Roman A. DiBiase

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Education

2011: Ph.D., Geological Sciences, Arizona State University

2005: B.A., Geophysics, University of California, Berkeley

Appointments

2014 - present: Assistant Professor, Department of Geosciences, Pennsylvania State University

2011-2014: Postdoctoral Scholar in Geology, California Institute of Technology

Honors and awards

2013: Editors' citation for excellence in refereeing for JGR-Earth Surface

2010-2011: Achievement Rewards for College Scientists (ARCS) Fellowship, Arizona State University

2006-2008: Arizona State University Graduate Scholar Fellowship

Publications

[16] **DiBiase, R.A.**, Lamb, M.P., Ganti, V., and Booth, A.M., *in review*. Slope, grain size, and roughness controls on dry sediment transport and storage on steep hillslopes

[15] Whipple, K.X., Forte, A.M., **DiBiase, R.A.**, Gasparini, N.M., and Ouimet, W.B., *in press*. Timescales of landscape response to divide migration and drainage capture: Implications for the role of divide mobility in landscape evolution, Journal of Geophysical Research-Earth Surface doi:10.1002/2016JF003973

[14] Whipple, K.X., **DiBiase, R.A.**, Ouimet, W.B., and Forte, A.M., 2017. Preservation or piracy: Diagnosing low-relief, high-elevation surface formation mechanisms, Geology 45, 91-94 doi:10.1130/G38490.1

[13] Brantley, S.L., **DiBiase, R.A.**, Russo, T., Shi, Y., Lin, H., Davis, K.J., Kaye, M., Hill, L., Kaye, J., Neal, A.L., Eissenstat, D., Hoagland, B., and Dere, A., 2016. Designing a suite of measurements to understand the critical zone, Earth Surface Dynamics 4, 211-235 doi:10.5194/esurf-4-211-2016.

[12] **DiBiase, R.A.**, Whipple, K.X., Lamb, M.P., and Heimsath, A.M., 2015. The role of waterfalls and knickzones in controlling the style and pace of landscape adjustment in the western San Gabriel Mountains, California, Geological Society of America Bulletin 127, 539-559, doi:10.1130/B31113.1.

[11] **DiBiase, R.A.**, 2014. River incision revisited, Nature 505, 294-295, doi:10.1038/505294a

[10] **DiBiase, R.A**., Limaye, A.B., Scheingross, J.S., Fischer, W.W., and Lamb, M.P., 2013. Deltaic deposits at Aeolis Dorsa: Sedimentary evidence for a large body of water in the northern plains of Mars, Journal of Geophysical Research-Planets 118, 1285-1302, doi:10.1002/jgre.20100.

[9] Whipple, K.X., DiBiase, R.A., and Crosby, B.T., 2013. Bedrock Rivers, in Treatise on Geomorphology, Vol. 9, Shroder, J., Jr., Wohl, E. (Eds.). Academic Press: San Diego, CA, doi:10.1016/B978-0-12-374739-6.00254-2.

[8] Lamb, M.P., Levina, M., DiBiase, R.A., and Fuller, B., 2013. Sediment storage by vegetation in steep, bedrock landscapes: Theory, experiments, and implications for post-fire sediment yield, Journal of Geophysical Research-Earth Surface 118, 1147-1160, doi:10.1002/jgrf.20058.

[7] **DiBiase, R.A.**, and Lamb, M.P, 2013. Vegetation and wildfire controls on sediment yield in bedrock landscapes, Geophysical Research Letters 40, 1093-1097, doi:10.1002/grl.50277.

[6] Dixon, J.L., Hartshorn, A.S., Heimsath, A.M., **DiBiase, R.A.**, and Whipple, K.X., 2012. Chemical weathering response to tectonic forcing: A soils perspective from the San Gabriel Mountains, California, Earth and Planetary Science Letters 323, 40-49, doi:10.1016/j.epsl.2012.01.010.

[5] Heimsath, A.M., **DiBiase, R.A.**, and Whipple, K.X, 2012. Soil production limits and the transition to bedrock dominated landscapes, Nature Geoscience 5, 210-214, doi:10.1038/ngeo1380.

[4] **DiBiase, R.A.**, Heimsath, A.M., and Whipple, K.X, 2012. Hillslope response to tectonic forcing in threshold landscapes, Earth Surface Processes and Landforms 37, 855-865, doi:10.1002/esp.3205.

[3] **DiBiase, R.A.** and Whipple, K.X, 2011. The influence of erosion thresholds and runoff variability on the relationships among topography, climate, and erosion rate, Journal of Geophysical Research-Earth Surface 116, F04036, doi:10.1029/2011JF002095.

[2] Norton, K.P., von Blanckenburg, F., DiBiase, R., Schlunegger, F., and Kubik, P.W., 2011. Cosmogenic 10Be-derived denudation rates of the Eastern and Southern European Alps, International Journal of Earth Sciences, doi:10.1007/s00531-010-0626-y.

[1] **DiBiase, R.A.**, Whipple, K.X, Heimsath, A.M., and Ouimet, W.B., 2010. Landscape form and millennial erosion rates in the San Gabriel Mountains, CA, Earth and Planetary Science Letters 289, 134-144, doi:10.1016/j.epsl.2009.10.036.

Courses taught

2017: GEOSC 340 – Geomorphology (3 credits, Spring)

2016: GEOSC 340 – Geomorphology (3 credits, Spring); GEOSC 497C – Making Geologic Maps with ArcGIS (1 credit, Spring); GEOSC 472 – Geology field school (3 credits, Summer); GEOSC 303 – Introduction to Environmental Geology (3 credits, Fall); GEOSC 597 – SfM seminar (1 credit, Fall); GEOSC 548 – Advanced Surface processes (1 credit, Fall)

2015: GEOSC 340 – Geomorphology (3 credits, Spring); GEOSC 303 – Introduction to Environmental Geology (3 credits, Fall); GEOSC 597E – Seminar in Earth surface processes and sedimentary geology (1 credit, Fall)

Professional Service

Publication review: Basin Research, Earth Surface Dynamics, Earth Surface Processes and Landforms, G-Cubed, Geology, Geomorphology, GSA Bulletin, International Journal of Wildland Fire, Journal of Geophysical Research – Earth Surface, Nature, Science

Proposal review: NSF Tectonics, NSF Geomorphology and Landuse Dynamics, NSF Geography and Spatial Sciences, ACS Petroleum Research Fund

Conference sessions convened: “Erosion and sediment transport in steep landscapes” AGU Fall Meeting 2014-2016

2015-present: Steering committee member, National Center for Airborne Laser Mapping (NCALM)

2016: AGU Fall Meeting Outstanding Student Paper Awards (OSPA) Coordinator for Earth and Planetary Surface Processes focus group

Invited Seminars

2016: Tulane University

2015: Northwestern University; MIT COG3 seminar

2014: Rice University; University of Massachusetts, Amherst; Pennsylvania State University; University of California, Berkeley; University of Pittsburgh

2013: Caltech Geology Club; NASA Jet Propulsion Laboratory Mars Forum; University of Southern California Lithospheric Dynamics Seminar

2012: Rice University

Graduate student advising:

PhD: Alexander Neely (2015-present)

MS: Joanmarie Del Vecchio (2015-present)

Undergraduate student advising:

Nicholas McCarroll (2016-present); Tyler White (2016-present); Perri Silverhart (2016 REU); Connor Martin (2016 REU); Michael Sickler (2015-2016); Sarah Granke (2015 REU)