, Mississippi State University
2009 ESRI Arc GIS I
1982 Scanning Electron Microscopy, McCrone Research Institute

EMPLOYMENT

2012- Associate Professor, Director of the Dunn-Seiler Museum, Department of Geosciences, Mississippi State University
2007-2012 Assistant Professor, Director of the Dunn-Seiler Museum, Department of Geosciences, Mississippi State University
2006 Distance Learning Instructor, Department of Geosciences, Mississippi State University
2005-2006 Online Instructor, College of Science and Technology, Northwestern State University of Louisiana
2003-2005 Assistant Professor, Director of the X-Ray Center, Department of Geology, University of Louisiana at Lafayette
2000-2003 Adjunct Professor and Instructor, Department of Geology, University of Louisiana at Lafayette
1999-2003 Instructor, South Louisiana Community College
1998 Research Assistant, Magnetic Products International
1984-1986 Chemistry and Calculus Instructor, Episcopal School of Acadiana
1984-1985 Chemist, Applied Science and Technology Laboratories, Dow Chemical, U.S.A., Louisiana Division
1981-1983 Chief Laboratory Assistant, Asbestos Research Program

PUBLICATIONS

Refereed Journal Articles

- Clary, R.M.** (2015). William Smith's mapping milestone: an Interactive Historical Vignette celebrating the bicentennial of the first national geologic map. *The Science Teacher*, 82(7), 36-42.
- Clary, R.M.** (2015). The resource beneath our feed. Gaining a new awareness during the International Year of Soils. *The Science Teacher*, 82(6), 49- 56.
- Sumrall, J.L., **Clary, R.M.**, & Watson, J.C. (2015). Geographic affiliation and sense of place: Influences on incoming online students' geological and meteorological content knowledge. *Journal of College Science Teaching*, 45(1), 36-43.
- Clary, R.M.**, and Wandersee, J.H. (2015). Finding the CO₂ culprit: Investigating whether man or mountain emits more atmospheric carbon dioxide. *The Science Teacher*, 82(3), 23-29.
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- Clary, R.M.** (2015). The human impact on earthquakes: Natural fracturing versus fracking. *Science Scope*, 38(5), 24-31.
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- Clary, R.M.**, & Wandersee, J.H. (in press). Volcano! Investigating plate tectonics, geologic time, and the rock cycle. *Science Scope*.
- Clary, R.M.**, Wandersee, J.H., and Tucker D.L. (2014). Just do it! Performance tasks in the science classroom. *Science Scope* 34-39.
- Clary, R.M.**, and Wandersee, J.H. (2014). Optimization of discussion forums for online students' climate literacy. *Journal of Geoscience Education*, 62(3), 402-409.
- Clary, R.M.**, and Wandersee, J.H. (2014). Graphing the past: A stratigraphy project for interpreting data and integrating science and math. *The Science Teacher*, 81(5), 39-44
- Clary, R.M.**, & Wandersee, J.H. (2014). Striding through time: Using dinosaur tracks to integrate engineering and math in the science classroom. *The Science Teacher*, 81(5) 45-51.
- Clary, R.M.**, and Wandersee, J.H. (2014). Lessons from US fossil parks for effective informal science education. *Geoheritage*, 6 (4), 241-256. DOI 10.10007/212371-014-01016-x
- Clary, R.M.**, and Wandersee, J.H. (2014). How low can you go? Interdisciplinary student-impact investigations for environmental awareness and sustainability. *Science Scope*, 37(7), 19-26.
- Clary, R.M.**, & Wandersee, J.H. (2014). History and Nature of Science: Is the Past the Key to our Future? *Science Scope*, 37(6), 63-71.
- Clary, R.M.**, & Wandersee, J.H. (2014) MicroWorld: Interdisciplinary investigations of scale. *The Science Teacher*, 81(1), 53-60.

- Clary, R.M., & Wandersee, J.H.** (2014). The Leonardo Strategy: Scientific discourse and argumentation in an online environment. *Science Scope*, 37(5), 18-22.
- Clary, R.M., & Wandersee, J.H.** (2013). Classification: Putting everything in its place. *The Science Teacher*, 80(9), 31-36.
- Clary, R.M., Sumrall, J.L., Rodgers, J.C., & Wandersee, J.H.** (2013). The effects of geographic affiliation on students' perceptions, awareness, and responses to the 2010 Deepwater Horizon oil spill. *Journal of Geoscience Education*, 61(4), 453-460.
- Clary, R.M., & Wandersee, J.H.** (2013). Cookie tectonics: An introduction to Earth hazards and tectonic fundamentals. *Science Scope*, 37(4), 23-28.
- Clary, R.M., & Wandersee, J.H.** (2013). Arguing history: Teaching historical scientific controversies to engage students in discourse and the nature of science. *The Science Teacher*, 80(5), 39-43.
- Clary, R.M., & Wandersee, J.H.** (2013). The human impact on biodiversity: A case study with corn. *Science Scope*, 36(8), 37-41.
- Clary, R.M., Wandersee, J.H., & Sumrall, J.L.** (2013). Sense of Place writing templates: Connecting student experiences to scientific content before, during, and after instruction. *Science Scope*, 13 (7), 63-67.
- Clary, R.M., & Wandersee, J.H.** (2013). Stromatolites: Interdisciplinary portal for teaching Earth's dynamic changes. *The Science Teacher*, 80(2), 60-66.
- Clary, R.M., & Wandersee, J.H.** (2013). Banking on the future: Seed bank investigations teach biodiversity and biocomplexity. *The Science Teacher*, 80(3), 66-71.
- Clary, R.M., Wandersee, J.H., Guyton, J., & Williams, M.** (2012). Citizen science your own backyard: Building a generation of scientists through entomology. *The Science Teacher*, 79(9), 51-57.
- Clary, R.M., & Wandersee, J.H.** (2012). Creative natural selection: Effective classroom techniques for exploring evolution. *Science Scope*, 36(2), 36-43.
- Clary, R.M., & Wandersee, J.H.** (2012). Rock on! Use gravel in your classroom to promote critical thinking. *The Science Teacher*, 79(3), 42-46.
- Clary, R.M., & Wandersee, J.H.** (2012). Mandatory climate change discussions in online classrooms: Promoting students' climate literacy and understanding of the nature of science. *Journal of College Science Teaching*, 41(5), 70-79.
- Clary, R.M., Brzuszek, R.F., & Fulford, C.T.** (2011). Measuring creativity: A case study probing rubric effectiveness for evaluation of project-based learning solutions. *Creative Education*, 2(4), 333-340.
- Clary, R.M., & Wandersee, J.H.** (2011). It's YOUR fault! An investigation into earthquakes, plate tectonics, geologic time. *The Science Teacher*, 78(9), 58-63.
- Clary, R.M., & Wandersee, J.H.** (2011). 1883 news report—Kakatoa erupts! A biology-geology integration inquiry. *The Science Teacher*, 78(9), 42-47.
- Clary, R.M., & Wandersee, J.H.** (2011). A “Coprolitic Vision” for earth science education. *School Science and Mathematics*, 111, (6), .262-273.
- Clary, R.M., & Wandersee, J.H.** (2011). Adopt-a-Dino: Creative scientific visualization. *The Science Teacher*, 78(6), 36-41.
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- Clary, R.M., & Wandersee, J.H.** (2011). DinoViz: The history and nature of science through the progression of dinosaur visualization. *Science Scope*, 34(6), 14-21.
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- Brzuszek, R.F., & Clary, R.M.** (2008). How big is big? The translation of the enormity of geologic time in an informal learning environment. *Design Principles and Practices: An International Journal*, 2(4), 69-78.
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- Clary, R.M.**, Wandersee, J.H., & Carpinelli, A. (2008). The great dinosaur feud: Science against all odds. *Science Scope* 32 (2), 34-40.
- Clary, R.M.**, & Wandersee, J.H. (2007). The Pet Rock Project: Make the rock cycle come alive! *Science Scope* 31(2), 59-64.
- Clary, R.M.**, & Wandersee, J.H. (2007). A mixed methods analysis of the effects of an integrative geobiological study of petrified wood in introductory college geology classrooms. *Journal of Research in Science Teaching*, 44 (8), 1011-1035.
- Clary, R.M.**, Wandersee, J.H., & Elias, J.S. (2007). Does the color coding of examination versions affect college science students' test performance? Countering claims of bias. *Journal of College Science Teaching*, XXXVII, 40-47.
- Wandersee, J.H., & **Clary, R.M.** (2007). Learning on the trail: A content analysis of a university arboretum's exemplary interpretative science signage system. *The American Biology Teacher*, 69 (1), 16-23.
- Clary, R.M.**, & Wandersee, J.H. (2006). A writing template for probing students' Geological Sense of Place. *Science Education Review*, 5 (2), 51-59.
- Clary, R. M.**, & Wandersee, J. H. (2006). Mary Anning: She's more than "seller of sea shells at the seashore." *The American Biology Teacher*, 139 (3), 153-157.
- Wandersee, J. H., **Clary, R.M.**, & Guzman, S. M. (2006). How-to-do-it: A writing template for probing students' Botanical Sense of Place. *The American Biology Teacher*, 68 (7), 419-422
- Clary, R.M.**, Gresham, D., Bases, F., Hamlin, E., Bergeron, N., Petry, C., LaGrange, M., & Fischer, E. (2005). Sediment and water analysis adjacent to an active scrap yard and archived Superfund site, Lafayette Parish, Louisiana. *Gulf Coast Association of Geological Societies Transactions*, 55, 89-100.
- Clary, R.M.**, & Wandersee, J.H. (2005). Through the looking glass: The history of aquarium views and their potential to improve learning in science classrooms. *Science and Education*, 14, 579-596.

Book Chapters

- Clary, R.M.**, & Wandersee, J.H. (2015). Using controversy and argumentation to develop students' critical thinking skills. In S. Latourelle (ed.) *Innovations in College Science Teaching*. Society for College Science Teachers (Chapter 3, pp. 115 – 130).
- Clary, R.**, Elder, A., Dunne, J., Tucker, D., Beard, D. Saebo, S., Wax, C., & Winter, J. (2015). Professional development with innovative co-teaching. In S. Latourelle (ed.) *Innovations in College Science Teaching*. Society for College Science Teachers (Chapter 3, pp. 103 – 114).
- Walker, R., **Clary, R.M.**, Carroll, K., & Anthony, K. (2015). Harnessing the power of immersive innovative environmental experiences. In S. Latourelle (ed.) *Innovations in College Science Teaching*. Society for College Science Teachers (Chapter 1, pp. 5 – 20).
- Clary, R.M.**, Remo, J.P., Walker, R., & Wandersee, J.H. (2015). Drawing scientists together: University faculty's perceptions of art and perceived barriers to constructing and implementing visual data in science classrooms. In J.E. Pederson and K.D. Finson (eds.) *Application of Visual Data in K-16 Science Classrooms*. Information Age Publishing (Chapter 15, pp. 357-376).

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- Clary, R.M., & Wandersee, J.H.** (2013). Optimizing "super graphics" for effective informal scientific visualization displays. In J.E. Pederson and K. D. Finson (eds.). *Visual Data and Their Use in Science Education*. Information Age Publishing, pp. 261-280.
- Clary, R.M., & Wandersee, J.H.** (2013). Opening both eyes: Gaining an integrated perspective of geology and biology (Chapter 9). In M.S. Khine and I.M. Saleh (eds.) *Approaches and Strategies in Next Generation Science Learning*. Hershey, PA: Information Science4 Reference (IGI Global), pp.165-183.
- Clary, R.M., & Wandersee, J.H.** (2012) Connect the spheres with the Coal Cycle! (Chapter 40). In S. Metz (ed.) *Fuel for Thought: Building Energy Awareness in Grades 9-12*. Arlington, VA: NSTA Press, pp. 345-357.
- Clary, R.M., & Wandersee, J.H.** (2012). The effectiveness of petrified wood as a geobiological portal to increase public understanding of geologic time, fossilization, and evolution. In *Earth Science* I.A.Dar (Ed). ISBN 978-953-307-861-8. (Chapter 3). InTech Publishers. Open Access: <http://www.intechopen.com/articles/show/title/the-effectiveness-of-petrified-wood-as-a-geobiological-portal-to-increase-public-understanding-of-ge>, pp. 46-70.
- Wandersee, J.H., & **Clary, R.M.** (in press). Envisioning a Rainbow Bridge: Eight research studies that reveal optimal opportunities to learn biology and geology at informal science education sites. In P. Kurtz & F. Ren (Eds.), *Proceedings of the 11th World Congress for Center for Inquiry-Transnational: Scientific Inquiry and Human Development*. Amherst, NY: Prometheus Books.
- Clary, R.M., & Wandersee, J.H.** (2011). Geobiological opportunities to learn at US fossil parks (Chapter 9). In A. Feig & A. Stokes (Eds.), *Qualitative Inquiry in Geoscience Education Research*, GSA Special Papers Volume 474, pp. 113-134.
- Clary, R.M., and Wandersee, J.H.** (2010). How old? Tested and trouble-free ways to convey geologic time (Chapter 23). In Liftig, I. (ed). *Tried and True: Time-Tested Activities for Middle School*. Arlington, VA: NSTA Press.
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- Clary, R.M., & Wandersee, J.H.** (2010). Use of informal education sites to facilitate paleoenvironmental integration in a nation-wide paleontology course. In Cloutier, C. (ed). *Geoscience Information: Making the Earth Sciences accessible for everyone*. Denver: 2007 Geoscience Information Society. V. 38, pp.93-98.

- Wandersee, J.H., & **Clary, R.M.** (2010). Envisioning a Rainbow Bridge: Eight research studies that reveal optimal opportunities to learn biology and geology at informal science education sites [Mandarin Chinese]. In P. Kurtz & F. Ren (Eds.), *Improving Science Spirits and Building a Harmony Society*. Beijing, Peoples Republic of China: Chinese Science and Technology Press, pp. 94 – 105.
- Clary, R.M.**, & Wandersee, J.H. (2007). Great expectations: Florence Bascom (1842 – 1945) and the education of the first generation of US women geologists. In C. Burek and B. Higgs (Eds.), *The role of women in the history of geology*, Bath, England: The Geological Society of London, Special Publications 281.
- Wandersee, J.H., & **Clary, R.M.** (2006). Advances in research towards a theory of plant blindness. Proceedings of the 6th International Congress on Education in Botanic Gardens, Oxford University. (London: Botanic Gardens Conservation International, pp. 16-20.
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- Wandersee, J.H., & **Clary, R.M.** (2006). Fieldwork: New directions and examples in informal science education research. In J. Mintzes & W. Leonard (Eds.), *NSTA handbook of college science teaching: Theory, research, & practice*. Arlington, VA: NSTA Press, pp.167-176.
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Abstracts

- Clary, R.M.** (2015). Taken for granite? A case study analysis of rock and substrate interpretation in botanical gardens. Abstract 140, <http://2015.botanyconference.org/engine/search/index.php?func=detail&aid=340> *Botanical Society of America*, Edmonton, Alberta, Canada.
- Clary, R.M.** (2015). Peer review in the college science classroom: Scientific communication's "missing link." *Society for College Science Teachers programs and Abstracts*, 35, 10.
- Clary, R.M.**, Dunne, J., and Saebo, S. (2015). Understanding by Design (UbD) in science professional development (PD) programs: Success depends upon **scientific** content, creativity, and applicability. *Society for College Science Teachers programs and Abstracts*, 35, 13.
- Clary, R.M.**, and Wandersee, J. (2015). Optimization of online discussion forums for students' climate literacy. *Journal of the Mississippi Academy of Sciences*, 60(1), p. 146.

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- Clary, R.M.,** Tucker, D., Dunne, J., & Wax, C. (2015). Teachers' perceived benefits and barriers to hands-on performance tasks in the science classroom. *Journal of the Mississippi Academy of Sciences*, 60(1), p. 148.
- Clary, R.M.,** Elder, A., Dunne, J., & Wax, C. (2014). Equal, separate, or complementary? Contributions of online modules in a blended geoscience professional development program. *Geological Society of America 2014 Abstracts with Programs*, 46 (6), p. 46.
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- Clary, R.M.** (2014). Envisioning Deep Time: Henry De la Beche's contributions to scientific visualization. *Geological Society of America 2014 Abstracts with Programs*, 46 (6), p. 258.
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- Clary, R.M.,** & Wandersee, J.H. (2014). College students' perceptions of the relative importance of Earth's natural resources: Implications for improved instructional approaches for enriched geoliteracy. *Geological Society of America 2014 Abstracts with Programs*, 46 (6), p. 646.
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- Clary, R.M.,** & Wandersee, J.H. (2014). Headline news: Using current topics to facilitate student research, argumentation, and understanding of the multivariate nature of controversies. *Society for College Science Teachers Programs and Abstracts*, 34, 15-16.
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- effective professional development. *NARST 2014 Annual International Conference Abstracts*, p. 233.
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- Wandersee, J.H., & **Clary, R.M.** (2014). College students' perceptions of the relative importance of eight of the Earth's key natural resource categories. *Journal of the Mississippi Academy of Sciences*, 59(1), 122.
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- McCormick, S., Walker, R., **Clary, R.**, & McKissick, B. (2014). An alignment of the Next Generation Science Standards to a historically significant curriculum. *Journal of the Mississippi Academy of Sciences*, 59(1), 120.
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- Clary, R.M.**, & Wandersee, J.H. (2013). Florence Bascom: Pioneering U.S. woman geologist, educator, and mentor. *Geological Society of America 2013 Annual Meeting*, 45 (7), Abstract 225099. Denver, CO.
- Clary, R.M.**, Moe-Hoffman, A., & Wandersee, J.H. (2013). The Dunn-Seiler Museum's geotreasures with impact: The potential of small geology museums to promote public geoliteracy. *Geological Society of America 2013 Annual Meeting*, 45 (7). Abstract 225113. Denver, CO.
- Clary, R.M.**, & Wandersee, J.H. (2013). Geology behind the computer: Advances in geoscience education within distance learning programs. *Geological Society of America 2013 Annual Meeting*, 45 (7), Abstract 225107. Denver, CO.
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- Clary, R.M.,** & Wandersee, J.H. (2012). Hearing the message: Maximizing push-button audio trails for effective informal geoscience learning. *Geological Society of America 2012 Annual Meeting*, Abstract 206152, Charlotte, NC.
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- Wandersee, J.H., & **Clary, R.M.** (2007, December). Behold the Wollemi pine! The Human Flower Project, http://www.humanflowerproject.com/index.php/weblog/behold_the_wollemi_pine/
- Wandersee, J.H. & **Clary, R.M.** (2007, November). Harvard's flowers for all seasons. The Human Flower Project, http://www.humanflowerproject.com/index.php/weblog/harvards_flowers_for_all_seasons/
- Wandersee, J.H., & **Clary, R.M.** (2007, October). Not for all the tea in the USA! The Human Flower Project, http://www.humanflowerproject.com/index.php/weblog/not_for_all_the_tea_in_the_usa
- Wandersee, J.H., & **Clary, R.M.** (2007, October). Plants & child's play: Conker season! The Human Flower Project, http://humanflowerproject.com/index.php/weblog/comments/plants_childs_play_conkers_season/
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- Wandersee, J.H., & **Clary, R.M.** (2007, April). Palm ash: Sacred recycling. The Human Flower Project, http://www.humanflowerproject.com/index.php/weblog/palm_ash_sacred_recycling/
- Wandersee, J.H., & **Clary, R.M.** (2007, March). The world's oldest potted plant. The Human Flower Project, http://www.humanflowerproject.com/index.php/weblog/the_worlds_oldest_potted_plant/
- Wandersee, J.H., & **Clary, R.M.** (2007, January). The Great Vine of England: All the makings of a Marquee Plant. The Human Flower Project, http://humanflowerproject.com/index.php/weblog/comments/marquee_plants_the_great_vine_of_england/
- Clary, R.M.** (2006). Instructor's Manual with Test Bank for *Historical Geology: Evolution of Earth and Life through Time 5/e*. Thomson Brooks/Cole, 385 p.
- Wandersee, J.H., & **Clary, R.M.** (2006, January). On seeing flowers: Are you missing anything? The Human Flower Project, http://www.humanflowerproject.com/index.php/weblog/on_seeing_flowers_are_you_missing_anything/
- Clary, R.M.** (2005). Memorial to Alan Marsh Bailey (1938-2003). *Geological Society of America Memorials*, 34, 23-25.
- Wandersee, J.H., & **Clary, R.M.** (June 17, 2005). Invited book review of *Active Learning in Secondary and College Science Classrooms* by Joel A. Michael and Harold I. Modell. *International Journal of Science Education*, 27 (8), 1007-1012.

SCHOLARLY PRESENTATIONS

International Level

- Clary, R.M.** (2015, July). *Taken for granite? A case study analysis of rock and substrate interpretation in botanical gardens*. Research paper presented at the Botanical Society of America international conference, Edmonton, Alberta, Canada.
- Clary, R.M.,** Elder, A., Dunne, J., Saebo, S., Beard, D., Wax, C., Wax, C., Winter, J., & Tucker, D. (2015, April). *Teachers' retention of discipline-specific scientific content knowledge throughout a 3-year professional development program*. Research paper presented at the National Association for Research in Science Teaching International Conference, Chicago, IL.
- Clary, R.M.,** Walker, R., & Remo, J.P. (2015, January). *Drawing scientists together: Science instructors' conceptions of art and perceived barriers to constructing and implementing visual data in science classrooms*. Research paper presented at the Association for Science Teacher Education International Conference, Portland, OR.
- Clary, R.M.,** Elder, A., Dunne, J., & Wax, C. (2014 October). *Equal, separate, or complementary? Contributions of online modules in a blended geoscience professional development program*. Research paper presented at the Geological Society of America Annual Meeting, Vancouver, BC, Canada.
- Theis, K., & **Clary, R.M.** (2014 October). *Geosites of northern California: A research investigation of potential geotourism and opportunities to improve public geoliteracy*. Research paper presented at the Geological Society of America Annual Meeting, Vancouver, BC, Canada..

- Clary, R.M.** (2014 October). *Envisioning Deep Time: Henry De la Beche's contributions to scientific visualization*. Research paper presented at the Geological Society of America Annual Meeting, Vancouver, BC, Canada. (*invited*)
- Clary, R.M.** (2014 October). *Optimizing "fossil parks": Research-based implications for enhancing public geoliteracy within informal field environments*. Research paper presented at the Geological Society of America Annual Meeting, Vancouver, BC, Canada..
- Clary, R.M., & Wandersee, J.H.** (2014 October). *College students' perceptions of the relative importance of Earth's natural resources: Implications for improved instructional approaches for enriched geoliteracy*. Research paper presented at the Geological Society of America Annual Meeting, Vancouver, BC, Canada. (*invited*)
- Clary, R.M., & Wandersee, J.H.** (2014 July). *The history of science in the science classroom: The past is the key to the future in science education*. Research paper presented at the 39th INHIGEO Symposium, Asilomar Conference Grounds, Pacific Grove, CA.
- Clary, R.M., Dunne, J., Saebo, S., Elder, A., Tucker, D., Beard, D., Wax, C., & Winter, J.** (2014, April). *A hybrid learning Mathematics and Science Partnership, Teacher Academy in the Natural Sciences (TANS): Blended instructional model for effective professional development*. Research paper presented at the 2014 National Association for Research in Science Teaching International Conference, Pittsburgh, PA.
- Clary, R.M., & Wandersee, J.H.** (2013, July). *The journey from elite society to government geologist: Henry De la Beche's powerful impact on the importance of observation within an emerging professional science*. Research paper presented at the 2013 International Congress of the History of Science, Technology, and Medicine, Manchester, UK.
- Clary, R.M., Weir, J., Hamil, B., Beard, D., Chevalier, D., Dunne, J., & Saebo, S.** (2013, January). *Assessing impact of enhanced science content and authentic research opportunities for secondary science teacher preparation*. Research paper presented at the Association for Science Teacher Education 2013 conference, Charleston, SC.
- Clary, R.M., & Wandersee, J.H.** (2012, August). *Geobiological opportunities to learn at US fossil parks*. Research paper presented at the 34th International Geological Congress, Brisbane, Australia.
- Clary, R.M., & Wandersee, J.H.** (2012, August). *Integration of enquiry fossil research approaches and students' local environments within online geoscience classrooms*. Research paper presented at the 34th International Geological Congress, Brisbane, Australia.
- Wandersee, J.H., & **Clary, R.M.** (2012, August). *Talking Rocks: A study of the process of communicating science on a US public geopark trail using push-button audio interpretation stations*. Research paper presented at the 34th International Geological Congress, Brisbane, Australia.

- Clary, R.M.,** & Wandersee, J.H. (2012, March). Petrified wood's effectiveness as an interdisciplinary science portal: A research investigation with inservice teachers. Research paper presented at the 2012 National Association for Research in Science Teaching annual international conference, Indianapolis, IN.
- Wandersee, J.H., & **Clary, R.M.** (2011, July). How can botanic gardens help us prevent plant blindness? Invited research symposium paper presented at the international (AFS, ASPT, BSA, SEB) plant scientific societies meeting, Botany 2011, St. Louis, MO.
- Wandersee, J.H., & **Clary, R.M.** (2010, May). Plant blindness—What research says. Invited public research lecture presented at Singapore Botanic Gardens' Botany Centre, National Parks Singapore, Republic of Singapore.
- Clary, R.M.,** Wandersee, J.H., & Brzuszek, R.F. (2010, March). *Students' geocognition of Deep Time, conceptualized in an informal educational display.* Research paper presented at the 2010 international meeting of the National Association for Research in Science Teaching, Philadelphia, PA.
- Clary, R.M.,** & Wandersee, J.H. (2010, January). *Science curriculum development in online environments: A SCALE to enhance teachers' science learning.* Research paper presented at the Association for Science Teacher Education Annual Conference, Sacramento, CA.
- Clary, R.M.,** Hamil, B., Beard, D., Chevalier, D., Dunne, J., and Saebo, S. (2009, December). *A research-based science teacher education program for a competitive tomorrow.* American Geophysical Union Fall Meeting, San Francisco, CA.
- Clary, R.M.,** & Wandersee, J.H. (2009, December). *Geology's "super graphics" and the public: Missed opportunities for geoscience education.* Research paper presented at the American Geophysical Union Fall Meeting, San Francisco, California.
- McNeal, K., **Clary, R.M.,** Sherman-Morris, K., Kirkland, B, Gillham, D., Moe-Hoffman, A. (2009, December). *Mississippi State University's geoscience education and geocognition research program in the Department of Geosciences.* American Geophysical Union Fall Meeting, San Francisco, CA.
- Wandersee, J.H. & **Clary, R.M.** (2009 November). Research book, *Seeing plants: The theory of plant blindness.* Book debut presented at the BGCI 7th International Congress on Education in Botanic Gardens, Durban, South Africa.
- Wandersee, J.H., & **Clary, R.M.** (2009, June). *Knowledge Integration and Mapping.* Short course presented at the 2009 Delta Research and Global Observation Network (DRAGON) Asian Summit, Siem Reap, Cambodia.
- Clary, R.M.,** & Wandersee, J.H. (2009, January). *Science teacher education in the online environment: Practicing teachers' perceptions of effective geoscience content delivery.* Research paper presented at the Association for Science Teacher Education Annual Conference, Hartford, CT.
- Clary, R.M.,** Brzuszek, R.F., & Wandersee, J.H. (2008, August) *Geology and design: Characteristics of successful landscape designs for incorporation of geologic time in informal education sites.* Research paper presented at the 33rd International Geological Congress, Oslo, Norway.

- Clary, R.M., & Wandersee, J.H.** (2008, August). *Heroes and hardships: Is there value in the early history of polar exploration for the science classroom?* Research paper presented at the 33rd International Geological Congress, Oslo, Norway.
- Wandersee, J.H., & **Clary, R.M.** (2008, August). *Optimizing the Bretherton Diagram to improve visual understanding.* Research paper presented at the 33rd International Geological Congress, Oslo, Norway.
- Wandersee, J.H., & **Clary, R.M.** (2008, August). *The geomythology of pipestone and its implications for geoscience education.* Research paper presented at the 33rd International Geological Congress, Oslo, Norway.
- Wandersee, J.H., & **Clary, R.M.** (2008, July). *A conceptual analysis of the 2007 documentary film King Corn with Implications for use in botany education.* Research paper presented at the Joint Annual Meeting of the Botanical Society of America and the Canadian Botanical Association, University of British Columbia, Vancouver, BC, Canada.
- Wandersee, J.H., & **Clary, R.M.** (2008, July). *Multisensory learning about stromatolites: Investigating the value added by field trips and fossil experiences.* Research paper presented at the Joint Annual Meeting of the Botanical Society of America and the Canadian Botanical Association, University of British Columbia, Vancouver, BC, Canada.
- Wandersee, J.H., & **Clary, R.M.** (2008, July). *A set of botany teaching implications drawn from the theory of plant blindness.* Symposium research paper presented at the Joint Annual Meeting of the Botanical Society of America and the Canadian Botanical Association, University of British Columbia, Vancouver, BC, Canada.
- Wandersee, J.H., & **Clary, R.M.** (2008, May). *A study identifying four gaps in the visitor experience that botanic gardens offer— A botanical education analysis of Sir David Attenborough's Work.* Research paper presented at the 2008 conference on The Role of Botanic Gardens in the 21st Century, The Linnaean Society, London.
- Clary, R.M., & Wandersee, J.H.** (2008, April). *Earth science teachers' perceptions of autonomous informal education assignments in a nationwide online paleontology course.* Research paper presented at the 2008 international conference of the National Association for Research in Science Teaching, Baltimore, MD.
- Wandersee, J.H., & **Clary, R.M.** (2008, March). *An interaction analysis of college biology laboratory students' discussion board contributions.* Research paper presented at the 2008 international conference of the National Association for Research in Science Teaching, Baltimore, MD.
- Brzuszek, R.F., & **Clary, R.M.** (2008, January). *How big is big? The translation of the enormity of scale and geologic time in an informal learning environment.* Research paper presented at the International Conference on Design Principles and Practice, Miami, FL.
- Clary, R.M., & Wandersee, J.H.** (2007, November). *All are worthy to know the earth: Henry De la Beche and the origin of geological literacy.* Research paper presented at the Geological Society of London History of Geology Group's In the Footsteps of the Founding Fathers celebration of the Bicentenary of the Geological Society of London, London, England.

- Wandersee, J.H., & **Clary, R.M.** (2007, October). *Envisioning a Rainbow Bridge: Eight selected research studies that reveal optimal opportunities to learn biology and geology at informal science education sites such as arboretums, botanic gardens, fossil parks, and museums*. Invited research paper presented at the 11th World Congress on Scientific Inquiry and Human Development, Beijing, China.
- Clary, R.M.**, & Wandersee, J.H. (2007, April). *Scientific caricatures in the earth science classroom: An alternative assessment for meaningful science learning*. Research paper presented at the 2007 international conference of the National Association for Research in Science Teaching, New Orleans, LA.
- Wandersee, J.H., & **Clary, R.M.** (2006, September). *Advances in research towards a theory of plant blindness*. Research paper presented at the 6th International Congress on Education in Botanic Gardens, Oxford, England.
- Clary, R.M.**, & Wandersee, J.H. (2006, April). *Can integrative study of petrified wood facilitate college students' understanding of fossilization, evolution, and geologic time?* Research paper presented at the 2006 annual international meeting of the National Association for Research in Science Teaching, San Francisco, CA.
- Clary, R.M.**, & Wandersee, J.H. (2005, November). *Florence Bascom's great expectations: The story of an innovative geology educator and inspiring mentor*. Research paper presented at the Geological Society of London History of Geology Group's special history of women in geology seminar, London, England.
- Wandersee, J.H., & **Clary, R.M.** (2005, July). *A research-based model for writing interpretive botanical trail signs*. Research paper presented at the Botanical Literacy Symposium of the 17th International Botanical Conference, Vienna, Austria.
- Wandersee, J.H., & **Clary, R.M.** (2005, April). *The fossil park design model: Result of a visitor experience study and critique of the first three US fossil parks*. Research paper presented at the 2005 annual international meeting of the National Association for Research in Science Teaching, Dallas, TX.
- Clary, R.M.**, & Wandersee, J.H. (2004, August). *Geotourism meets geoeducation: A comparative study of the three US fossil parks*. Research paper presented at the 2004 international convention of the 32nd International Geological Congress, Florence, Italy.
- Wandersee, J.H., & **Clary, R.M.** (2004, April). *Learning on the trail: A content analysis of an arboretum's exemplary science signage system*. Research Paper presented at the 2004 annual international meeting of the National Association for Research in Science Teaching, Vancouver, BC, Canada.
- Clary, R. M.**, & Wandersee, J. H. (2003, March). *Can scientific caricatures stimulate and enhance geoscience learning? Lessons from the history of geology*. Paper presented at the 2003 international meeting of the National Association for Research in Science Teaching, Philadelphia, PA.

National Level

- Domenech, J.A., **Clary, R.**, Dash, P., and Schmitz, D. (2015, April). *Multispectral mapping of sediment plumes in Pierpont Bay, CA using MODIS satellite data*. Research paper presented at the Association of American Geographers Annual Meeting, Chicago, IL.

- Clary, R.M.** (2015, March). *SCST Session: Peer review in the college science classroom: Scientific communication's "missing link."* Research paper presented at the National Science Teachers Association national conference on science education, Chicago, IL.
- Clary, R.M., Dunne, J., and Saebo, S.** (2015, March). *SCST Session: Understanding by Design (UbD) in science professional development (PD) programs: Success depends upon scientific content, creativity, and applicability.* Research paper presented at the National Science Teachers Association national conference on science education, Chicago, IL.
- Clary, R.M.** (2015, March) *Graphing the Rocks: A stratigraphy project for data interpretation.* Research paper presented at the National Science Teachers Association national conference on science education, Chicago, IL.
- Sherman-Morris, K., **Clary, R.**, Brown, M.E., and Diaz-Ramirez, J. (2015, January). *Increasing geosciences understanding through a hazards-based workshop for science teachers.* 24th Symposium on Education, American Meteorological Society, Phoenix, AZ.
- Tucker, D.L., Gardner, G., & **Clary, R.M.** (2014, December). *Hands-on assessment, Common Core, Next Generation Science Standards.* Research paper presented at the Learning Forward 2014 Annual Conference, Nashville, TN.
- Clary, R.M.** (2014, July). *Plants and the planets on which they live.* Research paper presented at the Botanical Society of America, Boise, ID.
- Clary, R.M., & Wandersee, J.H.** (2014, July). *Corn and biodiversity: A case study.* Research paper presented at the Botanical Society of America, Boise, ID.
- Clary, R.M., Wandersee, J.H., & Sumrall, J.L.** (2014, April). *Sense-of-Place writing templates: connect your students' past experiences with science and literacy.* Research paper presented at the National Science Teachers Association national conference on science education, Boston, MA.
- Clary, R.M., & Wandersee, J.H.** (2014, April). *SCST Session: Headline news: Using current topics to facilitate student research, argumentation, and understanding of the multivariate nature of controversies.* Research paper presented at the National Science Teachers Association national conference on science education, Boston, MA.
- Clary, R.M., Tucker, D.L., Dunne, J., & Wax, C.** (2014, April). *SCST Session: Assessing the NGSS performance expectations: Teachers' reflections on successes and challenges when using hands-on performance tasks.* Research paper presented at the National Science Teachers Association national conference on science education, Boston, MA.
- Sherman-Morris, K., Carroll, J., **Clary, R.**, Brown, M.E., McNeal, K.S., & Diaz-Ramirez, J. (2014, February). *Hazards-based Outreach for Middle School Students.* Research paper presented at the 23rd Symposium on Education, American Meteorological Society, Atlanta, GA.
- Clary, R.M., & Wandersee, J.H.** (2013, October). *Henry De la Beche's "great book" contributions to the observation of geology: Sections and Views, and A Geological Manual.* Research paper presented at the Geological Society of America 2013 Annual Meeting, Denver, CO. (*invited*)

- Clary, R.M.,** & Wandersee, J.H. (2013, October). *Florence Bascom: Pioneering U.S. woman geologist, educator, and mentor*. Research paper presented at the Geological Society of America 2013 Annual Meeting, Denver, CO. (*invited Pardee presentation*)
- Clary, R.M.,** Moe-Hoffman, A., & Wandersee, J.H. (2013, October). *The Dunn-Seiler Museum's geotreasures with impact: The potential of small geology museums to promote public geoliteracy*. Research paper presented at the Geological Society of America 2013 Annual Meeting, Denver, CO.
- Clary, R.M.,** & Wandersee, J.H. (2013, October). *Geology behind the computer: Advances in geoscience education within distance learning programs*. Research paper presented at the Geological Society of America 2013 Annual Meeting, Denver, CO.
- Sumrall, J.L., & **Clary, R.M.** (2013, October). *Sense of place writing templates: Determination of online students' geographic affiliations and associations*. Research paper presented at the Geological Society of America 2013 Annual Meeting, Denver, CO.
- Clary, R.M.,** & Wandersee, J.H. (2013, April). *SCST Session: Promoting students' understanding and awareness of sustainability issues and the nature of science through mandatory online discussions*. Research paper presented at the National Science Teachers Association National Conference on Science Education, San Antonio, TX.
- Clary, R.M.,** & Tucker, D.L. (2013, April). *ASTE Session: Teacher Academy in the natural Sciences (TANS) professional development program: Effective content and performance assessment instruction for your science classroom*. Research paper presented at the National Science Teachers Association National Conference on Science Education, San Antonio, TX.
- Sherman-Morris, K., McNeal, K, Carroll, J., Brown, M., **Clary, R.M.,** and Diaz-Ramirez, J. (2013, Spring). *A hazards approach to increase awareness and perceived relevance of the geoscience's: Preliminary results from a project designed to enhance diversity*. Research paper presented at the 21st Symposium on Education at the 93rd Annual American Meteorological Society, Austin, TX.
- Clary, R.M.,** & Wandersee, J.H. (2012, November). *Local gravel samples provide an inexpensive resource for multiple STEM inquiry investigations and critical thinking activities!* Research paper presented at the School Science and Mathematics Annual Convention, Birmingham, AL.
- Clary, R.M.,** Tucker, D. L., Dunne, J. Saebo, S., Beard, D., Elder, A., Wax, C., & Winter, J. (2012, November). *TANS: Blended professional development demonstrates effectiveness for middle school science teachers*. Research paper presented at the School Science and Mathematics Annual Convention, Birmingham, AL.
- Clary, R.M.,** Hamil, B., & Weir, J. (2012, November). *Earth science teachers for a competitive tomorrow: Incorporating undergraduate research opportunities for pre-service teachers*. Research paper presented at the Geological Society of America 2012 Annual Meeting, Charlotte, NC.

- Clary, R.M.**, & Wandersee, J.H. (2012, November). *Hearing the message: Maximizing push-button audio trails for effective informal geoscience learning*. Research paper presented at the Geological Society of America 2012 Annual Meeting, Charlotte, NC.
- Clary, R.M.**, & Wandersee, J.H. (2012, November). *Incorporation of authentic research in online geoscience classrooms through field investigations in students' local environments*. Research paper presented at the Geological Society of America 2012 Annual Meeting, Charlotte, NC.
- Sumrall, J.L., **Clary, R.M.**, & Rodgers, J.C. III. (2012, November). *A research investigation into the effects of students' sense of place on interest, knowledge, and behavioral changes with respect to the 2010 Deepwater Horizon oil spill*. Research paper presented at the Geological Society of America 2012 Annual Meeting, Charlotte, NC.
- Clary, R.M.**, & Wandersee, J.H. (2012, November). *Hearing the message: Maximizing push-button audio trails for effective informal geoscience learning*. Research paper presented at the Geological Society of America 2012 Annual Meeting, Charlotte, NC.
- Clary, R.M.**, & Wandersee, J.H. (2012, November). *Incorporating hot topics in the online classroom: Using mandatory discussions on biodiversity and climate change to address Earth sustainability issues*. Research paper presented at the Geological Society of America 2012 Annual Meeting, Charlotte, NC.
- Clary, R.M.**, & Wandersee, J.H. (2012, March). Promote Earth system science and sustainability through coal! Research paper presented at the National Science Teachers Association National Conference on science education, Indianapolis, IN.
- Brzuszek, R., & **Clary, R.M.** (2012, March). Using smartphone technology for informal environmental learning. Research paper presented at the 2012 Council of Educators in Landscape Architecture, Champagne-Urbana, Illinois.
- Wandersee, J.H., & **Clary, R.M.** (2012, March). Teach about plant like Linnaeus did! Research paper presented at the National Science Teachers Association National conference on science education, Indianapolis, IN.
- Clary, R.M.**, & Wandersee, J.H. (2012, March). *Optimizing online discussion board forums' content and time parameters for increased student scientific literacy*. Research paper presented at National Science Teachers Association Society for College Science Teachers National Conference, Indianapolis, IN.
- Clary, R.M.**, & Wandersee, J.H. (2011, November). *CSI paleontology: Using trace fossils to incorporate mathematics into the Mesozoic*. Research paper presented at School Science and Mathematics Annual Convention, Colorado Springs, CO.
- Brzuszek, R.F., & **Clary, R.M.** (2011, November). *Designing the educational landscape: The Gumpond Exhibit of The Crosby Arboretum*. Research paper presented at National Association of Interpreters 2011 National Workshop, Saint Paul, MN.
- Clary, R.M.**, & Wandersee, J.H. (2011, October). *Development of an online geoscience curriculum: The use of "SCALE" to enhance science learning*. Research paper presented at the Geological Society of America 2011 Annual Meeting, Minneapolis, Minnesota.

- Wandersee, J.H., & **Clary, R.M.** (2011, October). *The survey mapped around the world: The international dispersal of Henry De la Beche's geological survey methods.* Research paper presented at the Geological Society of America 2011 Annual Meeting, Minneapolis, Minnesota.
- Wandersee, J.H., & **Clary, R.M.** (2011, October). *The effectiveness of petrified wood as a geobiological portal to identify misconceptions in geologic time, fossilization, and mineralogical composition.* Research paper presented at the Geological Society of America 2011 Annual Meeting, Minneapolis, Minnesota.
- Clary, R.M.**, Wandersee, J.H., & Wax, C. (2011, October). *Teacher Academy in the Natural Sciences (TANS): Improving middle school science teachers' geoscience content through professional development.* Research paper presented at the Geological Society of America 2011 Annual Meeting, Minneapolis, Minnesota.
- Fulford, C.T., Brzuszek, R., **Clary, R.M.**, Gainer, D., & Lackey, G. (2011, April). Some like it hot: Getting creativity out of design students. Research paper presented at the Council of Educators in Landscape Architecture Urban Nature conference, Los Angeles, California.
- Clary, R.M.**, & Wandersee, J.H. (2011, March). *SCST Session: Developing college students' scientific literacy and understanding of the nature of science through climate change discussions.* Research paper presented at the 2011 National Science Teachers Association National Conference, San Francisco, CA.
- Clary, R.M.**, & Wandersee, J.H. (2011, March). *Explore Earth through sand!* Research paper presented at the 2011 National Science Teachers Association National Conference, San Francisco, CA.
- Wandersee, J.H., & **Clary, R.M.** (2011, March). *Measuring and modeling ancient and new pollen.* Research paper presented at the 2011 National Science Teachers Association National Conference, San Francisco, CA.
- Clary, R.M.**, & Wandersee, J.H. (2010, November). *MicroWorlds: Pollen and microfossil portals for effective, interdisciplinary science.* Research paper presented at the 2010 National Association of Biology Teachers professional development conference, Minneapolis, MN.
- Clary, R.M.**, & Wandersee, J.H. (2010, November). *Geology for the common good: Henry De la Beche and geological literacy.* Research paper presented at the Geological Society of America 2010 Annual Meeting, Denver, Colorado.
- Wandersee, J.H., & **Clary, R.M.** (2010, November). *Six fascinating "mini-stories" you can tell about Linnaeus.* Research paper presented at the 2010 National Association of Biology Teachers Professional Development Conference, Minneapolis, MN.
- Clary, R.M.**, & Wandersee, J.H. (2010, October). *Using mandatory online discussions to facilitate students' scientific understanding of climate change.* Research paper presented at the Geological Society of America 2010 Annual Meeting, Denver, Colorado.
- Clary, R.M.**, Wandersee, J.H., Moe Hoffman, A. Brzuszek, R.F., Kelly, J., & Hamil, B. (2010, October). *A Cretaceous Moment: Incorporating local geology to promote viewer understanding of the Earth Science Literacy Principles.* Research paper presented at the Geological Society of America 2010 Annual Meeting, Denver, Colorado.

- Wandersee, J.H., & **Clary, R.M.** (2010, August). *A case study of the effectiveness of Francesco Cirrillo's Pomodoro Technique for time management by a science graduate student*. Research paper presented at the 2010 Botanical Society of America National Conference, Providence, RI.
- Wandersee, J.H., & **Clary, R.M.** (2010, August). *Content analysis of the new Earth Science Literacy Principles: Implications for integrating earth science into plant science teaching*. Research paper presented at the 2010 Botanical Society of America National Conference, Providence, RI.
- Wandersee, J.H., & **Clary, R.M.** (2010, August). *How did Linnaeus integrate botany teaching and research? Insights from his university, garden, home, and farm*. Research paper presented at the 2010 Botanical Society of America National Conference, Providence, RI.
- Clary, R.M.**, & Wandersee, J.H. (2010, April). *Locating the play: The history of visualization in petroleum exploration*. Research paper presented at the American Association of Petroleum Geologists 2010 Annual Convention and Exhibition, New Orleans, LA. Archived at <http://vidego.multicastmedia.com/player.php?v=d4va49ll>
- Clary, R.M.**, & Wandersee, J.H. (2010, March). *Mesozoic mania: Multidisciplinary integration through dinosaurs*. Research paper presented at the 2010 National Science Teachers Association National Conference, Philadelphia, PA.
- Wandersee, J.H., & **Clary, R.M.** (2010, March). *Integrate biology and geology: 1883 news report—Karakatoa erupts!* Research paper presented at the 2010 National Science Teachers Association National Conference, Philadelphia, PA.
- Clary, R.M.**, & Wandersee, J.H. (2009, November). *Amber: Use 'tree tears turned to stone' to integrate biology, geology . . .and more!* Research paper presented at the 2009 National Association of Biology Teachers professional development conference, Denver, CO.
- Wandersee, J.H., & **Clary, R.M.** (2009, November). *Start your own seedbank! Teach biodiversity and biocomplexity*. Research paper presented at the 2009 National Association of Biology Teachers professional development conference, Denver, CO.
- Clary, R.M.**, & Wandersee, J.H. (2009, October). *Incorporation of field geology investigations in online learning environments*. Research paper presented at the 2009 Geological Society of America Annual Meeting, Portland, Oregon.
- Clary, R.M.**, & Wandersee, J.H. (2009, October). *Virtual field investigations: The advantages of Google Earth in online classrooms*. Research paper presented at the 2009 Geological Society of America Annual Meeting, Portland, Oregon.
- Wandersee, J.H., & **Clary, R.M.** (2009, October). *A computer-based text analysis of the new Earth Science literacy principles: Pedagogical implications for geoheritage site signage system design*. Research paper presented at the 2009 Geological Society of America 2009 Annual Meeting, Portland, Oregon.
- Wandersee, J.H., & **Clary, R.M.** (2009, October). *Teaching concept mapping and knowledge integration to 100 scientists at the USGS DRAGON Asia summit*. Research paper presented at the 2009 Geological Society of America 2009 Annual Meeting, Portland, Oregon.

- Wandersee, J.H., & **Clary, R.M.** (2009 October). *A computer-based text analysis of the new Earth Science literacy principles: Pedagogical implications for geoheritage site signage system design*. Research paper presented at the 2009 Geological Society of America Annual Meeting, Portland, Oregon.
- Wandersee, J.H., & **Clary, R.M.** (2009, July). *A computer analysis of Sir David Attenborough's botany teaching strategy*. Research paper presented at the Joint Annual Meeting of the Botanical Society of America and the Mycology Society of America, Snow Bird, Utah.
- Wandersee, J.H., & **Clary, R.M.** (2009, July) *A study of world newspaper coverage of two 21st-century global seed banks and the erroneous scientific ideas fostered by the popular press' misnomer: Doomsday Vault*. Research paper presented at the Joint Annual Meeting of the Botanical Society of America and the Mycology Society of America, Snow Bird, Utah
- Wandersee, J.H., & **Clary, R.M.** (2009, July). *Learning outcomes from requiring and evaluating science textbook annotation: The Polymath System* . Research paper presented at the Joint Annual Meeting of the Botanical Society of America and the Mycology Society of America, Snow Bird, Utah.
- Clary, R.M.**, & Wandersee, J.H. (2009, March). *Geology rocks! Using GeoPets to teach earth science*. Research paper presented at the 2009 National Science Teachers Association National Conference, New Orleans, LA.
- Guyton, J.W., & **Clary, R.M.** (2009, March). *Empowering elementary teachers to teach and do science*. Research paper presented at the 2009 National Science Teachers Association National Conference, New Orleans, LA.
- Wandersee, J.H., & **Clary, R.M.** (2009, March). *The "green" root beer laboratoryTM*. Research paper presented at the 2009 National Science Teachers Association National Conference, New Orleans, LA.
- Clary, R.M.**, & Wandersee, J.H. (2008, October). *The Great Dinosaur Feud: The triumph of science over subterfuge*. Research paper presented at the National Association of Biology Teachers 2008 Annual Conference, Memphis, TN.
- Clary, R.M.**, & Wandersee, J.H. (2008, October). *A Coprolitic Vision for paleontology education*. Research paper presented at the 2008 Joint meeting of the Geological Society of America, GCAGS, Gulf Coast SEPM, and others, Houston, TX.
- Clary, R.M.**, & Wandersee, J.H. (2008, October). *Beyond the computer: Incorporation of virtual field experiences, hands-on specimens, and autonomous research opportunities for effective online geoscience education*. Research paper presented at the 2008 Joint meeting of the Geological Society of America, GCAGS, Gulf Coast SEPM, and others, Houston, TX.
- Wandersee, J.H., & **Clary, R.M.** (2008, October). *Teach about plants using the "King Corn" documentary video!* Research paper presented at the National Association of Biology Teachers 2008 Annual Conference, Memphis, TN.
- Wandersee, J.H., & **Clary, R.M.** (2008, October). *Self-discovered human connections with planet Earth: Learning from the GEP's Earth wall chart*. Research paper presented at the 2008 Joint meeting of the Geological Society of America, GCAGS, Gulf Coast SEPM, and others, Houston, TX.

- Wandersee, J.H., & **Clary, R.M.** (2008, October). *Multisensory experiences with stromatolites in field and laboratory: Geocognitive effects*. Research paper presented at the 2008 Joint meeting of the Geological Society of America, GCAGS, Gulf Coast SEPM, and others, Houston, TX.
- Wandersee, J.H., & **Clary, R.M.** (2008, March). *Teach with the 10 best children's bio/geoscience picture books!* Research paper presented at the 2008 National Science Teachers Association National Conference, Boston, MA.
- Wandersee, J.H., & **Clary, R.M.** (2007, November). *One thousand fresh examples for teaching about flowering plants*. Research paper presented at the 2007 National Association of Biology Teachers National Conference, Atlanta, GA.
- Wandersee, J.H., & **Clary, R.M.** (2007, November). *Nothing tops seeing stromatolites in the field: Biology meets geology*. Research paper presented at the 2007 National Association of Biology Teachers National Conference, Atlanta, GA.
- Clary, R.M.**, & Wandersee, J.H. (2007, October). *Incorporating the great dinosaur feud in geoscience classrooms: A research study*. Research paper presented at the 2007 Geological Society of America Annual Meeting, Denver, CO.
- Clary, R.M.**, & Wandersee, J.H. (2007, October). *Use of informal education sites to facilitate paleoenvironmental integration in a nationwide online paleontology course*. Research paper presented at the 2007 Geological Society of America Annual Meeting, Denver, CO.
- Wandersee, J.H., & **Clary, R.M.** (2007, October). *Teaching legitimate scientific controversies to improve geoscience learning: Relevant research findings*. Research paper presented at the 2007 Geological Society of America Annual Meeting, Denver, CO.
- Wandersee, J.H., & **Clary, R.M.** (2007, July). *Research on the teaching and learning benefits of the Leonardo online discussion board strategy*. Research paper presented at the Joint Congress on Plant Biology and Botany, Chicago, IL.
- Wandersee, J.H., & **Clary, R.M.** (2007, July). *Research on improving instructional saliency of lessons on flowering plants*. Research paper presented at the Joint Congress on Plant Biology and Botany, Chicago, IL.
- Wandersee, J.H., & **Clary, R.M.** (2007, March). *Use our LEONARDO online discussion board strategy to build community and assess your students' science learning*. Research paper presented at the 2007 National Science Teachers Association National Conference, St. Louis, MO.
- Clary, R.M.**, & Wandersee, J.H. (2007, March). *Try Sense of Place writing templates: Assess students' prior geological/botanical knowledge and your own instructional impact*. Research paper presented at the 2007 National Science Teachers Association National Conference, St. Louis, MO.
- Clary, R.M.**, & Wandersee, J.H. (2006, October). *Earth Science teachers' perceptions of an autonomous fieldwork assignment in a nationwide online paleontology class*. Research paper presented at the 2006 Geological Society of America Annual Meeting and Exposition, Philadelphia, PA.
- Clary, R.M.**, & Wandersee, J.H. (2006, October). *The Wissahickon controversy: Florence Bascom's educational triumph*. Research paper presented at the 2006 Geological Society of America Annual Meeting and Exposition, Philadelphia, PA.

- Clary, R.M.**, & Wandersee, J.H. (2006, October). *Petrified wood: It's not just for geology anymore!* Research paper presented at the 2006 National Association of Biology Teachers National Conference, Albuquerque, NM.
- Wandersee, J.H., & **Clary, R.M.** (2006, October). *How can a 2,300-year-old geology book initiate conceptual change? An exploratory nationwide study of earth science teachers' ideas for using excerpts of Theophrastus' treatise On Stones.* Research paper presented at the 2006 Geological Society of America Annual Meeting and Exposition, Philadelphia, PA.
- Wandersee, J.H., & **Clary, R.M.** (2006, October). *A comparative study of geobiological opportunities to learn at the seven new US public fossil parks.* Research paper presented at the 2006 Geological Society of America Annual Meeting and Exposition, Philadelphia, PA.
- Wandersee, J.H., & **Clary, R.M.** (2006, October). *How to make a school nature trail.* Research paper presented at the 2006 National Association of Biology Teachers National Conference, Albuquerque, NM.
- Wandersee, J.H., & **Clary, R.M.** (2006, August). *A content-analytic study of the plant science audiotour at the university botanical garden in Florence, Italy.* Research paper presented at the 2006 Botanical Society of America Annual Meeting, Chico, CA.
- Wandersee, J.H., & **Clary, R.M.** (2006, August). *Theophrastus: An exploratory qualitative study of college science students' initial encounters with his words and ideas.* Research paper presented at the 2006 Botanical Society of America Annual Meeting, Chico, CA.
- Clary, R.M.**, & Wandersee, J.H. (2006, April). *Extreme makeover: Personalize large classes with technology.* Research paper presented at the 54th National Conference on Science Education of the National Science Teachers Association, Anaheim, CA.
- Wandersee, J.H., & **Clary, R.M.** (2005, December). *Case studies of two American towns that have recently developed geotourism venues: A comparison of steps taken in geoscience education program development.* Research paper presented at the 2005 American Geophysical Union Fall Meeting, San Francisco, CA.
- Clary, R.M.**, & Wandersee, J.H. (2005, October). *The evolution of illustration practices in geology texts during the Golden Age of geology (1788-1840).* Research paper presented at the 2005 Geological Society of America Annual Meeting, Salt Lake City, UT.
- Wandersee, J.H., & **Clary, R.M.** (2005, October). *Nicolaus Steno, visionary anatomies, and the metaphors of nature's knife and the earth as an anatomical theater.* Research paper presented at the 2005 Geological Society of America Annual Meeting, Salt Lake City, UT.
- Wandersee, J.H., & **Clary, R.M.** (2005, August). *A study of the new 'Climbers and Creepers' interactive botanical play zone for children at the Royal Botanic Gardens – Kew.* Research paper presented at the 2005 Botanical Society of America Annual Meeting, Austin, TX.
- Wandersee, J.H., & **Clary, R.M.** (2005, August). *A study of geobotanical learning opportunities at two US petrified forests.* Research paper presented at the 2005 Botanical Society of America National Meeting, Austin, TX.

- Wandersee, J.H., & **Clary, R.M.** (2005, August). *A study of geobotanical learning opportunities at two US petrified forests*. Research paper presented at the 2005 Botanical Society of America Annual Meeting, Austin, TX
- Clary, R.M.**, & Wandersee, J.H. (2005, March). *Technology in the classroom: To infinity and beyond!* Research paper presented at the 2005 National Science Teachers Association National Conference, Dallas, TX.
- Clary, R.M.**, & Wandersee, J.H. (2004, December). *A study of informal geobiology learning opportunities in three US fossil parks*. Research paper presented at the 2004 American Geophysical Union Fall Meeting, San Francisco, CA.
- Clary, R.M.**, & Wandersee, J.H. (2004, November). *The graphic innovations of geologist Henry T. De la Beche*. Research paper presented at the 2004 Geological Society of America Annual Meeting, Denver, CO.
- Wandersee, J.H., & **Clary, R.M.** (2004, November). *Visualizing aquascapes: From ichthyosaurs to Nemo*. Research paper presented at the 2004 National Association of Biology Teachers National Convention, Chicago, IL.
- Wandersee, J.H., & **Clary, R.M.** (2004, November). *Is William F. Buckland the first geobiologist?* Research paper presented at the 2004 Geological Society of America Annual Meeting, Denver, CO.
- Wandersee, J.H., & **Clary, R.M.** (2004, August). *College students' alternative conceptions about petrified wood: Implications for the integration of geological and botanical knowledge*. Research paper presented at the 2004 Botanical Society of America Annual Meeting, Snowbird, UT.
- Wandersee, J.H., & **Clary, R.M.** (2004, August). *A research-based model for developing an interpretive trail signage system about plants*. Research paper presented at the 2004 Botanical Society of America Annual Meeting, Snowbird, UT.
- Wandersee, J.H., & **Clary, R.M.** (2004, August). *Research-based characterization of a new genre of children's plant science picture books*. Research paper presented at the 2004 Botanical Society of America Annual Meeting, Snowbird, UT.
- Clary, R.M.**, & Wandersee, J.H. (2004, April). *Geology meets biology! How to use and construct scientific caricatures*. Research paper presented at the 2004 National Science Teachers Association National Convention, Atlanta, GA.
- Wandersee, J.H., & **Clary, R.M.** (2003, December). *College students' alternative conceptions about petrified wood: Implications for the integration of geological and biological knowledge*. Research paper presented at the 2003 American Geophysical Union Fall Meeting, San Francisco, CA.
- Clary, R.M.**, & Wandersee, J. H. (2003, October). *Learn how to use scientific caricatures (a lost art!) to teach biology*. Research paper presented at the 2003 National Association of Biology Teachers National Meeting, Portland, OR.
- Clary, R.M.**, & Wandersee, J.H. (2003, March). *Can scientific caricatures stimulate and enhance geoscience learning? Lessons from the history of geology*. Research paper presented at the 2003 National Association for Research in Science Teaching National Meeting, Philadelphia, PA.
- Clary, R. M.**, & Wandersee, J. H. (2002, November). *Introduce them to Mary Anning: She's more than "seller of sea shells at the seashore."* Research paper presented at the 2002 National Association of Biology Teachers National Meeting, Cincinnati, OH.

Regional, State, and Local Level

- Clary, R.M.** (2015, October). Florence Bascom: First professional US woman geologist with lasting impact! Research presentation at the Geosciences Brown Bag meeting, Mississippi State, MS. (*invited*)
- Clary, R.M.** (2015, May). *Fossils and geology of Mississippi: What time is it?* Presentation at the Columbus Kiwanis Club, Columbus, MS. (*invited*)
- Moe-Hoffman, A., Brown, R., **Clary R.M.**, & Neuenfeldt, L. (2015 April). *Museums, galleries, and collections: How to utilize these treasures of MSU*. Presentation at the Center for Teaching & Learning Brown Bag, Mississippi State, MS. (*invited*)
- Epstein, A., with Keith, J. (moderator), **Clary, R.M.** (panelist). (2015, March). *The Moral Case for Fossil Fuels*. Panel discussion for the The MSU Bagley College of Engineering Distinguished Lecture Series, Mississippi State, MS. (*invited*)
- Clary, R.M.**, & Wandersee, J. (2015, February). *Optimization of online discussion forums for students' climate literacy..* Research presentation at the Mississippi Academy of Sciences Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M.**, Sumrall, J., & Wandersee, J. (2015, February). *Sense of Place writing templates: Integration of formative science assessments, student experiences, and Common Core English Language Arts standards*. Research presentation at the Mississippi Academy of Sciences Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M.**, Tucker, D., Dunne, J., & Wax, C. (2015, February). *Teachers' perceived benefits and barriers to hands-on performance tasks in the science classroom*. Research presentation at the Mississippi Academy of Sciences Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M.**, & Allen, P. (2015, January) *Engaging students through writing: Lessons from the Maroon Institute for Writing Excellence*. Presentation at the Center for Teaching & Learning Brown Bag, Mississippi State, MS. (*invited*)
- Clary, R.M.** (2014, October). *A history of climate change*. Research presentation at the Geosciences Brown Bag meeting, Mississippi State, MS. (*invited*)
- Clary, R.M.**, Walker, R., Remo, J.P., & Wandersee, J.H. (2014, March). *Perceptions of art and graphic representation in college science classrooms*. Research presentation at the Mississippi Academy of Sciences Annual Conference, Hattiesburg, MS. (*refereed*)
- Wandersee, J.H., & **Clary, R.M.** (2014, March). *College students' perceptions of the relative importance of eight of the Earth's key natural resource categories*. Research presentation at the Mississippi Academy of Sciences Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M.**, & Wandersee, J.H. (2014, March). *Arguing science: Using legitimate scientific controversies to engage students in discourse and the nature of science*. Research presentation at the Mississippi Academy of Sciences Annual Conference, Hattiesburg, MS. (*refereed*)
- McCormick, S., Walker, R., **Clary, R.**, & McKissick, B. (2014, March). *An alignment of the Next Generation Science Standards to a historically significant curriculum*. Research presentation at the Mississippi Academy of Sciences Annual Conference, Hattiesburg, MS. (*refereed*)

- Muller, R., with Cooke, W (moderator), **Clary, R.M.** (panelist). (2013, November). *Global warming – Is it real? What if anything can we do?* Panel discussion for the Maroon Edition, Mississippi State, MS. (*invited*)
- Clary, R.M.**, Dunne, J., Beard, D., and Saebo, S. (2013, October) *TANS Share-a-Thon: Favorite classroom activities for chemistry, geosciences, and physics from the TEACHER ACADEMY IN THE NATURAL SCIENCES (TANS)*. Presentation at the Mississippi Science Teachers Association Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M.** (2013, September). *A Coprolitic Vision for the geosciences*. Research presented at the Geosciences Brown Bag meeting, Mississippi State, MS. (*invited*)
- Clary, R.M.**, & Wandersee, J.H. (2013, February). *Krakatoa erupts! Using curiosity starter readings and sensory priming activities to initiate student-led inquiry*. Research presented at the Mississippi Academy of Sciences 2013 Annual Conference, Hattiesburg, MS. (*refereed*)
- Wandersee, J.H., & **Clary, R.M.** (2013, February). *A content analysis of Sir David Attenborough's botany teaching strategy*. Research presented at the Mississippi Academy of Sciences 2013 Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M.**, Dunne, J., Beard, D., Elder, A., Saebo, S., Tucker, D., Wax, C. & Winter, J. (2013, February). *Teacher Academy in the Natural Sciences (TANS): Successful teacher professional development in chemistry, geosciences, and physics*. Research presented at the Mississippi Academy of Sciences 2013 Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M.** (2013, January). *Both ends of the Earth: Adventure, controversy, and discovery in the Polar Heroic Age*. Research presented at the Geosciences Tea Time meeting, Mississippi State, MS. (*invited*)
- Clary, R.M.**, & Wandersee, J.H. (2012, October). *Creative natural selection for your science classroom*. Research paper presented at the Mississippi Science Teachers Association Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M.**, Dunne, J., Saebo, S., Beard, D. (2012, October). *TANS Chemistry share-a-thon: Effective activities to incorporate chemistry into your middle school science classroom*. Presentation at the Mississippi Science Teachers Association Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M.**, Dunne, J., Wax, C. (2012, October). *TANS Geosciences share-a-thon: Effective activities to incorporate Earth science into your middle school science classroom* Presentation at the Mississippi Science Teachers Association Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M.**, Dunne, J., Winter, J. (2012, October). *TANS Physics share-a-thon: Effective activities to incorporate physics into your middle school science classroom*. Presentation at the Mississippi Science Teachers Association Annual Conference, Jackson, MS. (*refereed*)
- Hoffman, D., **Clary, R.**, Copeland, T., Harvey, B., Hersey, M., Miller, P., Spain, & A. Witt, J. (2002, October). *Environment, Art, and Culture*. Faculty Panel presentation for the Maroon Edition, Mississippi State, MS. (*invited*)

- Clary, R.M.,** Rezek, J., Briley, C., Hoffman, D., Shoup, B., & Williamson, C. (2012, September). *Money changes everything? Dimensions of poverty in the contemporary world*. Faculty Panel presentation for the Maroon Edition, Mississippi State, MS. (*invited*)
- Clary, R.M.,** Wandersee, Johnson, M., & Hamil, B. (2012, February). *Integrating plants in the science classroom through our human-flower connection*. Research paper presented at the Mississippi Academy of Sciences 2012 Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M.,** Wandersee, J.H., Kelly, J., & Hamil, B. (2012, February). “Green” water bottles: *Creative solutions for our planet*. Research paper presented at the Mississippi Academy of Sciences 2012 Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M. ,** & Wandersee, J.H. (2012, February). *Petrified wood in Mississippi’s K-12 science classrooms: An effective portal for misconception identification and interdisciplinary science study*. Research paper presented at the Mississippi Academy of Sciences 2012 Annual Conference, Hattiesburg, MS. (*refereed*)
- Wandersee, J.H., & **Clary, R.M.** (2012, February). *Design and testing of the Leonardo online discussion board strategy for college science teaching*. Research paper presented at the Mississippi Academy of Sciences 2012 Annual Conference, Hattiesburg, MS. (*refereed*)
- Brzuszek, R., & **Clary, R.M.** (2012, February). *Got an app for that? Using Smart Phones for learning on the trail*. Research paper presented at the National Association for Interpretation Region 3 Workshop, Nashville, TN (*refereed*)
- Clary, R.M.,** Tucker, D., & Dunne, J. (2012, February). *Teacher Academy in the Natural Sciences: Professional development for Mississippi’s middle school science teachers in geosciences, chemistry, and physics*. Presentation for the Mathematics and Science Partnerships Program Regional Conference, New Orleans, LA. (*invited*)
- Clary, R.M.,** & Brzuszek, R.F. (2011, October.) *Welly’s roots run deep: Geological and geographical influences upon the Old South*. Presentation for the Maroon Edition, Mississippi State, MS. (*invited*)
- Clary, R.M.,** & Wandersee, J.H. (2011, October). *Rock on! Using gravel in your science classroom to address weathering, erosion, geologic time, fossils, and MORE!* Research paper presented at the Mississippi Science Teachers Association 2011 Annual Conference, Jackson, MS. (*refereed*)
- Guyton, J., **Clary, R.M.,** & Blackwell, H. (2011, October). *Weather forecasting and models for the outdoor classroom*. Presentation at the Mississippi Science Teachers Association 2011 Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M.,** Dunne, J., Saebo, S., & Beard, D. (2011, October). *Effective chemistry activities for the middle school science classroom: The Teacher Academy in the Natural Sciences (TANS) Chemistry Share-a-thon*. Presentation at the Mississippi Science Teachers Association 2011 Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M.,** Dunne, J., & Wax, C. (2011, October). *Effective geosciences instruction in the middle school science classroom: The Teacher Academy in the Natural Sciences (TANS) Geosciences Share-a-thon*. Presentation at the Mississippi Science Teachers Association 2011 Annual Conference, Jackson, MS. (*refereed*)

- Clary, R.M., Dunne, J., & Winter, J.** (2011, October). *Effective physics instruction in the middle school science classroom: The Teacher Academy in the Natural Sciences (TANS) Physics Share-a-thon*. Presentation at the Mississippi Science Teachers Association 2011 Annual Conference, Jackson, MS. (*refereed*)
- Wandersee, J.H., & **Clary, R.M.** (2011, October). *Infuse your science course with green learning!* Research paper presented at the Mississippi Science Teachers Association 2011 Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M., Kelly, J. Hamil, B., and Moe Hoffman, A.** (2011, February). *Capitalizing on informal science education opportunities: National Fossil Day and the Geology of Mississippi*. Research paper presented at the Mississippi Academy of Sciences annual conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M., & Wandersee, J.H.** (2011, February) *Can online discussion boards facilitate students' climate change literacy and the understanding of the nature of science?* Research paper presented at the Mississippi Academy of Sciences annual conference, Hattiesburg, MS (*refereed*)
- Wandersee, J.H., & **Clary, R.M.** (2011, February). "Encouraging a clever pupil" *How Linnaeus integrated teaching and research*. Research paper presented at the Mississippi Academy of Sciences annual conference, Hattiesburg, MS. (*refereed*)
- Hamil, B.W., **Clary, R.M., & Weir, J.** (2011, January). *Teachers for a Competitive Tomorrow*. United States Department of Education TCT Project Director's Summit, Washington, D.C. (*invited*)
- Clary, R.M., Brzuszek, R.F., & Wandersee, J.H.** (2010, November). *The future of K-12 water education: The 2010 Mississippi framework and the proposed National Research Council framework for science education*. 2009 Mississippi Water Resources Conference, Bay St. Louis, MS. (*refereed*)
- Clary, R.M., Dunne, J., Saebo, S., & Beard, D.** (2010 October). *Teacher Academy in the Natural Sciences (TANS): Chemistry Share-a-thon for middle school science teachers*. Presentation at the Mississippi Science Teachers Association 2010 Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M., Dunne, J., & Wax, C.** (2010 October). *Teacher Academy in the Natural Sciences (TANS): Geosciences Share-a-thon for middle school science teachers*. Presentation at the Mississippi Science Teachers Association 2010 Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M., Dunne, J., & Winter, J.** (2010 October). *Teacher Academy in the Natural Sciences (TANS): Physics Share-a-thon for middle school science teachers*. Presentation at the Mississippi Science Teachers Association 2010 Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M., & Wandersee, J.H.** (2010 October). *It's all about scale: How to convey geologic time and Mississippi's geologic history in your science classroom*. Research paper presented at the Mississippi Science Teachers Association 2010 Annual Conference, Jackson, MS. (*refereed*)
- Hamil, B., Beard, D., Chevalier, D., **Clary, R., Dunne, J., & Saebo, S.** (2010, October). *Creative future science teachers*. Research paper presented at the Mississippi Science Teachers Association 2010 Annual Conference, Jackson, MS. (*refereed*)

- Wandersee, J.H., & **Clary, R.M.** (2010 October). *Teach your students two new science strategies*. Research paper presented at the Mississippi Science Teachers Association 2010 Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M.**, & Grimes, C. (2010, August). *Three Cups of Tea: Building a School in a Land of Extremes: The Geology of Pakistan*. Presentation for the Maroon Edition, Mississippi State, MS. (*invited*)
- Clary, R.M.**, & Wandersee, J.H. (2010, February). *History of geology and unique trace fossils: "A Coprolitic Vision" for science education*. Research paper presented at the Mississippi Academy of Sciences 2010 Annual Conference, Hattiesburg, MS. (*refereed*)
- Wandersee, J.H., & **Clary, R.M.** (2010, February). *A text content analysis of the new Earth Science Literacy Principles: Implications for geoscience instruction*. Research paper presented at the Mississippi Academy of Sciences 2010 Annual Conference, Hattiesburg, MS. (*refereed*)
- Clary, R.M.**, & Guyton, J. (2009, November). *CSI fossils part II: What time is it in Mississippi?* Workshop presented at Noxubee National Wildlife Refuge, MS. (*invited*)
- Clary, R.M.**, & Wandersee, J.H. (2009, October). *Bone Wars: Investigate the nature of science through the greatest science soap opera of all times!* Research paper presented at the Mississippi Science Teachers Association 2009 Annual Conference, Jackson, MS. (*refereed*)
- Hamil, B., Beard, D., Chevalier, D., **Clary, R.**, Dunne, J., & Saebo, S. (2009, October). *Creative science teachers*. Research paper presented at the Mississippi Science Teachers Association 2009 Annual Conference, Jackson, MS. (*refereed*)
- Wandersee, J.H., & **Clary, R.M.** (2009, October). *Hook them with fishbone diagramming!* Research paper presented at the Mississippi Science Teachers Association 2009 Annual Conference, Jackson, MS. (*refereed*)
- Clary, R.M.**, & Brzuszek, R.F. (2009, August). *Gulf Coast watersheds and water education: Outreach alignments and best practices*. 2009 Mississippi Water Resources Conference, Tunica, MS. (*refereed*)
- Clary, R.M.**, & Wandersee, J.H. (2009, February). *Scientific caricatures: Incorporation of visualization tools from the Golden Age of Geology (1788-1840) in modern science classrooms*. Research paper presented at the Mississippi Academy of Sciences 2009 Annual Conference, Olive Branch, MS. (*refereed*)
- Wandersee, J.H., & **Clary, R.M.** (2009, February). *Investigating the Polymath™ System of textbook annotation*. Research paper presented at the Mississippi Academy of Sciences 2009 Annual Conference, Olive Branch, MS. (*refereed*)
- Clary, R.M.**, & Wandersee, J.H. (2008, October). *Use Mississippi Marquee Fossils to integrate geology, biology, and environmental science*. Research paper presented at the Mississippi Science Teachers Association 2008 Annual Conference, Jackson, MS. (*refereed*)
- Guyton, J. & **Clary, R.M.** (2008 October). *Fun with rocks*. Workshop and demonstration presented at the Mississippi Science Teachers Association 2008 Annual Conference, Jackson, MS. (*refereed*)

- Wandersee, J.H., & **Clary, R.M.** (2008, October). *1,000 new examples to teach about flowering plants*. Research paper presented at the Mississippi Science Teachers Association 2008 Annual Conference, Jackson, MS. (**refereed**)
- Clary, R.M.**, & Guyton, J. (2008, September). *CSI Fossils*. Workshop presented at Noxubee National Wildlife Refuge, MS. (**invited**)
- Guyton, J., & **Clary, R.M.** (2008, August). *Fun with rocks and minerals*. Workshop presented at Noxubee National Wildlife Refuge, MS. (**invited**)
- Clary, R.M.** (2008, May). *Geology rocks! An introduction to geology in Mississippi*. Mississippi Master Naturalist program, Mississippi State University Coastal Research Center, Biloxi, MS. (**invited**)
- Buell, N.R., Schmitz, D., **Clary, R.M.**, & Dewey, C. (2008, April). *A look at regular grade gasoline reacted with hydrogen peroxide in a laboratory setting—what's left after the BTEX is gone*. 57th Annual Meeting Southeastern Section Geological Society of America, Charlotte, NC (**refereed**)
- Clary, R.M.**, Boss, S., & Wandersee, J. (2008, April). *Teacher perceptions of an introduction to virtual field exercises in an online geology classroom*. 57th Annual Meeting Southeastern Section Geological Society of America, Charlotte, NC. (**refereed**)
- Clary, R.M.**, & Wandersee, J.H. (2007, October). *Use writing templates to determine your students' science sense of place*. Mississippi Science Teachers Association 2007 Annual Conference, Jackson, MS. (**refereed**)
- Clary, R.M.**, & Wandersee, J.H. (2007, February). *A critical evaluation of public opportunity to learn geobiology at the Mississippi Petrified Forest in Flora, MS*. Research paper presented at the 2007 annual meeting of the Mississippi Academy of Sciences, Mississippi State, MS. (**refereed**)
- Clary, R.M.**, & Wandersee, J.H. (2006, October). *The Pet Rock Project™: Make Earth science informative AND fun!* Research paper presented at the 2006 Louisiana Association of Teachers of Mathematics and Louisiana Science Teachers Association Conference, Shreveport, LA. (**refereed**)
- Wandersee, J.H., & **Clary, R.M.** (2006, October). *Use our writing templates to probe your students' senses*. Research paper presented at the 2006 Louisiana Association of Teachers of Mathematics and Louisiana Science Teachers Association Conference, Shreveport, LA. (**refereed**)
- Wandersee, J.H., & **Clary, R.M.** (2006, February). *How to make a school nature trail*. Research paper presented at the 2006 annual Louisiana Environmental Education Symposium, Baton Rouge, LA (**refereed**)
- Clary, R.M.**, & Wandersee, J.H. (2004, October). *Aquarium view graphics: How to teach and test with them*. Research paper presented at the 2004 state convention of the Louisiana Science Teachers Association, Lafayette, LA. (**refereed**)
- Clary, R.M.**, & Wandersee, J.H. (2004, October). *Visual survey and analysis of botanical garden signage types*. Research paper presented at Missouri Botanical Garden, St. Louis, MO. (**invited**)
- Wandersee, J.H., & **Clary, R.M.** (2004, October). *How to write interpretive science signs for adults and for children*. Research paper presented at Missouri Botanical Garden, St. Louis, MO. (**invited**)

- Wandersee, J.H., & **Clary, R.M.** (2004, January). *Research perspectives of a university arboretum's exemplary interpretive science signage system*. Invited public research paper presented at Missouri Botanical Garden, St. Louis, MO. (*invited*)
- Wandersee, J.H., & **Clary, R.M.** (2004, January). *Public perception and understanding of plants at botanic gardens: Some relevant research findings*. Invited public research paper presented at Missouri Botanical Gardens, St. Louis, MO. (*invited*)
- Clary, R.M.**, & Wandersee, J.H. (2003, December). *Mary Anning: Geology, biology, rhyme, and deep time*; Research paper presented at the 2003 state convention of the Louisiana Science Teachers Association, New Orleans, LA (*refereed*)
- Myers, M. & **Clary, R.M.** (1984, February). *PAC polyols*. Research paper presented at the Louisiana Technology Conference, Baton Rouge, LA (*refereed*)

HONORS AND AWARDS

- Mississippi State University Office of Research and Economic Development George Duke Humphrey Faculty Leadership Program, 2014-2015
- Mississippi State University College of Arts & Sciences Dean's Eminent Scholar, 2014.
- Elected member, International Commission on the History of Geological Sciences (INHIGEO)
- Gold Award (1st prize) Association Media & Publishing EXCEL Award, Magazines: Feature Article (20,001 to 50,000 readership) for *The Science Teacher*, "Kakatoa Erupts!" by Renee Clary & James Wandersee, National Science Teachers Association, 2012
- Outstanding College Science Teacher, Mississippi Science Teachers Association, 2011
- StatePride Faculty Award, Mississippi State University, 2010
- Fellow, Geological Society of London, 2006
- Research Fellow, Geosystems Research Institute, 2009
- Who's Who Among America's Teachers, 2005 (student-nominated)
- Richard G. Neiheisel Phi Beta Kappa Endowed Award, Outstanding Graduate Student, December 1997
- Who's Who among Students in American Universities and Colleges, 1996
- International Leaders in Achievement, 1987
- International Who's Who of Professional and Business Women, 1987
- University of Louisiana at Lafayette Outstanding Graduate, College of Sciences, May 1983

GRANTS AND FELLOWSHIPS

- 2015 PI, GP-IMPACT: Geosciences Streamlined Pipeline and Research for Community Colleges (Geo-SPARCC). Proposal submitted to NSF 15-526, Improving Undergraduate STEM Education: Pathways into Geoscience (IUSE: GEOPATHS), October 2015, \$355,646.00.
- 2015 PI, CSBR: Natural History: Securing, Integrating, Digitizing—Improving Mississippi's Paleontological Collections (IMPACT). Proposal submitted to NSF 15-577 Collections in Support of Biological Research (CSBR), September, 2015, \$499,931.00.
- 2015 Co-PI, A multidisciplinary study on the environmental quality of water bodies in India and the US using geomorphology, hydrology, and remote sensing

- approaches. Proposal submitted to the Sri Venkateswara University/University Grants Commission, Indo-US 21st Century Knowledge Initiative 2015, 1,830,000 rupees
- 2015 PI, Bringing the “field” into Earth Science classrooms: Geological specimens, samples, models, and manuals to facilitate inquiry investigations and active learning. Schillig Special Teaching Projects Program, March 2015, \$2,999.02
- 2014 Co-PI, Place-Based Pedagogy and Scientific Literacy in Middle School Classrooms, Mississippi State University Office of Research and Economic Development Cross College Research Program, \$2000.00.
- 2013 Co-PI, Science Education Games Group Initiative (SEGG). \$2000. Mississippi State University Office of Research and Economic Development Cross College Research Program
- 2013 Co-PI, Using Art and Technology to Facilitate Learning in a Laboratory Setting, Schillig Special Teaching Projects Program, March 2013, \$2,850.00
- 2012 PI, Utilization of Visualization Techniques to Draw Interdisciplinary Departments Together. \$2000. Mississippi State University Office of Research and Economic Development Cross College Research Program.
- 2012 Co-PI, Using a Historically Significant Curriculum to Address Current Challenges in Science Education. \$2000. Mississippi State University Office of Research and Economic Development Cross College Research Program.
- 2011-2013 Co-PI, Hazards TEAMS: Teacher Education & Activities for Minority Students in the Meteorological, Geologic, and Hydrologic Hazards. National Science Foundation ORED Track 1, \$199,787.00
- 2010-2013 Co-PI and Co-Director, Teacher Academy in the Natural Sciences (TANS), \$1,464,189.46. Mississippi Department of Education Mathematics and Science Partnerships.
- 2009 Co-PI, Concept-Mapping as a Knowledge Integration Tool for the DRAGON Summit Partners. \$7426.62 .The Caddo Lake Institute, June 19, 2009.
- 2008-2010 Co-PI, Faculty Art Incentive Project, Sculpture of *Dunnicrinus* for the Dunn-Seiler Museum, February 2009, \$4,400.00
- 2007-2012 PI, Creative Research-Based Science Teachers for a Competitive Tomorrow (Co-PI, 2008-2011). US Department of Education; July 8, 2008; \$1,200,000; Funded 25 September 2008, P381A080011 09010025.
- 2005 Clary, R., & Richter, C. President’s Award: Expansion of audio-visual capabilities in Rougeau 332, STEP classroom, University of Louisiana at Lafayette; \$25,000.
- 2005 Clary, R., & Richter, C. STEP Grant for the purchase of audio-visual equipment for Virtual Field Trips in the classroom, University of Louisiana at Lafayette; \$3,730.
- 2005 Richter, C., & Clary, R. STEP Grant for the purchase and implementation of a GeoWall system, University of Louisiana at Lafayette; \$17,745.
- 2004 Kreamer, J., Richter, C., & Clary, R. (2004). STEP Grant for the implementation of advanced audio-visual equipment in Madison 229 (SMART classroom), University of Louisiana at Lafayette; \$25,000.

- 2004 Clary, R., & Richter, C. Mini-Grant for Instructional Improvement: Enhancing geology instruction: The portable digital camera for microscopy, University of Louisiana at Lafayette; \$400.
- 1997-1998 Board of Regents Fellowship in Geology, January 1996-December 1997; \$24,000

PROFESSIONAL SERVICE

Committees

- Geologically-based World Heritage site evaluator, International Union of Geological Sciences, UNESCO World Heritage Committee (2008 – present)
- Director, Dunn Seiler Museum, Mississippi State University (2008 – present)
- Member, Mississippi State University Campus Tree Advisory Committee (2014 – present)
- Mississippi Representative, National Association of Geosciences Teachers (NAGT) (2014 – present)
- Advisory Board, NSTA Reports!, 2012- present
- Governance Board, Region V Mississippi Science and Engineering Fair
- Committee Member, MSU Maroon Edition Planning Committee (2012 – present)
- Senator, Mississippi State University Robert Holland Faculty Senate (2015 – present)
- Faculty Advisor, Geosciences Club, Mississippi State University (2008 – present)
- Faculty Art Incentive Committee, Mississippi State University, 2010
- History and Philosophy of Geology Division, Geological Society of America: Chair (2013-present), Vice Chair (2011-2012); Second Vice Chair (2010-2011); Committee Chair, Nominating Committee (2008-2010); JTPC Division Representative (2012-2014); Pardee Convener, 2013.
- INHIGEO Organizing Program Committee, 2013-2014
- Councilor, History of Earth Science Society (2014 - present)
- Committee Member, Awards and Endowment Committee, School Science and Mathematics Association (2011 – present)
- Chair (2013-2014) Science Education Division, Mississippi Academy of Sciences
- Board Member, Gaining Ground Sustainability Institute of Mississippi (Committee Member, Finance and Personnel Committee) (2011 – 2014)
- Guest writer, Eco Walk the Talk, Asia environmental website (2010 – present) (<http://www.ecowalkthetalk.com/blog/guest-writers/>)
- Mississippi Representative, National Earth Science Teachers Association (2008 – present)
- Mississippi Representative, Society for College Science Teachers (2013 – present)
- Chair, University of Louisiana at Lafayette, Geology Department Textbook Committee (2004-2005)
- Chair, University of Louisiana at Lafayette, Geology Department, Committee for Investigation of Electronic Response Systems and Instruction (2004-2005)
- Member, University of Louisiana at Lafayette Radiation Safety Committee (2003-2005)

Reviewer

- Association for Science Teacher Education
- Earth Sciences History*
- International Journal of Science Education*
- Journal of Research in Science Teaching*

Journal of Geoscience Education
Science and Education
 National Association for Research in Science Teaching

Memberships

Fellow, Geological Society of London
 Lifetime Member, International Geological Congress
 Lifetime Member, International Congress
 Member, American Association for the Advancement of Science
 Member, American Association of Petroleum Geologists
 Member, American Educational Research Association
 Member, American Geophysical Union
 Member, Association for Science Teacher Education
 Member, Association for Supervision and Curriculum Development
 Member, Association for Women Geoscientists
 Member, Geological Society of America
 Member, History of Earth Sciences Society
 Member, History of Geology Group (Geological Society of London)
 Member, International Commission on the History of Geological Sciences (INHIGEO)
 Member, Kappa Delta Pi
 Member, Louisiana State University 15° Laboratory
 Member, Mississippi Academy of Sciences
 Member, Mississippi Science Teachers Association
 Member, National Association for Interpretation
 Member, National Association of Biology Teachers
 Member, National Association of Geoscience Teachers
 Member, National Association for Research in Science Teaching
 Member, National Earth Science Teachers Association
 Member, National Science Teachers Association
 Member, Phi Kappa Phi
 Member, School Science and Mathematics Association
 Member, Society for College Science Teachers

Dissertation Committees

Dissertation Director, J. L. Sumrall, PhD in Earth and Atmospheric Sciences anticipated May 2015, Mississippi State University.
 Dissertation Committee Member, R.J. Lenz, Ph.D. in Earth and Atmospheric Sciences anticipated December 2014, Mississippi State University.
 Dissertation Committee Member, P. Kambesis, PhD in Earth and Atmospheric Sciences, May 2014, Mississippi State University.

Thesis Committees

Thesis Director, K. Theis, MS in Geosciences anticipated May 2015, Mississippi State University.

- Thesis Director, D. Ramseyer; MS in Geosciences awarded December 2012, Mississippi State University.
- Thesis Director, A. Mulvihill; M.S. in Geology awarded December 2003, University of Louisiana at Lafayette.
- Thesis Committee Member, J. Banks, M.S. in Geosciences awarded May, 2014, Mississippi State University.
- Thesis Committee Member, M. Cooper, M.S. in Geosciences awarded May, 2014, Mississippi State University.
- Thesis Committee Member, K. Byrd, M.S. in Geosciences awarded December 2013, Mississippi State University.
- Thesis Committee Member, J.M. Weremeichik; M.S. in Geosciences awarded May 2013, Mississippi State University.
- Thesis Committee Member, F. M. Welch, M.S. in Education awarded December 2009, Mississippi State University.
- Thesis Committee Member, N.R. Buell, M.S. in Geology awarded May 2008, Mississippi State University.
- Thesis Committee Member, J.C. Whitenell; M.S. in Geology awarded May 2005, University of Louisiana at Lafayette.
- Thesis Committee Member, J. Kester; M.S. in Geology awarded December 2004, University of Louisiana at Lafayette.
- Thesis Committee Member, J.-C. Kerin; M.S. in Geology awarded December 2004; University of Louisiana at Lafayette.
- Thesis Committee Member, D. E. Standridge; M.S. in Geology awarded December 2004, University of Louisiana at Lafayette.

Current Master's Students

Curt Burbach
Glenn Myrick
Claire Rose

Current Doctoral Students

Julia Domenech
Mark Powers

TEACHING

Mississippi State University, 2006 – present

Graduate and Undergraduate Courses; Distance Learning, Video Conferencing, and Traditional Classroom; Department of Geosciences

Northwestern State University, 2005 – 2006

Undergraduate Courses, Department of Chemistry and Physics

University of Louisiana at Lafayette, 2000 - 2005

Undergraduate and Graduate Courses, Department of Geology

South Louisiana Community College, 1999 - 2003

Undergraduate Courses, Geology

Episcopal School of Acadiana, 1984 – 1986
High School Courses, AP chemistry and calculus

CONSULTING

Missouri Botanical Garden

Official Interpretative Science Signage System Consultant, Doris I. Schnuck Children's Garden: A Missouri Adventure (Dr. Peter Raven, Director). 2004-2006.

Barton Arboretum

Appointed Plant Science Trail Designer, Palmetto Trail, Burden Research Center (Dr. C. P. Hegwood, Director). 2004-2009.

Thomson Learning

Electronic Interactive Response System Consultant, JoinIn™ Premium Content for *Changing Earth (4th edition)* by Wicander and Monroe.

JoinIn™ Premium Content for *Physical Geology: Exploring the Earth (6th edition)* by Monroe, Wicander, and Hazlett.

Editor, Instructor's Manual, Wicander and Monroe *Historical Geology (5th edition)*

Editor, selection and scripts for video footage for natural hazards and geology textbooks (in conjunction with ABC News)

Cengage Learning/Brooks-Cole

Editor, selection and scripts for video footage for "Climate Change," ancillary for natural hazards and geology textbooks (in conjunction with ABC News)

Editor, Instructor's Manual and Instructor's Test Bank, Wicander and Monroe *Historical Geology (6th edition)*

Developer, critical thinking questions for natural hazard and Earth science videos (in conjunction with ABC News and the BBC)

Illustration consultant for physical geology textbooks, Monroe and Wicander, authors.

McGraw-Hill

Visualization Symposium Reviewer and Participant for *Exploring Physical Geology* (working title) by Reynolds and others.