Curriculum Vitae 2018: Ronald I. Dorn

<u>Business:</u> School of Geographical Sciences, Arizona State University Tempe AZ 85287-0104 (602) 965-7533; FAX (602) 965-8313 E-Mail: ronald.dorn@asu.edu

Education:

A.B.(Geography), University of California, Berkeley, 1980 M.A.(Geography), University of California, Berkeley, 1982 Ph.D.(Geography), University of California, Los Angeles, 1985

<u>Biographical Sketch</u>: Ronald I. Dorn has been a Professor of Geography at Arizona State University, Tempe, Arizona since 1988. He served previously on the faculty at Texas Tech University. He is co-coordinator of the Arizona Geographic Alliance, a K-12 outreach program to promote geographic education in Arizona. He has been President and Secretary/Treasurer of the Geomorphology Specialty Group and as chair of the Nystrom Committee of the Association of American Geographers. He is a Fellow of the Geological Society of America and the Arizona/Nevada Academy of Science, and a member of the Association of American Geographers and the American Rock Art Research Association. He is married and has two children.

<u>Present Research Activities</u>: desert geomorphology, rock art conservation, petroglyph analysis, quantification and geography of mineral weathering, geographic education, tyranny of the majority in science, rock coatings

Positions

Arizona State University, Tempe : Assistant, Associate, and Full Professor of Geography (1988-current); Co-Coordinator, Arizona Geographic Alliance (1996- current)

Texas Tech University, Lubbock: Assistant and Associate Professor of Geography (1985-1988); Research Associate, International Center Arid and Semi-Arid Land Studies (1985-1988).

Citations: Google Scholar has introduced a new way to track scientific citations called "Google Scholar Citations". This is my profile in this tracking

Ronald Dorn Curriculum Vitae

system:



Books: Rock Coatings. (No. 6 in Developments in Earth Surface Processes Series) Elsevier, 1998. 429 pp.

Geomorphology: Mojave Desert to Death Valley. Guide to Field Excursion A3. International Association of Geomorphologists Third International Geomorphology Conference. Tempe, Arizona: Arizona State University, Department of Geography Publication #4, 137 p., 1993. (with Norman Meek)

Refereed Articles and Book Chapters

169. Jeong, A. and Dorn, R.I. Under review. Land degradation associated with urban expansion in a warm desert setting of metropolitan Phoenix, Sonoran Desert, western USA. Land Degradation & Development: in review.

168. Dorn, R.I. Accepted August 2018. <u>Necrogeomorphology and the life expectancy of desert bedrock landforms</u>. Progress in Physical Geography: in press.

167. Dorn, R.I. 2018. <u>Anthropogenic interactions with rock varnish</u>. In: Ecological Drivers of Biogeochemical Cycles under Changing Environment, eds. Dontsova, K., Balogh-Brunstad, Z., Le Roux, G., Pierret, M-C., American Geophysical Union: Washington D.C. in press.

166. Dorn, R.I. and Jeong, A. 2018. Rock coating and weathering-rind development at the edge of retreating glaciers: An initial study. Association of Pacific Coast Geographers Yearbook 80: 1-31

165. Jeong, A., Cheung, S.Y., Walker, I.J., and Dorn, R.I. 2018. <u>Urban geomorphology of an arid city: Case study of Phoenix, Arizona</u>. In: Urban geomorphology: Landforms and processes in cities, eds. Thornbush, M.J. and Allen, C.D., Elsevier, pages 175-204.

164. Dorn, R.I., Mahaney, W.C., and Krinsley, D.H. 2017. Case hardening: Turning weathering rinds into protective shells. Elements 13: 155-158.

163. Schindler, M. and Dorn, R.I. 2017. <u>Coatings on rocks and minerals: The interface between lithosphere and the biosphere, hydrosphere and atmosphere</u>. Elements 13: 165-169.

162. Larson, P.H., Meek, N., Douglass, J. Dorn, R.I. and Seong, Y.B. 2017. <u>How rivers get across mountains</u>: A new landscape via transverse drainage. In Special Issue on Mountains, edited by M. Fonstad. Annals of the Association of American Geographers 107: 274-283.

161. Krinsley, D.H., Dorn, R.I., DiGregorio, B., Razink, J. and Fisher, R. 2017. <u>Mn-Fe enhancing budding bacteria in century-old rock varnish, Erie</u> <u>Barge Canal, New York</u>. Journal of Geology 125: 317-336.

160. Larson, P.H., Kelley, S.B., Dorn, R.I., Seong, Y.B. 2016. <u>Pace of landscape change and pediment development in the northeastern Sonoran</u> <u>Desert, United States</u> (with supplemental files) Annals of the Association of American Geographers 106: 1195-1216.

159. Dorn, R.I. 2016. <u>Identification of debris-flow hazards in warm deserts through analyzing past occurrences: Case study in South Mountain,</u> <u>Sonoran Desert, USA</u>. Geomorphology 273: 269-279.

158. Seong, Y.B., Dorn, R.I. and Yu, B.U. 2016. Evaluating the life expectancy of a desert pavement. Earth Science Reviews 162: 129-154

157. Cerveny, N.V., Dorn, R.I., Allen, C.D., Whitley, D.S. 2016. <u>Advances in rapid condition assessments of rock art sites: Rock Art Stability Index</u> (<u>RASI</u>). Journal of Archaeological Science Reports (in press): <u>http://dx.doi.org/10.1016/j.jasrep.2016.06.032</u>.

156. Seong, Y.B., Larson, P.H., Dorn, R.I., Yu B.Y. 2016. <u>Evaluating process domains in small arid granitic watersheds: Case study of Pima Wash</u>, <u>South Mountains, Sonoran Desert, USA</u>. Geomorphology 255: 108-124.

155. Turchi, L., Hinde, E.R., Dorn, R.I., Ekiss, G.O. 2016. <u>Six credit hours for Arizona, the United States, and the World: A Case study of teacher</u> <u>content-knowledge preparation and the creation of social studies courses</u>. In Crow, A.R., Cuenca, A., editors, Rethinking Social Studies Teacher Education in the Twenty-First Century, pp. 144-166. DOI 10.1007/978-3-319-22939-3_8.

154. Dorn, R.I. 2015. <u>Impact of consecutive extreme rainstorm events on particle transport: Case study in a Sonoran Desert range, western USA</u>. Geomorphology 250: 53-62.

153. Larson, P.H., Dorn, R.I., Faulkner, D.J. and Friend D.A. 2015. <u>Toe-cut terraces: A review and proposed criteria to differentiate from traditional fluvial terraces</u>. Progress in Physical Geography 39: 417-439.

152. Dorn, R.I. 2014. <u>Chronology of rock falls and slides in a desert mountain range: Case study from the Sonoran Desert in south-central Arizona</u>. Geomorphology 223: 81-89.

151. Dorn, R.I. 2014. Ants as a powerful agent of olivine and plagioclase dissolution. Geology 42: 771-774.

150. Larson, P.H., Dorn, R.I., Bowles, Z., Harrison, E.J., Kelley, S., Schmeeckle, M.W., and Douglass, J. 2014 <u>Pediment response to drainage basin</u> evolution in south-central Arizona. Physical Geography 35: 369-389.

149. Larson, P.H. and Dorn, R.I. 2014. Strath development in small-arid watersheds: Case study of South Mountain, Sonoran Desert, Arizona. American Journal of Science 314: 1202-1223.

148. Harrison, E.J. and Dorn, R.I. 2014. Introducing a terrestrial carbon pool in warm desert bedrock mountains, Southwestern USA. Global Biogeochemical Cycles 28: 253-268.

147. Krinsley, D.H., Ditto, J., Langworthy, K.A., Dorn, R.I., and Thompson, T.J. 2013. <u>Varnish microlaminations: New insights from focused ion</u> <u>beam preparation</u>. Physical Geography 34: 159-173

146. Dorn, R.I., Krinsley, D.H., Langworthy, K.A., Ditto, J., and Thompson, T.J. 2013. <u>The influence of mineral detritus on rock varnish formation</u>. Aeolian Research 10:61-76.

145. Dorn, R.I., Gordon, S., Krinsley, D., and Langworthy, K. 2013. <u>Nanoscale: mineral weathering boundary</u>. In: Shroder, J. (Editor in Chief), Pope, G.A. (Eds), Treatise on Geomorphology. Academic Press, San Diego, CA, vol 4, Weathering and Soils Geomorphology, pp.: 70-97.

144. Dorn, R.I. 2013. <u>Rock Coatings</u>. In: Shroder, J. (Editor in Chief), Pope, G.A. (Ed.), Treatise on Geomorphology. Academic Press, San Diego, CA, vol 4, Weathering and Soils Geomorphology, pp. 44-69.

143. Dorn, R.I., Gordon, S.J., Allen, C.D., Cerveny, N., Dixon, J.C., Groom, K.M. Hall, K., Harrison, E., Mol, L., Paradise, T.R., Sumner, P., Thompson, T., and Turkington, A.V. 2013. The role of fieldwork in rock decay research: case studies from the fringe. Geomorphology 100: 59-74.

142. Moore, M.J., Kraetz, G., and Dorn, R.I. 2012. Phoenix debris flow hazard assessment: House location matters. Physical Geography 33: 491-513.

141. Dorn, R. I., Dorn, J., Harrison, E., Gutbrod, E., Gibson, S., Larson, P., Cerveny, N. Lopat, N. Groom, K.M., and Allen, C. 2012 <u>Case hardening</u> <u>vignettes from the western USA: Convergence of form as a result of divergent hardening processes</u>. Association of Pacific Coast Geographers Yearbook 74: 1-12.

140. Dorn, R.I., Gordon, M., Pagán, E.O., Bostwick, T.W., King, M. and Ostapuk, P. 2012. <u>Assessing early Spanish explorer routes through</u> <u>authentication of rock inscriptions</u>. Professional Geographer. 64: 415-429.

139. Larson, P.H. and Dorn, R.I. 2012. <u>Painting Yosemite Valley: A Case study of rock coatings encountered at Half Dome</u>. Physical Geography 33: 165-182.

138. Dorn, R.I. 2012. Do debris flows pose a hazard to mountain-front property in metropolitan Phoenix, Arizona? Professional Geographer, 64: 197-210.

137. Dorn, R.I., Krinsley, D.H., and Ditto, J. 2012. <u>Alexander von Humboldt's initiation of rock coating research</u>. Journal of Geology, 120: 1-12.

136. Dorn, R.I. 2012. Formation of silica glaze rock coatings through water vapor interactions. Physical Geography 33 (1): 21-31.

135. Krinsley, D.H., Dorn, R.I., DiGregorio, B.E., Langworthy, K.A., and Ditto, J. 2012. <u>Rock varnish in New York: An accelerated snapshot of accretionary processes</u>. Geomorphology, 138: 339-351.

134. Whitley, D.S. & Dorn, R.I. 2012. — <u>The Earliest rock art in Far Western North America</u>. In: CLOTTES J. (dir.), L'art pléistocène dans le monde / Pleistocene art of the world / Arte pleistoceno en el mundo, Actes du Congrès IFRAO, Tarascon-sur-Ariège, septembre 2010, Symposium « Art pléistocène dans les Amériques ». N° spécial de Préhistoire, Art et Sociétés, Bulletin de la Société Préhistorique Ariège-Pyrénées, LXV-LXVI, 2010-2011, CD: p. 585-590

Ronald Dorn Curriculum Vitae

133. Dorn, R.I. 2011. Revisiting dirt cracking as a physical weathering process in warm deserts. Geomorphology 135: 129-142.

132. Ekiss, G.O., Dorn, R.U., Hinde, E.R., Douglass, J., and Trapido-Lurie, B. 2011. <u>Mathematics learning and geography education, in Geographic</u> Literacy in the United States: Challenges and Opportunities in the NCLB Era, eds. G.S. Elbow, D.J. Rutherford, and C. Shearer, pp. 57-62.

131. Hinde, E.R. Osborn Popp, S.E., Ekiss, G.O., and Dorn, R.I. 2011. Literacy Learning and Geography Education, in Geographic Literacy in the United States: Challenges and Opportunities in the NCLB Era, eds. G.S. Elbow, D.J. Rutherford, and C. Shearer, pp. 51-56.

130. Langworthy, K.A., Krinsley, D.H., and Dorn, R.I. 2011. Investigation of Tibetan Plateau varnish: New findings at the nanoscale using focused ion beam and transmission electron microscopy techniques. Scanning 33, 78-81.

129. Dorn, R.I. and Krinsley, D.H. 2011. <u>Spatial, temporal and geographic considerations of the problem of rock varnish diagenesis</u>. Geomorphology, 130: 91-99.

128. Hinde, E.R., Popp, S.E., Jimenez-Silva, M. and Dorn, R.I. 2011. <u>Linking Geography to Reading and English Language Learners' Achievement in</u> <u>U.S. Elementary and Middle School Classrooms</u>. International Research in Geographical & Environmental Education, 20: 47-63.

127. Langworthy, K., Krinsley, D.H., and Dorn, R.I. 2010. <u>High Resolution Transmission Electron Microscopy evaluation of silica glaze reveals new</u> textures. Earth Surface Processes and Landforms, 35: 1615–1620.

126. Larson, P.H., Dorn, R.I., Douglass, J., Gootee, B.F., and Arrowsmith, R. 2010. <u>Stewart Mountain Terrace: A new Salt River terrace with</u> <u>implications for landscape evolution of the lower Salt River Valley, Arizona</u>. Journal of the Arizona-Nevada Academy of Sciences, 42 (1): 26-36.

125. Dorn, R.I. 2010. Debris flows from small catchments of the Ma Ha Tuak Range, metropolitan Phoenix, Arizona. Geomorphology 120: 339-352.

124. Whitley, D.S. and Dorn, R.I. 2010. The Coso petroglyph chronology. Pacific Coast Archaeological Society Quarterly 43: 135-157.

123. Dorn, R.I. 2009. The rock varnish revolution: New insights from microlaminations and the contributions of Tanzhuo Liu. Geography Compass 3: 1804-1823.

122. Krinsley, D., Dorn, R.I., DiGregorio, B. 2009. Astrobiological Implications of Rock Varnish in Tibet. Astrobiology 9: 551-562.

121. <u>Merrell, C.L. and Dorn, R.I. 2009. Indian Writing Waterhole and Tom's Spring: Two central Idaho petroglyph sites in the Great Basin tradition.</u> <u>American Indian Rock Art 35: 203-217</u>.

120. Dorn, R.I. 2009. <u>Desert rock coatings</u>. In <u>Geomorphology of Desert Environments 2nd Edition</u>, ed. A.J. Parsons and A.D. Abrahams, Springer, chapter 7, pages 153-186.

119. Dorn, R.I. 2009. <u>Rock varnish and its use to study climatic change in geomorphic settings</u>. In <u>Geomorphology of Desert Environments 2nd</u> <u>Edition</u>, ed. A.J. Parsons and A.D. Abrahams, Springer, chapter 22, pages 657-673.

Ronald Dorn Curriculum Vitae

118. Dorn, R.I. 2009. <u>The role of climatic change in alluvial fan development</u>. In <u>Geomorphology of Desert Environments 2nd Edition</u>, ed. A.J. Parsons and A.D. Abrahams, Springer, chapter 24, pages 723-742.

117. Allen, C.D., Dorn, J., and Dorn, R.I. 2009. Fire in the Desert: Initial Gullying Associated with the Cave Creek Complex Fire, Sonoran Desert, Arizona. Association of Pacific Coast Geographers Yearbook 71: 1-14.

116. Douglass, J, Meek, N., Dorn, R.I., Schmeeckle, M.W. 2009. <u>A criteria-based methodology for determining the mechanism of transverse drainage</u> <u>development, with application to southwestern USA</u>. Bulletin of the Geological Society of America 121: 586-598. (<u>and data repository</u>)

115. Allen, C.D., and Dorn, R.I. 2008. Graduate degrees in geographic education: Exploring an online model. California Geographer 48: 3-19.

114. Mahaney, W.C., M.W. Milner, B. Kapran, P. Tricart, R.W. Barendregt, D.H. Krinsley, R.I. Dorn, B. Trapido-Lurie, S. Boccia, R.N.S. Sodhi, V. Kalm, and R. Beukens. 2008 Historical archaeology of the Hannibalic invasion of Italia: Technical Applications. <u>Technical Briefs in Historical Archaeology 3: 39-47.</u>

113. Mahaney, W.C., Kalm, V., Dirszowsky, Milner, M.W., Sodhi, R., Beukens, R., Dorn, R.I., Tricart, P., Schwartz, S., Chamorro-Perez, E., Boccia, S., Barendregt, R.W., Krinsley, D.H., Sequist, E.R., Merrick, D. and Kapran, B. 2008 <u>Hannibal's trek across the Alps: Identification of sties of geoarchaeological interest. Mediterranean Archaeology & Archaeometry 8 (2): 39-54</u>.

<u>112. Stumpf, R.J. II, Douglas, J., Dorn, R.I. 2008. Learning desert geomorphology virtually versus in the field.</u> Journal of Geography in Higher Education 32: 387-399.

<u>111. Dorn, R.I., Whiley, D.S., Cerveny, N.V., Gordon, S.J. Allen, C. and Gutbrod, E. 2008. The rock art stability index: A new strategy for maximizing the sustainability of rock art. Heritage Management 1: 35-70</u>.

<u>110. Hinde, E.R., Osborn Popp, S.E., Dorn, R.I., Ekiss, G.O., Mater, M., Smith, C.B., Libbee, M. 2007. The integration of literacy and geography: The Arizona GeoLiteracy program's effect on reading comprehension. Theory and Research in Social Education 35: 343-365.</u>

<u>109. Mahaney, W.C., Milner, M.W., Sodhi, R., Dorn, R.I., Boccia, S., Beukens, R.P., Tricart, P., Schwartz, S., Chamorro-Perrez, E., Barendregt, R.W., Kalm, V., Dirszowsky, R.W. 2007. Analysis of burnt schist outcrops in the Alps: Relation to historical archaeology and Hannibal's Crossing in 218 B.C. Geoarchaeology, v. 22: 799-818.</u>

108. Dorn, R.I. 2007. Rock varnish, Geochemical Sediments and Landscapes, ed, D.J. Nash and S.J. McLaren, London: Blackwell, pp. 246-297. Chapter 8. ISBN 1-4051-2159-5.

<u>107. 2007. Dorn, R.I. Baking black opal in the desert sun: The importance of silica in desert varnish: COMMENT. Geology, v. doi:</u> <u>10.1130/G23410C.1</u>

106. Dorn, R.I. 2007. Online Versus Hardcopy Textbooks. Science, v. 315: 1220.

105. Dorn, R.I. 2006. Petroglyphs in Petrified Forest National Park: Role of rock coatings as agents of sustainability and as indicators of antiquity. Bulletin of Museum of Northern Arizona 63: 52-63 [W. G. Parker and P. A. Thompson, eds., 2006, A Century of Research at Petrified Forest National Park: Natural and Cultural History]

<u>104. Cerveny, N.V., Kaldenberg, R., Reed, J., Whitley, D.S., Simon, J. and Dorn, R.I. 2006. A New Strategy for Analyzing the Chronometry of Constructed Rock Features in Deserts. Geoarchaeology v. 21, No. 3: 281-303.</u>

<u>103. Dorn, R.I., Douglass, J.D., Ekiss, G.O., Trapido-Lurie, B, Comeaux, M., Mings, R., Eden, R., Davis, C. Hinde, E. and Ramakrishna. B. 2005.</u> Learning geography promotes learning math: Results and implications of Arizona's GeoMath Grade K-9 Program. Journal of Geography, v. 104: 95-<u>103</u>.

102. Gordon, S.J. and Dorn, R.I., 2005. In situ weathering rind erosion. Geomorphology, v. 67: 97-113.

101. Gordon, S.J. and Dorn, R.I. 2005. Localized weathering: Implications for Theoretical and Applied Studies. Professional Geographer, v. 57: 28-43.

<u>100. Douglass, J., Dorn, R.I. and Gootee, B. 2005. A large landslide on the urban fringe of metropolitan Phoenix, Arizona. Geomorphology, v. 65:</u> <u>321-336</u>.

<u>99. Tratebas, A., Cerveny, N., and Dorn, R.I. 2004. The effects of fire on rock art: Microscopic evidence reveals the importance of weathering rinds.</u> <u>Physical Geography, v. 25: 313-333</u>.

<u>98. Dorn, R. 2004. Experimental approaches to dating petroglyphs and geoglyphs with rock varnish in the California Deserts: Current status and future directions, The Human Journal & Ancient Life in California Deserts, ed. M.W. Allen and J. Reed, Maturango Museum, Ridgecrest, 211-224</u>.

97. Selover, N.J., Dorn, D., Dorn, R.I. and Brazel, A.J. 2003. Community Partnership Grant Generates Pre-Service Teacher and Middle School Student Motivation for Authentic Science and Mathematics. School Science and Mathematics, v. 103 (1): 45-56.

96. Dorn, R.I. 2003. Boulder weathering and erosion associated with a wildfire, Sierra Ancha Mountains, Arizona. Geomorphology, v. 55: 155-171

<u>95. Dorn, R.I., Ekiss, G.B., Ostapuk, M. and Davis, C. 2002. The status of geography</u> education in Arizona. International Research in Geographical and Environmental Education, v. 11: 171-176. (click here for pdf version)

94. Dorn, R.I. 2002. Analysis of Geomorphology Citations in the Last Quarter of the 20th Century. Earth Surface Processes and Landforms, v. 27: 667-672.

93. Frink, D.S. and Dorn, R.I. 2001. <u>BEYOND TAPHONOMY: Pedogenic Transformations of the Archaeological Record in Monumental</u> Earthworks. <u>Arizona-Nevada Academy of Sciences Journal</u>, v. 34: 24-44.

92. Dorn, R.I. Stasack, E., Stasack, D., and Clarkson, P.B. 2001. Analyzing petroglyphs and geoglyphs with four new perspectives evaluating what's there and what's not. <u>American Indian Rock Art</u>, v. 27: 77-96.

91. Dorn, R.I. 2001. Chronometric Techniques -- Rock Engravings. in Handbook of Rock Art Research, ed. DS Whitley, Walnut Creek, CA: AltaMira Press. pp. 167-189.

Ronald Dorn Curriculum Vitae

90. Meek, N. and Dorn, R.I. 2000. Is mushroom rock a ventifact? California Geology, November/December Issue: 18-20.

89. Whitley, D.S., Dorn, R.I., J.M., Rechtman, R., Whitley, T.L. 1999. Sally's Rockshelter and the archology of the vision quest. Cambridge Archaeological Journal 9: 221-247.

88. Brady, P.V., Dorn, R.I., Brazel, A.J., Clark, J., Moore, R.B., Glidewell, T. 1999. Direct measurement of the combined effects of lichen, rainfall, and temperature on silicate weathering. Geochimica et Cosmochimica Acta 63, 3293-3300.

87. Whitley, D.S., Simon, J.M., and Dorn, R.I., 1999, Vision quest in the Coso Range. American Indian Rock Art 25, 1-31

<u>86. Fein, J.B., Brady, P.V., Jain, J.C., Dorn R.I., and Lee, J.-U., 1999, Bacterial effects on the mobilization of cations from a weathered Pbcontaminated andesite. Chemical Geology 158, 189-202.</u>

85. 1998. Dorn, R.I. Response. Science 280: 2136-2139.

84. 1998. Dorn, R.I. Age determination of the Coso Rock Art, Chapter 3, <u>Coso Rock Art. A New Perspective</u>, ed. J.W. Baird and E. Younkin, Maturango Museum, Ridgecrest, 69-96.

83. 1997. Kuby, M., Cerveny, R.S. and Dorn, T.I.A new approach to paleoclimatic research using Linear Programming. Paleogeography, Paleoclimatology, Paleoecology, 129: 251-267

82. 1997. Welsh, P.H. and Dorn, R.I. <u>Critical analysis of petroglyph radiocarbon ages from Coa, Portugal and Deer Valley, Arizona</u>. <u>American Indian</u> <u>Rock Art</u> 23: 11-23. [Presented at the May 24-27, 1996 ARARA Conference in El Paso, Texas.]

81. 1997. Dorn, R.I. Constraining the age of the Côa valley (Portugal) engravings with 14C. Antiquity 71: 105-115.

80. <u>1997. Shaffer, J.A., Cerveny, R.S., Dorn, R.I. Radiation windows as indicators of an astronomical influence on the Devil's Hole Chronology.</u> <u>Geology, 24: 1017-1020.</u>

79. 1996. Dorn, R.I. Uncertainties in 14C ages for petroglyphs from the Olary province, South Australia. Archaeology in Oceania 31: 214-215.

78. <u>1996. Dorn, R.I. Uncertainties in the radiocarbon dating of organics associated with rock varnish: A plea for caution. Physical Geography 17: 585-591</u>.

77. <u>1996</u>. Dorn, R.I. Radiocarbon dating glacial moraines with the aeolian biome: test results at Bishop Creek, Sierra Nevada, California. Physical Geography 17: 157-179</u>.

76. <u>1996</u>. <u>Dorn</u>, R.I. Climatic Hypotheses of Alluvial-Fan Evolution in Drylands are Not Testable, in The Role of the Philosophy of Science in Geomorphology, ed. B. Rhoads and C. Thorn, Binghamton Geomorphology Series, Chapman & Hall, 191-220.

75. 1996. Liu, T. and Dorn, R.I. Understanding the spatial variability of environmental change in drylands with rock varnish microlaminations. Annals of the Association of American Geographers 86: 187-212.

Ronald Dorn Curriculum Vitae

74. 1996. Stasack, E., Dorn, R.I. and Lee, G. First direct 14C ages on Hawaiian petroglyphs. Asian Perspectives 35: 51-72.

73. <u>1995. Dorn, R.I. Alterations of Ventifact Surfaces at the Glacier/Desert Interface. Desert Aeolian Processes, ed. V. Tchakerian, Chapman and Hall, pp. 199-217.</u>

72. <u>1995. Villa, N., Dorn, R.I. and Clark, J. Fine material in rock fractures: aeolian dust or weathering? Desert Aeolian Processes, ed. V. Tchakerian, Chapman and Hall, pp. 219-231</u>.

71. <u>1995. Dorn, R.I. and Meek, N. Rapid formation of rock varnish and other rock coatings on slag deposits near Fontana, California. Earth Surface Processes and Landforms 20: 547-560</u>.

70. <u>1995. von Werlhof, J., Casey, H., Dorn, R.I., and Jones, G.A. AMS 14C age constraints on geoglyphs in the lower Colorado River region, Arizona and California. Geoarchaeology 10 (4): 257-273.</u>

69. 1995. Clarkson, P.B. and Dorn, R.I New chronometric dates for the puquios of Nasca, Peru. Latin American Antiquity 6(1): 56-69.

68. 1995. Dorn, R.I. and Brady, P.V. Rock-based measurement of temperature-dependent plagioclase weathering. Geochimica et Cosmochimica Acta 59 (13): 2847-2852.

67. <u>1995. Dorn, R.I. Digital processing of backscatter electron imagery: A microscopic approach to quantifying chemical weathering. Geological Society of America Bulletin 107 (6): 725-741.</u>

<u>66. 1995. Pope, G., Dorn, R.I., Dixon, J. A new conceptual model for understanding geographical variations in weathering Annals of the Association of American Geographers 85 (1): 38-64.</u>

65. <u>1995. Peterson, F., Bell, J. Dorn, R., Ramelli, A., Ku, T.L. Late Quaternary geomorpholgy and soils in Crater Flat, Yucca Mountain area, southern Nevada. Geological Society of America Bulletin 107 (8): 379-395.</u>

64. 1995. Krinsley, D., Dorn, R.I., Tovey, N.K. Nanometer-scale layering in rock varnish: implications for genesis and paleoenvironmental interpretation. Journal of Geology, v. 103: 106-113.

63. 1994. Dorn, R.I. Surface exposure dating with rock varnish. In <u>Dating in Exposed and Surface Contexts</u>, ed. C. Beck, University of New Mexico Press, Albuquerque pp.77-113.

62. <u>1994</u>. Dorn, R.I. and Krinsley, D.New perspectives on colluvial boulder deposits in the Southwestern Great Basin, USA. Physical Geography 15: 62-79.

61. 1994. Dorn, R.I. Dating petroglyphs with a 3-tier rock varnish approach. In <u>New Light on Old Art: Advances in Hunterer-Gatherer Rock Art</u> <u>Research</u>, ed. D.S. Whitley and L. Loendorf, UCLA Institute for Archaeology Monograph Series, no. 36, pp. 12-36.

60. 1994. Dorn, R.I. Rock varnish as an indicator of climatic change. In <u>Geomorphology of Desert Environments</u>, ed. A.D. Abrahams and A.J. Parsons, Chapman & Hall, pp. 539-552

Ronald Dorn Curriculum Vitae

59. 1994. Dorn, R.I. Alluvial fans an an indicator of climatic change. In <u>Geomorphology of Desert Environments</u>, ed. A.D. Abrahams and A.J. Parsons, Chapman & Hall, pp. 593-615.

58. 1993. Francis, J., Loendorf, L., and Dorn, R.I. Results of AMS radiocarbon and cation ratio dating of rock art in the Bighorn Basin of Wyoming and Montana: New advances for rock art studies. American Antiquity 58: 711-737.

57. 1993. Whitley, D.S. and Dorn, R.I. New perspectives on the Clovis versus Pre-Clovis controversy. American Antiquity: 58: 626-647.

56. 1993. Wasklewicz, T., Dorn, R.I., Clark, S., Hetrick, H., Pope, G., Liu, T., Krinsley, D., Dixon, J. Moore, R. and Clark, J. <u>Olivine does not</u> necessarily weather first. Journal of Tropical Geography 14(1): 72-80.

55. <u>1993</u>. Nishiizumi, K., Kohl, C.P., Arnold, J.R., Dorn, R., Klein, J., Fink, D., Middleton, R., and Lal, D. Role of in situ10Be and 26Al in the study of diverse geomorphic processes. Earth Surface Processes and Landforms, v. 18: 407-425 cosmogenic nuclides .

54. 1993. Dorn, R.I., Jones, A., Bock, F., and Bock, A.J. Preliminary Data on Radiocarbon Dating Petroglyphs at Petrified Forest National Park, Arizona <u>American Indian Rock Art</u> 19: 31-39.

53. 1993. Nobbs, M.F. and Dorn, R.I. New surface exposure ages for petroglyphs from the Olary Province, South Australia. <u>Archaeology in Oceania</u> 28: 18-39.

52. 1992. Dorn, R.I., Krinsley, D.H., Liu, T., Anderson, S., Clark, J., Cahill, T.A., and Gill, T.E. 1992. Manganese-rich rock varnish does occur in Antarctica. Chemical Geology 99: 289-298.

51. <u>1992. Hooke, R.LeB. and Dorn, R.I. Segmentation of alluvial fans in Death Valley, California: New Insights from surface-exposure dating. Earth</u> Surface Processes and Landforms 17: 557-574.

50. 1992. Dorn, R.I. A review of rock varnish dating of rock engravings. International Newsletter on Rock Art 2: 10-14.

49. 1992. Dorn, R.I. Paleoenvironmental signals in rock varnish on petroglyphs. American Indian Rock Art 18: 1-17.

48. 1992. Dorn, R.I.and Clark, S. <u>Spatial organization in the landforms of Death Valley</u>. <u>Geographical Snapshots of North America</u>, ed. R.G. Janelle, International Geographical Contress Special Publication, 362-366.

47. 1992. Dorn, R.I. and Nobbs, M. Further support for the antiquity of South Australian rock engravings. <u>Australian Aboriginal Studies</u>: No. 1: 56-60.

46. <u>1992</u>. Dorn, R.I., Clarkson, P.B., Nobbs, M.F., Loendorf, L.L., and Whitley, D.S. Radiocarbon dating inclusions of organic matter in rock varnish, with examples from drylands. Annals of the Association of American Geographers 82: 136-151.

45. 1992. Dorn, R.I., Jull, A.J.T., Donahue, D.J., Linick, T.W., Toolin, L.J., Moore, R.B., Rubin, M., Gill, T.E., and Cahill, T.A. <u>Rock Varnish on</u> <u>Hualalai and Mauna Kea, Volcanoes, Hawaii</u>. <u>Pacific Science</u> 46: 11-34.

Ronald Dorn Curriculum Vitae

44. 1991. Krinsley, D.H. and Dorn, R.I. New eyes on Eastern California varnish. California Geology 44(5): 107-114.

43. 1991. Dorn, R.I. and Phillips, F.M. Surface exposure dating: review and critical evaluation. Physical Geography 12: 303-333.

42. 1991. Phillips, F.M., Zreda, M.G., Smith, S.S., Elmore, D., Kubik, P.W., Dorn, R.I., and Roddy, D.J. Age and geomorphic history of Meteor Crater, Arizona, from Cosmogenic Cl-36 and Rock Varnish C-14. Geochimica Cosmochimica Acta 55: 2695-2698.

41. 1991. Clarkson, P.B., and Dorn, R.I. Nuevos datos relativos a la antiguedad de los geogliofos y pukios de Nazca, Peru. <u>Boletin de Lima</u>, v. 13 (78): 33-45. (Published in 1992)

40. 1991. Dorn, R.I., and Krinsley, D.H. Cation-leaching sites in rock varnish. Geology 19: 1077-1080.

39. <u>1991. Dorn, R.I. Rock varnish. American Scientist 79: 542-553</u>.

38. <u>1991. Dorn, R.I., Phillips, F.M., Zreda, M.G., Wolfe, E.W., Jull, A.J.T., Kubik, P.W. and Sharma, P. Glacial chronology of Mauna Kea, Hawaii, as constrained by surface-exposure dating. National Geographic Research and Exploration 7: 456-471.</u>

37. 1991. Zreda, M.G., Phillips, F.M., Elmore, D., Kubik, P.W., Sharma, P., and Dorn, R.I. Cosmogenic chlorine-36 production rates in terrestrial rocks. Earth and Planetary Science Letters 105: 94-109.

36. 1990. Kearns, T., Dorn, R.I., Stanford, D. Potential of cation-ratio dating for analyzing the ages of artifacts in southeastern Utah. <u>Current Research</u> in the Pleistocene 7: 84-87.

35. 1990. Dorn, R.I., McGlone, W.R., Leonard, P.M. <u>Age-determination of petroglyphs on sandstone, southeast Colorado, using the cation-ratio</u> method of dating rock varnish. <u>Southwestern Lore</u> 56(2): 21-36.

34. 1990. Dorn, R.I., Cahill, T.A., Eldred, R.A., Gill, T.E., Kusko, B.H., Bach, A.J., and Elliott-Fisk, D.L. <u>Dating rock varnishes by the cation ratio</u> method with PIXE, ICP, and the electron microprobe. International Journal of PIXE 1: 157-195.

33. 1990. Dorn, R.I. and Dragovich, D. Interpretation of rock varnish in Australia: Case studies from the arid zone. Australian Geographer. 21: 18-32.

32. 1990. Benson, L.V., Currey, D.R., Dorn, R.I., Lajoie, K.R., Oviatt, C.G., Robinson, S.W., Smith, G.I., Stine, S. and Thompson, R.S. Chronology of expansion and contraction of four great basin lake systems during the past 35,000 years. <u>Palaeogeography</u>, <u>Palaeoclimatology</u>, <u>Palaeoecology</u>, 78: 241-286.

31. 1990. Dorn, R.I., Jull, A.J.T., Donahue, D.J., Linick, T.W., Toolin, L.J. Latest Pleistocene lake shorelines and glacial chronology in the western Basin and Range Province, USA: Insights from AMS radiocarbon dating of rock varnish and paleoclimatic implications. <u>Palaeogeography</u>, <u>Palaeoclimatology</u>, <u>Palaeoecology</u>, 78: 315-331.

30. 1990. Krinsley, D.H., Dorn, R.I. and Anderson, S. Factors that may interfere with the dating of rock varnish. Physical Geography, v. 11: 97-119.

Ronald Dorn Curriculum Vitae

29. 1990. Dorn, R.I. Quaternary alkalinity fluctuations recorded in rock varnish microlaminations. Palaeogeography, Palaeoclimatology, Palaeoecology 76 : 291- 310.

28. 1989. Dorn, R.I. Cation-ratio dating: a geographic assessment. Progress in Physical Geography 13: 559-596.

27. <u>1989. Dorn, R.I. and Dickinson, W.R. First paleoenvironmental interpretation of a pre-Quaternary rock varnish site, Davidson Canyon, south</u> <u>Arizona. Geology 17: 1029-1031.</u>

26. 1989. Dorn, R.I., Jull, A.J.T., Donahue, D.J., Linick, T.W. and Toolin, L.J. Accelerator mass spectrometry radiocarbon dating of rock varnish. <u>Geological Society of America Bulletin</u> 101:1363-1372.

25. 1988. Bamforth, D.B. and Dorn, R.I. On the nature and antiquity of the Manix Lake Lithic Industry. Journal of California and Great Basin Anthropology. 10: 209-226.

24. <u>1988. Whitley, D.S. and Dorn, R.I. Cation-ratio dating of petroglyphs using PIXE. Nuclear Instruments and Methods in Physics Research B35:</u> <u>410-414</u>.

23. 1988. Nobbs, M. and Dorn, R.I. Age-determinations for rock varnish formation within petroglyphs: cation-ratio dating of 24 motifs from the Olary region of arid South Australia. <u>Rock Art Research 5</u>: 108-26,133-9,144-6.

22. <u>1988</u>. Dorn, R.I., Nobbs, M., Cahill, T.A. Cation ratio dating of rock engravings from the Olary Province of arid South Australia. Antiquity 62: 681-689

21. 1988. Dorn, R.I. A rock varnish interpretation of alluvial-fan development in Death Valley, California. National Geographic Research 4: 56-73.

20. 1987. Dorn, R.I., Turrin, B.D., Jull, A.J.T., Linick, T.W., and Donahue, D.J. Radiocarbon and cation-ratio ages for rock varnish on Tioga and Tahoe morainal boulders of Pine Creek, eastern Sierra Nevada in California, and Paleoclimatic Implications. <u>Quaternary Research</u> 28: 38-49.

19. 1987. Whitley, D.S. and Dorn, R.I. Rock art chronology in eastern California. World Archaeology 19: 150-164.

18. 1987. Dorn, R.I., Tanner, D., Turrin, B.D. and Dohrenwend, J.C. Cation-ratio dating of Quaternary materials in the east-central Mojave Desert, California. <u>Physical Geography</u> 8: 72-81.

17. 1987. Dorn, R.I., DeNiro, M.J. and Ajie, H.O. <u>Isotopic evidence for climatic influence on alluvial-fan development in Death Valley, California</u>. <u>Geology</u> 15: 108-110.

16. <u>1986</u>. Dorn, R.I. Rock varnish as an indicator of aeolian environmental change. In Aeolian Geomorphology, ed. W.G. Nickling, Allen & Unwin, London, pp. 291- 307.

15. 1986. Reneau, S.L., Dietrich, W.E., Dorn, R.I., Berger, C.R., and Rubin, M. Geomorphic and paleoclimatic implications of latest Pleistocene radiocarbon dates from colluvium-mantled hollows, California. <u>Geology</u> 14: 655-658.

Ronald Dorn Curriculum Vitae

14. 1986. Dorn, R.I. (first author with 11 co-authors). Cation-ratio and accelerator- radiocarbon dating of rock varnish on Mojave artifacts and landforms. <u>Science</u> 231: 830-833.

13. <u>1985. Dorn, R.I. and DeNiro, M.J. Stable carbon isotope ratios of rock varnish organic matter: a new paleoenvironmental indicator. Science 227:</u> <u>1472-1474</u>.

12. 1984. Dorn, R.I. Geomorphological interpretation of rock varnish in the Mojave Desert. In <u>Surficial Geology of the Eastern Mojave</u> <u>Desert, California</u>, ed. J.C. Dohrenwend, Geological Society of America, Reno, pp. 69-87.

11. <u>1984. Dorn, R.I. Cause and implications of rock varnish microchemical laminations. Nature 310: 767-770</u>.

10. 1984. Dorn, R.I. and Whitley, D.S. Chronometric and relative age-determinations of petroglyphs in the western United States. Annals of the Association of American Geographers 74: 308-322.

9. <u>1984</u>. Dietrich, W.E. and Dorn, R.I. Significance of thick deposits of colluvium on hillslopes: a case study in the coastal mountains of northern California. Journal of Geology 92: 147-158.

8. 1983. Whitley, D.S. and Dorn, R.I. Chemical and micromorphological analysis of rock art pigment. Journal of New World Archaeology 6 (3): 48-51.

7. 1983. Dorn, R.I. and Whitley, D.S. Cation-ratio dating of petroglyphs from the western Great Basin, North America. Nature 302: 816-818.

6. 1983. Dorn, R.I. Cation-ratio dating: a new rock varnish age-determination technique. Quaternary Research 20: 49-73.

5. 1982. Dorn, R.I. and Oberlander, T.M. Rock varnish. Progress in Physical Geography 6: 317-367.

4. 1982. Dorn, R.I. Enigma of the desert. Environment Southwest 297: 3-5. (reprinted in Desert Protective Council Educational Bulletin 82-3)

3. 1982. Dorn, R.I. Observations on the use of "desert varnish" in the age-determination of surfaces. Society California Archaeology Bulletin 16 (1): 15-18.

2. 1981. Dorn, R.I. and Oberlander, T.M. Rock varnish origin, characteristics and usage. Zeitschrift fur geomorphologie 25: 420-436.

1. <u>1981. Dorn, R.I. and Oberlander, T.M. Microbial origin of rock varnish. Science 213: 1245-1247.</u>

Edited Electronic Computer Capstones:

Jimenez-Silva, M., Hinde, E.R., Ekiss, G.O. and Dorn, R.I. (2010, Version 1.0). <u>A virtual GeoLiteracy workshop on teaching geography and English</u> <u>language learners</u>. Tempe, AZ: Arizona Geographic Alliance. (URL: http://alliance.la.asu.edu/geoliteracy/ELL/vgeet/vgeet.html)

Hinde, E.R., Jimenez-Silva, M., Ekiss, G.O., Dorn, R.I., Osborn Popp, S.E., Managing Editors, (2009, Version 5.4). <u>GeoLiteracy ELL Adaptations:</u> <u>Integrating Geography, Reading and Writing</u>. Tempe, AZ: Arizona Geographic Alliance. Winner of the 2010 Geography Excellence in Media Award from the National Council for Geographic Education. (URL: http://alliance.la.asu.edu/geoliteracy/ELL/ELLCD/AAClickMeFirst.html)

Hinde, E.R., Ekiss, G.O., and Dorn, R.I., Managing Editors (2007 CD Version 3.1). <u>GeoMath: Integrating Geography and Mathematics</u>. Arizona Geographic Alliance, Arizona State University, Tempe, Arizona. (URL: http://alliance.la.asu.edu/geomath/GeoMath3/AAClickMeFirst.html)

Non Refereed Publications

50. 2018. Mahaney, B., Langowrthy, K., Fischer, R., Dorn, R. 2018. In memory of Professor David Krinsley, University of Oregon. Studio Quaternaria 35 (1): in press.

49. 2017. Larson, P.L. and Dorn, R.I. <u>Radiometric dating/techniques</u>. The International Encyclopedia of Geography: People, the Earth, Environment, and Technology. Association of American Geographers.

48. 2017. Thompson, T.J. and Dorn, R.I. <u>Weathering processes and landforms</u>. The International Encyclopedia of Geography: People, the Earth, Environment, and Technology. Association of American Geographers.

47. 2010. Dorn, Ronald I. "<u>Desert Varnish</u>." Encyclopedia of Geography. SAGE Publications. 1 Oct. 2010. http://www.sage-ereference.com/geography/Article_n276.html.

46. 2008. Dorn, R.I. Desert varnish as a paleoclimate proxy, in Encyclopedia of Paleoclimatology and Ancient Environments, ed. V. Gornitz, Springer. Entry 00067.

45. 2007. Ostapuk, P., Page, J., King, M., Dorn, R.I. Authenticating efforts related to a 1776 Spanish Inscription at Glen Canyon. Proceedings paper, <u>Spanish Trails of the American West</u>, a symposium organized and sponsored by the Old Spanish Trail Association, Cedar City, Utah. 34 pp.

44. 2007. Whitley, D.S., Simon, J.M., Cerveny, N., Dorn, R.I. <u>High-stand shoreline survey in the Searles Lake area</u>, <u>San Bernardino County</u>, <u>California</u>, in <u>A Festschrift Honoring the Contributions of California Archaeologist Jay von Werlhof</u>, ed. R.L. Kaldenberg, Maturango Museum Publication No. 20, Maturango Museum: Ridgecrest, CA, 209-224.

43. 2006. Dorn, R.I. Arizona, in chapter "Geographical Education in North America (Canada and the United States)" by Bednarz, S., Bednarz, R., Mansfield, T.D., Semple, S., Dorn, R. and Libbee, M., in <u>Geographical Education in a Changing World: Past Experience, Current Trends, and Future Challenges</u>, ed John Lidstone and Michael Williams, Special Publication IGU Brisbane, Springer: Amsterdam, 107-126.

42. 2006. Stasack, E., Dorn, R. and Lee, G. The petroglyphs of Kaho'olawe Island, Hawai'i. IRAC Proceedings, Rock Art - Work Heritage, section editor G. Lee, American Rock Art Research Association, p. 137-144.

41. 2005. Dorn, R.I. Review of The Geomorphic evolution of Yosemite Valley and Sierra Nevada Landscapes: Solving the Riddles in the Rocks, J.P. Shaffer, Wilderness Press (1997) in Annals of the Association of American Geographers 95 (2): 491-493.

40. 2005. Dorn, R.I. Why testify for the defense? La Pintura 31 (2): 8-13.

Ronald Dorn Curriculum Vitae

39. 2004. Gordon, S. and Dorn, R.I.Weathering rinds, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 853-855.

38. 2004. Dorn, R.I. Case hardening, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 118-119.

37. 2004. Dorn, R.I. Geomorphological role of fire, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 367-370.

36. 2004. Dorn, R.I. Desert varnish, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 251-254.

35. 2004. Dorn, R.I. Rock coatings, in Encyclopedia of Geomorphology, ed. A.S. Goudie, Routledge: London, 870-873.

34. 2000. Meek, N. and Dorn, R.I. Is Mushroom Rock a ventifact? California Geology. November-December Issue, 18-20.

33. 2000. Dorn, R. Rock varnish. in <u>Dictionary of Physical Geography</u>, ed. D.S.G. Thomas and A. Goudie, Blackwell: London, p. 417 & 2000. Dorn, R. Rock coatings. in <u>Dictionary of Physical Geography</u>, ed. D.S.G. Thomas and A. Goudie, Blackwell: London, p. 417-419

32. 2000. Dorn, R. Sieve deposits. in Dictionary of Physical Geography, ed. D.S.G. Thomas and A. Goudie, Blackwell: London, p. 444

31. 2000. Dorn, R. Rock-art dating. in Archaeological method and theory, ed. L Ellis, Garland Publishing: New York. pp. 523-527.

30. 1997. Dorn, D. and Dorn, R. Basic Map Reading. Arizona Geographic Alliance, 64 pp. (Also distributed to K-12 Teachers as a part of February 1998 GeoDayTrip Outreach Field Trip)

29. 1996. Dorn, R. A change of perception. La Pintura 23 (2): 10-11.

28. 1996. Bach, A., Dorn, R., Liu, T., Phillips, F.M., Zreda, M., Elmore, D. Elliott-Fisk, D. and Clark, J. Last 200,000 years of glacial history at Bishop Creek, Eastern Sierra Nevada, California. <u>U.S. Geological Survey Circular</u> 1119: 9-11.

27. 1996. <u>Rock Varnish Microlaminations as a Paleoclimatic Indicator in Drylands.</u> Educational Slide Set, Paleoclimatic Program, NOAA National Geophysical Data Center, Boulder, Colorado.

26. 1996. Dorn, R.I. Review of <u>Rock Weathering and Landform Evolution</u>, ed. D.A. Robinson, and R.B.G. Williams, Wiley (1994) in <u>Annals of the</u> <u>Association of American Geographers</u> 86: 146-147.

25. 1996. Dorn, R.I. In the dog house. La Pintura 22 (2): 11-14.

24. 1996. Dorn, R.I. Radiocarbon dating. In 1996 McGraw-Hill Yearbook of Science & Technology, ed. S.P. Parker, McGraw-Hill, p. 288-230.

23. 1995. Dorn, R.I. Comment on "Evidence suggesting that methods of rock-varnish cation-ratio dating are neither comparable nor consistently reliable". <u>Quaternary Research</u> 43: 272-273.

22. 1993. Dorn, R.I. Review of <u>Geomorphic responses to climatic change</u>, W.B. Bull, Oxford University Press (1991) in <u>Progress in Physical</u> <u>Geography</u> 17: 377-378.

Ronald Dorn Curriculum Vitae

21. <u>1992. Bach, A.J., Dorn, R.I., Elliott-Fisk, D.L. and Phillips, F.M. 1992. Glacial Avulsion in Pleistocene moraine complexes of the East-central Sierra Nevada, California. In The History of Water: Eastern Sierra Nevada, Owens Valley, White-Inyon Mountains White Mountains Research Station Symposium Volume 4, ed. C.A. Hall, Jr., V. Doyle-Jones and B. Wadawski, University of California Press, Los Angeles, pp. 17-31.</u>

20. 1992. Dorn, R.I. and Krinsley, D.J. Reply to comment on "Cation-leaching sites in rock varnish". Geology 20: 1051-1052.

19. 1992. Dorn.R.I. Comment. Geology 20: 470-471.

18. 1992. Dorn, R.I. Comment. Geology 20: 283.

17. 1992. Meek, N. and Dorn, R.I. <u>Regional geomorphology: Las Vegas to San Diego.</u> Field Trip Guide #1, Annual Meeting of the Association of American Geographers. San Diego, Ca. April 15-18, 1992. 92 pp.

16. 1991. Dorn, R.I. Letter to editor. American Scientist 80: 112-113.

15. 1991. Dorn, R.I., Dixon, J.C., and Orme, A.R. Integrating geomorphic processes and landscape evolution: an editorial. <u>Physical Geography</u> 12: 301-2.

14. 1991. Dorn, R.I. A discussion on the ethics of sampling petroglyphs for dating. <u>La Pintura</u>, v. 18(2), p. 6. (Translated and reprinted in <u>Boletin</u> <u>Sociedad de Ivestigacion del Arte Rupestre de Bolivia</u>, 1992, no. 1 issue)

13. 1991. Dorn, R.I. and Clark, J. Thinking on the run. Nature (London) 352: 10.

12. 1991. Phillips, F.M., and Dorn, R.I. Penrose Conference Report on New Methods of Dating Geomorphic Surfaces. <u>GSA Today</u> 1:102.

11. 1991. Dorn, R.I. Reply (to comment on Accelerator Mass Spectrometry Radiocarbon Dating of Rock Varnish), <u>Geological Society of America</u> <u>Bulletin</u> 103: 312-314.

10. 1990. Dorn, R.I. Rock varnish dating of rock art: State of the art perspective. La Pintura 17(2): 1-2, 10-11.

9. 1990. Phillips, F.M. and Dorn, R.I. <u>Geological Society of America, Penrose Conference Field Guide, "New Methods in Surface Exposure Dating"</u>, Mammoth Lakes, October 12-17, 35 pp.

8. 1990. Nobbs, M. and Dorn, R.I. Reply to Further Invited Comments on "Age- determinations for rock varnish formation within petroglyphs: cationratio dating of 24 motifs from the Olary region of arid South Australia." <u>Rock Art Research:</u> 7: 51- 52.

7. 1989. Nobbs, M. and Dorn, R.I. Reply to Further Invited Comments on "Age- determinations for rock varnish formation within petroglyphs: cationratio dating of 24 motifs from the Olary region of arid South Australia." <u>Rock Art Research 6</u>: 63- 67.

6. <u>1989</u>. Dorn, R.I. Comment on "A note of the characteristics and possible origins of desert varnishes from SE Morocco" by B.J. Smith and W.B. Whalley. Earth Surface Processes and Landforms. <u>14</u>: <u>167-170</u>.

Ronald Dorn Curriculum Vitae

5. 1988. Nobbs, M. and Dorn, R.I. Reply to Invited Comments on "Age-determinations for rock varnish formation within petroglyphs: cation-ratio dating of 24 motifs from the Olary region of arid South Australia." <u>Rock Art Research 5</u>: 143-144.

4. 1988. Dorn, R.I. Reply to letter by A. Gillespie on "Radiocarbon and cation-ratio ages for rock varnish on Tioga and Tahoe morainal boulders of Pine Creek, eastern Sierra Nevada in California, and Paleoclimatic Implications. <u>Quaternary Research</u> 30:104-105.

3.1987. Dorn, R.I., DeNiro, M.J., and Ajie, H.O. 1987. Reply to comment by Wells and McFadden on "Isotope evidence for climatic influence on alluvial-fan development in Death Valley, California. <u>Geology</u> 15: 1179-1180.

2. 1987. Dorn, R.I. Review of <u>Geomorphology and Soils</u>, ed. K.S. Richard, R.R. Arnett and S. Ellis, Allen & Unwin (1985) in <u>Professional</u> <u>Geographer</u> 39: 124.

1. 1987. Dorn, R.I. Response to Presentation of the Kirk Bryan Award. Geological Society of America Bulletin 99: 155.

Courses Taught

ASU 101

Introduction to Physical Geography Society and Environment Freshman Seminar for Learning Community on Sustainability Field Methods **Teacher Training Workshops** Applied Geomorphology Introduction to Landform Processes **Regional Geomorphology** Quaternary Environments Principles of Remote Sensing **Digital Image Processing** Landforms of the Western United States Environmental Change Weathering Seminar Field/Lab Methods in Quaternary Research Physical Geography Forum ST: Desert Geomorphology Introduction to Research Methods Honors, Physical Geography Global Change Physical Geography Seminar Teaching Geography Standards **Rock Coatings** Research on Teaching College Geography

Field Methods

Core Courses for Masters of Advanced Study in Geographic Education (Introduction to Geographic Teaching, Physical Geography for Teachers, Human Geography for Teachers, Geographic Techniques for Teachers, World Geography for Teachers, North American Geography for Teachers, Geography Across the Curriculum)

Recent Instructional Accomplishments

Coordinator of GCU 113 and GCU 114 courses – I led the team that developed two courses required of aspiring elementary education majors: U.S. and Arizona Social Studies (GCU/HST 113) and World Social Studies (GCU/HST 114). Now that these courses are in the hands of over 10 different faculty teaching them in geography and cross-listed in history, I coordinated the ongoing development of new materials. I also help maintain and post the online syllabi used by the teaching faculty, help answer the questions of faculty associates, help answer student questions, and help coordinate with the Mary Lou Fulton Teacher's College with respect to the number of desired sections and course type (hybrid, online, in person). I also teach or coteach these courses with new faculty associates.

CLAS Sustainability Learning Community - Partnering with Prof. Peter Goggin, Librarian Katherine O'Clair, English TAs April Brannon and Steven Accardi, and Geography TAs Gabe Judkins and Elyssa Gutbrod, I served as the lead faculty in this Fall Semester learning community. Although there was supposed to be a course-load reduction, my course load actually increased from two to three courses in order to meet programmatic needs. The community lasted for two fall semesters in 2006 and 2007, with a break in the Fall of 2008 because of Professor Goggin's sabbatical. Resumption in the Fall of 2009 was not possible. Please feel free to examine some of the photos taken during field trips (for example, <u>Salt River Trip Photos</u>).

Development of GPH 211 as Online Lab Science Class – At the behest of the Provost, CLAS was tasked with the development of completely online lab science courses. The stated goal was to help graduation rates for students whose life paths had forced them to move away from ASU, but who were just missing a few courses needed for graduation. Another stated goal was to allow online degrees. In turn, CLAS approached my academic unit to develop an online version of Introduction to Physical Geography (GPH 111). In its stead, I coordinated an effort to turn our Introduction to Landform Processes (GPH 211) course into an online lab format that meets the Natural Science Quantitative (SQ) general studies criteria. A pilot version of this course was taught in the Fall of 2008 and a 140-enrollment version is being taught currently in the Fall of 2009. This effort absorbed (and continues to take) a tremendous amount of time rethinking every aspect of instruction, essentially turning the traditional SQ model upside down in order to maximize active learning of SQ criteria.

Development of an entirely Online Masters Degree in CLAS for Teachers – My outreach service to the K-12 teachers of Arizona, as a cocoordinator of the Arizona Geographic Alliance (<u>http://alliance.la.asu.edu/azga/</u>), led me to the realization that a Masters degree would benefit Arizona's geography teachers. Surveys revealed a strong preference for an online format, whereby professor-developed courses in geography content could be graded and mentored in coordination with retired master teachers. This is a program now run during Summer and Winter Sessions in order to best match the schedules of practicing teachers.

This model, approved by ABOR, is to create a cycle of professional development. Stage 1 is pre-service teachers learning about how to teach geography. This first stage is implemented through a new course model for the training of future geography teachers described below. Stage 2 is where new teachers join the Arizona Geographic Alliance and gain more experience. Stage 3 is where teachers obtain their Master of Advanced Study in Geographic Education (MASGE), CLAS degree with 2 courses taught by collaborators in ASUs Colleges of Education. Stage 4 is where alumni of this program go on to be Faculty Associates who grade assignments in the courses and mentor new teachers through this professional growth. As the program's director, I continue to refine content and aid Faculty Associates. I coordinated the development of this program with many

Ronald Dorn Curriculum Vitae

colleagues. A paper, written with the first associate director of the MASGE that describes the degree in greater detail, can be viewed at this web address: <u>http://alliance.la.asu.edu/dorn/MASGE_CalifGeog_08.pdf.</u>

Learning Outcomes Assessment Coordinator – I volunteer as the "go to" individual in the writing and implementation of the learning outcome plans in my school. These assessment plans are required by ASUs Office of University Evaluation.

Development of New Course Model for Training Pre-service Instruction in the Teaching of Geography – I developed and continue to improve GCU 414 (Teaching Geography Standards) as an online course to assist in the preparation of K-12 pre-service teachers. This "Geography Methods" course is unique in its online format, its use of an extensive collection of best practices videos of master teachers explaining how they teach, and its connecting the realities of classroom instruction with pedagogical theory learned in classes in ASUs colleges of education. The course was designed in way that it could be "turned over" to Faculty Associates (practicing or retired teachers), who have been the formal instructors of record starting in the Fall of 2006. The course continues in this fiscal climate, because instruction now occurs during summer sessions.

Coordinator of GPH 111 Labs – Introduction to Physical Geography (GPH 111) is one of the largest enrollment courses in my academic unit, because it fulfills the SQ Natural Laboratory Science requirement. I volunteer, without the normal course load reduction applied in many academic units, as the individual who works with the teaching assistants to monitor and improve the laboratory experiences of our students.

Notable Student Mentoring – My greatest satisfaction comes from mentoring students. This mentoring occurs in three contexts.

First, I love helping undergraduates grow as scholars through the research process, taking them from freshmen to published authors. I particularly enjoy working with brilliant students who, for one reason or another, fell through the cracks in high school and question their own ability for academic success. Space restrictions prevent a full listing of all undergraduates mentored. The latest published honors students' paper, first authored by Honors alumni Richard Stumpf II, can be seen here: <u>http://alliance.la.asu.edu/dorn/StumpfLearningVirtually2008.pdf</u>.

Second, I mentor graduate students in geography, most commonly Ph.D. students who are seeking employment as a college teacher. It is a point of great pride for me that every single Ph.D. student has obtained academic employment at their preferred level. These graduates and their first positions are listed below

Third, I am currently mentor over 30 teachers seeking a graduate degree in geographic education in the program described above. Rather than requiring a thesis, the capstone project requires that teachers embrace the scholarly literature in geography and link that literature to scholarly pedagogy. As I write, I am working with the second and third cohorts Master of Advanced Study in Geographic Education students on their applied projects.

Student	Title	Year, Degree	First Appointment After Degree
Peter Goodwin	Geomorphic interpretation of digital SPOT imagery;	1988, M.A. Thesis Texas Tech University	Chevron Overseas Remote Sensing Unit, San Francisco

Theses and Dissertations Supervised or Co-Supervised

alluvial fan, Death Valley, California		
Pedogenesis and geomorphology of Hanaupah Canyon alluvial fan, Death Valley, California	1989, M.A Thesis Texas Tech University	Ph.D. Student, Texas Tech University
Quartz decrystallization in glacial tills, eastern Sierra Nevada, California	1990, M.A. Thesis, Arizona State University	Ph.D. Student at Arizona State University
Importance of environment on basalt weathering, Hawaii	1992, M.A. Thesis Arizona State University	Ph.D. Student at Arizona State University
Weathering- constrained erosion of sandstone at the Roman Theather, Petra Jordan	1993, Ph.D. Dissertation, Arizona State University	Assistant Professor at University of Hawaii at Hilo
A weathering boundary layer model to interpret spatial variation in quartz weathering	1994, Ph.D. Dissertation, Arizona State University	Assistant Professor Montclair State University
Visual microlamina-tions in rock varnish: a new paleoenviron- mental and geomor-phic tool	1994, Ph.D. Dissertation, Arizona State University	Postdoctoral Fellow at Lamont-Doherty Earth Observatory, Columbia University
	 alluvial fan, Death Valley, California Pedogenesis and geomorphology of Hanaupah Canyon alluvial fan, Death Valley, California Quartz decrystallization in glacial tills, eastern Sierra Nevada, California Importance of environment on basalt weathering, Hawaii Weathering- constrained erosion of sandstone at the Roman Theather, Petra Jordan A weathering boundary layer model to interpret spatial variation in quartz weathering Visual microlamina-tions in rock varnish: a new paleoenviron- mental and geomor-phic tool 	alluvial fan, Death Valley, CaliforniaPedogenesis and geomorphology of Hanaupah Canyon alluvial fan, Death Valley, California1989, M.A Thesis Texas Tech UniversityQuartz decrystallization in glacial tills, eastern Sierra Nevada, California1990, M.A. Thesis, Arizona State UniversityImportance of environment on basalt weathering, Hawaii1992, M.A. Thesis Arizona State UniversityWeathering- constrained erosion of sandstone at the Roman Theather, Petra Jordan1993, Ph.D. Dissertation, Arizona State UniversityA weathering boundary layer model to interpret spatial variation in quartz weathering1994, Ph.D. Dissertation, Arizona State UniversityVisual microlamina-tions in rock varnish: a new paleoenviron- mental and geomor-phic tool1994, Ph.D. Dissertation, Arizona State University

Molly Pohl	Radiocarbon dating in drylands	1995, M.A. Thesis, Arizona State University	NSF Graduate Fellow, Ph.D. Student at Arizona State University
Steve Gordon	Assessing the effects of temperature on plagioclase weathering, Iztaccihuatl, Mexico	1996, M.A. Thesis, Arizona State University	Ph.D. Student at Arizona State University
Donald Friend	Evolution of desert colluvial boulder fields, eastern California	1997, Ph.D. Dissertation, Arizona State University	Assistant Professor, Mankato State University (Now Minnesota State University)
Steve Gordon	An analysis of volcanic glass weathering, El Malpais National Monument, New Mexico, USA	1999, Ph.D. Dissertation, Arizona State University	Assistant Professor, United States Air Force Academy, Colorado Springs
Niccole Cerveny	Relationships between internal fractures and surface microtopography of quartz grains	2000, M.A. Thesis, Arizona State University	Instructor, Scottsdale Community College
Brandon Vogt	Weathering of a tombstone sphere, Tempe, Arizona	2000, M.A. Thesis, Arizona State University	Ph.D. Student Arizona State University
Michael Henze	Sediment yield on Spook Hill Pediment, Arizona	2000, M.A. Thesis, Arizona State University	Consultant, J.E. Fuller
Lorenzo	Glacial	2000, Ph.D.	Research

Vazquez Selem	Chronology of Iztaccihuatl Volcano, Central Mexico. A Record of Environmental Change on the Border of the Tropics	Dissertation, Arizona State University	Professor, UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO, Mexico City
Mike Applegarth	Interpretation of pediment form using geographic information technology and field data	2001. Ph.D. Dissertation, Arizona State University	Assistant Professor, Shippinsburg State University
Evan Palmer	Feasibility and implications of a rock coating catena: Analysis of a desert hillslope	2002, M.A. Thesis, Arizona State University	United States Air Force
Kathryn Anne Gross	Analysis of lateral channel stability for a portion of New River, Arizona, Between 1964- 2000	2002, M.A. Thesis, Arizona State University	Hydrologist, Maricopa County Flood Control District
Daniel A. Gilewitch	Military Geography: The Interaction of Desert Geomorphology and Military Operations	2003, Ph.D. Dissertation, Arizona State University	Assistant Professor, United States Army Military Academy, West Point
Kevin A. Green	Debris slope/pediment	2003, M.A. Thesis, Arizona	Ph.D. Student, University of

	adjustment to hydraulic processes through analyses of particle size-slope relations in different lithologies	State University	Oregon
Rebecca S. Beard	Stream channel change in response to cattle exclosures in semi-arid riparian ecosystems	2003, M.A. Thesis, Arizona State University	Research Assistant, Ecuadorian Andes Land Use Change Project, University of Texas, Austin
Kathleen M. Bergmann	Urban impacts on Rillito Creek	2004, M.A. Thesis, Arizona State University	Army Corp of Engineers
John C. Douglass	Criterion approach to transverse drainages	2005, Ph.D. Dissertation, Arizona State University	Full-time instructor, Paradise Valley Community College, Paradise Valley, Arizona
Susan Johnson	Combining geography instruction with reading: Exploring the interplay in 3rd and 5th grade classrooms	2005, M.A. Thesis, Arizona State University	Elementary School Teacher, Virginia
Niccole Villa Cerveny	A weathering- based perspective on rock art conservation	2005, Ph.D. Dissertation, Arizona State University	Full-time Instructor, Mesa Community College
Wendy Bigler	Historical biocomplexity in irrigation	2007, Ph.D. Dissertation,	Assistant Professor,

	agriculture: The Akimel O'Odham (Pima) and the Gila River, Arizona	Arizona State University	Southern Illinois University
Douglas Frink	Explorations into a dynamic process-oriented soil science	2007, Ph.D. Dissertation, Arizona State University	Visiting Professor, Valdosta State University
Casey Allen	Using rock art as an alternative science pedagogy	2008, Ph.D. Dissertation, Arizona State University	Assistant Professor, University of Colorado-Denver
Elyssa Gutbrod	Implementing Rapid Assessment of the Trail Environments of Arid Regions: Indicator Development and Implementation Scenarios	2013, Ph.D. Dissertation, Arizona State University	GIS Professional Employment (Titan Mapping Solutions), Calgary, Canada
Emma Harrison	Introducing a terrestrial carbon pool in desert mountains	2013, M.A. Thesis, Arizona State University	Visiting Instructor, University of Wyoming
Phil Larson	Conceptual field- based models to elucidate the distribution and nature of desert fluvial terraces: Case studies within the Sonoran Desert, Basin and Range, Arizona.	2013, Ph.D. Dissertation, Arizona State University	Assistant Professor, Minnesota State at Mankato
R. Evan Palmer	Analysis of the Spatial Thinking	2014, Ph.D. Dissertation,	Assistant Professor, Air

of College	Arizona State	Force Academy,
Students in	University	Colorado Springs
Traditional and		
Web-facilitated		
Introductory		
Geography		
Courses using		
Aerial		
Photography and		
Geo-visualization		
Technology		

Manuscript Reviewer

American Chemical Society, Symposium Volume (Archaeological Chemistry) American Indian Rock Art Annals of the Association of American Geographers Earth Surface Processes and Landforms Geoarchaeology: An International Journal Geological Society of America Bulletin Geological Society of America Centennial Volume on Geomorphology Geology Geomicrobiology Journal <u>Geomorphology</u> Israel Journal of Earth Science Journal of Archaeological Science Journal of Geology Landscape Ecology Mountain Research and Development National Geographic Research Nature (London) Palaeogeography, Palaeoclimatology, Palaeoecology Physical Geography Plains Anthropologist Professional Geographer Quaternary Research Radiocarbon Rock Art Research Royal Geological Society London Science Wiley, Physical Geography texts http://www.public.asu.edu/~atrid/dorncv.html

Zeitschrift für Geomorphologie Scanning Microscopy International

Proposal Reviewer

American Institute of Biological Sciences American Chemical Society **Cotrell Science Advancement Program** International Science Foundation Lawrence Livermore Laboratory-University of California Program Los Alamos-Institute of Geophysics and Planetary Physics Program NASA National Geographic Society National Oceanic and Atmospheric Administration National Park Service National Center Preservation Technology and Training Program National Sciences and Engineering Research Council of Canada National Science Foundation Programs: Anthropology Archaeology Climate Dynamics Ecological Studies Geography Geology Instrumentation Polar Programs EPSCoRm Small Business Innovation Research NOAA U.S. Geological Survey

Membership in Professional Organizations

American Quaternary Association American Rock Art Research Association Arizona-Nevada Academy of Sciences Association of American Geographers Association of Pacific Coast Geographers Geological Society of America National Council for Geographic Education

Awards

2012 President's Medal of Social Embeddedness for the Teaching Foundations Project [led by Laura B. Turchi, shared with many others]
2010 Geography Excellence in Media Award from the National Council for Geographic Education. [Hinde, E.R., Jimenez-Silva, M., Ekiss, G.O., Dorn, R.I., Osborn Popp, S.E., Managing Editors, (2009, Version 5.4). GeoLiteracy ELL Adaptations: Integrating Geography, Reading and Writing. Tempe, AZ: Arizona Geographic Alliance.]
Distinguished Mentor Award from the National Council for Geographic Education, 2009.
College of Liberal Arts and Science's Innovation in Teaching Award, Arizona State University, 2009.
Enhancement of Geographic Literacy Cram Award, 2005 for GeoMath, National Council for Social Studies (with G.B. Ekiss and E. Hinde)

Ronald Dorn Curriculum Vitae

Professor of the Year Special Recognition, 2005, Arizona State University Parents Association Enhancement of Geographic Literacy Cram Award, 2003 for GeoLiteracy, National Council for Social Studies (with G.B. Ekiss and E. Hinde) Guggenheim Fellowship, 1996-1997 Wiley Award, Presented for Excellence in Geomorphological Research, British Geomorphological Research Group, 1993 (with Roger LeB. Hooke) Castleton Award, Presented for Excellence in Rock Art Research, American Rock Art Research Association, 1992 G.K. Gilbert Award, Presented for Excellence in Geomorphological Research, Geomorphology Specialty Group of the Assoc. American Geographers, 1988 New Professor Excellence in Teaching Award, Texas Tech University, 1988 Presidential Young Investigator Award of the National Science Foundation, 1987 New Faculty Award, Texas Tech University, 1987 Kirk Bryan Award of the Geological Society of America (with T.M. Oberlander), For Excellence in Geomorphological Research, 1986

Honors

Fellow of the Arizona-Nevada Academy of Sciences, 1996 Fellow of the Geological Society of America, 1992 Sigma Xi, 1986 National Science Foundation Graduate Fellowship, 1980-1984 Phi Beta Kappa, 1979