

**ROBERT C. GRAHAM****1. Cumulative Publications**

## PEER-REVIEWED TECHNICAL JOURNAL ARTICLES

1. Graham, R.C., and A.R. Southard.  
1983. Genesis of a Vertisol and an associated Mollisol in northern Utah. *Soil Sci. Soc. Am. J.* 47:552-559.
2. Graham, R.C., K. Johnson, and M.J. Vepraskas.  
1985. A method to estimate soil textural class for students using split-hook prostheses for hands. *J. Agron. Educ.* 14:49-50.
3. McDaniel, P.A., and R.C. Graham.  
1986. Splashboards: A simple field and classroom demonstration of splash erosion. *J. Agron. Educ.* 15:117-118.
4. Helalia, A.M., J. Letey, and R.C. Graham.  
1988. Crust formation and clay migration effects on infiltration rate. *Soil Sci. Soc. Am. J.* 52:251-255.
5. Graham, R.C., B.E. Herbert, and J.O. Ervin.  
1988. Mineralogy and incipient pedogenesis of Entisols in anorthosite terrane of the San Gabriel Mountains, California. *Soil Sci. Soc. Am. J.* 52:738-746.
6. Reid, D.A., R.C. Graham, S.B. Edinger, L.H. Bowen, and J.O. Ervin.  
1988. Celadonite and its transformation to smectite in an Entisol at Red Rock Canyon, Kern County, California. *Clays Clay Min.* 36:425-431.
7. Graham, R.C., S.B. Weed, L.H. Bowen, and S.W. Buol.  
1989. Weathering of iron-bearing minerals in soils and saprolite on the North Carolina Blue Ridge Front: I. Sand-size primary minerals. *Clays Clay Min.* 37:19-28.
8. Graham, R.C., S.B. Weed, L.H. Bowen, D.D. Amarasiriwardena, and S.W. Buol.  
1989. Weathering of iron-bearing minerals in soils and saprolite on the North Carolina Blue Ridge Front: II. Clay mineralogy. *Clays Clay Min.* 37:29-40.
9. Bowen, L.H., E. DeGrave, D.A. Reid, R.C. Graham, and S.B. Edinger.  
1989. Mössbauer study of a California desert celadonite and its pedogenically-related smectite. *Phys. Chem. Minerals* 16:697-703.
10. Alexander, E.B., C. Adamson, P.J. Zinke, and R.C. Graham.  
1989. Soils and conifer productivity on serpentized peridotite of the Trinity ophiolite, California. *Soil Sci.* 148:412-423.
11. Alexander, E.B., C. Adamson, R.C. Graham, and P.J. Zinke.  
1990. Mineralogy and classification of soils on serpentized peridotite of the Trinity ophiolite, California. *Soil Sci.* 149:138-143.

12. Graham, R.C., R.B. Daniels, and S.W. Buol.  
1990. Soil-geomorphic relations on the North Carolina Blue Ridge Front: I. Slope processes and regolith type. *Soil Sci Soc. Am. J.* 54:1362-1367.
13. Graham, R.C., and S.W. Buol.  
1990. Soil-geomorphic relations on the North Carolina Blue Ridge Front: II. Soil characteristics and pedogenesis. *Soil Sci Soc. Am. J.* 54:1367-1377.
14. Taylor, K., R.C. Graham, and J.O. Ervin.  
1990. Laumontite in soils of the San Gabriel Mountains, California. *Soil Sci. Soc. Am. J.* 54:1483-1489.
15. Graham, R.C., M.M. Diallo, and L.J. Lund.  
1990. Soils and mineral weathering on phyllite colluvium and serpentinite in northwestern California. *Soil Sci. Soc. Am. J.* 54:1682-1690.
16. Graham, R.C., and H.B. Wood.  
1991. Morphologic development and clay redistribution in lysimeter soils under chaparral and pine. *Soil Sci. Soc. Am. J.* 55:1638-1646.
17. Graham, R.C., A.L. Ulery, R.H. Neal, and R.R. Teso.  
1992. Herbicide residue distributions in relation to soil morphology in two California Vertisols. *Soil Sci.* 153:115-121.
18. Southard, R.J., and R.C. Graham.  
1992. <sup>137</sup>Cs distribution in a California Pelloxerert: Evidence of pedoturbation. *Soil Sci. Soc. Am. J.* 56:202-207.
19. McDaniel, P.A., and R.C. Graham.  
1992. Organic carbon distributions in shallow soils under pinyon-juniper. *Soil Sci. Soc. Am. J.* 56:499-504.
20. Graham, R.C., and E. Franco-Vizcaino.  
1992. Soils on igneous and metavolcanic rocks in the Sonoran Desert of Baja California, Mexico. *Geoderma* 54:1-21.
21. Levy, D.B., and R.C. Graham.  
1992. Paragonite in soils derived from quartz-mica schist in northern California. *Soil Sci.* 155:123-130.
22. Levy, D.B., and R.C. Graham.  
1993. An integrative landscape-scale exercise for introductory soil science classes. *J. Nat. Resour. Life Sci. Ed.* 22:31-33.
23. Ulery, A.L., and R.C. Graham.  
1993. Forest fire effects on soil color and texture. *Soil Sci. Soc. Am. J.* 57:135-140.
24. Reid, D.A., R.C. Graham, R.J. Southard, and C. Amrhein.  
1993. Slickspot soil genesis in the Carrizo Plain, California. *Soil Sci. Soc. Am. J.* 57:162-168.
25. Jones, D.P., and R.C. Graham.  
1993. Water-holding characteristics of weathered granitic rock in chaparral and forest ecosystems. *Soil Sci. Soc. Am. J.* 57:256-261.

26. Franco-Vizcaíno, E., R.C. Graham, and E.B. Alexander.  
1993. Plant species diversity and chemical properties of soils in the central desert of Baja California, Mexico. *Soil Sci.* 155:406-416.
27. Ulery, A.L., R.C. Graham, and C. Amrhein.  
1993. Wood-ash composition and soil pH following intense burning. *Soil Sci.* 156:358-364.
28. Alexander, E.B., R.C. Graham, and C.L. Ping.  
1994. Cemented ultramafic till beneath a podzol in southeast Alaska. *Soil Sci.* 157:53-58.
29. Amundson, R., E. Franco-Vizcaíno, R.C. Graham, and M. DeNiro.  
1994. The relationship of precipitation seasonality to the flora and stable isotope chemistry of soils in the Vizcaíno Desert, Baja California, Mexico. *J. Arid Environ.* 28:265-279.
30. Laurent, T.E., R.C. Graham, and K.R. Tice.  
1994. Soils of the red fir-barrens mosaic, Siskiyou Mountains crest, California. *Soil Sci. Soc. Am. J.* 58:1747-1752.
31. Johnson-Maynard, J., M.A. Anderson, S. Green, and R.C. Graham.  
1994. Physical and hydraulic properties of weathered granitic rock in southern California. *Soil Sci.* 158:375-380.
32. Ulery, A.L., R.C. Graham, O.A. Chadwick, and H.B. Wood.  
1995. Decade-scale changes of soil carbon, nitrogen, and exchangeable cations under chaparral and pine. *Geoderma* 65:121-134.
33. Moody, L.E., and R.C. Graham.  
1995. Geomorphic and pedogenic evolution in coastal sediments, central California. *Geoderma* 67:181-201.
34. McDaniel, P.A., A.L. Falen, K.R. Tice, R.C. Graham, and S.E. Fendorf.  
1995. Beidellite in E horizons of northern Idaho Spodosols formed in volcanic ash. *Clays Clay Min.* 43:525-532.
35. Graham, R.C., J.O. Ervin, and H.B. Wood.  
1995. Aggregate stability under oak and pine after four decades of soil development. *Soil Sci. Soc. Am. J.* 59:1740-1744.
36. Anderson, M.A., R.C. Graham, G.J. Alyanakian, and D.Z. Martynn.  
1995. Late summer water status of soils and weathered bedrock in a giant sequoia grove. *Soil Sci.* 160:415-422.
37. Weitkamp, W.A., R.C. Graham, M.A. Anderson, and C. Amrhein.  
1996. Pedogenesis of a vernal pool Entisol-Alfisol-Vertisol catena in southern California. *Soil Sci. Soc. Am. J.* 60:316-323.
38. Ulery, A.L., R.C. Graham, and L.H. Bowen.  
1996. Forest fire effects on soil phyllosilicates in California. *Soil Sci. Soc. Am. J.* 60:309-315.
39. Tice, K.R., R.C. Graham, and H.B. Wood.  
1996. Transformations of 2:1 phyllosilicates in 41-year-old soils under oak and pine. *Geoderma* 70:49-62.

40. Reid, D.A., R.C. Graham, L.A. Douglas, and C. Amrhein.  
1996. Soil clay mineralogy and smectite charge characteristics along an arid geomorphic transect. *Soil Sci. Soc. Am. J.* 60:1602-1611.
41. Sternberg, P.D., M.A. Anderson, R.C. Graham, J.L. Beyers, and K.R. Tice.  
1996. Root distribution and seasonal water status in weathered granitic bedrock under chaparral. *Geoderma* 72:89-98.
42. Quideau, S.A., O.A. Chadwick, R.C. Graham, and H.B. Wood.  
1996. Base cation biogeochemistry and weathering under oak and pine: a controlled long-term experiment. *Biogeochemistry* 35:377-398.
43. Mace, J.E., R.C. Graham, and C. Amrhein.  
1997. Anthropogenic lead distribution in rodent-affected and undisturbed soils in southern California. *Soil Sci.* 162:46-50.
44. Graham, R.C., P.J. Schoeneberger, M.A. Anderson, P.D. Sternberg, and K.R. Tice.  
1997. Morphology, porosity, and hydraulic conductivity of weathered granitic bedrock and overlying soils. *Soil Sci. Soc. Am. J.* 61:516-522.
45. Moody, L.E., and R.C. Graham.  
1997. Silica cemented terrace edges, central California coast. *Soil Sci. Soc. Am. J.* 61:1723-1729.
46. Amundson, R.G., R.C. Graham, and E. Franco-Vizcaino.  
1997. Orientation of carbonate laminations in gravelly soils along a winter/summer precipitation gradient in Baja California. *Soil Sci.* 162:940-952.
47. Quideau, S.A., R.C. Graham, O.A. Chadwick and H.B. Wood.  
1998. Carbon sequestration under chaparral and pine after four decades of soil development. *Geoderma* 83:227-242.
48. Lee, B.D., T.N. Williamson, R.C. Graham, and L.J. Lund.  
1998. Forensic soils: An integrative exercise for introductory soil science. *J. Nat. Res. Life Sci. Educ.* 27:110-112.
49. Feng, X., J.C. Peterson, S.A. Quideau, R.A. Virginia, R.C. Graham, L.J. Sonder, and O.A. Chadwick.  
1999. Distribution, accumulation and fluxes of soil carbon in four monoculture lysimeters at San Dimas Experimental Forest, California. *Geochim. Cosmochim.* 63:1319-1333.
50. Quideau, S.A., R.C. Graham, O.A. Chadwick, and H.B. Wood.  
1999. Biogeochemical cycling of calcium and magnesium by ceanothus and chamise. *Soil Sci. Soc. Am. J.* 63:1880-1888.
51. Quideau, S.A., M.A. Anderson, R.C. Graham, O.A. Chadwick, and S.E. Trumbore.  
2000. Soil organic matter processes: Characterization by  $^{13}\text{C}$  NMR and  $^{14}\text{C}$  measurements. *For. Ecol. Mgmt.* 138:19-27.
52. Frazier, C.S., and R.C. Graham.  
2000. Pedogenic transformation of fractured granitic bedrock, southern California. *Soil Sci. Soc. Am. J.* 64:2057-2069.

53. Quideau, S.A., O.A. Chadwick, S.E. Trumbore, J.L. Johnson-Maynard, R.C. Graham, and M.A. Anderson.  
2001. Vegetation control on soil organic matter dynamics. *Organic Geochemistry* 32:247-252.
54. Lee, B.D., R.C. Graham, T.E. Laurent, C. Amrhein, and R.M. Creasy.  
2001. Spatial distributions of soil chemical conditions in a serpentinitic wetland and surrounding landscape. *Soil Sci. Soc. Am. J.* 65:1183-1196.
55. Hubbert, K.R., R.C. Graham, and M.A. Anderson.  
2001. Soil and weathered bedrock: Components of a Jeffrey pine plantation substrate. *Soil Sci. Soc. Am. J.* 65:1255-1262.
56. Quideau, S.A., O.A. Chadwick, A. Benesi, R.C. Graham, and M.A. Anderson.  
2001. A direct link between vegetation type and soil organic matter composition. *Geoderma* 104:41-60.
57. Peterson, A.C., P.F. Hendrix, C. Haydu, and R.C. Graham.  
2001. Single-shrub influence on earthworms and soil macroarthropods in the southern California chaparral. *Pedobiologia* 45:509-522.
58. Hubbert, K.R., J.L. Beyers, and R.C. Graham.  
2001. Roles of weathered bedrock and soil in seasonal water relations of *Pinus jeffreyi* and *Arctostaphylos patula*. *Can. J. Forest Res.* 31:1947-1957.
59. Egerton-Warburton, L.M., R.C. Graham, E.B. Allen, and M.F. Allen.  
2001. Reconstruction of historical changes in mycorrhizal fungal communities under anthropogenic nitrogen deposition. *Proceedings of the Royal Society of London* 268:2479-2484.
60. Lee, B.D., T.N. Williamson, and R.C. Graham.  
2002. Identification of stolen rare palm trees by soil morphological and mineralogical properties. *J. Forensic Sci.* 47:190-194.
61. Anderson, K.C., S.G. Wells, and R.C. Graham.  
2002. Pedogenesis of vesicular horizons, Cima Volcanic Field, Mojave Desert, California. *Soil Sci. Soc. Am. J.* 66:878-887.
62. Frazier, C.S., R.C. Graham, P.J. Shouse, M.V. Yates, and M.A. Anderson.  
2002. A field study of water flow and virus transport in weathered granitic bedrock. *Vadose Zone J.* 1:113-124.
63. Johnson-Maynard, J.L., R.C. Graham, L. Wu, and P.J. Shouse.  
2002. Modification of soil structural and hydraulic properties after 50 years of imposed chaparral and pine vegetation. *Geoderma* 110: 227-240.
64. Wood, Y.A., R.C. Graham, and S.G. Wells.  
2002. Surface mosaic map units: capturing the spatial variability of a desert pavement surface. *J Arid Env.* 52: 305-317.
65. Aochi, Y.O., W.J. Farmer, and R.C. Graham.  
2003. N<sub>2</sub>, CO<sub>2</sub>, and 1,2-dichloroethane as molecular probes of soil microstructure. *Geoderma* 114:369-388.

66. Rose, K.L., R.C. Graham, and D.R. Parker.  
2003. Water source utilization by *Pinus jeffreyi* and *Arctostaphylos patula* on thin soils over bedrock. *Oecologia* 134: 46-54.
67. Hamer, M., R.C. Graham, K.N. Bozhilov, and C. Amrhein.  
2003. Dissolution of ripidolite (Mg, Fe-chlorite) in organic and inorganic acid solutions. *Soil Sci. Soc. Am. J.* 67:654-661.
68. Egerton-Warburton, L.M., R.C. Graham, and K.R. Hubbert.  
2003. Spatial variability in mycorrhizal hyphae and nutrient and water availability in a soil-weathered bedrock profile. *Plant and Soil* 249:331-342.
69. Witty, J.H., R.C. Graham, K.R. Hubbert, J.A. Doolittle, and J.A. Wald.  
2003. Contributions of water supply from the weathered bedrock zone to forest soil quality. *Geoderma* 114:389-400.
70. Lee, B.D., S.K. Sears, R.C. Graham, C. Amrhein, and H. Vali.  
2003. Secondary mineral genesis from chlorite and serpentine in an ultramafic soil toposequence. *Soil Sci. Soc. Am. J.* 67:1309-1317.
71. Quideau, S.A., R.C. Graham, and X. Feng.  
2003. Isotopic fractionations in physical and chemical fractions of A horizons differentiated according to vegetation. *Soil Sci. Soc. Am. J.* 67:1544-1550.
72. Lee, B.D., R.C. Graham, T.E. Laurent, and C. Amrhein.  
2004. Pedogenesis in a wetland meadow and surrounding serpentinitic landslide terrain, northern California, USA. *Geoderma* 118:303-320.
73. Amrhein, C., J.R. Alder, R.C. Graham, and V.K. Housel.  
2004. Can chemical oxidation improve the permeability of sand basins? *Water Environment Research* 76:268-271.
74. Johnson-Maynard, J.L., P.J. Shouse, R.C. Graham, P. Castiglione, and S.A. Quideau.  
2004. Microclimate and pedogenic implications in a 50-year-old chaparral and pine biosequence. *Soil Sci. Soc. Am. J.* 68:876-884.
75. Newman, B.D., B.P. Wilcox, and R.C. Graham.  
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76. Kendrick, K.J., and R.C. Graham.  
2004. Pedogenic silica accumulation in chronosequence soils, southern California. *Soil Sci. Soc. Am. J.* 68:1295-1303.
77. Williamson, T.N., B.D. Newman, R. C. Graham, and P.J. Shouse.  
2004. Regolith water in zero-order chaparral and perennial grass watersheds four decades after vegetation conversion. *Vadose Zone J.* 3:1017-1030.
78. Williamson, T.N., R.C. Graham, and P.J. Shouse.  
2004. Effects of a chaparral to grass conversion on soil physical and hydrologic properties after four decades. *Geoderma* 123:99-114.

79. Wood, Y.A., R.C. Graham, and S.G. Wells.  
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80. Bornyasz, M.A., R.C. Graham, and M.F. Allen.  
2005. Ectomycorrhizae in a soil-weathered granitic bedrock regolith: Linking matrix resources to plants. *Geoderma* 126:141-160.
81. Johnson-Maynard, J.L., R.C. Graham, P.J. Shouse, and S.A. Quideau.  
2005. Base cation and silicon biogeochemistry under pine and scrub oak monocultures: Implications for weathering rates. *Geoderma* 126:353-365.
82. Quideau, S.A, R.C. Graham, S.-W. Oh, P.F. Hendrix, and R.E. Waylisen.  
2005. Leaf litter decomposition in a chaparral ecosystem, southern California. *Soil Biol. Biochem.* 37:1988-1998.
83. Goforth, B.R., R.C. Graham, K.R. Hubbert, C.W. Zanner, and R.A. Minnich.  
2005. Spatial distribution and properties of ash and thermally altered soils after high-severity forest fire, southern California. *Int. J. Wildland Fire* 14:343-354.
84. Berkowitz, J., M.A. Anderson, and R.C. Graham.  
2005. Laboratory investigation of aluminum solubility and solid-phase properties following alum treatment of lake waters. *Water Research* 39:3918-3928.
85. Hubbert, K.R., H.K. Preisler, P.M. Wohlgemuth, R.C. Graham, and M.G. Narog.  
2006. Prescribed burning effects on soil physical properties and soil water repellency in a steep chaparral watershed, southern California, USA. *Geoderma* 130:284-298.
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2006. Assessment of aboriginal smallholder soils for rubber growth in Peninsular Malaysia. *Soil Sci.* 170:1034-1049.
87. Enloe, H.A., R.C. Graham, and S.C. Sillett.  
2006. Arboreal Histosols in old-growth redwood forest canopies, northern California. *Soil Sci. Soc. Am.* 70:408-418.
88. Breiner, J.M., M.A. Anderson, H.W.K. Tom, and R.C. Graham.  
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89. Williamson, T.N., P. Gessler, and R.C. Graham.  
2006. Links between pedogenesis and watershed terrain after chaparral to grass conversion. *Soil Sci. Soc. Am. J.* 70:2065-2074.
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91. Graham, R.C., D.R. Hirmas, Y.A. Wood, and C. Amrhein.  
2008. Large near-surface nitrate pools in soils capped by desert pavement in the Mojave Desert, California. *Geology* 36:259-262.
92. Newman, B.D., and R.C. Graham.  
2008. Species-level impacts on chaparral root zone hydrology. *Vadose Zone J.* 7:1110-1118.
93. Turk, J.K., B.R. Goforth, R.C. Graham, and K.J. Kendrick.  
2008. Soil morphology of a debris flow chronosequence in a coniferous forest, southern California, USA. *Geoderma* 146:157-165.
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2008. Bulk density determination by automated three-dimensional laser scanning. *Soil Sci. Soc. Am. J.* 72:1591-1593.
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96. Furquim, S.A.C., R.C. Graham, L. Barbiero, J.P. Queiroz Neto, and V. Valles.  
2008. Mineralogy and genesis of smectites in an alkaline-saline environment of Pantanal Wetland, Brazil. *Clays Clay Min.* 56:579-595.
97. Barbiero, L., A Rezende Filho, S.A.C. Furquim, S. Furian, A.Y. Sakamoto, V. Valles, R.C. Graham, M. Fort, R.P.D. Ferreira, and J.P. Queiroz Neto.  
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2010. Soil mineral genesis and distribution in a saline lake landscape of the Pantanal Wetland, Brazil. *Geoderma* 154:518-528.
100. Graham, R.C., and A.T. O'Geen.  
2010. Soil mineralogy trends in California landscapes. *Geoderma* 154:418-437. (Invited)
101. Hirmas, D.R., C. Amrhein, and R.C. Graham.  
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102. Enloe, H.A., S.A. Quideau, R.C. Graham, S.C. Sillett, S.-W. Oh, and R.E. Waylisen.



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103. Rossi, A.M., and R.C. Graham.  
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104. Graham, R.C., A.M. Rossi, and K.R. Hubbert.  
2010. Rock to regolith conversion: producing hospitable substrates for terrestrial ecosystems. *GSA Today* 20:4-9. (Invited)
105. Bai, Y., T.A. Scott, W. Chen, R.C. Graham, L. Wu, A.C. Chang, and L.J. Lund.  
2010. Soil temperature regimes of the Mojave Desert. *Soil Sci.* 175:398-404.
106. Estrada-Medina, H., W. Tuttle, R.C. Graham, M.F. Allen, and J.J. Jiménez-Osornio.  
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107. Furquim, S.A.C., L. Barbiero, R.C. Graham, J.P. de Queiroz Neto, R.P. Dias Ferreira, S. Furian.  
2010. Neof ormation of micas in soils surrounding an alkaline-saline lake of Pantanal wetland, Brazil. *Geoderma* 158:331-342.
108. Hirmas, D.R., and R.C. Graham.  
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2011. Performance of ground-penetrating radar on granitic regoliths with different mineral composition. *Soil Sci.* 176:435-440.
111. Pietrasiak, N., J.R. Johansen, T LaDoux, and R.C. Graham.  
2011. Comparison of disturbance impacts and spatial distribution of soil crusts in the Little San Bernardino Mountains of Joshua Tree National Park, California. *Western North American Naturalist* 71:539-552.
112. Hirmas, D.R., R.C. Graham, and K.J. Kendrick.  
2011. Soil-geomorphic significance of land surface characteristics in an arid mountain range, Mojave Desert, USA. *Catena* 87:408-420.
113. Briggs, C., J.M. Breiner, and R.C. Graham.

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114. Udawatta, R.P., C.J. Gantzer, S.H. Anderson, A.M. Rossi, R.C. Graham, and R.A. Ketcham. 2012. Analysis of three-dimensional geometrical pore parameters from rock weathering. *Soil Sci.* 177:506-516.
115. Wald, J.A., Graham, R.C., Schoeneberger, P.J.  
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116. Lybrand, R.A., Michalski, G., Graham, R.C., Parker, D.R.  
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117. Estrada-Medina, H., Graham, R.C., Allen, M.F., Jimenez-Osornio, J.J., Robles-Casolco, S.  
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118. Estrada-Medina, H., Santiago, L.S., Graham, R.C., Allen, M.F., Jimenez-Orsonio, J.J.  
2013. Source water, phenology and growth of two tropical dry forest tree species growing on shallow karst soils. *Trees.* Vol. 27: p.1297-1307.

#### In Press

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