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PROFESSIONAL PREPARATION

Ph.D. Environmental Sciences, University of Virginia, Charlottesville, VA, May 1999

M.S. Geology, Arizona State University, Tempe, AZ, December 1987

B.S. Geology, University of Georgia, Athens, GA, May 1985

PROFESSIONAL APPOINTMENTS

1988-Present	Geologist, Center for Earth and Planetary Studies, National Air and Space Museum, Smithsonian Institution, Washington, DC
2008	Visiting Professor, Universidad Nacional Autónoma de México, Instituto de Geografia, Mexico City
2007	Visiting Professor, Université Paris-Sud, Orsay, France
2003-2005	Science Advisor, Under Secretary for Science, Smithsonian Institution, Washington, DC

PUBLICATIONS

Ramirez, R.M. R.A. Craddock, and T. Usui (2020). Climate Simulations of Early Mars with Estimated Precipitation, Runoff, and Erosion Rates, *Journal of Geophysical Research-Planets*, **125**, e2019JE006160.

Horvath, D.G., P. Moitra, C.W. Hamilton, R.A. Craddock, and J.C. Andrews-Hanna (2020). Geologically recent explosive volcanism in Elysium Planitia, Mars, *Geophysical Research Letters*, in press.

Morgan, A.M, and R.A. Craddock (2019). Assessing the accuracy of paleodischarge estimates for rivers on Mars, *Geophysical Research Letters*, **46**, 11738-11746.

Quantin-Nataf, C., R.A. Craddock, F. Dubuffet, L. Lozac'h, M. Martinot (2019). Decline of crater obliteration rates during early Martian history, *Icarus*, **317**, 427-433

Craddock, R.A., L. Bandeira, and A.D. Howard (2018). An assessment of regional variations in martian modified impact crater morphology, *Journal of Geophysical Research-Planets*, **123**(3), 763-779.

Ramirez, R.M., and R.A. Craddock (2018). The geological and climatological case for a warmer and wetter early Mars, *Nature Geoscience*, *Nature Geoscience*, **11**, 230-237.

Craddock, R.A. and R.D. Lorenz (2017). The changing nature of rainfall during the early history of Mars, *Icarus*, **293**, 172-179.

Morgan, A.M. and R.A. Craddock (2017). Depositional processes of alluvial fans along the Hilina Pali fault scarp, Island of Hawai'i, *Geomorphology*, **296**, 104-112.

Craddock, R.A. and R.D. Lorenz (2017). The changing nature of rainfall during the early history of Mars, *Icarus*, **293**, 172-179.

Craddock, R. A., S. Tooth, J. R. Zimbelman, S. A. Wilson, T. A. Maxwell, and C. Kling (2015). Temporal observations of a linear sand dune in the Simpson Desert, central Australia: Testing models for dune formation on planetary surfaces, *Journal of Geophysical Research-Planets,* **120**, 1736–1750.

Craddock, R.A., A. Howard, R.P. Irwin III, S. Tooth, R.M. Williams, and P.-S. Chu (2012). Drainage network development in the Keanakāko'i Tephra, Kīlauea Volcano, Hawai'i: Implications for fluvial erosion and valley network formation on early Mars, *Journal of Geophysical Research-Planets*, **117**, E08009, doi: 0.1029/2012JE004074.

Craddock, R.A. (2012). Aeolian Processes on the Terrestrial Planets: Recent Observations and Future Focus, *Progress in Physical Geography,* **36**(1), 110-124.

Craddock, R.A., Are Phobos and Deimos the Result of a Giant Impact? (2011). *Icarus*, **211**(2), 1150-1161.

Irwin, R.P., III, R.A. Craddock, A.D. Howard, and H.L. Flemming (2011). Topographic influences on development of Martian valley networks, *Journal of Geophysical Research-Planets*, 116, E02005, doi:10.1029/2010JE003620.

Craddock, R.A., M. Hutchison, and J.A. Stein (2010). Topographic Data Reveal a Buried Fluvial Landscape in the Simpson Desert, Australia, *Australian Journal of Earth Sciences*, **57**(1), 141-149.

Craddock, R.A. and R. Greeley (2009). Minimum Estimates of the Amount and Timing of Gases Released into the Martian Atmosphere from Volcanic Eruptions, *Icarus*, **204**(2), 512-526, doi: 10.1016/j.icarus.2009.07.026.

Other publications and awards

Craddock, R.A. (2004). *The Apollo 11 Collection*, Chronicle Books, San Francisco, CA, October 2003. *Winner of the American Association of Museums Award, Best Educational Resource.*

Craddock, R.A., and A.D. Howard (2002). The case for rainfall on a warm, wet early Mars, *Jour. Geophys. Res. Planets,* **107**(E11), 21-1-21-36, doi: 10.1029/2001JE001505. *Named as one of the 25 most frequently cited papers over the last 25 years by the Journal of Geophysical Research – Planets.*

University of Georgia, Department of Geology, Distinguished Alumni Award, 2018.

William A. and Valerie Anders Research Endowment, 2019, Smithsonian Institution, Supports analog research on the Moon and Mars and graduate student activities.

SYNERGISTIC ACTIVITIES

1. **Instructor:** Smithsonian/University of Georgia Hawaii Field School, Fall 2013, Summer 2014, Summer 2015.
2. **Organizer:** Workshop on Mars Valley Networks, Kohala, Hawaii (2004), Second Workshop on Mars Valley Networks, Moab, Utah (2008)
3. **Investigator:** *NASA Mars Data Analysis Program, NASA Solar System Workings Program*
4. **Reviewer**: for *EPSL*, *JGR*, *PSS*, *Icarus*, *Geology*, *Science*, *Nature*, NASA, Smithsonian.
5. **Academic Mentorship:**

   PhD: Sylvan Bouley, Université Paris-Sud, (Committee Member, Fall 2009), Alex Morgan, University of Virginia (Pre-Doctoral Advisor, 2014-2017; Post-Doctoral Advisor, 2017-2019), Rachel Rotz, University of Georgia (Committee Member, 2016-2020), David Richardson, University of Georgia (Committee Member, 2019-Present).

   MS: Corbin Kling, University of Georgia (2014—2016), Steffan Becker, University of Georgia (2019-2021).

   University of Georgia Undergraduates: Corbin Kling (Summer 2013), Evan Whallon (Summer 2014), Walker Padgett (Summer 2014), Calvin Conn (Summer 2015), Michael Torcivia (Summer 2015), Elizabeth Benyshek (Summer 2015)

COLLABORATIONS AND OTHER AFFILIATIONS

Collaborators in the last 4 years: Jeff Andrews-Hanna (University of Arizona), Paul Hesse (MacQuarie University), Alan Howard (Planetary Science Institute), Corbin Kling (Planet), Wei Luo (Northern Illinois University), Adam Milewski (University of Georgia), Alex Morgan (Planetary Science Institute), Gerald Nanson (University of Wollongong), Wendy Nelson (Towson State University), Marisa Palucis (Dartmouth College), Tim Ralph (Macquarie University), Ramses Ramirez (University of Central Florida), Rachel Rotz (Florida Gulf Coast University), Yasu Sekine (Tokyo Institute of Technology), Stephen Tooth (Aberystwyth University), Becky Williams (Planetary Science Institute)

Former Advisors: *Masters Advisor*: Ronald Greeley, Arizona State University (deceased)

PhD Advisor: Alan Howard, University of Virginia