

Warren Wilson Academic Departments: 17

Art; Biology; Chemistry/Physics; Creative Writing; Education; English; Environmental Studies; Global Studies; History/Political Science/Economics/Business; Math/Computer Science; Music; Outdoor Leadership; Philosophy/Religion; Psychology; Social Work; Sociology/Anthropology; Theatre

Sustainability research is self-reported by faculty who received the STARS faculty report template and the list was reviewed by Division Chairs who completed the survey in consultation with faculty who had not responded.

Warren Wilson Faculty Sustainability Research

Anthropology/Sociology: Christy Carwile, PhD

Research interests include water religions in West Africa and the diaspora, gender, power and the politics of reproduction (Nigeria); ethnochoreography; as an example, "From Salsa to Salzonto: Rhythmic Identities and Inventive Dance Traditions in Ghana" The Oxford Handbook of Dance and Ethnicity (June 2016)

Anthropology/Sociology: Ben Feinberg, PhD

Research interests include the anthropology of tourism and social change/social inequality, and indigenous identity and representations; current projects examine adventure and spiritual tourism in southern Mexico and their relationship with social and environmental crises; as an example, (forthcoming) Are We (Still) the World? Study Abroad, Service Learning, Social Media, and the Weirdness of an Incomplete Cosmopolitanism. In Shepherd, Robert, ed. *Rethinking Cosmopolitanism: Tourism and Tourists in a Post-Hegelian Age*. Lanham, MD: Lexington Books.

Anthropology/Sociology: Siti Kusijarti, PhD

Research in gender, climate change, disaster and community resilience; current research and work mainly focus on the interconnection of climate change and disaster with gendered aspects of vulnerability, resilience, risk scape, disaster capitalism and corrosive community; as an example, 2014 -2016 : Gender justice and climate change. Sabbatical research funded by Warren Wilson College, Appalachian College Association and International Social Science Council; 2014-2015 : "Building Networks for Gender Justice and Sustainability in REDD/REDD+ Climate Change Projects" (Co-PI). Funded by International Social Science Council (seed grant). 2013-2014 : Document Anal

Art: Lara Nyugen, MFA

Research in public art and social change; as an example, 2016 Interlude, Presented by Black Mountain College Museum & Art Center and the Media Arts Project, Folding Prince Charming, Durational Performance & Installation at the Center for Craft, Creativity & Design, Asheville, NC; April 2016 Being Her Now: Feminine Identity in the 21st Century, Juried Group Exhibition, Salisbury University Art Galleries, Salisbury, MD; March 2015 Generations: Forty Hues Between Black & White, Juried Group Exhibition, Orange County Center for Contemporary Art, Jurors Dinh Q. Le & Stephen Anderston, Santa Ana CA, December

Biology: Paul Bartels, PhD

Research in biodiversity science: basic aspects of this field such as estimating and monitoring biodiversity and its implications ; as an example, Kaczmarek, L., Bartels, P.J., Roszkowska, M. & Nelson, D.R. (2015). The zoogeography of marine tardigrada. *Zootaxa* 4037:1-189; Bartels, P.J., Apodaca, J.J., Mora, C., & Nelson, D.R. (2016). A global biodiversity estimate of a little known taxon: Phylum Tardigrada. *Zoological Journal of the Linnean Society*. 178:730- 736

Biology: Amy Boyd, PhD

Research includes floristic studies that contribute to conservation efforts as well as a long-term population study of an endangered cactus which involves impacts from things like border issues, mining, grazing, and wildlife management policy; as an example, McIntosh, M. E., A. E. Boyd, A. E. Arnold, and L. A. McDade. Continuing decline in a local population of the endangered Nichol's Turk's Head Cactus, *Echinocactus horzonthalonius* var. *nicholii*. Manuscript submitted to *Plant Species Biology* for review.

Biology: Liesl Erb, PhD

Research topics include ecology and evolutionary biology, conservation biology, wildlife ecology; as an example, 2011 Erb, L.P., R. Guralnick, C. Ray. (2011) On the generality of a climate-mediated shift in the distribution of the American pika (*Ochotona princeps*). *Ecology* 92: 1730-1735. (Peer reviewed); Guralnick, R.P., L. Erb, C. Ray. (2011) Mammalian distributional responses to climatic changes: A review and research prospectus; In J. Ballant and E. Beever (Eds.), *Ecological Consequences of Climate Change: Mechanisms, Conservation, and Management*. Taylor and Francis, Boca Raton, FL. (Peer reviewed)

Additional research into citizen-driven wildlife science: engaging local communities in the collection of scientific data on rare mammals, specifically on bats and spotted skunks. Both taxa are declining due to human-driven changes including habitat loss, climate change, and disease

Biology: Alisa Hove, PhD

Research focuses on identifying the ecological conditions that favor the evolution of different reproductive strategies, studying evolutionary responses to environmental stress, and investigating the conservation genetics of wild plant populations; as an example, 1. Haggerty, B.P., A.A. Hove, S.J. Mazer, and L.A. Barnett. 2013. Flight of the Pollinators: Plant Phenology from a Pollinator's Perspective in: *Citizen science: 15 lessons that bring biology to life*; National Science Teachers Association (NSTA) Press. 2. de Beurs, K.M., R.B. Cook, S.J. Mazer, B.P. Haggerty, A.A. Hove, G.M. Henebry, E. Beaubien, L.A. Barnett, C.L. Thomas, and B.R. Pohlrad. 2013. Phenology in higher education: ground-based and spatial analysis tools in: *Phenology: An Integrative Environmental Science*. Second Edition. M. Schwartz, editor. Springer.

Biology/Environmental Studies: Olya Milenkaya, PhD

Research includes the following: conservation of native salamanders against the emerging threat of a non-native, invasive, fungal pathogen (Bsal). This lethal pathogen was recently discovered in Europe and poses a major threat to North American salamanders based on laboratory trials; research on the behavioral ecology of native cavity-nesting birds facing the conservation threat of an effective, invasive competitor to understand how native species may adapt and learn (or not) to deal effectively with increasingly novel communities caused by anthropogenic activities (e.g., habitat modification, invasive species, climate change, etc.) ; as an example, 2014 Catlin DH, Milenkaya O, Hunt KL, Friederich MJ, JD Fraser. Can river management improve the piping plover's long-term survival on the Missouri River? *Biological Conservation* 180: 196–205; 2019 Crowell

A*, McKay JL, Eden K*, O Milenkaya. Native population is maladapted in competing with invasive species, but intraspecific variation suggests changing behaviour. Oral presentation, Georgia Academy of Sciences,

Chemistry and Physics: Kim Borges, PhD

Research interests include aquatic microbiology and public health; as an example, Borges, K., Tracking microbial contamination of a river as a service-learning project 2012 American Society for Microbiology Council on Undergraduate Education Annual Meeting San Francisco, CA.; Harwood, V., Staley, C., Badgely, B., Borges, K., and Korajkic, A. (2014) Microbial source tracking markers for detection of fecal contamination in environmental waters: relationships to pathogens and human health outcomes, invited review for FEMS Microbiol. Rev.38, 1-40.

Chemistry and Physics: Yuemei Zhang, PhD

Research interests include renewable energy (solar cell, fuel cell, hydrogen evolution, thermoelectrics) focused on applying computational chemistry techniques to advance the understanding and design of functional materials used in the windmill, solar cell, fuel cell, hydrogen generation, waste heat recovery, and digital devices. I collaborate closely with chemists, physicists and material scientists who are performing synthesis, characterization and device fabrication.

Chemistry and Physics: Langdon Martin, PhD

An example of a current research project: Research into the reduction of agricultural methane with spent yeast from craft breweries to better understand the potential of spent craft yeast, a co-product of the brewing industry, as an additive to livestock feed to reduce methane production

Chemistry and Physics: David Coffey, PhD

Continued research at National Renewable Energy Laboratory; as an example, Cox, P.A.; Glaz, M.S.; Harrison, J.S.; Peurifoy, S.R.; Coffey, D.C.; Ginger, D.S. "Imaging Charge Transfer State Excitations in Polymer/Fullerene Solar Cells with Time-Resolved Electrostatic Force Microscopy," The Journal of Physical Chemistry Letters, 8(15), 2852-2858 (2015)

Creative Writing: Gary Hawkins, PhD

Sustainability research interests infused in poetry writing surrounding race, class, sexuality, ability, and gender; as an example, "The Irrational Element in the Undergraduate Poetry Workshop: Beyond Craft." Teaching Creative Writing in Higher Education. Ed. Heather Beck. London: Palgrave Macmillan, 2012. "Clerk in a Post-Religious Age: Reading Lurie's Remnant Romantic Temperament in Disgrace." Encountering Disgrace: Reading and Teaching Coetzee's Novel. Ed. Bill McDonald. New York: Camden House, 2009

Creative Writing: Rachel Haley Himmelheber, PhD

Sustainability research interests in gender, race, and ability equity in publishing; research interests in fiction writing surrounding race, class, sexuality, ability, and gender; as an example, "From The Bottom To The Top: Building, Rebuilding and Embracing an Inclusive Creative Writing Program," Associated Writers and Writing Programs Annual Conference, Washington, DC, February 2017; "Confronting Privilege as a Potential Barrier to Empathy in a Fiction Writing Process," Claflin University Conference on English and Language Arts Pedagogy, Orangeburg, South Carolina, October 2014.

Creative Writing: Julie Wilson, PhD

Research and publication on role of higher education inside prisons to promote equity and social justice: Reitz-Krueger, C. L. , McConnell, M. E., & Wilson, J. (in press)

English/Carol Howard, PhD

Research on women's writings on gardens, landscape, nature, and the environment, as well as on women literary artists who use gardens and natural settings toward social or aesthetic transformation; monthly "Literary Gardener" magazine columns include articles on environmentalists and nature writers such as Wendell Berry, Henry David Thoreau, and Annie Dillard

Environmental Studies: Kirk Adams, PhD

Current research project: Research in implementing wearable data collection devices on Warren Wilson's cattle herd to determine if commercially available products result in a positive economic return in a sustainable farm operation such as the Warren Wilson farm

Environmental Studies: Mark Brenner, PhD

Research interests include nutrient cycling in ecosystems and ecological approaches to waste treatment; as an example, in collaboration with his class, they researched and made a recent discovery of a toxic algae bloom in a local lake that led to its closing

Environmental Studies: Dave Ellum, PhD

Recent Publications: Assessment of nontimber forest products in the United States under changing conditions. Chamberlain, J., Davis, J., Duguid, M., Ellum, D., Kruger, S., Marcano-Vega, H., McCoy, J., Prisley, S., Zasada, J. Non-Timber Forest Products and Production. Chapter in: Chamberlain, James L.; Emery, Marla R.; Patel-Weynand, Toral. 2018. Assessment of nontimber forest products in the United States under changing conditions. General Technical Report SRS-GTR-232. USDA Forest Service, Southern Sustainability Research Station. 268p. <https://doi.org/10.2737/SRS-GTR-2322018>

Environmental Studies: Mallory McDuff, PhD

Published books: *Natural Saints: How People of Faith are Working to Save God's Earth*; *Sacred Acts: How Churches are Working to Protect Earth's Climate*; *Conservation Education and Outreach Techniques*. Books under contract: *Our Last Best Act: My Search For Natural Burials, Home Funerals, Pine Caskets, And A Good Death To Heal The Earth* ; *Climate Stories For Courageous Girls: How 50 Women Are Fighting For Their Fight To A Healthy Life*

Environmental Studies: Mary Bulan, PhD

Research interests include connections between agriculture, environment, and society, and in the development of ecologically and economically sound food production systems; as an example, Saunders Bulan, M.T., Posner, J.L., Peng, D., Emshwiller, E., Wang, X., Li, J., Stoltenberg, D., and Stoecker, R. (2017). Old Crop, New Society: Persistence and Change of Tartary Buckwheat Farming in Yunnan, China. *Hum Ecol* 45, 37–51; Balda, J.B., Saunders Bulan, M.T., and Desmarais, W. (2017). Igniting Leadership: Ritual and Interaction within the AI Summit. In *Developing Leaders for Positive Organizing*, B. Vogel, R. Koonce, and P. Robinson, eds. (Emerald Group Publishing) (forthcoming); Saunders Bulan M, Wu J, Emshwiller E, Berres ME, Posner JL, Peng

D, et al. Social and environmental influences on tartary buckwheat (*Fagopyrum tataricum* Gaertn.) varietal diversity in Yunnan, China. *Genet Resour Crop Evol.* 2015 Oct 24;1–13

Environmental Studies: Amy Knisley, PhD

Research interests include community-based engagement with hazardous waste remediation; environmental justice, particularly issues impacting people of color in eastern NC; the law of water rights, especially in the context of the Rocky Mountain west; as an example, “Living With It: One Community’s Superfund Site” (submitted) *Assn Envntl Studies and Sciences*, Tucson 6/17; “‘Chemicals Compatible with Life’: Science, Ethics...” *Intl Soc for Envntl Ethics at APA Western*, San Francisco 4/16

Education: Annie Jonas, Ed.D.

Research interests include civic identity curriculum development and experiential education; as an example, research and data collection on the development of Civic Identity in First Year Students: Fall 2016 (research writing continued during sabbatical in Spring 2017.); Invited Presenter, High Impact Practices, Far Reaching Ripples: DEAL Model and Service Learning for First Year Students, SC Campus Compact Summit, Columbia, SC: April 2015.

Global Studies: David Abernathy, PhD

Research Interests include environment/society relations; as an example, “Collaborative Asset Mapping for Regional Food Security: ODK & Google Fusion Tables.” Southeastern Region of the Association of American Geographers Meeting, Asheville, NC, 2012; “Building the ‘Bridge of Life,’ or burning it? The construction and constriction of biodiversity on the isthmus of Panama.” Colloquium Series presentation for the Department of Global Studies, Warren Wilson College, 2011.

Global Studies: Christine Swoap, PhD

Research Interests are incorporating service-learning and community engagement in the foreign language classroom

Global Studies: Jeff Keith, PhD

Research examples: a media collective that uses film, music, and theater to challenge stereotypes about Appalachia; the stories of race and oppression behind a folk song, *Swannanoa Tunnel*, that describes the work of African-American prisoners to dig railroad tunnels into the mountains surrounding Asheville; the World: Society for Historians of American Foreign Relations Conference, Arlington, VA, June 2013. “The Legacies of Appalachian Industrialization: Social, Environmental, and Cultural Transformations in an American Region,” US Embassy’s American Center, Beijing, PRC, June 2012.

History, Politics, Economics, Business: Erik Shutz, PhD

Research: Revision work now on book, *Economy and Class*—a social justice study on the economics of that subject

History, Politics, Economics, Business: Christine Bricker, PhD

Research interests include political culture and public policy, especially how political culture influences adoption of state laws, state policy adoptions and participatory budgeting; as an example, under review: "The Ties that Bind Us: The Influence of Public Opinion on Policy Diffusion" (with Scott LaCombe)

History, Politics, Economics, Business: Daleah Goodwin, PhD

Research on Black women's organizational activism; as an example, *Determined to Rise* shapes a broader understanding of the woman suffrage movement throughout the turn of the century, acknowledging not only the achievements resulting in the ratification of the 19th Amendment, but also its profound limitations. The topic for the inaugural event hosted at Wesleyan is "Women's Education Reform in the Progressive Era, 1890-1920." Panelists for the event include Dr. Jenny Barker-Devine, associate professor of history, Illinois College; Dr. Vivian Lawton Fowler, president, Wesleyan College; and Dr. Daleah Goodwin, professor of history, Warren Wilson College.

History, Politics, Economics, Business: Alfredo Rosete, PhD

Research on policy implications of the Harrod-Domar sustainability model; as an example, Rosete, Alfredo R.M. Property, Access and Power: Agribusiness Venture Agreements in the Philippines. (<http://www.umass.edu/economics/publications/2016-09.pdf>)

Mathematics, Holly Rosson, PhD

Research interests include mathematical modeling and data science, particularly with applications to the environment and human health; as an example, Research Experiences for Undergraduate Faculty (REUF) on the Mathematics of Data, funded participant. Duke University, Durham, NC; Harvey Mudd Mathematics Conference on the Mathematics of Environmental Sustainability and Green Technology, participant, Claremont, CA 2010

Music: Kevin Kehrberg, PhD

Recent research: the stories of race and oppression behind a folk song, *Swannanoa Tunnel*, that describes the work of African-American prisoners to dig railroad tunnels into the mountains surrounding Asheville- 2016 "Convicts, Cave-Ins, and a Song: The Musical Travesty of the Swannanoa Tunnel in Southern Appalachia," at the Society for American Music 42nd Annual Conference, Boston, MA 2015; "Landscape, Song, and the Tragic Story of the Swannanoa Tunnel in Western North Carolina," at the Appalachian Studies Association 38th Annual Conference, Johnson City, TN 2013; "'One Harmonious Effort to Unite Everyone': Shape-Note Gospel Singing and Community in Central Arkansas, 1920-1950," at the Society for Ethnomusicology 58th Annual Meeting, Indianapolis, IN

Outdoor Leadership: Jill Overholt, PhD

Research on the relationship of natural environments to human health; as an example, *Mitten, D., Overholt, J., Haynes, F., D'Amore, C. & Ady, J. (2016). Hiking: A low-cost, accessible intervention to promote health benefits. *American Journal of Lifestyle Medicine*, Published online before print, July 9, 2016; <http://ajl.sagepub.com/content/early/2016/07/08/1559827616658229.abstract> *Overholt, J. & Ewert, A. (2015). Gender matters: Exploring the process of developing resilience through outdoor adventure. *Journal of Experiential Education*, 38(1), 41-55.

Psychology: Christina Reitz-Krueger, PhD

Research and publication on role of higher education inside prisons to promote equity and social justice: Reitz-Krueger, C. L. , McConnell, M. E., & Wilson, J. (in press). The role of higher education in prison settings. In S. Castaños-Cervantes & J. Valtierra Zamudio (Eds.), *Applied Sustainability Research with Vulnerable Populations*. London: Taylor & Francis

Psychology: Martha Knight Oakley, PhD

Research interests include environmental attitudes, experience, and behavior; as an example, Knight-Oakley, M. L. (2008, November). Influencing attitudes, removing barriers, and promoting behavior change to reduce greenhouse gas emissions.

Social Work: Lucy Lawrence, PhD

Book chapter contribution to *The Intersection of Ecology, Community, Climate Change, and Environmental Justice*, Springer Publishing, forthcoming 2020; research on ethical responsibilities of social workers to environmental justice (Publication by CSWE in Spring 2020); Global Education Commission. Council on Social Work Education. (2014 – present). Selected for three-year term (2014 – 2017) to serve on commission with charge to further the global/international agenda of CSWE by providing leadership on global social work education and research; Butterfield, A. & Cohen C. (2016). Six Promising Principles: Practicing as a Social Work Educator in International Collaboration. CSWE Publications (in press). Collaborated on chapter: Building Sustainability from the start: Developing Local Leadership.

Social Work: Sara Himmelheber, PhD

Research interests include community food security and Intersections between the social and natural environments; as an example, Himmelheber, S.A., Zhu, L. & Early, K. (March, 2015). Creating Healthier Food Pantries: First Steps in a Community-Advocacy Effort. Paper presented at the Annual Conference of Social Work Baccalaureate Program Directors (BPD). Zhu, L., Himmelheber, S.A., & Early, K. (October, 2014). Understanding Public Food Donations: A First Step in Improving Healthy Food Pantry Options. Poster presented at the Annual Conference of the Academy of Nutrition and Dietetics.

Philosophy and Religion: Rima Vesely-Flad, PhD

Research in the religious and philosophical origins of the construct of race and anti-racist social movements against disproportionate policing and imprisonment; *Racial Purity and Dangerous Bodies: Moral Pollution, Black Lives, and the Struggle for Justice* was published in June 2017.

Philosophy and Religion : Matt Hoffman, M.Div.

Research includes interfaith organizing and community activism; targeting the connection between food, religion, community building; and the practice of justice; as an example, *“You’ve got to get your hands in the dirt!” And other lessons I’ve learned from teaching Interfaith Engagement*. State of Formation. 2019.

Theater: Candace Taylor, MFA

Sustainability research interests in theater surrounding race, class, sexuality, ability, and gender; selects productions to direct that examine these issues