

CHARLES REDD CENTER FOR WESTERN STUDIES



2017
ANNUAL REPORT

954 Spencer W. Kimball Tower
Brigham Young University
Provo, UT 84602
801-422-4048
reddcenter.byu.edu

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OUR MISSION

The mission of the Charles Redd Center for Western Studies is to promote the study of the Intermountain West by sponsoring research, publication, teaching, and public programs in a variety of academic disciplines including history, geography, sociology, anthropology, politics, economics, literature, art, folklore, range science, forestry, and popular culture.

PERSONNEL

Faculty: Brian Q. Cannon, Director; Brenden W. Rensink, Assistant Director

Staff: Amy Carlin, Office Specialist

Student Employees and Interns for 2017: Addison Blair, Dani Carmack, Joshua Franzen, Aubrey Glazier, Gabriel Hendrickson, Kristen Kitchen, Tanner Tolman

Current Board Members: Thomas G. Alexander, James B. Allen, Val J. Anderson, Adam Brown, Mark Brunson, Jay Buckley, John E. Butler, Dennis Cutchins, Jessie Embry, Ed Geary, Holly George, P. Jane Hafen, Jason B. Jones, Chester Mitchell, John M. Murphy, Jeff Nichols, Paul Starrs, Carol Ward

Lemuel Hardison Redd, Jr. Professor of Western American History: Ignacio Garcia

Lemuel Hardison Redd, Jr. Professor of Western American History Emeriti: Thomas G. Alexander, James B. Allen

Visiting Fellows in 2017: Tracy L. Brown

DIRECTOR'S REPORT: BRIAN Q. CANNON

In 2017 the Charles Redd Center continued its tradition of underwriting the scholarship of professors, students and independent scholars; funding prizes for articles and State History Day projects; supporting museum exhibits; and helping to fund other public programs in western studies. The Center awarded over \$102,000 in its annual springtime awards competition. Additional funds were awarded later in the year including a Karl and Mollie Butler Young Scholar award for Michelle Kesler of the School of Music and a visiting scholar award that went to Tracy Brown (Central Michigan University) who was in residence at the Center during the Fall Semester.

I'm very pleased that we were able to contribute to western studies at BYU by sponsoring numerous guest lectures, many of which were also made available via live feed to viewers elsewhere. In the Winter Semester Jerry and Donna Spangler delivered the Clarence Dixon Taylor Lecture and David Wrobel (University of Oklahoma) delivered the Annaley Naegle Redd Lecture. Additionally, the Redd Center co-sponsored the Folklore Archive Founder's Day Lecture by Elliott Orring. In the Fall Semester Benjamin Madley (UCLA) delivered the William Howard and Hazel Butler Peters Lecture. Additionally the Center hosted lectures by Joseph Taylor (Simon Fraser University), David Baron (NPR), Larry Cebula (Eastern Washington University) and Pamela Perlich (University of Utah). Visiting scholar Tracy Brown gave a research presentation at the Center's luncheon for western studies faculty in November.

We had the good fortune of collaborating with the Utah Humanities Council, the Utah State Historical Society, and the University of Utah in sponsoring conferences and lectures elsewhere in Utah. We also sponsored prizes and events in conjunction with professional organizations including the Western History Association, the Western Literature Association, the Western Political Science Association, Phi Alpha Theta, the Western Museum Association, the Native American Literature Symposium, the Mormon History Association, the Utah State Historical Society, and the Buffalo Bill Historical Association. Additionally we provided support for BYU students to attend the Biennial Conference of Science and Management on the Colorado Plateau and Southwest Region at Northern Arizona University. I am especially pleased to announce that the Center, in collaboration with the History Department at the University of Utah and the State Historical Society, was able to create the Thomas G. Alexander Editorial Fellowship at the Utah Historical Quarterly in recognition of Tom's contributions to the Redd Center and to Utah and western history.

In the fall the Redd Center offered an interdisciplinary lecture series course on Western American Studies, American Studies 392R, taught by Brenden Rensink. Students in the course were treated to research presentations by guest presenters from the life sciences, humanities, arts and social sciences, each of whom had received research support from the Redd Center.

The Center continued to develop its region-wide digital public history venture, Intermountain Histories. Faculty and students in history courses on several campuses as well as Redd Center student interns under Brenden Rensink's supervision contributed to the project. See Brenden's report for updates on this venture.

The Center hosted and sponsored a seminar entitled the Era of Reconstruction in Mormon America in June. Redd Center personnel worked with Clyde Milner (University of New Mexico) to plan and carry out the seminar. The seminar brought scholars together to present and critique drafts of chapters in preparation for publication of an edited scholarly book by the University of Oklahoma Press. Scholars who contributed papers for the seminar were Clyde Milner, Angela Pulley Hudson, Christine Talbot, Patrick Mason, Brent Rogers,

DIRECTOR'S REPORT: BRIAN Q. CANNON

Brett Dowdle, Rachel St. John, Eric Eliason, and Jared Farmer. Elliott West, Anne Hyde, and John Faragher provided formal comments on the papers.

We continued to make progress toward publication of edited volumes arising from previous seminars. In 2017 the University of Utah Press contracted to publish an edited volume of essays that were originally presented at a Redd Center seminar on Mormons and the environment in 2015. Essays that were presented at the Redd Center seminar on Mormons and American Indians in 2016 were revised and edited under the direction of Jane Hafen and Brenden Rensink and were submitted to the University of Utah Press late in 2017.

In June I delivered my presidential address at the annual conference of the Mormon History Association. My paper entitled “‘To Buy Up the Lamanite Children as Fast as They Could’: Indentured Servitude and Its Legacy in Mormon Society” will be published in the April 2018 issue of the *Journal of Mormon History*. In conjunction with the Redd Center seminar in June, Clyde Milner and I worked with each author as they revised their work in preparation for the essays’ publication. We also wrote an editors’ preface and I wrote an interlude essay for the volume entitled “Reckoning with Lost Causes.” The book manuscript, *The Era of Reconstruction in Mormon America*, has been submitted to the University of Oklahoma Press for peer review. My chapter entitled “Ezra Taft Benson and the Family Farm” was reviewed and accepted for publication by the University of Illinois Press in a volume edited by Matthew Harris and entitled *Thunder on the Right: Ezra Taft Benson in Mormonism and Politics*. My chapter “‘Millions of Acres in Our State’: Mormon Agrarianism and the Environmental Limits of Expansion” was accepted for publication by the University of Utah Press in a volume entitled *The Earth Will Appear as the Garden of Eden: Essays on Mormon Environmental History*, edited by Jed Rogers and Matt Godfrey

I continued to serve on the editorial boards of *BYU Studies Quarterly* and the *Utah Historical Quarterly*, and as an associate fellow at the Center for Great Plains Studies. In June I completed my term as president of the Mormon History Association. In the history department I taught History 374 (US, 1890–1945), History 364 (Utah) and History 221 (the second half of the US History survey course).

I am grateful to our board members for their excellent suggestions and their service as judges in our awards competitions. I am also grateful to BYU and the College of Family, Home, and Social Sciences for their support of the Redd Center.

ASSISTANT DIRECTOR'S REPORT: BRENDEN RENSINK

This past year kept us busy at the Redd Center. We successfully continued much of our traditional programming, events, and awards, and even began some new initiatives. Overall, it was a very rewarding year. You can also review Center Director Brian Cannon's Annual Report for items I do not feature below.

Our award cycle was particularly competitive this year. The overall number of applications did not increase, but we found ourselves having to deny funding to a number of very attractive projects. We continue to field applications from a growing number of disciplines and are working to further expand our reach. Applicants this year came from the fields of Anthropology, Art, Art History, Biology, Cinematic Arts, Design, Economics, English, French, Geography, Irish-American Studies, Native American Studies, Philosophy, Plant and Wildlife Science, Religious Studies, Sociology, Theater Studies, and various subfields.

Independent scholars and public programming groups also submitted exciting proposals. As always, we are pleased to be able to fund so many promising works. We also continued to provide awards for the annual Mary Lou Fulton Poster competition at BYU and the Utah State History Day competition.

We hosted a number of speakers on campus in 2017. During the winter semester we welcomed Jerry Spangler (Colorado Plateau Archaeological Alliance) and David Wrobel (Oklahoma). We hosted Benjamin Madley (UCLA), Joseph Taylor (Simon Fraser University), David Baron (University of Colorado at Boulder, NPR), Larry Cebula (Eastern Washington University), and Pamela Perlich (University of Utah) during the fall semester. A number of these were among the best lectures we have had since I arrived here, considering the feedback from students and others who attended. Our audience sizes were good, and a few people tuned in via live stream. We host the videos on our YouTube Channel, and they receive regular views.

In June we hosted another workshop, this time focused on the Era of Reconstruction in Mormon America. Brian Cannon and Clyde Milner organized the workshop, and the participant list included some of the biggest names in Western History. The discussion was spirited and the anthology that will result should make quite an impact in the field. I finished revisions on the anthology from our summer 2016 seminar on Mormons and Indians. Board member P. Jane Hafen and I went through multiple rounds of edits with essay authors, fielded a few new contributions, and submitted the final manuscript to John Alley at the University of Utah Press.

Our Intermountain Histories digital public project is coming along nicely. We did a trial run during Fall Semester 2016, working with professors and students to create content. In 2017 I began the task of uploading stories to the back end of the website, editing them, and publishing them online for the general public. We worked with a growing list of professors from around the Intermountain West and received a large batch of new content at the end of the fall semester. As we uploaded, edited, and published that material, we began something of a "soft launch" of the site. This included new Facebook and Twitter pages for the project, lots of word-of-mouth discussion, and even a small advertisement in the BYU Alumni Magazine. In the fall of 2017 we participated in a panel at the Utah State History Conference where two collaborating professors and myself presented on the project. It was very well received. Another group of professors, again from new universities, joined the project during fall semester 2017. At year's end, we have around one hundred stories live on the site, with an incoming batch of fifty or so new stories to publish over the next few months. With each semester, the breadth of geographic coverage grows and the diversity of content improves. Now that we have content to showcase, we will attempt more of a "hard launch" in 2018.

ASSISTANT DIRECTOR'S REPORT: BRENDEN RENSINK

We began a new internship program in the summer of 2017 in conjunction with the Intermountain Histories project. Interns study public history, then research and write stories for the project. We had one intern in the summer, who has now transitioned to a position as a research and editorial assistant with the project, and one in the fall. This internship gives students valuable experience, published materials under their names, and strong lines on their CVs or résumés for future job opportunities. We will continue this program for the foreseeable future, rotating interns into research and editorial assistant positions as well.

Visit facebook.com/IntermountainHistories or twitter.com/InterMtnHistory for updates when we publish new content, and visit intermountainhistories.org to see the site. You can also download the free mobile app on the iOS or Google Play app stores.

This year I presented research at the Native American and Indigenous Studies Conference in Vancouver, BC; the Western History Association Conference in San Diego; and the aforementioned Utah State History Conference. My last volume with the Joseph Smith Papers, *Documents Vol. 6*, was published in the fall of 2017. A number of book reviews were also published. I also finished *Native but Foreign*, and it will be published in May 2018. You can find information at www.nativebutforeign.org. Work on two future book projects, *Adventuring in the West: From the Deep Past to Ultra Present* and *History, Rephotography and the Passage of Time in the San Rafael Swell*, continued, albeit slowly. I look forward to turning more attention to them in 2018.

As always, after reviewing my activities over the year along with the many things I do at the Center with Brian, I am astounded at what the Center accomplishes. Though Amy, Brian, and I may sometimes feel stretched thin by the Center's many commitments, the results never fail to impress. Forwarding the study and understanding of the region where we live is truly rewarding work.

PLANS FOR 2018

The Center will continue to build content for the Intermountain Histories digital public history project, working with professors and students from around the region. In conjunction with this, the Center will employ BYU students in two capacities: research and editorial assistants to help manage the project, and as interns to learn about public history and create new content.

The Center will offer research and public programming awards this year, including a Visiting Fellow appointment.

The Center will offer a Karl and Mollie Butler Young Scholar Award in Western American Studies.

The Publication Grant program will continue to provide funding to presses that publish scholarly books regarding the Intermountain West.

The Center will continue to assist state history fairs in promoting the work of secondary school students by offering prizes for the best projects and papers related to the American West.

Center personnel will continue publishing books and articles and presenting papers at conferences. Personnel will also attend new conferences to publicize Center programming and awards and extend influence into new fields, disciplines, and communities of scholars.

The Center will continue to sponsor lectures. Three lectures and a panel discussion are scheduled for Winter Semester. Brent Rogers lectured on his book *Unpopular Sovereignty: Utah Territory and the Politics of Antebellum America* on January 17. Dan Flores will deliver the William Howard and Hazel Butler Peters Lecture on February 22 on his book *Coyote America: A Natural and Supernatural History*, Angela Pulley Hudson will deliver the Annaley Naegle Redd Lecture on February 27, and a panel of White Mesa Ute and Navajo residents of San Juan County will discuss issues surrounding the Bears Ears National Monument on April 5. The Center will also host several lectures during the fall semester.

The Center will inaugurate a semi-regular electronic newsletter. It will be circulated to the western studies faculty at BYU, the Redd Center's board, former award winners, and others who have had various associations with the Center. It will highlight center programs, upcoming events, research being funded by the Center, and introduce visiting scholars and student workers. A key objective of the newsletter is to build connections between the Center and its award recipients.

The Center will honor its existing commitments for article and paper prizes and will entertain proposals for new awards related to western studies in any academic discipline.

The Center will sponsor the Charles Redd Center Awards for the best research posters dealing with the Intermountain West in conjunction with the Mary Lou Fulton Mentored Research Conference at BYU.

The Center will sponsor two Charles Redd Center Awards in conjunction with the Graduate Research Conclave in the Department of Plant and Wildlife Sciences.

The Center will offer awards for student papers at the BYU English Symposium.

The Center will sponsor a luncheon for its BYU affiliates in western studies to promote collegiality and discussion of western studies topics.

The Center will continue to provide honoraria and travel funds for guest lecturers in western studies who visit BYU to speak to classes or deliver public lectures.

The Center will continue its partnership with the Buffalo Bill Center of the West in supporting the Cody Digital Archive editorial internship at BYU under the direction of English professor Frank Christianson.

The Center will continue its outreach to K-12 teachers by funding up to four \$500 fellowships to enable teachers to attend the 2016 Western History Association meeting in St. Paul. Teachers produce lesson plans based in part upon what they have learned at those meetings, and those lesson plans will be posted on the Center's website.

PLANS FOR 2018

The Center will continue its tradition of promoting understanding of western American literature by co-sponsoring a plenary session at the Western American Literature 2018 meeting.

The Center will continue to fund up three \$500 fellowships that enable K–12 teachers to attend the Western American Literature Association conference. Teachers produce lesson plans based in part upon what they have learned at those meetings, and those lesson plans will be posted on the Center’s website.

The Center will pursue revitalizing the Western American Studies minor by offering a new course, American Studies 301, in the winter 2018 semester. The Center will also collaborate with the American Studies program at the end of the winter 2018 semester to strategize potential amendments to the minor and how to attract students to it.

The Center will offer a one-credit lecture series class for American Studies, Presentations on Western American Studies, during the Fall Semester. Redd Center award winners will share their research with students registered in the class and with other interested members of the university community.

The Center will work with Chuck Rankin of the University of Oklahoma Press toward publication of a scholarly book resulting from the Center’s 2017 seminar, the Era of Reconstruction in Mormon America. The book is being edited by Clyde Milner and Brian Cannon

The Center will continue working with Jed Rogers, Matthew Godfrey, and John Alley of the University of Utah Press on the publication of a scholarly book resulting from the Center’s 2015 seminar on Mormon environmental history. The manuscript has been accepted for publication and is on track to be published late in 2018 or early in 2019.

The Center will continue working toward publication of a volume of revised essays that were originally prepared for a seminar in 2016 on American Indians and Mormons. Jane Hafen and Brenden Rensink are the co-editors of the volume, which is undergoing peer review at the press.

The Center will cooperate with Ryan Stewart on plans to sponsor a four-day workshop at the Desert Botanic Garden in Phoenix in 2019 on “How prehistoric Agave agroecosystems in the U.S. Southwest might influence sustainability of conventional agriculture in a warming world.” The workshop is designed with the following outcomes in mind: 1. Compilation of workshop presentations into a special issue of a relevant peer-reviewed journal (e.g., *Economic Botany*, *Agriculture, Ecosystems & Environment*, *Agricultural & Environmental Letters*, etc.) or an edited book published by BYU or the University of Arizona Press. 2. Research grant proposal to submit to National Science Foundation Dynamics of Coupled Natural and Human Systems on the interrelationships between society and water in an arid landscape.

The Center will plan a seminar for 2019 on the topic of the American West in the late-20th and early-21st centuries, tentatively entitled “The Turn of a New Century in the North American West.” This seminar will workshop papers that pull historical topics across the 21st century divide and reframe the “modern” West to integrate more recent developments.

The Center will begin a podcast entitled “Writing Westward” to extend our engagement with new scholarship beyond the select few authors we are able to bring to campus for public lectures. Brenden Rensink will conduct phone/skype interviews with authors about new books or scholarship for dissemination as a podcast. A slate of ten authors have already agreed to participate for the inaugural 2018 season, presses are currently shipping books, and interviews will commence during the spring. New social media pages will be created for the podcast as well.

The Center will debut a newly designed website. This website will feature more prominently a blog function to highlight new podcast episodes, notices of Redd Center funded scholarship, upcoming events, award cycles, and other announcements.

LECTURES, PRIZES, AND EVENTS

Lectures

February 2: Jerry and Donna Spangler, Colorado Plateau Archaeological Alliance

Clarence Dixon Taylor Lecture

“Nine Mile Canyon: Where the Old West Came to Die”

March 23: David Wrobel, University of Oklahoma

Annaley Naegle Redd Lecture

“John Steinbeck’s America: The 1930s”

September 21: Benjamin Madley, University of California, Los Angeles

William Howard and Hazel Butler Peters Lecture

“An American Genocide: The United States and the California Indian Catastrophe”

October 12: Joseph Taylor, Simon Fraser University and Stanford University

“Follow the Money: Mapping Transfer Payments and Unlearning Wisdom about the Federal Domain in the American West”

October 26: David Baron, University of Colorado, Boulder

“Edison and the Eclipse that Enlightend America

December 7: Pamela S. Perlich, University of Utah

“Utah’s Ongoing Demographic Transformation: A View Fifty Years into the Future”

Co-Sponsored Lectures

January 25: Elliott Oring, California State University, Los Angeles

William A. Wilson Folklore Archives Founder’s Lecture

With the William A. Wilson Folklore Archives

November 30: Larry Cebula, Eastern Washington University

“But Will It Count for Tenue? Explorations in Public and Digital History”

With the History Department

Prizes

The Western Political Science Association awards the Charles Redd Award for Best Paper on the Politics of the American West. The prize of \$250 was presented to Albert Ponce for his paper entitled “Racialized Disposability, Migration, Labor and Violence.”

The Center sponsored two Beatrice Medicine Awards in American Indian Studies at the Native American Literature Symposium. The awards of \$250 went to Brandy Nalani McDougall for her monograph *Finding Meaning: Kaona and Contemporary Hawaiian Literature* and Jan Johnson for her essay “We Were All at Wounded Knee: The Engaged Resistance of Folk and Rock in the Red Power Era.”

The Western Museum Association Award for Exhibition Excellence was funded by the Redd Center. The award of \$500 went to the Boise Art Museum for the exhibition “Minidoka: Artist as Witness.”

The Arrington-Prucha Prize, awarded by the Western History Association, for the best article of the year in Western American Religious History. The award of \$500 went to Marie Christine Duggan for “With and Without an Empire: Financing for California Missions Before and After 1810,” published in *Pacific Historical Review*.

LECTURES, PRIZES, AND EVENTS

Prizes Continued

The Jensen-Miller Award, awarded by the Western History Association, is for the best article in the field of women and gender in the North American West. The award of \$500 went to Katrina Jagodinsky for “A Tale of Two Sisters: Family Histories from the Strait Salish Borderlands,” published in *Western Historical Quarterly*.

Four Charles Redd Teaching Excellence Award were given, enabling school teachers to attend the Western History Association’s annual convention. The \$500 prizes were awarded to Liam Concannon (Saint Martin de Porres academy), Kelly Griffith (Guadalupe Regional Middle School), Porsia Tunzi (La Reina High School and Middle School), and Helen M. Vassilou (Adena Elementary School).

Two Charles Redd Teaching Excellence Awards were given, enabling school teachers to attend the Western Literature Association’s annual convention. The two \$750 prizes were awarded to Jennifer Kawecki and Hakan Armagan (Burke High School).

The Charles Redd Center for Western Studies Award for the best general interest article of the year appearing in the Utah Historical Quarterly was awarded to Will Bagley for his article “Touching History: A Grandson’s Memories of Felix Marion Jones and the Massacre at Mountain Meadows.”

The Charles Redd Center Phi Alpha Theta Best Book in Western History Award of \$500 was split between a tie this year. Brent Rogers was awarded \$250 for his book *An American Genocide: The United States and the California Indian Catastrophe*, and Benjamin Madley was awarded \$250 for his book *Unpopular Sovereignty: Mormons and the Federal Management of Early Utah Territory*.

The Clarence Dixon Taylor Award was given posthumously to Ronald W. Walker for his article “The Tintic War of 1856: A Study of Several Conflicts” that appeared in the *Journal of Mormon History*.

The Center sponsored awards for the Mary Lou Fulton Conference poster contest dealing with the Intermountain West/Mountain West (the states of Utah, Idaho, Montana, Wyoming, Colorado, Nevada, New Mexico, and Arizona). First place (\$300) was awarded to Sarah Curry and Cassidy Hansen for their poster entitled “A Peculiar People: Split-Ticket Voting among Latter-day Millennials.” Second place (\$200) was awarded to Rebekah Pierce, Aubrey Harshorn, Josheline Guerrero, and Samantha Jensen for their poster entitled “The Choice: Motherhood or Education.” The honorable mention (\$50) was awarded to Leisha Hansen, Chad Garner, Molly Swainston, Claire Nelson, and George Charbadze for their poster entitled “A Comparative Edge Metrics Analysis for Two Distinct Environmental Greenways.”

Two \$500 Charles Redd Center Awards were given at the 2017 Plant and Wildlife Sciences Graduate Research Conclave to Tara Bishop and Justin Taylor.

The Center sponsors an award for the best English paper in Western American Studies at the BYU English Symposium. First place (\$200) was awarded to Kate Yancey for her essay “Zitkala-Sa and the Assimilation of Cultures.” Second place (\$100) was awarded to Anne Thomas for her essay “Knowing Canyonlands.” The honorable mention (\$50) was awarded to Jenny Rollins for her paper “Clashing Modernities.”

The Center also sponsored awards for state National History Day competitions in Arizona, Colorado, Idaho, New Mexico, and Utah.

LECTURES, PRIZES, AND EVENTS

Events

June 1: The Redd Center sponsored the opening reception at the MHA meeting

June 15–16: Redd Center Seminar on Mormonism and Reconstruction

November: The Redd Center sponsored the public history reception at the WHA meeting

November 17: Western Studies Faculty Luncheon and Lecture given by Tracy Brown

2017 REDD CENTER AWARDEES

Annaley Naegle Redd Assistantships

The Annaley Naegle Redd Assistantship is open to professors at Brigham Young University, who can then employ graduate and undergraduate students in a mentored learning environment. It provides students an opportunity to work closely with leading scholars in Western American Studies.

In 2017, the Redd Center received nine applications and awarded the following three individuals:

Riley Nelson, Biology. "Tiger Moths of the West"

Joseph Price, Economics. "The Role of the Family in Long-Run Economic Growth"

Carol Ward, Sociology. "Facing New Challenges in a Montana Boomtown: A Case Study of Colstrip, Montana"

Total granted for 2017–2018: \$27,225

Annaley Naegle Redd Student Award in Women's History

The Annaley Naegle Redd Student Award in Women's History is given annually to an undergraduate or graduate student performing research on women in the American West.

In 2017, the Redd Center received six applications and awarded the following individual:

Charnan Williams, History, University of Michigan. "Claiming Property: Enslaving Black Women and Female Children in Antebellum Los Angeles, California"

Total granted for 2017–2018: \$1,500

Charles Redd Fellowship in Western American History

The Charles Redd Fellowship in Western American History is designed to facilitate access to Western American manuscript collections in Special Collections and has been greeted with excitement and enthusiasm by researchers.

In 2017, the Redd Center received twelve applications and awarded the following six individuals:

Christine Bold, English and Theatre Studies, University of Guelph. "Princess Chinquilla and other "Vaudeville Indians" on stage and in film"

Sasha Coles, History, University of California, Santa Barbara. "Latter-Day Saints in the Marketplace: Commerce, Commodities, and the Politics of Historical Memory"

Mika Kennedy, English Language and Literature, University of Michigan. "Imagining Barbed Wire: The West and the War Relocation Authority's Cowboy Pioneers at Topaz"

Nathan Rees, Art, University of West Georgia. "Race and Space in Nineteenth-Century Mormon Art"

Brent Rogers, Joseph Smith Papers. "Buffalo Bill and the Mormons: Intersections of Two Pillars of the American West"

Amos Stailey-Young, Cinematic Arts, University of Iowa. "From Trailblazer to Traveler: Hollywood Westerns, Location Shooting, and the Tourist Gaze"

Total granted for 2017–2018: \$8,050

2017 REDD CENTER AWARDEES

Independent Research and Creative Works Award

The Independent Research and Creative Works Award is open to individuals who are not connected to an academic institution as a faculty member or student.

In 2017, the Redd Center received eight applications and awarded the following two individuals:

George Matthews “Billy the Kid, Thomas Catron and the Santa Fe Ring”

Kimberly Spurr “Timelapse Photography of Prehistoric Solar Observatories in Northern Arizona”

Total granted for 2017–2018: \$2,350

John Topham and Susan Redd Butler Faculty Research Awards

The John Topham and Susan Redd Butler Faculty Research Awards are designed to illuminate some aspect of the American experience in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and/or Wyoming.

In 2017, the Redd Center received three Brigham Young University faculty applications and awarded the following two individuals:

Paul Adams, Design. “Vanishing Voices”

Daryl Lee, French and Italian. “French Appropriations of Mormon “Colonizers” in Le Far West”

Total Granted for 2017–2018: \$3,650

In 2017, the Redd Center also received thirteen off-campus faculty applications and awarded the following five individuals:

Sandra Mathews, History, Nebraska Wesleyan University. “Deception and Betrayal: Pueblo Indian Land Grants since 1689”

Barry McCarron, Irish and Irish-American Studies, New York University. “Conflict and Cooperation: The Irish and Chinese in the American West”

Joseph Taylor III, History, Simon Fraser University. “Follow the Money: A Spatial History of In-Lieu Payments for Western Federal Lands”

Jennifer Watt, Geography, University of Utah. “A record of Mountain Pine Beetle outbreaks at Phyllis Lake, Idaho located in a high-elevation Whitebark Pine forest of the Northern Rocky Mountains, USA”

Joe Weber, Geography, University of Alabama. “Investigating Nevada’s Lost Arrowhead Trail Highway”

Total Granted for 2017–2018: \$11,800

Public Programming Award

The Public Programming Award is open to any organization that is planning a conference, museum exhibit, or lecture series focusing on Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and/or Wyoming.

In 2017, the Redd Center received thirteen applications and awarded the following six organizations:

Antelope Island State Park “Visitor Center Displays”

BYU Museum of Peoples and Cultures “Pixels, Lasers, and Code: Digital Technologies Advancing Archaeological Discovery”

Nevada Humanities “In Nevada I Wish to Say”

New Mexico Museum of Art “Sombras del Pais (Shadows of the Country)”

Utah Museum of Fine Arts “Now West! programming in conjunction with the Museum’s 2017-18 marquee exhibition Go West! Art of the American Frontier from the Buffalo Bill Center of the West”

2017 REDD CENTER AWARDEES

Western Literature Association “Sweet Land, Mighty Waters: Myth and Storytelling West of the Mississippi”
Total granted for 2017–2018: \$15,500

Summer Award for Upper Division and Graduate Students

The Summer Awards for Upper Division and Graduate Students helps promising students begin serious research on Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and/or Wyoming.

In 2017, the Redd Center received six Brigham Young University applications and awarded the following six individuals:

Makani Fisher, Biology. “Metabolic Chemistry of Western North American Lichen Moths”

Stephanie Lambert, Anthropology. “Examining the Production and Exchange of Fremont Snake Valley Black-on-Gray Ceramics”

Spencer Lambert, Anthropology. “Exploring Butchering Strategies among the Fremont of Wolf Village Using Strontium Isotope Analysis”

Aaron Rhodes, Plant and Wildlife Sciences. “Monitoring Aspen Regeneration after Fire in Monroe Mountain”

Jeffrey Svedin, Plant and Wildlife Sciences. “High Tech Farmers: The Final Frontier of Water Conservation Research”

Tristan Torgersen, History. “Mormons in the Meadows: The Mormon Influence on the Growth of Las Vegas”

Total granted for 2017–2018: \$7,025

In 2017, the Redd Center also received thirty off-campus applications and awarded the following sixteen individuals:

Alan Clark, Religion, Claremont Graduate University. “Strangers in a Strange Land: A History of Pentecostalism in Utah”

Kerri Clement, History, University of Colorado - Boulder. “Game of Horsepower: Robert Yellowtail, Horses, and Power on the Crow Reservation from 1928 to 1945”

Katherine Clifford, Geography, University of Colorado. “Fugitive Dust: How Dust Escapes Science”

Katie Epstein, Geography, Montana State University. “The Amenity Transition and Wildlife Management in the Greater Yellowstone”

Mette Flynt, History, University of Oklahoma. “Reborn on Skis: Winter Recreation and the Transformation of the Wasatch Front, 1915-2002”

Rabeca Lausch, Biological Sciences, Northern Arizona University. “Gilded and Northern flicker hybridization in Arizona: using new methods to examine an old problem”

Patrick Lozar, History, University of Washington. “Behind and Beyond the Line: Indigenous Communities, International Borders, and Native Identities on the Columbia Plateau, 1850s-1920s”

Lindsie McCabe, Biological Sciences, Northern Arizona University. “As forest go do forest bees?”

Sydney Pullen, Anthropology, University of Arizona. “Informal Education and Rural Identity in Rodeo”

Julie Rakes, Life Sciences, Arizona State University. “Infectious Agent Characterization in Biological Soil Crusts”

Michaela Rife, Art History, University of Toronto. “King Coal and the Silver Queen: The Visual Culture of Resource Extraction in Progressive Era Colorado”

Amy Schott, Anthropology, University of Arizona. “Suitability of soils in wind-deposited landscapes of Northeastern Arizona for long-term prehistoric agriculture”

Caroline Tracey, Geography, University of California. “Neighbor is a Verb: Ranchers, the Military, and

2017 REDD CENTER AWARDEES

Conservation in Southeastern Colorado”

Frank Whitehead, History, University of Arizona. “‘The Two are Pardners’: Rodeo Cowboys, Their Horses, and a Distinctly Western Relationship”

Samantha Williams, History, University of California. “‘That was our home, and it needs to be remembered’: Erasing and Reclaiming the History of the Stewart Indian School”

Anthony Wood, History and Philosophy, Montana State University. “Race, Ruination, and Exodus: Understanding the Impact of 1917 on Montana’s Black Community”

Total granted for 2017–2018: \$16,355

Mollie and Karl Butler Young Scholar Award

The Mollie and Karl Butler Young Scholar Award acknowledges outstanding academic promise of faculty members at the assistant or associate professor levels at Brigham Young University, based upon record of research, teaching, and university citizenship. The award carries with it an annual \$3,000 salary stipend and \$5,000 research support for three consecutive academic years.

In 2017, the Redd Center received three nominations and awarded the following individual to serve her term as noted:

Michelle Kesler, Music, 2017–2020

Continuing Young Scholars:

Spencer Fluhman, History, 2014–2017

Mike Searcy, Anthropology, 2015–2018

James Swensen, Comparative Arts and Letters, 2016–2019

Publication Grants

The Redd Center offers publication grants to presses to help offset the costs of publishing Intermountain West titles. Grants permit presses to improve the quality of the publication and/or make the book more affordable.

In 2017, the Redd Center awarded publication grants to the following presses:

University Press of Colorado, *A Touch of Civilization*

Total granted for 2017–2018: \$3,000

Interdisciplinary Studies Grants

The Redd Center offers interdisciplinary studies grants of up to \$10,000 to groups of three or more scholars collaborating from three or more fields on a topic regarding the Intermountain West.

In 2017, the Redd Center awarded one \$10,000 interdisciplinary studies grant for the following proposal:

Michael Taylor (English, Brigham Young University) with James Swenson (Art History and History of Photography, Brigham Young University) and Farina King (History, Northeastern State University).

“Recovering, re-contextualizing, and returning the creative works and surviving testimonies of students of the Intermountain Indian School (IIS) to the Navajo Nation and surrounding Intermountain Indian communities”

Total granted for 2017–2018: \$10,000

2017 CHARLES REDD CENTER AWARD REPORTS

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ANNALEY NAEGLE REDD ASSISTANTSHIP

Michael R. Cope, Sociology, BYU. “Rural Utah Community Study”

Bryan G. Hopkins, Plant and Wildlife Sciences, BYU. “Stars Wars and Water Wars: Scientific Solutions for Western US Water Problems”

Roger Koide, Biology, BYU. “Stress Tolerance of *Populus Tremuloides* (Quaking Aspen) Controls Population Stability: The Role Of Fungal Endophytes”

Russell Rader, Biology, BYU. “Exploring the Most Isolated Aquatic Habitat on Earth: Invertebrates in Hanging Gardens of the Colorado Plateau”

MICHAEL R. COPE

Sociology, BYU

“Rural Utah Community Study”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Beginning in July 2017 we conducted a survey of the residents of 25 rural Utah communities. The objective of this research was to expand knowledge regarding the experiences and perceptions of these community residents. Specifically, this study is part of an ongoing effort to learn about changes in the access to, quality of, and perception of community services (such as education and healthcare), as well as the effects of population growth/decline in rural communities. Importantly, to more fully understand the forces of change affecting rural people and places, this research is a valuable component of developing baseline data for making comparisons of trends across time and place of rural peoples/places in the West. The communities targeted for study in this research project will likely experience unanticipated short and long-term social and economic impacts stemming from a wide range of factors (e.g., economic developments/closures, environmental hardships). With this understanding, an important aspect of this research is the establishment of an accurate baseline of pre-impact social and demographic conditions in these communities. This baseline, in essence, will provide a “social map” for identifying the local conditions that promote community resilience, or the ability to adjust and recover following disruptions of varying degrees. Norris et al. (2008:130) define community resilience as “a process linking a set of networked adaptive capacities to a positive trajectory of functioning and adaptation in constituent populations after a disturbance.” In this view, resilience hinges on the ability to call upon social resources (or adaptive capacities) to buffer or counteract stressors brought on by disruptions to the community. Conversely, in more vulnerable communities populations are less able to adapt, resulting in persistent dysfunction. Accordingly, the findings from this research will inform the academic literature as well as studies on impacts that will undoubtedly unfold in the future.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

The \$7,800.00 we received in funding from the Redd Center were used to fund 3 undergraduate research assistants (@\$10/hr) for one semester. We could not have accomplished this research without these funds or the help of our research assistants. This project offered us a unique mentoring experience with these upper division undergraduate students. Research assistant were involved in all phases of research and help us carry the data collection phases and are continuing to assist us during the data analysis phase. These students learned how to create a sampling frame, collect and code survey data, how to properly analyze the data, and are now learning how to produce high quality papers and presentations based on their findings. Because students were mentored in every component of the research project, the skills students learned will significantly improve their marketability when applying to graduate programs or job opportunities.

Please list publications and/or presentations based on your Redd Center research or program.

Presently there have been none.

MICHAEL R. COPE

Sociology, BYU

“Rural Utah Community Study”

If your research is not yet completed, what are the next steps in your research process?

With the data collection phase of the project now complete, we have begun preliminary analysis. Based on this preliminary analysis we plan to submit the following papers for peer review during the first half of 2018: (1) Bears Ear Monument and Community Satisfaction in Utah; (2) Rural Healthcare Access and Service Bundling in the Rural West; and (3) The Effects of the Affordable Care Act on Rural Healthcare in Utah.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

We intend to use the research for publication(s) in high-quality, scholarly outlets. We have manuscript in draft (with preliminary findings) that anticipate submitting for peer review in early 2018. It is also anticipated that these data will be used in three presentations at the 2018 annual meetings of the Rural Sociological Society. We specifically note that two of these presentations will be given by undergraduate research assistants who have been involved on the project. Moreover, the two aforementioned undergraduate research assistants on this project are applying to graduate school at BYU and have indicated that these data will potentially be used in their master's thesis research. We also anticipate that all student research assistants will create and present a poster highlighting their work, and the funding from the Redd Center, at the Mary Lou Fulton Annual Mentored Student Research Conference. Additionally, above and beyond the mentoring opportunities previously mentioned, this data will be used to help students enrolled in Methods of Research in Sociology (SOC 300) to gain hands on experience with local research as they complete the requirements for their undergraduate degrees and develop job skills that will increase their marketability upon graduation.

Comments

In addition to the expanding knowledge regarding the experiences and perceptions of rural Utah community residents, we anticipate using these data to conduct important comparative analysis with the experiences and perspectives of rural community residents in other communities, such as Montana where members of the sociology department have conducted survey research that includes comparable data items. Additionally, relevant rural-urban comparisons may be made using data from the Utah and Montana survey projects. Information produced by the surveys of rural communities can form the basis for development of recommendations for solutions to problems identified by educators and health care providers related to service quality, access, unmet needs, etc. Understanding the experiences of rural community members provides the foundation for a more nuanced conceptualization of the context in which they access and utilized education and healthcare services. Thank you for helping us conduct this research.

BRYAN G. HOPKINS

Plant and Wildlife Science, BYU

“Stars Wars and Water Wars: Scientific Solutions for Western US Water Problems”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

During 2016, we worked with an Idaho farmer on his potato/wheat/grass farm equipped with a Variable Rate Irrigation (VRI) system. This grower was attempting to utilize VRI, but it was suspected that the full potential was not realized. The main goal was to conserve water while maintaining or improving economic sustainability for the farmer. To achieve this goal, we evaluated the Crop Water Productivity (CWP) spatial variability across his VRI grain field. We refer to this as determining the “crop per drop” or, in other words, the amount of crop produced per unit of water. We collaborated with a geostatistical scientist from the BYU geography department who guided us to take 80 samples per field to produce reliable and publishable spatial maps through the kriging method. These samples were taken to a depth of four feet, and analyzed for soil moisture both in early spring and after late summer harvest. These data, along with the VRI and precipitation data, were used to spatially identify the quantity of water the crop used during the growing season. In addition, the yields were spatially determined with a commercial yield monitor mounted on the grower’s grain combine. We then combined these factors to calculate CWP. The CWP method is used frequently in literature, but our research is the first time a spatial map has been generated representing an entire field. The ultimate goal is to use this CWP map as a prescription that this farmer and others can adopt to conserve water in the western states. Our first year findings, made possible through this Redd Center grant, confirmed our hypothesis that the blending of Variable Rate Irrigation and Crop Water Productivity methods have the potential to conserve water in an economically sustainable fashion. However, additional research is needed to fine tune these methods.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

We generated field maps from highly intensive sampling to show spatial differences in: • stored soil moisture, • seasonal soil moisture change, • seasonal crop water consumption, • 2016 grain yield, • Crop Water Productivity (CWP). The CWP map proved to be a valuable tool for understanding how crops utilized water in specific areas. We successfully identified plants in some areas efficiently using the available water to produce grain, while other field locations did not produce the anticipated yield despite receiving ample water. This map essentially told the farmer where watering fell short, met, or exceeded demand. This initial data proved very useful for altering irrigation management to conserve water and enhance grain yield. Farmers will be able to use this methodology to guide VRI systems in future years. Although the grower adjusted his irrigation rate by as much as 10% in some locations prior to 2015, we discovered stored soil water and precipitation played a larger role than suspected giving a less than 5% difference in total available water in contrast to the fully irrigated areas. Thus, the decrease in irrigation for previous grain crops was not enough to make a significant difference and we have the initial tools to make the needed spatial adjustments with only minimal risk. Although this technology has tremendous future potential, the bottom-line for the grower we are currently working with is that he will use this data to reduce his water consumption using VRI by nearly 50% on 24 acres of the field for 2017. Thus, we have both tangible, immediate benefits to go along with potential future ones.

Please list publications and/or presentations based on your Redd Center research or program.

Svedin J.D., N.C. Hansen, R. Kerry, R.C. Christensen, and B.G. Hopkins. 2017. Creating prescription variable rate irrigation and fertilization zones: Water and nutrient management interactions. (Poster and Oral Flash and Dash Presentations) In Proc. of the Western Nutrient Management Conference; 2017 March 2-3; Reno, NV. Vol.12: 156. Available at [http://www.ipni.net/ipniweb/conference/wnmc.nsf/e0f085ed5f091b1b852579000057902e/ccbc3bfdb684ebec852580e400519374/\\$FILE/17WN](http://www.ipni.net/ipniweb/conference/wnmc.nsf/e0f085ed5f091b1b852579000057902e/ccbc3bfdb684ebec852580e400519374/$FILE/17WN)

BRYAN G. HOPKINS

Plant and Wildlife Science, BYU

“Stars Wars and Water Wars: Scientific Solutions for Western US Water Problems”

MC%20Svedin%20pg156.pdf Hopkins, B.G., and N.C. Hansen. 2017. Nitrogen and water interactions: Crop production systems case studies. In Proc. of the Western Nutrient Management Conference; 2017 March 2-3; Reno, NV. Vol.12:22. Available at [http://www.ipni.net/ipniweb/conference/wnmc.nsf/e0f085ed5f091b1b852579000057902e/ccbc3bfdb684ebee852580e400519374/\\$FILE/17WNMC%20Hopkins%20pg22.pdf](http://www.ipni.net/ipniweb/conference/wnmc.nsf/e0f085ed5f091b1b852579000057902e/ccbc3bfdb684ebee852580e400519374/$FILE/17WNMC%20Hopkins%20pg22.pdf). Hopkins, B.G., J.D. Svedin, and R.C. Christensen. 2017. On-Farm Fertilizer and Water Management Case Studies. Idaho Potato Conference; 2017 January 19; Pocatello, ID. Svedin, J., N.C. Hansen, R. Kerry, and B.G. Hopkins. 2016. Variable rate irrigation and water use efficiency. In Abstracts, ASA•CSSA•SSSA International Annual Meetings; 2016 Nov. 6-9; Phoenix, AZ. Madison, WI: ASA-CSA-SSSA. Svedin, J., N.C. Hansen, R. Kerry, and B.G. Hopkins. 2016. Variable rate irrigation and water use efficiency. 2016 Nov. 17; Provo, UT: Redd Center Sponsored and BYU Plant and Wildlife Sciences Department Graduate Student Conclave presentation. Svedin J.D., N.C. Hansen, R. Kerry, R.C. Christensen, and B.G. Hopkins. 201x. Creating prescription variable rate irrigation and fertilization zones: Water and nutrient management interactions. Journal of Soil and Water Conservation (In Preparation) Svedin J.D. 201x. Creating prescription variable rate irrigation and fertilization zones: Water and nutrient management interactions. M.S. Thesis, Brigham Young University (In Preparation)

If your research is not yet completed, what are the next steps in your research process?

Assuming we obtain funding, the next steps to accomplish in are to determine if the data is consistent the following year as we compare the CWP map we generated in 2016 with the one we are hoping to generate in 2017. We also will test the hypothesis of the yield and water conservation benefits from fully utilizing the VRI system. Furthermore, we will determine how many samples are needed to determine CWP under grower conditions (i.e. growers can't test 80 locations and, thus, it's necessary to determine an appropriately sized subsampling recommendation). Beyond 2017, we hope to continue this work with other crops and in other locations. The grower we are currently working with is planning to rotate into potato in 2018. We plan to work on this crop with him at that time. We also have identified another field with a VRI system that is being underutilized that we hope to work with in the near future. Funding for this research gave the Western agriculture industry a novel insight into irrigation and fertility management that will alter future water management.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

The two main publications we are planning are listed below. There is good potential that we will have an additional journal publication beyond the one listed if funding permits. We also plan to present this data in similar venues as listed above in the publications section during 2017 and 2018. Svedin J.D., N.C. Hansen, R. Kerry, R.C. Christensen, and B.G. Hopkins. 201x. Creating prescription variable rate irrigation and fertilization zones: Water and nutrient management interactions. Journal of Soil and Water Conservation (In Preparation) Svedin J.D. 201x. Creating prescription variable rate irrigation and fertilization zones: Water and nutrient management interactions. M.S. Thesis, Brigham Young University (In Preparation)

Comments

We are very grateful for the funding received from the Charles Redd Center. This is very innovative research and we are using the funds as a pilot research project with hopes of leveraging this data into larger grant funding from other sources for future years. We are very much hoping to secure another round of funding for this project from the Charles Redd Center during 2017. Doing so will enable us to further this important work that will have large impacts on water use in the Western U.S. in future years as demand on water supplies becomes increasingly problematic.

ROGER KOIDE

Biology, BYU

“Stress Tolerance of *Populus Tremuloides* (Quaking Aspen) Controls Population Stability: The Role Of Fungal Endophytes”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Three projects were funded or partially funded with Redd Foundation funds. The first concerned the factors determining the structure of endophytic fungal communities in Gambel oak. The second concerned the ecological status of fungal endophytes of Gambel oak. The third concerned the distribution of a fungal disease on quaking aspen.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

1. We determined the separate effects of neutral and deterministic processes structuring communities of *Quercus gambelii* leaf endophytes by sampling north- and south-facing flanks of four canyons so local climate varied independently from spatial separation. We found that both deterministic (response to climate) and neutral (dispersal limitation) processes significantly influenced community structure. These findings, if applicable to other systems, may have consequences in both agricultural and natural ecosystems. 2. We asked whether endophytic fungi play other ecological roles, specifically whether the leaf endophytes of *Quercus gambelii* persist during the course of leaf decomposition, requiring a transition from a biotrophic to a saprotrophic mode of nutrition. Using automated ribosomal intergenic spacer analysis (ARISA), we found that endophyte fungal OTU diversity declined as decomposition commenced, but some endophytes persisted for months during which leaves were decomposing. In contrast, saprotroph fungi OTU diversity increased as decomposition progressed. These results are consistent with the hypothesis that some biotrophic endophytes persist in leaves during decomposition by becoming saprotrophic, and that the niche occupied by them is broader than expected. 3. In order to minimize harvest wood loss in Utah, we determined the locally important factors that explain the wide variation in the incidence of sporocarps of *Phellinus tremulae*. We found that while the incidence of *Phellinus tremulae* sporocarps on quaking aspen was always low at higher elevations, it was variable at lower elevations. Our regression model indicated that variation in the incidence of sporocarps at lower elevations was attributable, in part, to variation in aspect, slope, environmental stress and tree age/size.

Please list publications and/or presentations based on your Redd Center research or program.

Publications:

Szink I, Davis EL, Ricks KD, Koide RT. 2016. New evidence for broad trophic status of endophytic fungi of *Quercus gambelii*. *Fungal Ecology* 22:1-8.

Koide RT, Ricks KD, Davis E. 2017. Climate and dispersal influence structure of leaf endophyte communities of *Quercus gambelii* in the eastern Great Basin, USA. *Fungal Ecology* 30:19-28.

Koide RT, Watkins J, Ricks KD, Aranda E, Nettles R, Yokum H, Yin N, Clark E, Eggett D. Site and tree factors determining the distribution of *Phellinus tremulae* in *Populus tremuloides* in Utah, USA. Submitted to *Canadian Journal of Forest Research*, August, 2017.

Speaking engagements:

Chinese Academy of Forestry, Beijing, China

Sichuan Academy of Forestry, Chengdu, China

ROGER KOIDE

Biology, BYU

“Stress Tolerance of *Populus Tremuloides* (Quaking Aspen) Controls Population Stability: The Role Of Fungal Endophytes”

If your research is not yet completed, what are the next steps in your research process?

There is one final manuscript to be published from this work. It has been submitted for publication, and we will see that it is finally published.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

See response above

Comments

Thank you for your funding! It has proven to be very important to us.

RUSSELL RADER

Biology, BYU

“Exploring the Most Isolated Aquatic Habitat on Earth: Invertebrates in Hanging Gardens of the Colorado Plateau”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

This past spring and summer we visited 17 hanging gardens (May through July). Hanging gardens are characterized by a sheet of water slowly flowing down a vertical face from cracks in the sandstone walls of slot canyons. Except for brief periods in the spring, water does not pool in shallow depressions below most of these habitats because rates of evaporation are too high. Five “gardens” were very temporary with no aquatic macrophytes or macroinvertebrates, whereas 7 in Zions N.P. and 5 around Moab, including Arches N.P., contained aquatic invertebrates. We removed the aquatic larval stages of aquatic insects from the walls by hand, and deployed Malaise Traps to catch the flying adults. Except for water mites, we only found facultative aquatic insects with an areal adult stage capable of flying to and colonizing isolated aquatic habitats. All of the aquatic larval forms of insects were grazers that feed on the algae growing on the rocks. We identified 19 species of aquatic invertebrates. Most were midges (Chironomidae), biting midges (Ceratogonidae), Dryopidae beetles, Elmidae beetles, Collembola (spring tails), water mites (Trombidiformes), and caddisflies (Hydroptilidae).

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Financial support from the Redd Center was used to fund 6 sampling trips over three months (2/ month). The number of species in a single garden ranged from 4 to 11. There was a strong relationship between the number of species at a site and the distance to the nearest permanent aquatic habitat (streams, rock pools, and Tinajas). Thus, most of these taxa appear to colonize Hanging Gardens from other nearby aquatic habitats. This is a critical connection because all of these sites may dry-up during a severe drought. Many of these species would need to re-colonize from other habitats. The least diverse sites appear to be some of the most isolated aquatic habitats on earth.

The only predaceous aquatic taxa were the water mites and what appeared to be a semi-aquatic spider. All of the other taxa were grazers. Also, small mites were the only obligate aquatic taxa. Other common obligate aquatic taxa found in other aquatic habitats on the Colorado Plateau in Utah (fairy shrimp, clam shrimp, zooplankton, etc. were absent. Thus, these gardens appear to have one of the simplest foodwebs in the world.

Two dryopid beetles appear to be new species to science (Helichus sp. 1 and sp. 2). They don't fit any of the keys for dryopids in Utah.

Please list publications and/or presentations based on your Redd Center research or program.

Two students plan on presenting these data as a poster at the annual meetings for Wetland Scientists in Denver CO in 2018.

If your research is not yet completed, what are the next steps in your research process?

- 1) Finish species identifications where possible. Some taxa will need to be sent to national experts for identification (e.g. chironomids).
- 2) We still need to match some larval stages with the correct adult stage.

RUSSELL RADER

Biology, BYU

“Exploring the Most Isolated Aquatic Habitat on Earth: Invertebrates in Hanging Gardens of the Colorado Plateau”

3) We need to pursue the identification of the potentially new species of dryopid beetles. This is a challenging process.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

We plan to publish these data in the Western North American Naturalist.

Comments

We are grateful to the Redd Center. This study would not have been possible without your generous support.

ANNALEY NAEGLE REDD STUDENT AWARD IN WOMEN'S HISTORY

Charnan Williams, History, University of Michigan. "Claiming Property:
Enslaving Black Women and Female Children in Antebellum Los Angeles,
California"

CHARNAN WILLIAMS

History, University of Michigan

“Claiming Property: Enslaving Black Women and Female Children in Antebellum Los Angeles, California”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With the aid of funds received from the Charles Redd Center, I researched at the Seaver Center for Western History Research at the Natural History Museum of Los Angeles and the Huntington Library that house early California legal records, wills, and correspondences. Through my research, I found critical documents showing how black women and children were impacted by the practice of enslavement through guardianship laws in the free state of California from 1850 to 1865.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My initial research questions centered on black women and girls experience with guardianship laws from 1850-1865 in Los Angeles. Although scholars and the general public assume that pre-civil war California was a free frontier space, I argued that an interrogation of guardianship laws could reveal that for black women and girls “free” Los Angeles often represented a place of slavery and servitude. I investigated the particular relationship between black women and girls and their experience in guardianship cases.

Ultimately, many of the cases that I found in the archives were noticeably gendered, with young girls appearing more frequently than boys in the state records. The reasoning behind such an occurrence is still unclear and a question I plan to explore further. Additionally, I was surprised at how much the archival records illuminated the struggle for freedom for both free and enslaved Black women and children in California and to what extent prominent families of post-annexation California played a role in these processes. Although infant children who ranged from a few months to one year could not possibly be utilized for labor, many of these children were front and center in guardianship cases, which ultimately led to their parents being coerced to service white households.

Please list publications and/or presentations based on your Redd Center research or program.

I have yet to publish or present on the archival material that I have found.

If your research is not yet completed, what are the next steps in your research process?

The next steps in my research process is to utilize the archival research information obtained on this research trip to draft the first chapter of my dissertation that centers on guardianship laws in California from United States annexation in 1850 until the end of the Civil War period in 1865. This chapter supports larger claims in my dissertation that intervenes in the history of slavery in the United States. Diverging from traditional narratives that merely focus on southern slavery, this dissertation chapter demonstrates how the practice of enslavement through guardianship laws in the American West must be included in scholarly discussions regarding the fate of slavery in nineteenth-century United States.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I also plan to turn this chapter into a publishable scholarly article for the Pacific Historical Review.

Comments

I would like to thank the Charles Redd Center for providing me with the opportunity to carry out dissertation research.

CHARLES REDD FELLOWSHIP AWARD IN WESTERN AMERICAN HISTORY

Kathryn M. Holmes, American Studies, Pennsylvania State University. "Your Religion is Showing: Negotiating Mormon Culture in Utah through the Body"

Denise Machin, Dance, University of California Riverside. "Uncovering the Mormon Influences in American Dancesport"

KATHRYN M. HOLMES

American Studies, Pennsylvania State University

“Your Religion is Showing: Negotiating Mormon Culture in Utah through the Body”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

The Redd Center provided me with a vast amount of primary material from which to build the foundations of my research. I spent roughly three weeks in July of 2016 in their archives. While there, I researched missionary pamphlets from a variety of dates and missions to look at how the missionary dress code has been altered over the years. There were also transcriptions of speeches given by church leaders, including Brigham Young, concerning issues of modesty and dress.

While I was in the archives, the center had an exhibit on Rose Marie Reid, a famous swimwear designer during the mid-twentieth century who was famous for her modest swimsuits. The exhibit provided ample primary material, displaying photographs, letters, et cetera about Reid's life and impact on the industry.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My research centers around how the uniqueness of Utah culture is reflected in the bodily practices of Utah residents. While I am conducting some ethnographic work, archival material was of key importance. Talks by prominent leaders of the church, past and present, show the central nature of the physical body to the LDS faith. Brigham Young's talk on modesty was particularly interesting because it dealt more with cautioning against following ever changing fashion trends than any moral issues. Young, and other early leaders, are important to my work because they show the dominant thinking of the founders of Utah. The framing of modesty in this and other early talks also shows that context is important when defining what a term means.

Missionary pamphlets for elders have remained, more or less, stagnant over the years, but the guidelines for the sisters became more defined in the 1970s. One pamphlet I found in the archives acknowledged the church's struggle to avoid valuing appearance over substance and the need to present a pleasant appearance in order to be more inviting to potential investigators. With no hint at sexualization or objectification, this pamphlet described in detail the clothing young sisters should wear to be stylish while still representing the Lord.

The Reid exhibit was fascinating as it showed the negotiation between popular culture and LDS standards. Reid herself enjoyed celebrity status, but used her spotlight in order to promote modesty. Her determination to create and market fashionable one-piece swimsuits during the era of the bikini shows the devotion that members of the church feel towards their doctrine. These are just a few examples of how the archives helped to strengthen my research.

Please list publications and/or presentations based on your Redd Center research or program.

I will be presenting a paper at the upcoming annual meeting of the American Folklore Society based on my research.

If your research is not yet completed, what are the next steps in your research process?

I am currently in the process of writing my dissertation based largely on the research I collected during my fellowship. I am combining it with some ethnographic interviews and scholarly works on both body studies and Utah culture in order to provide a unique place of the body in Utah culture. I am currently focused on writing and editing and I hope to defend my dissertation in the fall of 2018.

KATHRYN M. HOLMES

American Studies, Pennsylvania State University

“Your Religion is Showing: Negotiating Mormon Culture in Utah through the Body”

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I plan to present papers at the annual conferences of the Association for the Sociology of Religion and the Western Folklore Society in the upcoming year. Once my dissertation has been successfully defended, I plan to rework it as an academic book. I have already been in contact with both the University of Utah Press and Utah State University Press regarding interest in publishing my dissertation.

Comments

The Redd Center Archives were well organized and the staff was knowledgeable and helpful. My dissertation would not be possible without the information I gathered from the primary sources. I am appreciative that I had this opportunity and plan to thank the archives in the introduction to my dissertation.

DENISE MACHIN

Dance, University of California Riverside

“Uncovering the Mormon Influences in American Dancesport”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

My time at the Charles Redd Center enabled me to look at primary sources relating to ballroom dance at BYU. Especially useful, I was able to examine the personal writings of Alma Heaton, the BYU professor who brought ballroom dance to Utah. It was only possible to do this research at the Charles Redd Center.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My time at the Charles Redd Center helped illuminate how Alma Heaton brought ballroom dance to BYU, a move that has led to Utah becoming an internationally recognized dance capital. Heaton's personal writings also gave insight into the spirit with which he created the program. Calling himself the “professor of fun” I learned that ballroom dance at BYU started out as a recreational program that has transformed into a competitive program over the course of its history.

Please list publications and/or presentations based on your Redd Center research or program.

In May I will be defending my dissertation. Chapter two of my dissertation is grounded in the research I accomplished due to my Charles Redd Fellowship in Western Studies.

If your research is not yet completed, what are the next steps in your research process?

Right now I am finishing my dissertation chapter that relies heavily on the research I compiled while at the Charles Redd Center for Western Studies. My next step is defending my dissertation in May!

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I want to extend my heartfelt gratitude to the Charles Redd Center for Western Studies for enabling me to complete research crucial to dissertation project.

Comments

I want to extend my heartfelt gratitude to the Charles Redd Center for Western Studies for enabling me to complete research crucial to dissertation project.

INDEPENDENT AND CREATIVE WORKS AWARD

Jared Jakins “La Borrega (The Sheep)”

Laraine Miner “Mormon Pioneer Dances”

Kassandra Nelson “The Prince of the Upper Missouri: Captain James McGarry”

Kimberly Spurr “Timelapse Photography of Prehistoric Solar Observatories in Northern Arizona”

JARED JAKINS

“La Borrega (The Sheep)”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

We are in process of creating a documentary short film (15-20 minute) exploring the relationship of a multi-generational sheep farmer and his Latin-American hired hand as they both pursue the American Dream within the stunning landscape of the Great Basin area.

Shepherding is still a tradition for many residents and a livelihood for some. However, we feel that current shepherding is a concept that remains foreign and separated from recent cultural history and current identity. Thus, our motivation for making this film is to record history in the making, giving a voice to the voiceless. Not often do we hear from the American farmer who works hard with the land, and in this case, with the migrant-worker culture. Fascinated with the experiences these secluded migrant workers have to tell, we realized their stories needed to be shared because their stories reflect those of other foreign workers who often remain voiceless.

Our data thus far centers around a hard-working sheep farmer Carl Peckham, of central Utah, and his relationship with work, the land, and his hired hand Alejandro--a Latin American migrant worker shepherd. We have recorded the sheep farmer training and working alongside his hired hand near the Manti-lasal Mountain Range, and plan on continuing that observation through winter at the West Desert. The juxtaposition of two different cultures, languages, and lifestyles, both pursuing the American Dream is a topic we have found worthy of exploration.

Using a fusion of documentary and ethnographic techniques, we are creating an unbiased, short-form documentary. While documentary provides a visually compelling venue of storytelling, we are also capturing the story of the young American farmer & his Latin American herder as objectively as possible.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Our Redd Center Grant allowed us to purchase adequate data storage for high-quality digital film footage. We are still in the midst of our project as it is a long-term study.

So far we have learned that two central characters are critical to the story we want to tell. By following a multi-generational farmer, we have explored his draw towards this occupation, his connection to the land in Utah, and his cultural heritage. The Latin American migrant worker provides an unique perspective that is often overlooked. His working in a foreign country with its own and different culture and language allows us to document a unique human experience. To understand both the young farmer and the migrant worker's motivation, the reason for staying, and the joy and sorrow of staying in this occupation has allowed us to investigate how the notion of the “American Dream” impacts those who come to this country seeking for it.

Please list publications and/or presentations based on your Redd Center research or program.

IF/THEN Pitch, Tribeca Film Institute, hosted by the Big Sky International Film Festival

Teaser 1: Pw Woollywest, <https://vimeo.com/159585002>

Teaser 2: <https://www.dropbox.com/scl/fi/ghoell7j5dp8o7p8bfozl/If%3AThenPitchTeaser.mp4?oref=fre>

If your research is not yet completed, what are the next steps in your research process?

JARED JAKINS

“La Borrega (The Sheep)”

We are following Alejandro and Carl this winter as they move Carl’s sheep to the West Desert for the colder months. We will film November through March as needed, planning to have the short documentary completed by May 2018.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

In collaboration with the Great Basin National Heritage Area, we plan to complete a 15-20 minute short film expressing the relationship with farmer, migrant worker, and the landscape to tell a unique story of pursuing the American Dream in the American West.

The short film is tentatively scheduled to be shown as part of the 2019 Shepherders’ Ball in Baker, Nevada. It may also be shown in the Old Theatre in Fountain Green, Utah as part of their Lamb Day celebration. Other public and private screenings will likely occur, maybe including film festival screenings. This film may also become part of a larger body of work depicting a similar topic.

Comments

Many thanks to the Redd Center for allowing us needed funds to secure vital data storage for our project. We could not have started this leg of our research without those harddrives purchased.

LARAINÉ MINER

“Mormon Pioneer Dances”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With the funds received from The Charles Redd Center I was able to accomplish more in depth research on the 31 authentic Mormon pioneer dances I selected for publication of my project. I purchased period dance manuals and music books online, along with illustration photos of period instruments and a painting of the Old Social Hall dance/drama venue in Salt Lake City from the Daughters of Utah Pioneers' Museum. Redd Center funds also helped make it possible to procure the very best, most authentic musicians to record the pioneer tunes, and pay an excellent videographer to create the final DVD of the dances.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

I have certainly learned a lot about working with a videographer to create a video which makes the Mormon pioneer dances more accessible for the general public to learn and teach. I've also learned a great deal about submitting my project for publication to make it available to the general public. The 19th century dance/music manuals I purchased helped to re-construct the dances more authentically in the 19th century style. The dances are organized to satisfy the needs of beginning and more experienced dancers. I also present, for archival purposes, three ballroom dances not necessarily accessible for the general public to learn, but mainly to view. They are two five-part 19th century Quadrilles actually danced by the Mormon pioneers, and one example of an early 19th century Cotillion.

Please list publications and/or presentations based on your Redd Center research or program.

“Mormon Pioneer Dances, 31 Authentic Dances of the Early Saints,” was published May 9, 2017 by Cedar Fort Inc., and is available for purchase online at Amazon and Barnes, Noble for \$15 as well as other brick and mortar venues. It contains a chapter on historical, religious and cultural background, descriptions of all 31 dances, a chapter on Mormon pioneer dress, a chapter on the pioneer dance music and a video of all 31 dances including the recorded music for each of the dances.

I wrote and published an article about this project in the National Folk Organization Newsletter which came out in April '17.

Four of the dances from this publication were presented and taught in a special workshop at the Stockton Folk Dance Camp in Stockton, CA July '17

One of the dances from this publication was presented and taught at the Pourparler conference for callers and teachers of traditional dance last month, September '17 where the books were sold.

If your research is not yet completed, what are the next steps in your research process?

My research is always in progress due to my abiding passion for this subject.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I plan to join a Speakers Bureau to present and promote Mormon Pioneer Dances.

I plan to apply to teach a class at BYU Education Week presenting Mormon Pioneer Dances.

LARAINÉ MINER

“Mormon Pioneer Dances”

I have been invited to present my research on Mormon Pioneer Dances at the Utah Folklore Society annual conference.

I am currently executing a marketing plan involving a giveaway through Goodreads, and other promotional activities.

I, and other teachers, will continue to teach and call the Mormon Pioneer Dances at the monthly Barn Dance in Provo, UT, and the monthly Eagle Mountain Family Dance.

Comments

I wish to express my gratitude to the Charles Redd Center for their generous grant to assist in bringing this project to fruition.

KASSANDRA NELSON

“The Prince of the Upper Missouri: Captain James McGarry”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

The funds received from the Charles Redd Center primarily went towards a research trip to the Montana State Historical Society with the leftover amount going towards ordering copies of documents from the State Historical Society of North Dakota.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My research trip to the Montana State Historical Society yielded invaluable information about Captain McGarry due the fact that they have the business records of T. C. Power, the captain's boss. Among the correspondence files, I found copies of part of Captain McGarry's probate record. His estate was probated in Burleigh County, North Dakota (where he died) and those records were thrown out in the 1940s. Thus, the partial copies at the MSHS are quite possibly the only copies of his probate record in existence. From this, I was able to determine the amount of his investment in the Fort Benton Transportation Company as well as in a Montana cattle herd. Financial books for T. C. Power's many companies provided clues about the cattle herd McGarry was part of owner, including that it may have been the first cattle herd in the Judith Basin area of Montana.

The outgoing correspondence ledgers from the T. C. Power collection proved to be a gold mine of information. Unfortunately, no letters written by McGarry to his employer survived. The letters sent to him clarify what a vital role he played in the Fort Benton Transportation Company's origins and success. The letters confirmed the extent to which McGarry was responsible for and oversaw the building of the company's boats. Moreover, the letters illuminated the power McGarry was given by T. C. Power to make and accept business contracts. These letters prove that his role in the company has been greatly understated by other historians.

Please list publications and/or presentations based on your Redd Center research or program.

I have not yet given any presentations or had anything published based upon the Redd Center funded research.

If your research is not yet completed, what are the next steps in your research process?

The research aspect of this project is not yet completed. There are some questions I am still trying to answer about Captain McGarry's life that will require the ordering copies of records from various institutions and research on-site at the Nebraska State Historical Society where there are federal records available for viewing on microfilm. However, I have completed enough research that I have started writing segments of my book.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

Captain McGarry will be the subject of a presentation given at History Camp Iowa on November 11, 2017. This presentation will include information gained from the Redd Center funded research. In addition to this presentation, I am currently working on an article about Captain McGarry's role within the Fort Benton Transportation Company. Once completed, I will submit it for publication consideration to the Montana Magazine of Western History.

Comments

Thank you!

KIMBERLY SPURR

“Timelapse Photography of Prehistoric Solar Observatories in Northern Arizona”

Museum of Northern Arizona (MNA) Archaeology Division was awarded a Redd Center Independent Research and Creative Works Award in 2016 in the amount of \$775 for logistical and material support of Timelapse Photography of Prehistoric Solar Observatories in Northern Arizona. This project developed as part of a larger baseline documentation and condition assessment of petroglyphs and other features at four sites in the Crack-in-Rock Community of Wupatki National Monument, Arizona. The project is a collaboration between MNA and the National Park Service Flagstaff Area National Monuments, with fieldwork conducted 2014-2016. Three petroglyph panels at Horseshoe Mesa (WS834) were previously identified as solar image markers of the solstices. Our documentation recorded equinox interactions at one panel, and possible solar image effects at two panels not previously recorded. Based on our documentation of the shadow and sunlight interactions visible on two of the panels (Panels 39 and 50), we became concerned that the previous documentation misrepresented the nature and intentionality of some of these effects through the use of closely cropped still photography, which removes the effects from their physical context of the whole panel and its surroundings, and from the movement of the shadows and sunlight as the Earth rotates on its axis relative to the sun. The Redd Center Award was requested to support a proposed program of long-term timelapse photography at these two panels, as well as visits to other panels and features at Horseshoe Mesa and Middle Mesa (WS833) for which claims have also been made that they are prehistoric solar observatories. Our photography project began in 2016 and will extend through the equinox in March 2018.

Our recording equipment consists of two nearly identical timelapse camera setups, consisting of a folding sheet-metal construction sawhorse used as the camera mount, a Wingscapes Timelapse Camera, a ballhead to mount and position the camera, a solar power source, and a sheetmetal hood to protect the camera (shown below). One setup was purchased by the Principal Investigator in 2015 for long term testing. \$385 of the grant was used to purchase



the second camera setup, including the camera, mount, ballhead, solar panel, sheet metal for both camera hoods, three 32 GB SD memory cards, and batteries. The cameras require alkaline batteries to run the photographic program 24/7, but run off of the solar panel (which includes dedicated batteries) when the sun is shining. The cameras were installed in September 2016, just before the Autumnal Equinox. \$311 of the grant has been used for mileage (115 miles round trip from Flagstaff) and per diem for the crew of two (as per MNA safety policy when working in remote areas) to install and maintain the cameras.

The balance of \$79 subvented part of the cost for the PI to attend and present on this project at the Society for Cultural Astronomy in the American Southwest (SCAAS) Conference on

Cultural Astronomy in the Greater Southwest: *Before Borders: Revealing the Greater Southwest's Ancestral Cultural Landscape* at Crow Canyon Archaeological Center in Cortez, Colorado. The conference took place October 25-29, 2016. Our presentation “Revisiting the Solar Markers of Horseshoe Mesa, Wupatki National Monument” took place 3:00 PM, Wednesday, October 26. The presentation was well received and we have agreed to prepare it for publication in a conference proceedings, with a draft manuscript to be submitted by February 15, 2017. We are grateful to the Redd Center for supporting this research, which has expanded our understanding of solar calendar features at Wupatki National Monument, Arizona.

David Purcell and Kimberly Spurr, Museum of Northern Arizona, Flagstaff

JOHN TOPHAM AND SUSAN REDD
BUTLER BYU FACULTY RESEARCH AWARD

Mark Graham, Art. "Ancient Art and Desert Ecology in Utah, Northern Arizona, and New Mexico."

Heather Belnap Jensen, Comparative Arts and Letters. "Pioneers in Paris: Mormon Women Artists Abroad, c. 1880–1920"

Daryl Lee, French and Italian. "French Appropriations of Mormon "Colonizers" of the American West"

Brent Nielsen, Microbiology and Molecular Biology. "Diversity of Halophilic Microorganisms Associated with Halophytes in Western Utah"

MARK GRAHAM

Art

“Ancient Art and Desert Ecology in Utah, Northern Arizona, and New Mexico.”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

The project included field studies among archaeological sites and a study of indigenous ceramic traditions in Southern Utah and Northern Arizona. We focused on Fremont and Anasazi rock art, desert landscape, local communities, and indigenous ceramics. We spent time in ancient rock art sites in Sego Canyon, Utah, Hovenweep National Monument, Utah, and Chaco Culture National Historic Park in Arizona. In addition to studying ancient artifacts, we talked with people in the area who have ancestral ties to these ancient cultures. We also did background research on Fremont and Anasazi rock art and ceramic traditions.

The art works of local artists and indigenous artists are often neglected in favor of more traditional work found in museums. Many students who come to BYU have never visited many of the wilderness areas in Utah and surrounding areas, do not understand the history that surrounds the area and are unaware of the many important issues of ecology, wilderness preservation, indigenous peoples, local culture. This project was designed to help students become active and informed within communities of practice and to be forces for positive change.

Artists and art educators are increasingly engaged in investigation and creative work that considers local culture and histories within an ecological perspective. This study uses the theoretical construct of critical place-based education. Place-based educators emphasize the importance of local human and ecological communities and their history as an essential part of both the K-12 and post-secondary curriculum. These investigations develop knowledge and stewardship about the relationship between human and non-human communities, consistent with the aims of a BYU education that include preparing students “who are able to improve the moral, social, and ecological environment in which they and their families live.” This study helped build knowledge and understanding of local culture, history, and ecology.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

This project gave students opportunities to work with faculty mentors on research and creative work. There was an unexpected enthusiastic response from students; altogether 26 students participated including ten graduate students and 16 undergraduate students. This research allowed students to become acquainted with a variety of research methods and to begin to see how the roles of artist, teacher, and researcher might complement each other. In addition to working within these unique sites, students and faculty had many opportunities to talk about a wide range of topics during the travel to and from these places. We conducted class seminars in the field as part of these studies. Picture a group of students gathered around a tent discussing texts as part of their individual artistic and research projects. These mentored experiences allowed student to experience local culture, community, ecology, wilderness, contemporary and ancient art, conduct reviews of research literature, and engage in meaningful field studies. We were particularly interested in the relationships among politicized landscape of the West, indigenous culture, existing ecological challenges, and how these issues might be represented within the visual arts. One of the most important insights gained from this study was the complexity of the issues regarding conservation, ecology, land use, and the lives of the people who live in these areas. Both students and faculty also developed a renewed sense of awe and reverence for these places and the human and natural history.

MARK GRAHAM

Art

“Ancient Art and Desert Ecology in Utah, Northern Arizona, and New Mexico.”

Please list publications and/or presentations based on your Redd Center research or program.

This research was presented at the Utah Art Education Association annual conference in February, 2017 and at the National Art Education Association annual conference in New York City in March, 2017. These presentations are being prepared for publication in appropriate journals. Students and and faculty also created an exhibition of creative work as part of this project.

If your research is not yet completed, what are the next steps in your research process?

The topics of this research are of continued interest to faculty and students in the Art Department. We have contacted the museum at the University of Arizona, which has the largest collection of Western indigenous ceramics in order to continue our studies of ceramic traditions (two of the faculty involved are ceramic artists). There are many sites in Utah, includes those in the Bears Ears area that we plan to study in the future, both from an artistic perspective and within the political and ecological contexts of the areas. Since our project in Chaco Canyon and Hovenweep, two graduate students have already begun research and field studies in the Bears Ears area. As a continuation of the research begun with this project, the Art Department is planning a Study Abroad type of experience during the Spring or Summer semesters that will focus on the land and indigenous artwork of the Intermountain West.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

As noted above, we are preparing our findings and presentations for appropriate art education journals.

Comments

Thanks to the Redd Center for their support of this project, which was extremely rewarding for students and faculty.

HEATHER BELNAP JENSEN

Comparative Arts and Letters

“Pioneers in Paris: Mormon Women Artists Abroad, c. 1880–1920”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With funds from the Charles Redd Center, I was able to conduct extensive on-site research at home (Utah) and abroad (France and England) for my book project, “Artistic Frontiers: Mormon Women Artists Abroad, 1880-1945.” This cultural history will serve to raise consciousness of these women and their invaluable contribution to the Utah and LDS art scenes, as well as examine the ways in which their education, training, work, and contribution to the arts fit into broader regional and national patterns for women in the arts at this time. I estimate that I have amassed more than half of the material needed to complete this manuscript.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Funding from the Redd Center enabled me to more systematically survey the terrain of my project, which I now recognize as more complex and compelling than I had thought initially. Travel funding enabled me to work on-site and make connections with scholars and archivists whose assistance has been indispensable. In the course of my research, and subsequent presentations and first publication on the subject (the material of which will serve as the first chapter of the book), I have discovered that there is significant scholarly and institutional interest in it, and that it fills lacuna in scholarship in the fields of art history, Mormon history, women’s history, and Western studies. I have been approached by the LDS Church History Museum about possibly curating an exhibition (and writing an accompanying catalogue), in 2019 or 2020.

Please list publications and/or presentations based on your Redd Center research or program.

Book chapter: “Aesthetic Evangelism, Artistic Sisterhood, and the Gospel of Beauty: Mormon Women Artists at Home and Abroad, c. 1890-1920” in *Beyond Biography: Sources and Contexts for Mormon Women’s History*, eds. Rachel Cope, Amy Easton-Flake, Keith Erikson, and Lisa Olsen Tait (Madison, New Jersey: Fairleigh Dickenson University Press, 2017): 141-66.

Keynote speaker. “Mormon Women Artists Abroad.” The Zion Art Society, Salt Lake City, September 23, 2017.

If your research is not yet completed, what are the next steps in your research process?

I will be exploring those artists and their oeuvres who have come to light in the course of the survey of material, as well as continuing to visit archives and libraries and various art collections (private and public) over the next few years.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I intend to publish a monograph, as well as co-curate an exhibition (with catalogue) devoted to the subject.

I gave due credit to the Redd Center in the publication listed above.

Comments

I am so grateful for the funding, and apologize profusely for the delay in submitting this report!

DARYL LEE

French and Italian

“French Appropriations of Mormon “Colonizers” of the American West”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

By combining the award with funds from the College of Humanities, I was able to spend one extra day at a conference in April in Washington, D.C., to find a document in the Library of Congress, and then to extend time during a research trip to Paris in May/June. In both cases, my primary concern was to track state regulation of Mormon immigrants to the United States from France. The LC document had to do with a circular sent from the US Secretary of State, Evarts, to all consular offices, requesting foreign states to limit Mormon migration to the US, where it was presumed church members would break US law by practicing polygamy. The document also included invaluable information in the report on the Paris office’s attempt to secure French support for this blockage from the French Minister of Foreign Affairs, William Henry Waddington. (I am happy to share pdfs of the circular and report; you may find them fascinating.) In France, I sought documents at the Archives Diplomatiques that would complement the US findings—whether a visit by the American in the LC document (Mr. Hitt) to the French Minister actually occurred, and perhaps even more detail on what occurred. Alas, I was unable to prove Mr. Hitt’s visit, however in combing through the Minister’s files, I found data that suggests the visit may have taken place and that the French Minister was tracking US news reports of Mormon activity; this information was dated within a month of the supposed visit by the American Hitt to the Ministry.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

I better understand the levers of state used to block Mormon immigration to Utah from France. This will prove important in trying to demonstrate the French attitude towards Mormons and how the French state viewed religious practice in America.

Please list publications and/or presentations based on your Redd Center research or program.

I have not published on this material, but I hope to in the coming year.

If your research is not yet completed, what are the next steps in your research process?

I am revising drafts of two separate article manuscripts on Mormonism in the French imagination, one for French Historical Studies and the other for a special issue of *Transatlantica*.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

This year’s findings are most likely to find a place in a book project I am writing with co-authors Heather Belnap Jensen and Corry Cropper (both here at BYU). I am grateful to the Redd Center. The resources from my Award have proven extremely useful. Of course, I will acknowledge the Center in my future publications. And perhaps elements of subsequent aspects of this project will be worthy of future awards—the French have quite a fascination with the American West!

Comments

Thank you.

BRENT NIELSEN

Microbiology and Molecular Biology

“Diversity of Halophilic Microorganisms Associated with Halophytes in Western Utah”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With the help of six undergraduate students since the summer of 2016 we have collected soil samples from three salt-tolerant plant (halophyte) species (*Salicornia rubra*, *Salicornia utahensis*, and *Allenrolfea occidentalis*). These plants grow in a highly saline area south of Utah Lake, just east of the small town of Goshen. The undergraduate students collected soil samples from around the roots of the three plant species and also from areas where no plants were growing as controls. In the lab, soil samples were placed on nutrient agar plates and incubated to isolate individual bacterial species. Many organisms with different morphology grew; the students purified DNA from each. The 16S rRNA region from each sample was sequenced and the resulting data used to identify the bacteria from the NIH NCBI sequence database. Using this approach the following bacterial species were identified: *Halomonas elongata*, *Halomonas huangheensis*, *Bacillus licheniformis*, *Bacillus atrophaeus*, *Bacillus sonorensis*, *Bacillus subtilis*, *Brevibacterium halotolerans*, *Zhihengiluella halotolerans* (bright yellow pigment), *Kushneria* (red-orange pigment), *Planococcus* (bright orange pigment). All of these had a white or off-white colony appearance unless otherwise noted. We tested the salt tolerance levels of each species, and found that most could tolerate 2 M or 2.5 M NaCl while some could tolerate up to 3 or 4 M NaCl, more than five times higher than the salinity of ocean water. Dr. Darrell Weber, retired professor of botany at BYU who previously studied these plants, accompanied us on the first collection trip to help find the area and explain background information about the area and the plant species. We made two return trips later in the summer and fall, and another in the spring of 2017 to collect additional soil samples. We have initiated testing these bacteria for the ability to stimulate growth of salt-sensitive alfalfa in salty soil.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Redd Center funding allowed us to purchase materials to analyze salt-tolerant bacteria (the microbiome) associated with the roots of halophyte plants. This involved the collection of soil and root samples from the halophyte plants, growth media to isolate and characterize bacteria from the samples, reagents for DNA isolation, and costs for DNA sequencing analysis to identify the bacterial species. Little previous work has been published on microbiomes associated with native halophytes in the western states or their potential for enhancing plant growth. Halophiles in and around the Great Salt Lake and other marine environments have been studied, but the species are different from those found in soil. We found that the bacteria associated with these plants were from a wide range of genera and they were all very salt-tolerant, with the ability to grow in salt ranging from 1.5 M to 4 M NaCl. Some of these bacteria were known previously only in salt-water environments, so finding them in desert soil was a novel finding.

Our hypothesis for our continuing work is that some of these native species of bacteria found associated with the roots (endophytes or rhizosphere) of native halophytes will contribute to growth of crop plants in saline soil. We have begun testing these bacterial isolates for the ability to stimulate the growth of alfalfa, which normally can tolerate only low levels of salt, under salty soil conditions. We have found three isolates that stimulate alfalfa growth in salty soil, and at least one of these is capable of becoming established as an endophyte within the plant roots.

Please list publications and/or presentations based on your Redd Center research or program.

BRENT NIELSEN

Microbiology and Molecular Biology

“Diversity of Halophilic Microorganisms Associated with Halophytes in Western Utah”

“The microbiome of Utah halophytes” Jennifer Kearn, Caitlyn McNary (undergraduate students) and Brent Nielsen, poster presentation, annual meeting of the Intermountain Branch of the American Society for Microbiology, April 2017.

“Can halophilic bacteria stimulate plant growth in salty conditions?” Brent Nielsen presentation at the MMBIO Dept. Faculty Research Luncheon, July 2017.

“The microbiome of native Utah halophytes: two isolates stimulate growth of a salt-sensitive crop plant” Brent Nielsen, invited seminar, Alabama State University, September, 2017.

“Stimulation of alfalfa growth in saline soil using isolates from a halophyte microbiome”, Brent Nielsen and Scott Lowman (Institute for Advanced Learning and Research, Danville, Virginia) grant proposal submitted to the National Science Foundation/USDA Plant-Biotic Interactions program, September, 2017.

“Halophilic bacteria isolated from Utah halophytes stimulate the growth of alfalfa in salty soil” Jennifer Kearn, Caitlyn McNary, Jason West (undergraduate students) and Brent Nielsen, manuscript in preparation for submission to a scientific journal.

If your research is not yet completed, what are the next steps in your research process?

Our findings to this point have been very exciting, and lead to several new possibilities of research to identify bacteria that can be used to stimulate growth of bacteria under salty soil conditions. We have plans to screen additional bacterial isolates from the rhizosphere and endophytes of halophyte plants for the ability to stimulate growth of alfalfa in saline soil. To determine the mechanism(s) involved, we will analyze properties of the bacterial isolates that contribute to plant growth stimulation. In addition, we will analyze differential expression and disruption of plant genes induced by the bacterial inoculum. This will allow us to develop a model for the mechanism(s) involved in growth stimulation. Because different plants have different nutrient requirements and abilities to tolerate stress such as heat, drought, pH as well as salt, it is likely that one bacterial species is not able to allow tolerance to all of these conditions. The approaches we have used should provide a basis to allow the identification of bacteria that are capable of stimulating growth of other crop plants in salty soil, or bacteria that enhance plant tolerance to other stress conditions.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

We plan to continue to give talks or present posters on this research at appropriate regional and national meetings, such as the branch ASM meeting or the national microbiology or plant biology meeting. As mentioned above, one manuscript to report our findings is in preparation for submission to an appropriate scientific journal for publication. We expect that at least two publications will directly result from this project, one on characterization of the halophyte microbiome, and one on stimulation of alfalfa growth in salty soil. We will notify you when these papers are accepted for publication. Support from the Redd Center has been and will be acknowledged in all publications and presentations, and was listed as a source of support for the preliminary data included in our NSF/USDA grant proposal.

Comments

Thank you for the support, it has been a great project for the students who have worked with me.

JOHN TOPHAM AND SUSAN REDD BUTLER OFF-CAMPUS FACULTY RESEARCH AWARD

Stephanie Capaldo, Comparative Cultural Studies and Public Humanities, Northern Arizona University. “Neutralizing Nuclear Memory: A Transnational Study of Commemoration in WWII Nuclear Environmental History”

Matthew DeSpain, History and Native American Studies, Rose State College. “Mel Thom: Tradition, Community and the Rise of Indian Activism”

Paul Formisano, English, University of South Dakota. “Navajo Dam and the Reclamation of the Hispano Voice”

Brian Frehner, History, Oklahoma State University. ““The Lost City of St. Thomas: Mormons, Water, and Hydraulic Societies””

Melody Graulich, English and American Studies, Utah State University. “Who’s at Home in Yellowstone?: The Northern Pacific Railroad and the Paintings of Abby Williams Hill, 1903–6”

Cathryn Halverson; English, Germanic, and Romance Languages; University of Copenhagen. “Faraway Women and *The Atlantic Monthly*”

Benjamin J. Koch, Center for Ecosystem Science and Society, Northern Arizona University. “Geomorphic Controls On Freshwater Food Webs in Mountain Watersheds: The Role of Alpine Lakes”

STEPHANIE CAPALDO

Comparative Cultural Studies and Public Humanities, Northern Arizona University.

“Neutralizing Nuclear Memory: A Transnational Study of Commemoration in WWII Nuclear Environmental History”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

The funds provided by the Charles Redd Center helped support travel from Flagstaff, Arizona to Grants, New Mexico with one night lodging, to Los Alamos, New Mexico for two nights lodging, and to Moab, Utah for two nights lodging. I was able to visit the New Mexico Mining Museum in Grants, New Mexico, with a “simulated uranium mine built by minors,” the Museum of Moab which features an exhibit on uranium mining, as well as the Los Alamos Historical Museum and the Manhattan Project National Historical Park, both in Los Alamos, New Mexico. The Grants and Moab museums provided me examples of local, place-based understandings of nuclear memory in public commemoration, as well as larger regional constructions of role of atomic energy development in the American West. The Los Alamos Historical Museum and the Manhattan Project National Historical Park represented a more national depiction of collective United States’ nuclear environmental memory.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My central goal in the aforementioned trips was to begin to understand the similarities and differences in the environmental stories told about WWII nuclear history, in order to ascertain elements of environmental memory that are locally place-based, regionally constructed within the mythic narrative of the American Southwest, and institutionally shaped to cultivate a sense of nationalism. In the local Moab and Grants museums the narrative focused centrally on the mythic ideals of rugged individualism in the American West. The stories told about uranium mining focused on the miners themselves, depicted as individual prospectors seeking fortune during the uranium boom era, with little recognition of larger corporate and state direction of mining. Exhibits walked visitors through the daily lives of the miners, what they ate, regular responsibilities, hardships, dangers faced as related to general mining accidents. The rugged individualism of the miners was situated within a larger regional identity of the Frontier. There is a clear sense of pride in local identity, and sense of place is tightly tied to the history of mining in the US West. There is little sense of an environmental memory tied to the local experience with uranium, other than general geological knowledge consistent with the narrative of harsh landscapes endured by pioneers in the West. The Los Alamos Historical Museum, although located in the same region of the American West, told a larger national story of uranium development and deployment, and the story of apprehensive scientists cautious of the repercussions of their work on human life. The national story is based on ideas of American ingenuity and exceptionalism during the WWII and post-war eras. Environmental memory is much more present in the exhibits, however, focused mainly on shifts in the physical landscape of the Pajarito Plateau and Rio Grande Valley.

Please list publications and/or presentations based on your Redd Center research or program.

Once the research is complete, I hope to present my work at the American Society for Environmental History conference, as well as submit an article, “Neutralizing Nuclear Memory: A Transnational Study of Commemoration in WWII Nuclear Environmental Memory,” to the Environmental History Journal. I am also working on developing an Interdisciplinary and Comparative Topic Course in Humanities based on this research.

If your research is not yet completed, what are the next steps in your research process?

STEPHANIE CAPALDO

Comparative Cultural Studies and Public Humanities, Northern Arizona University.

“Neutralizing Nuclear Memory: A Transnational Study of Commemoration in WWII Nuclear Environmental History”

In addition to the museums in the American Southwest, I hope to apply for additional funding sources to re-visit Manhattan Project exhibits in Washington D.C., as well as the Peace Park Memorials and Museums in Hiroshima and Nagasaki. Each will build additional layers of storytelling from the local, regional, national, and international scopes. I hope to further compare the local and national memories depicted in the American Southwest with international memories of environmental understandings of nuclear development.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

Once the research is complete, I hope to present my work at the American Society for Environmental History conference, as well as submit an article, “Neutralizing Nuclear Memory: A Transnational Study of Commemoration in WWII Nuclear Environmental Memory,” to the Environmental History Journal. I am also working on developing an Interdisciplinary and Comparative Topic Course in Humanities based on this research.

Comments

Thank you for your support in my ongoing research and I will report further developments to the Redd Center.

MATTHEW DESPAIN

History and Native American Studies, Rose State College

“Mel Thom: Tradition, Community and the Rise of Indian Activism”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Funding provided travel for archival research at various institutions. Typescript interviews of Mel Thom at the University of Utah Special collection about Thom's activism activities were insightful. While there I piggybacked other research on a smaller project examining correspondence between Historian Dale Morgan with publisher Fred Rosenstock. While at the U of U I discover additional Thom material from the founders of the American West Center, an incredible and unexpected information coup I was unaware of.

BYU's Special Collections offered more info, particularly recordings of the Regional Indian Youth Conference sponsored by BYU. An incredible document of the LDS church's supporting the rise of Indian activism. There are other sources at BYU I need to look at.

I visited the University of New Mexico where the National Indian Youth Council are housed. The NIYC is the organization I am centering my project on Thom around. Letters, papers, and publications are all part of the collection and show Thom's energy and organizational skills in the NIYC's early years. Thom's writings in the NIYC publication “Americans Before Columbus” give nuanced insights into Thom's influences and perspectives.

I recently located the descendants of Thom, his daughter, here in Oklahoma and am currently negotiating a meeting and access to what papers they have.

Oral interviews of those still alive who worked with Thom are part of my effort, with the Redd Center's generosity funding those trips.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Redd Center funding was essential for travel and housing as I worked in the above mentioned research archives. Placing Thom more central in the rise of Indian activism in the 1960s is the central objective of my research. However, I am also discovering the more personal side of Thom through the interviews of those that knew him. His characteristics, passion for the Native cause, how that cause consumed him at times and impacted his personal life, and sometimes self-destructive penchants are creating a more nuanced and complex view of Thom. These discoveries only form more questions to be answered in the research that is unfolding.

Please list publications and/or presentations based on your Redd Center research or program.

No publications or presentations as of yet. In actuality, the research is leading towards a larger project than was initially envisioned.

If your research is not yet completed, what are the next steps in your research process?

Next steps in research would include accessing three key additional points of research. One is to continue working with the Thom descendants to gain access to family materials. We are in initial discussions. But as with many Native American families working with non-Native researchers, a strong sense of trust and reciprocity must be established including cultural protocols. These take time. The second is gaining access to the Walker River Paiute archives. Funding was not sufficient to extend my trip and accommodation to such an isolated corner of the Great Basin. I will, however, need to comb the tribal archives since Thom

MATTHEW DESPAIN

History and Native American Studies, Rose State College

“Mel Thom: Tradition, Community and the Rise of Indian Activism”

was tribal chief following his days of activism. I hope there are untapped resources there. There are also other Thom family members on that reservation I would like to interview. Third, and lastly, I'll need to return to Washington DC to comb the National Archives and Library of Congress. Thom was active in lobbying and protest movements, particularly the Poor People's Campaign of 1968.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

My initial plans for publication remain an article length piece. The two periodicals in mind are the American Indian Quarterly or the Western Historical Quarterly. There is the potential for the project to stretch to a book-length project, but that is to be seen.

Comments

The Redd Center has been spectacular in its support and funding for my research. My father was best friends with Bob Redd and to sustain that family connectivity in this unique way is a privilege and an honor.

Let me add that the hiring by the Redd Center of Brenden Rensink as Assistant Director was an incredible coup! I have known Brenden only a short while, but I am always taken with his scope of knowledge, great nature, willingness to help forge connections between scholars, and how he represents BYU, and by extension the LDS Church, in such a positive, professional, and approachable manner. He is the consummate gentleman and scholar. BYU and the Redd Center would do well to keep him around as long as possible. Then again, I am not saying anything you all do not already recognize.

PAUL FORMISANO

English, University of South Dakota

“Navajo Dam and the Reclamation of the Hispano Voice”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

The award allowed me to spend four days at the University of New Mexico's Center for Southwest Research where my goal was to consult the papers of Francis Quintana to better understand how the Navajo Dam and Reservoir affected the small Hispano communities displaced by these projects. Although the majority of the Quintana collection was unrelated to my project, I found unpublished papers of Quintana that elaborated on the dam's impact as well as a transcript of a radio interview with Quintana and one of Rosa's citizens discussing the dam's impact on local communities. However, what I realized after combing through her field notes was that they didn't include actual transcripts of the citizens of Rosa and other towns flooded by the dam. Instead, they provided only summaries filtered through the lens of an ethnographer seeking to understand the unique culture of Northern Mexico. Thus, what I originally set out to find did not exist.

Despite the overall lack of relevant material in Quintana's papers, I found important information in the papers of Clinton Anderson, Dennis Chavez, and Joseph Montoya, who were New Mexico state representatives during this period. Their papers included significant correspondences and other items which provide greater context about the development of the dam within the larger Colorado River Storage Project and its impact on the Navajo Tribe. I also consulted the archive of writer and activist, John Nichols, who was integral in capturing and protesting the movement to build Indian Camp Dam just east of Navajo Dam. Thus, while I have more research to conduct on the impact of Navajo Dam on the flooded Hispano communities, I discovered a wealth of information that helps me locate this particular issue within a larger debate about land and water rights for marginalized groups in the Four Corners region.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

As noted above, Quintana's papers did not have the exact information I hoped to locate. However, what I did find helped reinforce the significant emotional and financial toll the construction of the dam had on those forced to leave their homes. At the same time, her documents indicated where I might locate the transcripts for the Tri-Ethnic Project of which she participated that would likely have more elaborate information about the flooding of the San Juan Valley communities. What I didn't anticipate was how valuable other collections would prove to be. Anderson's, Chavez's, and Montoya's papers contain valuable information particularly about how the Colorado River Storage Project would benefit the Navajo tribe. Drafts of speeches to various government subcommittees, newspaper clippings, and memorabilia from the dam's dedication in 1962 offer my project a greater sense of the controversial nature of the dam and these delegates' efforts to secure water for their constituency.

Most enlightening during my time in the archives was the material from the Nichols collection, which adds an important dimension to work I hadn't previously considered. While Hispano reactions to Navajo Dam have been difficult to locate thus far, Nichols papers include a wealth of information about protests from the Taos area against the proposed Indian Camp Dam. As this event acts as the backdrop for his novel, *The Milagro Beanfield War*, Nichols's papers include extensive notes and other documents tracing the Tres Rios Association's efforts to block the dam by mobilizing Hispanos in and around Taos. As this event occurred nearly twenty years after the construction of Navajo Dam and toward the end

PAUL FORMISANO

English, University of South Dakota

“Navajo Dam and the Reclamation of the Hispano Voice”

of the Bureau of Reclamation’s big dam building phase, it represents the successful efforts of Hispano communities which asserted their land and water rights to oppose federal interests.

Please list publications and/or presentations based on your Redd Center research or program.

I presented some of my findings from the Quintana and Montoya papers at the biennial Under Western Skies Conference on Sept. 27, 2016 at Mount Royal University in Calgary, Alberta, Canada. My paper, “Navajo Dam and the San Juan River: A Study of Conflict and Endurance,” aptly fit the conference theme of water, and provided a preliminary discussion of the competing interests (Hispano, Navajo, federal government) involved in the dam’s construction.

If your research is not yet completed, what are the next steps in your research process?

Because I was not able to locate the transcripts I had hoped were in Quintana’s papers, I now need to consult the Omer Stewart Archives at the University of Colorado—Boulder along with the Bureau of Reclamation archives at the Federal Center in Denver, Colorado. Stewart was the project lead on the Tri-Ethnic Project, and so I hope Quintana’s interview materials are located in the project’s collection. The Bureau’s archives may include more information about the negotiations it had with the local communities. In particular, I am hoping to locate information regarding a petition citizens of Rosa sent to their state representatives. Quintana noted that one had been circulated throughout the town, and these documents would offer much more insight into the extent to which these small rural towns challenged the Bureau’s plans. Once I’ve gathered this material, I anticipate having what I need for my chapter about the dam and its impact on the Hispano communities and Navajo tribe.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

My intent is to further develop the paper I gave at the Under Western Skies conference for publication in venues such as ISLE (Interdisciplinary Study of Literature and the Environment) as well as in my current book project under contract with the University of Nevada Press. As I am also in the early stages of an anthology on the literature of dams, I anticipate drawing from the Nichols’ collection of original artwork and other documents about the Indian Camp Dam.

Comments

Thank you again for this award and to the donors as it provided the necessary support to make this research trip possible and to jump start my chapter. I hope to collaborate with the Center again!

BRIAN FREHNER

History, Oklahoma State University.

“The Lost City of St. Thomas: Mormons, Water, and Hydraulic Societies”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

I was able to take two separate trips to Utah and visit four different archives. During the first trip, I spent seven days conducting research at the LDS Church History Center, the Brigham Young University Special Collections Department, and at the Utah Historical Society. I later returned to southern Utah and spent four days at Dixie State College, Special Collections. Both trips yielded invaluable primary sources that are at the center of my study. Without these materials, I would have not coherent research project.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

I learned that Mormons who colonized tributaries along the Colorado River demonstrated remarkable ingenuity and skill at harnessing water from nearby tributaries to irrigate their arid lands. However, Mormon communities throughout southern Nevada and southern Utah struggled to establish enduring communities and, in this respect, were like other non-Mormon communities in failing to realize a hydraulic society. My research revealed that aridity and volatile rivers of this region presented Mormon communities with unique technological challenges and that they at times succeeded in building and sustaining their hydraulic societies but that the unpredictability of nature frequently undermined their efforts.

Joseph Smith and Brigham Young taught a theology infused with environmental values, but environment often prevented settlers from implementing their leaders' religious ideas. Scholars have argued that various Christian denominations possessed values that translated into stewardship over natural resources and, conversely, that religious values resulted in a paternalistic and hierarchical domination of the natural world. My work steers a middle course between these extremes. Mormon religious values of cooperation and communalism greatly informed settlements throughout the Colorado Plateau and portions of the Mohave Desert, but the natural environment disrupted their lives so frequently and with such devastation that settlers often proved unable to realize the religious ideals that animated Brigham Young's geopolitical vision. Flash floods particularly devastated settlements. When clouds unleashed water, the physical environment transformed dramatically and with little notice. Engorged rivers washed away fields and undermined their food supply, carried off homes and workplaces, and potentially drowned human beings caught by surprise. Many early settlers suffered from severe food shortages when water inundated and destroyed their crops. Even the most committed, inspired, and zealous settlers often could not withstand or survive such conditions. Population in many settlements declined dramatically.

Please list publications and/or presentations based on your Redd Center research or program.

“The Lost City of St. Thomas: Mormons, Water, and Hydraulic Societies,” Mormons and the Environment, Jedediah Rogers and Matthew C. Godfrey, eds. University of Utah Press, (under review)

Presented this paper at the Mormon History Association, May 2017, St. Louis, MO

If your research is not yet completed, what are the next steps in your research process?

The volume of sources I found suggest that a book-length study of my project is possible and warranted. However, I'm uncertain if I'm going to pursue such a project at the present time.

BRIAN FREHNER

History, Oklahoma State University.

“The Lost City of St. Thomas: Mormons, Water, and Hydraulic Societies”

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

My future plans on this topic are uncertain at the moment.

Comments

I'm incredibly grateful for the research funds granted. I would like to express my thanks to the people who made these funds available and to express thanks for an intellectually rewarding experience.

MELODY GRAULICH

English and American Studies, Utah State University

“Who’s at Home in Yellowstone?: The Northern Pacific Railroad and the Paintings of Abby Williams Hill, 1903–6”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

In summer, 2016, I spent a week working in the comprehensive Abby Williams Hill archives at the University of Puget Sound in Tacoma. While there I consulted with the research librarians who are in charge of the archives and was given a tour of the Hill paintings that are not in public sites (hung in the dean’s office, for instance, or not up at the moment). In fall, 2016, I spent two days in the Yellowstone archives looking for materials related to Hill, which was very profitable, and visiting and photographing the sites of her paintings.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

At the University of Puget Sound, I succeeded in gathering much more biographical information about Hill, as well as reading her journals in full and copying them, largely with my iPhone. I saw photographs of her and her family throughout her life. I read her husband’s journals, which chronicle their travels through the National Parks late in life, materials I had never encountered before, and her daughters’ letters. Most significantly for this part of my research on Hill, I read many letters to her from American Indian friends which documented her relationship to them, as did some of her daughters’ letters and journals. I also saw some of her correspondence with the Northern Pacific.

While the Yellowstone Archives have little material about Hill, researching more fully the scholarship on the park confirmed for me my instinct from what I had read before: its largely male bias. Hill is never mentioned in any of the major histories of the park! She does not appear on the park website, an oversight I intend to address. The archivists, as I had confirmed before visiting, had never heard about her! As I worked through the materials in the archives, I realized a fuller context for understanding Hill’s work for the Northern Pacific as I saw their promotional materials over the decades and what aspects of the park the later artists emphasized, what the Railroad asked of them. I intend to send some of my compiled research to the park archives so she will appear in their company.

Please list publications and/or presentations based on your Redd Center research or program.

I presented two different talks on my topic focused on Hill and the Northern Pacific at two conferences: the Western Literature Association conference at Big Sky, Montana, in September 2016, and at the American Studies Association Conference in Denver in November 2016. The presentation at ASA was in an international panel, where I met two German scholars with whom I hope to collaborate on further work on western North American women photographers and artists, a recurring theme in my scholarship and publications. I am currently preparing an application to do research on this topic next summer at the Montana Historical Society in Helena and planning a symposium on Montana women artists.

If your research is not yet completed, what are the next steps in your research process?

I continue to look for materials about Hill. I now hope to visit the Northern Pacific Archives.

MELODY GRAULICH

English and American Studies, Utah State University

“Who’s at Home in Yellowstone?: The Northern Pacific Railroad and the Paintings of Abby Williams Hill, 1903–6”

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I am preparing an essay to send to the Montana Historical Quarterly. I intend to continue to work with the Yellowstone Archives.

I also will include a biography of Hill in a book I am preparing about “quirky” western women writers and artists, intended for a popular audience.

Comments

Presenstation available upon request

CATHRYN HALVERSON

English, Germanic, and Romance Languages; University of Copenhagen

“Faraway Women and The Atlantic Monthly”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

I visited a number of archival collections across the United States, including the Susan George Bloomfield collection at Sweetwater County Historical Museum, Green River, Wyoming; the Emerson family papers, New York Public Library Archives and Manuscripts, New York City; the Ellery Sedgwick papers, Massachusetts Historical Society, Boston; and Houghton Mifflin Company records, 1866-1968, Houghton Library, Harvard University, Cambridge.

These additional visits were invaluable in developing new research on two of my chapters, as well as returning to a number of sources used throughout the book that I had previously consulted at the Massachusetts Historical Society.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Through work with the Emerson papers, I gained a much deeper understanding of Idaho/Alberta writer Hilda Rose, especially of events in her life from 1933 to 1945. I also learned more about the role that Margaret Emerson in New York played in her life, and how her readers nationwide responded to her 1928 book, *The Stump Farm*.

Working with the Bloomfield papers in Green River, Wyoming, I likewise filled in many gaps in my knowledge about Wyoming homesteader and writer Elinore Pruitt Stewart. Of particular interest were the epistolary friendships she developed with women across the United States, and how this practice helped her continue to publish.

I also made numerous smaller discoveries about the Atlantic Monthly and Atlantic editor Ellery Sedgwick, which fed into my opening chapter.

Please list publications and/or presentations based on your Redd Center research or program.

I gave a number of talks on the project, at venues that included the University of Wyoming, where I focused on what I had recently learned about Stewart; the Massachusetts Historical Society; St. Lawrence University, and the Society for the Study of American Women Writers conference in Bordeaux, France.

If your research is not yet completed, what are the next steps in your research process?

At this point I am editing the full manuscript, as well as tracking down stray citations and quotations.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

Since receiving the award, the University of Massachusetts Press has offered me an advance contract to publish the book as part of its long-running series, *Studies in Print Culture and the History of the Book*. I am contracted to deliver the manuscript January 2018.

Comments

I am very grateful for this award. Without it, I would not have visited either the Sweetwater County Museum or the New York Public Library, as the trips were expensive and I had not anticipated that I would find as much as I did. That I was able to do so resulted in a considerably stronger book, with new revelations and insights about my set of writers. Thank you so much.

BENJAMIN J. KOCH

Center for Ecosystem Science and Society, Northern Arizona University

“Geomorphic Controls On Freshwater Food Webs in Mountain Watersheds: The Role of Alpine Lakes”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Watershed morphology shapes the functioning of freshwater ecosystems in predictable ways, yet our understanding of the consequences of these patterns for stream food webs is coarse. Lakes are prominent geomorphic features of many headwater catchments and drive the ecology of the streams that flow from them. However little is known about how biophysical features of lakes control patterns of energy flow in the food webs of lake outlet streams. Because of their influence on the timing and magnitude of organic matter cycled within lakes, factors such as lake area, shape, and basin orientation that influence the amount of organic matter routed downstream are likely to drive in-stream production. In the Rocky Mountains, high elevation lakes are predicted to experience earlier snowmelt and longer ice-free periods – changes that will alter the timing of planktonic subsidies to downstream food webs. The extent to which these changes will affect food webs in mountain headwater streams is unknown.

In June 2016, I collected preliminary data from a pair of alpine basins in western Colorado (one with a lake, and one without a lake) to determine the feasibility of partitioning organic matter derived from lakes and streams according to their isotopic signatures.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Redd Center funds enabled me to collect preliminary data to demonstrate the feasibility of isotopically partitioning lake- and stream-derived sources of organic matter. I collected phytoplankton, zooplankton, and stream biofilm samples to determine the extent to which these organic matter end-members could be distinguished isotopically using natural abundance ratios of $2H$, $13C$, and $15N$.

I found that the concentration of suspended organic particles in the streams differed between the lake-outlet versus the stream-only watershed. Discharge increased longitudinally in both streams. Suspended organic particle loads in the lake outlet stream were 600% higher than those in the stream without the lake, but converged to similar values within 250m downstream. This pattern suggests that lake-derived organic matter may subsidize stream food webs early in the summer growing season, but that the spatial extent of such subsidies is limited. Preliminary isotopic results indicate that this lake-derived organic matter can be distinguished from stream-derived organic matter (biofilm). Isotopic analyses of the final set of samples are currently underway at the Colorado Plateau Stable Isotope Laboratory at Northern Arizona University. Once finalized, we expect those results to enable calculating the relative contributions of lake-derived versus stream-derived organic matter to macroinvertebrates within the lake outlet stream.

Please list publications and/or presentations based on your Redd Center research or program.

Koch, B.J. 2016. Exploring the effects of alpine lake morphometry and catchment characteristics on stream outlet food webs. (Poster) Bi-annual Summer Meeting, Association for the Sciences of Limnology and Oceanography, Santa Fe, NM.

Pigg, H.C., and B.J. Koch. 2018. Distinguishing the contributions of lake-derived and stream-derived organic matter to alpine stream food webs. (Poster) Annual Undergraduate Research and Design Symposium, Northern Arizona University College of Engineering, Forestry, and Natural Sciences, Flagstaff, AZ.

BENJAMIN J. KOCH

Center for Ecosystem Science and Society, Northern Arizona University

“Geomorphic Controls On Freshwater Food Webs in Mountain Watersheds: The Role of Alpine Lakes”

If your research is not yet completed, what are the next steps in your research process?

The stable isotope analyses from the final set of samples we collected for this project will be completed by April 2018. Together with the data we have already analyzed from the alpine lake and stream ecosystems sampled for this project, these results will lay the foundation for a full funding proposal to the National Science Foundation, to be submitted in 2019. We have shown that the basal resources of alpine stream food webs can be distinguished between lake-derived and stream-derived sources. That distinction will enable conducting a much broader set of field surveys and experiments to quantify the food-web impacts of temporal mismatches in lake and stream phenology in alpine regions across the American West.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

As indicated above, an undergraduate student and I will present the findings from this project on April 27, 2018 at the Annual Undergraduate Research and Design Symposium held by College of Engineering, Forestry, and Natural Sciences on the Campus of Northern Arizona University in Flagstaff, AZ. We also plan to submit a publication to a peer-reviewed journal later in 2018. I will notify the Redd Center when this work is published.

Comments

I would like to express my deep gratitude to the Redd Center for funding this research. The funding that was provided enabled me to collect field data from remote and difficult-to-access locations high in the Colorado Rockies. These data are proving useful for better understanding the consequences of climate change for alpine aquatic ecosystems, and will facilitate the development of natural resource policies to mitigate the negative impacts of those consequences. This funding also enabled the participation of traditionally underrepresented groups in scientific research. I recruited and trained two superb female undergraduate students as part of this project; one of them will have the opportunity to present her research findings at a top-notch research symposium in Arizona.

PUBLIC PROGRAMMING AWARD

Boise Art Museum “Minidoka: Artist as Witness”

BYU Museum of Peoples and Cultures “Ancient Places, New Technologies:
Rediscovering Casas Grandes”

Natural History Museum of Utah “Statewide Urban Ecology Initiative — Phase
One Launch”

Springville Museum of Art “Round Up Exhibition”

The Western Literature Association “51st Annual WLA Conference Opening
Event: *A Winter in the Blood* Screening and Discussion”

University of Colorado “Pioneers: Women Artists in Boulder, 1898–1950”

BOISE ART MUSEUM

“Minidoka: Artist as Witness”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

The Charles Redd Center for Western Studies provided an award of \$3,000 to support Boise Art Museum’s (BAM) exhibition, “Minidoka: Artist as Witness,” which was on view from October 8, 2016 – January 15, 2017. This timely exhibition opened an important dialogue and generated greater awareness of a significant world and local event, historical Idaho site, and the people who were incarcerated at the Minidoka War Relocation Center in south central Idaho during World War II. The exhibition featured artworks produced at the camp or created by artists whose families have a personal connection to the Minidoka incarceration experience. Works of art by Takuichi Fujii (1892–1964), Kenjiro Nomura (1896–1956), Roger Shimomura (b.1939), Teresa Tamura (b.1960), and Wendy Maruyama (b.1952) ranged from drawings, paintings, and photography, to room-sized sculptural installations. 12,105 people visited the exhibition.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

The Redd Center grant supported the production and installation of a crucial educational component of the exhibition – the one-time expense of vinyl didactic text. The text provided critical context for the artwork on display throughout the exhibition. The didactic text provided factual and unbiased information presented with sensitivity to the events that informed the artwork. “Minidoka: Artist as Witness” provided many opportunities for BAM to engage new audiences who may not be familiar with the Minidoka National Historic Site or the Museum. This exhibition was very successful, drawing visitors from all across the United States, some of whom made a special trip to Idaho to view the artwork, and even attracted international visitors.

Please list publications and/or presentations based on your Redd Center research or program.

A robust schedule of educational programming related to the exhibition was made possible through partnerships BAM developed with National Park Service staff from the Minidoka National Historic Site, the Friends of Minidoka, the Boise Valley and Snake River chapters of the Japanese American Citizens League, and the Four Rivers Cultural Center, as well as artists, human rights and arts advocates, legislators, and historians. The Museum featured the exhibition as a part of its Free School Tour Program, which provided docent-guided tours and hands-on studio activities to 4th through 12th grade students. 760 students participated in the tour, which made cross-curricular connections to Idaho history and world history. More than 2,200 children and adults participated in BAM’s educational programs and demonstrations related to the exhibition. Throughout the exhibition, these programs reached people of all ages and included “Sunday Demonstrations,” “First Thursday Studio Art Exploration,” and “Art Answers,” which provided hands-on art projects and displays, “Art Break” and “Especially for Seniors,” which featured docent-guided tours of the exhibition, and a cell phone audio guide. Visitors of all ages explored the exhibition and then created artwork inspired by their own family histories during “Family Art Saturday” and “Toddler Wednesday.”

Comments

Thank you again for supporting BAM and the visual arts in the Intermountain West.

BYU MUSEUM OF PEOPLES AND CULTURES

“Ancient Places, New Technologies: Rediscovering Casas Grandes”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With the help of funding from the Redd Center, student curators at the Museum of Peoples and Cultures planned and constructed an exhibition entitled “Piecing Together Paquimé.” This exhibit opened in February 2017 and will run until August 2018. To date, the exhibit has hosted 18,000 visitors including participants from numerous school tours and museum events. It highlights the Casas Grandes culture, including the ancient city of Paquimé. One of the main goals of the exhibition is to portray ongoing archaeological research done at this UNESCO World Heritage site done by BYU faculty and graduate students. Individual displays showcase the tools used during excavation and survey, as well as the analyses graduate students have performed on dental calculus, use alteration of pottery, and settlement patterns of the ancient people. These analyses are demonstrated through maps and artifacts (pottery, manos, metates, and ancient corn cobs). The exhibition was designed to be a realistic representation of Paquimé to help visitors feel an emotional connection to the site and its inhabitants.

The students involved on this project were enrolled in museum practices coursework at BYU. These courses are part of the university’s museum certificate program, in which the students are enrolled. Many of them plan to pursue careers in the museum field and the experiences they had preparing this exhibition enabled them to develop marketable skills which will help them obtain future jobs. They each became experts on specific aspects of Paquimé as they researched the culture and wrote the exhibition text. They also learned how to use power tools as they participated in building walls and other aspects of fabrication. The experience strengthened their design skills by pushing them to think outside the box and to be adaptable as changes were made throughout the life of the project.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Redd Center funding for this exhibit allowed us to accomplish our goals of teaching people about archaeological methods and helping them feel a connection to the Casas Grandes culture. To do this, we created a 3D model of the city of Paquimé, which helps visitors understand the site, since they likely will never travel there personally. We purchased a 3D printer using museum funds, so the cost of creating this model was less than anticipated. We used the extra funds from this portion of the grant money we requested to create other interactives for the exhibit. Our interactives are designed to help visitors experience portions of ancient life in Paquimé. These people created and decorated pottery, so we have chalkboard pots for guests to decorate and coils to create pottery shapes.

The funds also allowed us to promote faculty and student research by displaying some of their findings and photographs. The exhibit includes several maps that archaeologists have created of the area in an effort to focus future research and analyze ancient settlement patterns. We display pictures of archaeologists in the field surveying the area using drones, as well as excavating sites. A TV monitor with drone flyover footage gives visitors a sense of the magnitude of the city. Using grant funds for these purposes freed up museum funds for other design elements, such as 2-foot thick walls, a T-shaped doorway, and stucco. These elements help visitors feel as though they are present in the city. One visitor explained, “The whole experience for me was both enlightening and informative. I have entertained the idea of driving to the archeological site in Mexico for awhile. The exhibit at the museum was as good as being there in person, as far as I am concerned.”

BYU MUSEUM OF PEOPLES AND CULTURES

“Ancient Places, New Technologies: Rediscovering Casas Grandes”

Please list publications and/or presentations based on your Redd Center research or program.

Presentations related to the Redd Center-funded exhibition have been made to a variety of groups as they have come to visit the Museum, including

- University coursework in Anthropology, Spanish, Art History, and others
- Boy Scouts, Cub Scouts, Girls Scouts, and Activity Day Girls
- University students and families from the community as part of special event programming
- Field trips for K-12 students

Considering the presentation-nature of a museum exhibition, even casual visitors to the MPC since the opening of the exhibition could be considered beneficiaries of this.

Comments

We appreciate the funding we received from the Redd Center this year. The students who participated in building the exhibition said the experience prepared them well for their future careers by helping them develop marketable skills. One student explained “It pushed me to think out of the box and not accept the first idea we had.” The opportunity to participate on a design team to build an exhibition was a valuable experience for the students involved.

NATURAL HISTORY MUSEUM OF UTAH

“Statewide Urban Ecology Initiative — Phase One Launch”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

In Phase One of its statewide urban ecology initiative NHMU launched a new partnership with the Salt Lake City Open Space Lands Program (SLCOSLP) called SLC Neighborhood Naturalists. The goals of the program include creating baseline species inventories of open spaces managed by SLC with iNaturalist and engaging the communities around those open spaces in exploring nature.

SLCOSLP selected three priority sites for SLC Neighborhood Naturalist bioblitzes in 2016 based on their needs for data to improve land management practices. The Peace Labyrinth on the Jordan River is slated to undergo ecological restoration in 2018. The Fred and Ila Fife Wetland Preserve on the Jordan River and the Miller Park Bird Refuge are the sites of recent restoration projects.

NHMU hosted a bioblitz at each site in June that included an orientation, about two hours of bioblitzing, and a wrap-up to upload observations to iNaturalist, celebrate, and enjoy snacks. Six Youth Teaching Youth Bioblitz interns assisted participants with using iNaturalist and making good observations. We also provided mobile wi-fi hotspots and a mobile device charging station to ensure participants could interact with iNaturalist easily. About 60 attendees made 579 observations during these events. Here are the links to each of the bioblitzes on the iNaturalist website:

- <http://www.inaturalist.org/projects/slc-neighborhood-naturalists-peace-tree-bend>
- <http://www.inaturalist.org/projects/slc-neighborhood-naturalists-fife-wetland-preserve>
- <http://www.inaturalist.org/projects/slc-neighborhood-naturalists-miller-park>

We are returning to the open spaces we surveyed this spring to gather observations this fall. Having data from both spring and fall will provide SLCOSLP a more comprehensive understanding of the biodiversity on the sites. After the completion of the final 2016 bioblitz, SLCOSLP staff will download the data from iNaturalist for analysis. This analysis will help guide the objectives for SLC Neighborhood Naturalist bioblitzes in 2017.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Redd Center funds enabled NHMU and SLCOSLP to make excellent progress toward both of the goals we established for the SLC Neighborhood Naturalists program. We started building baseline species lists for three urban open spaces by gathering two rounds of bioblitz data for each site. We plan to return to these sites next year to search for more species. In addition, we will work with SLCOSP to create specific survey objectives (e.g. documenting invasive plants) for the bioblitzes, if appropriate, based on the ecology of each space and the analysis of the data gathered this year. We are prototyping this idea this fall with some informal activities. We tested water quality at the Peace Labyrinth. We'll survey aquatic invertebrates in Red Butte Creek in Miller Park and birds, with the help of Tracy Aviary, at the Fife Wetland Preserve.

During the pilot phase of the project this spring, we promoted the SLC Neighborhood Naturalists bioblitzes through the NHMU e-mail list as well as SLCOSLP volunteers. This fall we began our outreach to the neighborhoods surrounding the bioblitz sites by mailing bilingual postcards to over 5,000 households in these communities. The SLC Neighborhood Naturalists registration page website is

NATURAL HISTORY MUSEUM OF UTAH

“Statewide Urban Ecology Initiative — Phase One Launch”

available in Spanish as well. Over 50 people, largely Glendale residents, attended the first bioblitz at the Peace Labyrinth on October 1. Registration for the subsequent bioblitzes was equally strong.

In addition, NHMU formed a partnership with Hartland Community 4 Youth and Families, a community-based organization in Glendale. The organization’s founder and driving force, Gilberto Magaña Rejón, has a passion for Jordan River and its stewardship. Mr. Magaña Rejón brought 15 youth from his program to the October 1 bioblitz at the Peace Labyrinth and will bring another group to the final bioblitz at the Fife Wetland Preserve.

Please list publications and/or presentations based on your Redd Center research or program.

NHMU’s citizen science coordinator, Ally Coconis, helped develop and present a session at the Association for Science and Technology Centers annual conference in Tampa this fall, a major conference for museum professionals from around the globe. The session, titled “Citizen Science and Museums: Where do we start?” focused on successful models and tools for museums interested in launching a citizen science program. Ally shared NHMU’s work developing and implementing SLC Neighborhood Naturalists. She also presented a poster on SLC Neighborhood Naturalists and NHMU’s Firefly Citizen Science Project at the Utah Museums Association Conference in Ogden in October to build awareness of citizen science in Utah’s museum community.

Comments

We are so honored to partner with the Charles Redd Center on this project. Your support has allowed us to not only collect important scientific data, but make real, critical relationships—which will no doubt be long-lasting—with a number of organizations and individuals in our community. Thank you so much!

Note: This award report was erroneously included in the 2016 Annual Report. NHMU staff misunderstood which year they were submitting a report for, and submitted it a year early.

SPRINGVILLE MUSEUM OF ART

“Round Up Exhibition”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Round Up: Icons of the American West exhibition premiered at the Springville Museum of Art on August 16, 2017, and features works of art and attendant programming for the community based on stories and experiences from individuals and communities from the early American west. The exhibition will be on display through June of 2020 and highlights paintings and other works from local artists such as Minerva Teichert, Gary Ernest Smith, and Card. The opening celebration on August 16 featured a cookout dinner, live farm animals, art activities for children, games, and live music from local bands. The museum and all of its programming is free to the public, so exhibitions and activities like these would not be possible without funding from entities like the Charles Redd Center. The museum welcomes over 50,000 visitors each year to view this and other exhibitions.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Through the process of curating and displaying this exhibition, the museum was able to learn and teach to the community various concepts related to life in the early American west, particularly as it relates to cowboys, ranchers, Native Americans, and farmers. The museum invited a focus group of individuals representing these populations, including educators and representatives from local Native American tribes as well as local ranchers, to share their experiences and insights in regards to this time in history. Areas of focus for the exhibition include rugged individualism, man versus nature, economies of family and communities, reality versus romanticism, settling the land, and imposing will on the land. The descriptive panels, educational materials, and group tours that attend the exhibition encourage visitors to examine their own roles and duties in contemporary society through the lens of the past. Questions are poised such as:

- What did it mean to tame the land, animals, etc.?
- What kind of work was required in the West?
- How did these different groups interact with each other?
- What were the positive and negative results of these interactions?
- How do we reconcile the idealized images of Native Americans during this time with actual experience?
- How did individuals, families and communities survive and thrive in the American West?

These questions and ideas prompt personal storytelling, allowing visitors and students to make connections between the experiences of these historical figures and their own lives.

Please list publications and/or presentations based on your Redd Center research or program.

Publications for the exhibition include educational materials such as the gallery guide brochure.

Comments

The Springville Museum of Art is appreciative of the funding provided by the Charles Redd Center that made this exhibition possible. The exhibition will continue to bring the stories and experiences of the early American west into the current context of our communities. This heritage continues to play an important role in contemporary society as we benefit from the contributions and learn from the experiences of these early American west “icons”.

WESTERN LITERATURE ASSOCIATION

“51st Annual WLA Conference Opening Event: *A Winter in the Blood* Screening and Discussion”

I am the most recent Past-President of the Western Literature Association, and I hosted our 51st annual conference in Big Sky, Montana, September 21-24, 2016. WLA requested a grant of \$3,000 to fund the honoraria (\$1,500 each) for Andrew and Alex Smith, directors of the film *Winter in the Blood*. In May 2016, WLA received a grant from The Charles Redd Center in the amount of \$1,500, which I used to partially fund each honorarium in the amount of \$750, for a total of \$1,500. All grant monies were expended.

This year, for the first time in the organization’s history, we incorporated nineteen (19) K-12 teachers as an integral component of the conference. This educational event was an outgrowth of our conviction that western literature is vital at all ages, and in venues that include the K-12 classroom. The Conference’s opening event was a screening of *Winter in the Blood* followed by a discussion with directors Andrew and Alex Smith, actor Lily Gladstone, and Lois Welch. Other highlights of the Conference included panels and presentations on the film and the novel by James Welch, a wide variety of academic papers on Native literatures and cultures, and the crossover events that featured teaching Native literatures in the K-12 classroom prior to university or college.

On behalf of WLA, thank you very much for your generous support; it enabled me to bring the full contingent of participants to the *Winter in the Blood* opening event, which was a success for all members of the audience, and especially for the college teachers and K-12 educators who are likely to use WITB (book and film) in their classrooms, thus impacting future generations of Montana students. The support The Charles Redd Center provided helped enable that opportunity and made the conference a richer, more intellectually and artistically compelling event. The Redd Center was acknowledged as a key supporter in the conference program and in an opening slide presentation.

Best,

Linda Karell, Ph.D.

Winter in the Blood Screening Event Budget (Actual, rounded to nearest dollar)

Honorarium for Andrew Smith: \$1,500
Honorarium for Alex Smith: \$1,500
Honorarium for Lily Gladstone: \$1,500
Air Fare for Andrew Smith: \$441
Air Fare for Alex Smith: \$911
Travel Costs for Lily Gladstone: \$130
Accommodations for Andrew Smith: \$314
Accommodations for Alex Smith: \$447
Reimbursements for Andrew Smith: \$311
Reimbursements for Alex Smith: \$165
Reimbursements for Lily Gladstone: \$24

UNIVERSITY OF COLORADO

“Pioneers: Women Artists in Boulder, 1898–1950”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With the help of the Redd Center Grant, the University of Colorado Art Museum (CUAM) mounted the exhibition, *Pioneers: Women Artists in Boulder, 1898-1950*. The exhibition was up from September 16, 2016, until February 7, 2017, and documented the pivotal contributions of women artists to the development of Boulder’s vibrant art scene. The exhibition was well attended, featured in regional press (including Boulder Daily Camera, Westword, etc.), and the subject of a February symposium, which included local collectors and curators. Lastly, this exhibition was the springboard of a documentary film on women artists in the region.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

The funding received from the Redd Center was essential in funding the transport of works of the artist Eve Drewelowe from the University of Iowa. These paintings were a keystone of the exhibition. Additionally, in examining these work of art in person, it became evident that Eve changed dates on her painting retroactively in order to fashion a history of herself in which she was always the cutting edge of artistic developments in the 20th century. This yielded tremendous insight into self-fashioning.

Please list publications and/or presentations based on your Redd Center research or program.

Public Lectures/Presentations:

“The Blue Birds.” Gold Hill Museum, July 14, 2016

“Women Artists in Colorado” Symposium at the CU Art Museum, February 6, 2017

Documentary Film:

Pioneers Women Artists of Colorado, 1870-1950. Directed by Erika O’Conor, Executive Producer: Kirk Ambrose (93 minutes, documentary film)--numerous screenings in the region

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

We plan on developing an electronic catalogue raisonnee of the women included in the exhibition, as well as others discovered over the course of our research. The hope is to give greater visibility to these women. I have also begun discussions with another scholar on possibly co-authoring a book on the role of women in the arts of the Rocky Mountain region from 1850-1950.

Comments

We are extremely grateful to the funding from the Redd Center. The programming that it enabled shed light on a little-known aspect of Boulder history, which has proven so rich. Response from the community was overwhelmingly positive.

SUMMER AWARD FOR BYU UPPER DIVISION AND GRADUATE STUDENTS

Makani Fisher, Biology. “Metabolic Chemistry of Western North American Lichen Moths”

Stephanie Lambert, Anthropology. “Examining the Production and Exchange of Fremont Snake Valley Black-on-Gray Ceramics”

Spencer Lambert, Anthropology. “Exploring Butchering Strategies among the Fremont of Wolf Village Using Strontium Isotope Analysis”

Aaron Rhodes, Plant and Wildlife Sciences. “Monitoring Aspen Regeneration after Fire in Monroe Mountain”

Jeffrey Svedin, Plant and Wildlife Sciences. “High Tech Farmers: The Final Frontier of Water Conservation Research”

MAKANI FISHER

Biology

“Metabolic Chemistry of Western North American Lichen Moths”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

I collected lichen moths species from a variety of different locations throughout western North America. We used those moths to obtain eggs and caterpillars from in which we did feeding preference studies with. We then used these caterpillars, after feeding, to run through chemical analyses to see what chemicals they had sequestered.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

We learned areas where these moths thrive. We verified the leading hypothesis that their caterpillars eat lichen and observed that they can eat a variety of lichen without preference.

Please list publications and/or presentations based on your Redd Center research or program.

None yet, but coming soon.

If your research is not yet completed, what are the next steps in your research process?

The next steps are getting the full chemical profile of the moths. They have been sent to Purdue University for analyzing.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

We plan to publish this work with the preference (or lack thereof) data and chemical profiles. I hope to present this at future moth and lichen conferences.

Comments

This was a fun and very fruitful project. Thank you for your help in funding.

STEPHANIE LAMBERT

Anthropology

“Examining the Production and Exchange of Fremont Snake Valley Black-on-Gray Ceramics”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

I have not officially used the funds I received from the Charles Redd Center by this date. I am still prepping my ceramic samples for my projects to be sent to a lab for further analysis. As a recap, my research will help confirm that hypothesis that Fremont Snake Valley Black-on-gray (SVBG) ceramics were manufactured by the Fremont, and ancient group who lived in now Utah, in the Parowan Valley. I will compare the chemical compositions of SVBG ceramics from three archaeological sites in the Parowan Valley to three archaeological sites in Utah Valley and Salt Lake Valley. I want to determine if the ceramics from the northern sites were trade wares from the sites in the Parowan Valley, or if the northern ceramics were locally made imitations.

In order to answer my research questions, I am prepping 120 SVBG ceramic sherds to be sent to the Archaeometry Laboratory at the University of Missouri Research Reactor (MURR) for Instrumental Neutron Activation Analysis (INAA). INAA is a method that measures chemical levels in materials. INAA is used to identify homogeneous compositional groups of materials by looking at the samples' chemical signatures. I will use INAA to see if the compositions of the northern ceramics are similar or not to those found in the Parowan Valley. The funds from my award will fund 31 sherds of my sample (31 sherds x \$40 = \$1,240).

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

I do not have the results of the analysis because I have not yet sent my samples to MURR.

Please list publications and/or presentations based on your Redd Center research or program.

Since my research is incomplete at this time, I have yet to publish or present my data. I am conducting this research in part to obtain a master's degree in anthropology with an emphasis in archaeology here at Brigham Young University. I will also use the information based on my MA thesis to produce two paper presentations, one at the 83rd Society for American Archaeology Conference in April 2018 and another at the 2018 Utah Professional Archaeological Council Meeting. I submitted a paper presentation proposal for the 83rd Society for American Archaeology Conference and I will be hearing from the society about my acceptance or rejection within the next month.

If your research is not yet completed, what are the next steps in your research process?

First, I need to finish prepping my samples to send to MURR and then await their results. It will take MURR approximately four to six months to process and test the samples, analyze the data, and report the results back to me. Second, while I am waiting for the results from MURR, I will finish oxidation analysis on my other sherds. I will also continue to write chapters of my master's thesis.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

As mentioned in a previous answer, I will be finishing my master's thesis on this topic within the next academic year. Once I finish my master's thesis, I also plan on publishing a portion of my MA thesis in a peer-reviewed journal. I will also present my research at the 2018 Utah Professional Archaeological Council Meeting in March.

STEPHANIE LAMBERT

Anthropology

“Examining the Production and Exchange of Fremont Snake Valley Black-on-Gray Ceramics”

Comments

Thank you for your support in my master's thesis research. I truly appreciate the funds from donors. The funds from this award is helping me academically and professionally by allowing me to perform this research and then present my findings at conferences. I will update the Charles Redd Center when I receive the results of the INAA studies from MURR and when I finish with my master's thesis. Thank you again for your support.

SPENCER LAMBERT

Anthropology

“Exploring Butchering Strategies among the Fremont of Wolf Village Using Strontium Isotope Analysis”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

My research entails the analysis of animal bones from several ancient Native American sites in Utah. In this research, I explore the processing and transportation techniques of Fremont hunters at Wolf Village by comparing skeletal frequencies. Then, I compare these frequencies with results of strontium isotope analysis on large mammal teeth from Wolf Village to determine which species were obtained locally. I also identify the strontium baseline at Wolf Village and five other Fremont sites in order to identify evidence of trade between Fremont communities.

To examine my research objectives I apply two methods. First, I adopt Lewis Binford’s modified general utility index as a means for predicting which body parts can be expected to remain at kill-butchered sites and which would be transported to another place to be consumed. If there are changes in the ratio of low to high utility elements at Wolf Village between the two occupations, then some large animals were likely hunted in close proximity to the site and whole carcasses were brought back to the site for processing.

Second, I use strontium (Sr) isotope analysis to examine changes in hunting techniques. Of the four isotopes of strontium, ^{87}Sr and ^{86}Sr provide information about the environment. Strontium occurs naturally in igneous bedrock and is passed on into the local ecosystem as herbivores eat plants and drink water. The ^{87}Sr and ^{86}Sr values depend on the geology of the area, and each area gives a unique geochemical signature. In essence, strontium isotopes serve as geochemical signatures that can be used to ‘source’ a prehistoric skeleton to a geologic area.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

I used funds from the Redd Center to pay the cost of running strontium isotope analysis on 90 specimens from Wolf Village and other Fremont sites in Utah. I have scheduled the Strontium Isotope Geochemistry Laboratory at the University of Utah for November 6 to November 17. I will assist Dr. Diego Fernandez in performing the isotope analysis on 60 rodent teeth specimens, 13 mule deer specimens, 8 bighorn sheep specimens, 4 antelope specimens, and 5 worked bone gaming pieces. This summer I traveled to the Natural History Museum of Utah to obtain rodent teeth specimens from two Fremont sites. I prepared other specimens from the Museum of Peoples and Cultures at Brigham Young University. All specimens were placed in plastic bags and photographed before their destruction during the analysis. Since the analysis has not occurred quite yet, I have not received any results. I hope to learn about which locations some of the larger game were hunted by the Fremont of Wolf Village.

Please list publications and/or presentations based on your Redd Center research or program.

At this time, I have not published any results on this research. I have submitted abstracts to two archaeology conferences next year. The first is the Southwest Symposium meeting in January. The second is Society for American Archaeology in April. Both conferences are listed below:

a. “An Examination of Fremont Large Game Hunting Practices.” Submitted as a poster at the 16th Biennial Southwest Symposium, Denver, Colorado, 5 January – 7 January 2018.

b. “Identifying Fremont Large Game Hunting Practices through the Modified General Utility Index and Strontium Isotope Analysis.” Submitted as a paper presentation at the 83rd Society for American Archaeology annual meeting, Washington, D.C., 11 April – 15 April 2018.

SPENCER LAMBERT

Anthropology

“Exploring Butchering Strategies among the Fremont of Wolf Village Using Strontium Isotope Analysis”

If your research is not yet completed, what are the next steps in your research process?

My next step is to travel to the Strontium Isotope Geochemistry Laboratory at the University of Utah from November 6 to November 17. I will assist Dr. Diego Fernandez with performing the strontium isotope analysis over the course of two weeks. It will be another two weeks before I receive the results and can present them in my thesis research.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I plan on using this data in my thesis research. Beyond that, I plan on publishing the strontium isotope data in at least one article. I will work on this article after my thesis is completed and hope to submit it to a journal sometime in 2018 or 2019. I will also present this research at the upcoming archaeology conferences in 2018 that I previously mentioned, as well as submitting an abstract based on the research for the Great Basin Anthropological Conference in November 2018.

Comments

Thank you again for your generosity in funding this research.

AARON RHODES

Plant and Wildlife Sciences.

“Monitoring Aspen Regeneration after Fire in Monroe Mountain”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Aspen forests provide habitat for hundreds of species of plants and animals including mule deer, elk, and livestock that drive the economies of hunting and ranching in the state of Utah. However, much research has pointed to reduction in aspen cover across North America due to suppression of fire. Managers are increasingly looking at prescribed burns as a tool to improve aspen habitat conditions in Utah's Subalpine forests. We proposed to optimize aspen regeneration and recruitment protocols to understand the influence of prescribed fire and wildlife and livestock aspen forests.

We set up an extensive monitoring network in Summer 2017 at the Indian Peak fire complex 2 miles Northeast of the Koosharem Guard Station on Monroe Mountain. We monumented (using semi-permanent u-posts) belt transects (2 m wide) that vary in length (25m long to 100m long). At each transect we recorded aspen density, height and measure ungulate herbivory by recording whether apical meristems (buds) of aspen have been eaten or not (browse %). From these data, we will use a nested frequency of variable plot sizes in order to create a “population area” curve. We will estimate the optimal area needed to be sampled in order to have accurate predictions of aspen regeneration per acre, for height, and for browse %.

We are currently analyzing the data, and plan to use Geographic Information Systems to model the population density, height, and ungulate influence on aspen across the fire. We will characterize the necessary number of plots needed per acre of burned landscape to improve the efficiency and efficacy of future monitoring efforts.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

We learned that the optimum plot size and number is different for each response variable measured (i.e. height, density, browse %). Currently all variables are measured along transects of the same length. However, the most time consuming measurements height, and browse % require much less area sampled. Effectively we can cut the monitoring time by more than half and gain the same quality of information. This will allow managers to either reduce work hours, reduce workers, or improve sample size.

Please list publications and/or presentations based on your Redd Center research or program.

We are currently preparing a publication and multiple presentations based on our research.

If your research is not yet completed, what are the next steps in your research process?

Our research in the field is completed. We must know formalize the analysis of the collected data, prepare a manuscript for peer-review and begin presenting our findings at multiple venues.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

These data will be prepared for publication in a peer-reviewed journal (Forest Ecology and Management) in 2018. Data will be presented at the Department of Plant and Wildlife Sciences Graduate Research Conclave Nov. 2017. And the data will be presented to local managers and stakeholder and other members of the Monroe Mountain Working Group out of Richfield, Utah.

AARON RHODES

Plant and Wildlife Sciences.

“Monitoring Aspen Regeneration after Fire in Monroe Mountain”

Comments

I would like to thank the Redd Center for their sponsorship of important research in the Intermountain West. I believe that the funding provided makes a large impact on understanding and protecting natural resources of Utah.

JEFFREY SVEDIN

Plant and Wildlife Sciences.

“High Tech Farmers: The Final Frontier of Water Conservation Research”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

We generated field maps from highly intensive sampling to show spatial differences in

- stored soil moisture,
- seasonal soil moisture change,
- seasonal crop water consumption,
- 2017 grain yield,
- 2017 Crop Water Productivity (CWP)
- Test irrigation management zones with paired t-test analysis

There were irrigation test plots throughout the field-testing different strategies to maximize crop produced per drop of yield. The CWP map that was calculated was a valuable tool in understanding how the various irrigation treatments utilized the provided water. We successfully identified plants in some areas efficiently using the available water to produce grain, while other field locations did not produce the anticipated yield despite receiving ample water. This map essentially told the farmer which irrigation treatments fell short, met, or exceeded demand. This initial data proved very useful for identifying the correct irrigation management method to conserve water and enhance grain yield.

Farmers will be able to use this methodology to guide VRI systems in future years. Previously the grower adjusted his irrigation rate by as much as 10% in some locations but we discovered stored soil water and precipitation played a larger role than suspected. Thus, the decrease in irrigation for previous grain crops was not enough to make a significant difference and we have the initial tools to make the needed spatial adjustments. Although this technology has tremendous future potential, the bottom-line for the grower we are currently working with is that he will use this data to reduce his water consumption using VRI by nearly 50% on 24 acres of the field for 2017. Thus, we have both tangible, immediate benefits to go along with potential future ones.

Please list publications and/or presentations based on your Redd Center research or program.

Svedin J.D., R. Kerry, N.C. Hansen, and B.G. Hopkins. 2017. Using a field scale crop water productivity layer to develop variable rate irrigation zones. In Proc. of the 11th European Conference on Precision Agriculture; 2017 July; Edinburg, UK. Vol. 8:2

This project received funding through the Redd Center Annaley Naegle Redd Assistantship from 2016-2017 which allowed the following publications and presentations.

Svedin J.D., N.C. Hansen, R. Kerry, R.C. Christensen, and B.G. Hopkins. 2017. Creating prescription variable rate irrigation and fertilization zones: Water and nutrient management interactions. (Poster and Oral Flash and Dash Presentations) In Proc. of the Western Nutrient Management Conference; 2017 March 2-3; Reno, NV. Vol.12: 156. Available at: <http://www.ipni.net/ipniweb/conference/wnmc>.

JEFFREY SVEDIN

Plant and Wildlife Sciences.

“High Tech Farmers: The Final Frontier of Water Conservation Research”

[nsf/e0f085ed5f091b1b852579000057902e/ccbc3bfdb684ebee852580e400519374/\\$FILE/17WNMC%20Svedin%20pg156.pdf](http://www.ipni.net/ipniweb/conference/wnmc.nsf/e0f085ed5f091b1b852579000057902e/ccbc3bfdb684ebee852580e400519374/$FILE/17WNMC%20Svedin%20pg156.pdf)

Hopkins, B.G., and N.C. Hansen. 2017. Nitrogen and water interactions: Crop production systems case studies. In Proc. of the Western Nutrient Management Conference; 2017 March 2-3; Reno, NV. Vol.12:22. Available at: [http://www.ipni.net/ipniweb/conference/wnmc.nsf/e0f085ed5f091b1b852579000057902e/ccbc3bfdb684ebee852580e400519374/\\$FILE/17WNMC%20Hopkins%20pg22.pdf](http://www.ipni.net/ipniweb/conference/wnmc.nsf/e0f085ed5f091b1b852579000057902e/ccbc3bfdb684ebee852580e400519374/$FILE/17WNMC%20Hopkins%20pg22.pdf)

Hopkins, B.G., J.D. Svedin, and R.C. Christensen. 2017. On-Farm Fertilizer and Water Management Case Studies. Idaho Potato Conference; 2017 January 19; Pocatello, ID.

Svedin, J., N.C. Hansen, R. Kerry, and B.G. Hopkins. 2016. Variable rate irrigation and water use efficiency. In Abstracts, ASA•CSSA•SSSA International Annual Meetings; 2016 Nov. 6-9; Phoenix, AZ. Madison, WI: ASA-CSA-SSSA.

Svedin, J., N.C. Hansen, R. Kerry, and B.G. Hopkins. 2016. Variable rate irrigation and water use efficiency. 2016 Nov. 17; Provo, UT: Redd Center Sponsored and BYU Plant and Wildlife Sciences Department Graduate Student Conclave presentation.

If your research is not yet completed, what are the next steps in your research process?

The next steps are to test this research in other locations with various crops and soil types. Different environmental factors found at other sites may dictate changes in recommendations regarding variable rate irrigation. The next step is to customize the methods that allow grower adoption. It is unrealistic for farmers to take 90 soil samples. To address this we have started a collaboration with a BYU spatial statistician to determine the minimum samples to describe field variability.

The grower we are currently working with is planning to rotate into potato in 2018. We plan to work on this crop with him at that time. We also have identified another field with a VRI system that is underutilized that we hope to work with in the near future. We are at the beginning of a collaboration with several BYU faculty outside of our department to develop a model that growers can adopt that will give field prescription variable rate irrigation management.

Funding for this research gave the Western agriculture industry a novel insight into irrigation management that will alter future water management.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

The three main publications we are planning are listed below. There is good potential that we will have an additional journal publication beyond those listed if funding permits. We also plan to present this data in similar venues as listed above in the publications section during 2017 and 2018.

Svedin J.D., N.C. Hansen, R. Kerry, R.C. Christensen, and B.G. Hopkins. 201x. Insights into irrigation management using a field scale crop water productivity analysis. Journal of Soil and Water conservation (In Preparation)

JEFFREY SVEDIN

Plant and Wildlife Sciences.

“High Tech Farmers: The Final Frontier of Water Conservation Research”

Svedin J.D., N.C. Hansen, R. Kerry, R.C. Christensen, and B.G. Hopkins. 201x. Creating prescription variable rate irrigation and fertilization zones: Water and nutrient management interactions. *Journal of Soil and Water Conservation* (In Preparation)

Svedin J.D. 201x. Creating prescription variable rate irrigation and fertilization zones: Water and nutrient management interactions. M.S. Thesis, Brigham Young University (In Preparation)

Comments

I am very grateful for the funding received from the Charles Redd Center. This research provides the foundation for innovative research that we are using as a pilot research project with hopes of leveraging this data into larger grant funding from other sources for future years. Doing so will enable further important work that will have large impacts on water use in the Western U.S. in future years as demand on water supplies becomes increasingly problematic.

SUMMER AWARD FOR OFF-CAMPUS UPPER DIVISION AND GRADUATE STUDENTS

Alan Clark, Religion, Claremont Graduate University. "Strangers in a Strange Land: A History of Pentecostalism in Utah"

Kerri Clement, History, University of Colorado - Boulder. "Game of Horsepower: Robert Yellowtail, Horses, and Power on the Crow Reservation from 1928 to 1945"

Katie Epstein, Geography, Montana State University. "The Amenity Transition and Wildlife Management in the Greater Yellowstone"

Mette Flynt, History, University of Oklahoma. "Reborn on Skis: Winter Recreation and the Transformation of the Wasatch Front, 1915-2002"

Rabecca Lausch, Biological Sciences, Northern Arizona University. "Gilded and Northern flicker hybridization in Arizona: using new methods to examine an old problem"

Patrick Lozar, History, University of Washington. "Behind and Beyond the Line: Indigenous Communities, International Borders, and Native Identities on the Columbia Plateau, 1850s-1920s"

Lindsie McCabe, Biological Sciences, Northern Arizona University. "As forest go do forest bees?"

Julie Rakes, Life Sciences, Arizona State University. "Infectious Agent Characterization in Biological Soil Crusts"

SUMMER AWARD FOR OFF-CAMPUS UPPER DIVISION AND GRADUATE STUDENTS, CONTINUED

Michaela Rife, Art History, University of Toronto. “King Coal and the Silver Queen: The Visual Culture of Resource Extraction in Progressive Era Colorado”

Amy Schott, Anthropology, University of Arizona. “Suitability of soils in wind-deposited landscapes of Northeastern Arizona for long-term prehistoric agriculture”

Caroline Tracey, Geography, University of California. “Neighbor is a Verb: Ranchers, the Military, and Conservation in Southeastern Colorado”

Frank Whitehead, History, University of Arizona. “‘The Two are Partners’: Rodeo Cowboys, Their Horses, and a Distinctly Western Relationship”

Samantha Williams, History, University of California. “‘That was our home, and it needs to be remembered’: Erasing and Reclaiming the History of the Stewart Indian School”

Anthony Wood, History and Philosophy, Montana State University. “Race, Ruination, and Exodus: Understanding the Impact of 1917 on Montana’s Black Community”

ALAN CLARK

Religion, Claremont Graduate University

“Strangers in a Strange Land: A History of Pentecostalism in Utah”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

I am completing my dissertation on Pentecostal History in the state of Utah. The goal is to discover the history of the various denominations and then to connect that history to the larger story of Pentecostalism and Western History.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Through the funds provided, I was able to gather information from the Assemblies of God historical archive in Springfield, Missouri. The Assemblies of God is the largest Pentecostal denomination in the United States. I was also able to complete several interviews with pastors who have lived and worked in the state of Utah.

Please list publications and/or presentations based on your Redd Center research or program.

I have not yet completed my dissertation, but these funds have brought me considerably closer to my goal. I hope to complete my writing within the next 6 months.

If your research is not yet completed, what are the next steps in your research process?

I am now sifting through the many sources I have gathered in order to organize the data into an historical narrative which I can then analyze and compare with other religious traditions in the West.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

As mentioned above, I plan to complete my dissertation soon. I will notify the center at the time of my defense.

Comments

Thank you again for your generous assistance and willingness to help me as I am endeavoring to finish my PhD and begin my professional life in academia. The funds are invaluable in helping students like me with limited means to manage to produce quality scholarship.

KERRI CLEMENT

History, University of Colorado—Boulder.

“Game of Horsepower: Robert Yellowtail, Horses, and Power on the Crow Reservation from 1928 to 1945”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

During my summer research, that due to necessity, I have continued into the fall semester, I visited many different institutions and archival depositories in Montana, Wyoming, and Colorado, using the funds provided by the Redd Center. The first archive I visited this summer was on June 19th, Montana State Historical Society, where I examined several holdings within the Crow Oral history collection, along with historical brand records. After the Montana State Historical Society visit, I went to Montana State University Special Collections and examined several of their collections pertaining to Crow and Indigenous history, which contained some materials relating to my research, albeit in a peripheral manner. The following week I visited Cody, Wyoming, to visit the Buffalo Bill Museum McCracken archives for two days, in order to examine local ranching records and grazing leases from the 1920s and 30s, along with photographs from the Sturm Studio collection, the Willcutt Ranch collection, and the Larry Larom Collection. With the exception of my Cody Wy visit, every archival visit in Montana I was able to find housing with family and friends, or was able to drive to the archive. After the Cody visit, I spent a month, sponsored by CU-Boulder’s history department, at a Native American seminar at the Newberry library, where I found some background materials relating to my research. Upon returning to Colorado, I spent a total of 6 days in the NARA-Broomfield records. Due to scheduling conflicts, my research on the Crow reservation itself will begin next week. I have scheduled a meeting with a local horse expert, along with planning to visit the Little Bighorn College Archive for several days. I expect that I will need to make at least one more trip up to the Crow reservation to conduct research this fall alone.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

The Redd Center funds were a crucial portion of my summer research. Due to the grant, I was able to accomplish the wide-ranging research necessary to answer questions that arose during my research. For example, I able to visit the Montana State Historical society, where I found Crow oral histories relating to horse purchasing programs in the 1930s, which I was unable to access before. Additionally, the Helena research enabled me to identify and cross-reference brands utilized by both Crow tribal members and surrounding ranches, which has assisted me in identifying horses found in photographs from every archive I have visited. My time spent at the Buffalo Bill Cody McCracken library allowed me to conceptualize the greater picture surrounding Crow grazing leases, along with the impact and motivations behind horse eradication programs in the 1920s and 1930s. My time spent at NARA-Broomfield has been fruitful in that it has provided a more complete picture, as seen in the Extension service photos of high-end horses on the Crow reservation in the 1930s. Additionally, my time at NARA provided me with a better contextualization of the historical events surrounding the Indian New Deal and its implementation on the reservation. My time spent thus far has allowed me to stitch together a myriad of diverse and disconnected sources, that prove the far-reaching effect that the horse buying program had in the state of Montana and the Crow reservation. My research shows that the horse buying program in the 1930s, as implemented by the Crow Superintendent Robert Yellowtail, was an important building block in the recovery program on the reservation, albeit a contentious one as several oral histories and an internal investigation demonstrate. For the Crow, even in the era of growing mechanical power, horses were an important factor in reclaiming Crow power.

KERRI CLEMENT

History, University of Colorado—Boulder.

“Game of Horsepower: Robert Yellowtail, Horses, and Power on the Crow Reservation from 1928 to 1945”

Please list publications and/or presentations based on your Redd Center research or program.

Thus far, I have presented my research at the Newberry Library’s Native American Consortium conference, August 2017, in a paper entitled, “Game of Horsepower: Robert Yellowtail, Horses, and Power on the Crow Reservation.” I have also presented a shorter version of that paper at a conference and workshop in Colorado, titled the WEST network consortium, in May 2017. I have already had a paper accepted for the American Society for Environmental Historians conference in March 2018, as a direct result of the Redd Center grant. Furthermore, I am currently collaborating with several other historians on a panel proposal for Western History Association 2018 and plan on presenting a paper there that would rely on the research funded by the Redd Center grant.

If your research is not yet completed, what are the next steps in your research process?

The next steps in my research project are to finalize and complete my research visits on the Crow reservation, including the last visits to the Little Bighorn College archives, along with meeting with several prominent community members. After concluding these research visits, I will spend several months revising and editing my paper into an article for publication. Additionally, I am considering turning this paper into a chapter of my dissertation. Without the Redd Center grant, I would not have been able to complete the visits to such a wide variety of archives and sources. These visits to the archives allowed me to piece together sources kept separate, which in turn has enabled a deeper engagement with the topic.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

Future publication plans include revising my research paper into an article and I plan on submitting to several of the following journals; Western Historical Quarterly, Montana the Magazine, Environmental History, Journal of American History, and Native American and Indigenous Studies journal. Additionally, I am considering turning this research paper into a dissertation chapter, which I intend on publishing eventually as a monograph.

Future presentation plans include presenting to at the ASEH history conference in March 2018, along with WHA 2018.

Comments

Thank you for the opportunity to engage with my research in a profound and enriching experience this summer. The Redd Center grant enabled my engagement with normally quite disparate archives, and my research has benefitted from, and will continue to benefit greatly from the grant. I truly want to say thank you for the opportunity.

KATIE EPSTEIN

Geography, Montana State University

“The Amenity Transition and Wildlife Management in the Greater Yellowstone”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

This summer I was able to accomplish several critical research tasks. First and foremost I was able to conduct over 20 interviews with key private land stakeholders in various parts of my study region through the Greater Yellowstone. Alongside these interviews I was also able to scope out several potential sites for future research and make important connections with research partners such as the Montana Land Reliance and the Western Landowners Alliance. The data collected from these interviews is currently being processed and transcribed. Afterwards I will code and analyze the data for emergent themes, trends and patterns.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

The Redd Center's funding has greatly assisted in my research by providing the funding necessary to complete primary data collection to contribute to my dissertation. Specifically the interviews I've conducted this summer have provided several important insights into my research question. First, private land ownership turnover is uneven across the Greater Yellowstone. Some places experience high turnover (The Shields Valley, e.g.) while others have longer and more stable patterns of legacy property tenure (The Madison Valley, e.g.). Amenity-oriented owners approach landownership from a variety of emotional positions: some are interested in the recreational pursuits of hunting while others more captivated by the rural existence and potential for closeness to wild places. These two ideals manifest in land management practices in novel ways. Agricultural intensification can occur if a landowner seeks to identify more strongly as an agriculturalist (and thus part of the western aesthetic) and so may take advantage of agricultural policies that encourage pivot irrigation. Lastly, amenity-owners have distinct social networks. They are heavily reliant on the real estate and land management communities and tend to seek information from these sources, as opposed to conservation districts or natural resource agency representatives.

Please list publications and/or presentations based on your Redd Center research or program.

I am currently working on a manuscript that will detail the findings from the above interviews. Projected date of manuscript submission is December 2017 and the target journal is *Society and Natural Resources*. I will also present the findings from this manuscript at the Annual Meeting of the Association of American Geographers in New Orleans in April 2018.

If your research is not yet completed, what are the next steps in your research process?

The next steps in my research process will be to revise my interview guide based on the results from my preliminary round of interviews. Afterwards I will seek out another round of participants to further develop my understanding of how the amenity transition is impacting elk and elk management.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I plan to publish at least three peer-reviewed journal articles and several public and department presentations. I will send along whatever materials I publish to be used by the Redd Center as they see fit.

Comments

Thank you very much for support of my research project. I would not be able to conduct this work without the generous funding of the Redd Center. I'm very grateful!

METTE FLYNT

History, University of Oklahoma

“Reborn on Skis: Winter Recreation and the Transformation of the Wasatch Front, 1915–2002”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With Redd Center funds, I completed research at the Utah Ski Archives at the University of Utah, focusing on the papers of Ted Wilson, Ann Wechsler, Dave Hanscom, and the Wasatch Mountain Club. At the Park City Municipal Council, I was able to review town council minutes related to the development of Deer Valley and Park City Mountain Resort. Once in Denver, I visited the National Archives in Denver. This research trip centered primarily on the records of the U.S. Forest Service relating to watershed management in Alta, expansion permits in the 1960s, and reforestation efforts during the 1960s. Support from the center also enabled me to organize and conduct several oral histories with individuals involved in ski promotion, resort development, and the 2002 Winter Olympics.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My time in Salt Lake City, Park City, and Denver was instrumental in filling in some of the gaps of previous research trips. First, the materials that I reviewed at the University of Utah helped me understand the role of public officials in developing and implementing watershed controls in the wake of urban development during the 1970s and 1980s. The collections there also shed light on the motivations and strategies of environmental organizations challenging ski area expansion. Park City’s municipal records allowed me to track the evolution of water sanitation and urban infrastructure in relation to resort development. I had seen some of these developments in other sources, particularly newspapers, but the municipal records contained many details and perspectives missing in other documents. The Forest Service records played a similar role. Since they covered more time than other collections, the NARA holdings helped me develop a longer and more complete timeline of the Forest Service’s role in skiing. Lastly, the oral histories that I conducted provided the most valuable insight into my research. The individuals who met with me not only shared their own stories and collections but also introduced me to other contacts within the ski industry. Several of these narrators have been involved in some facet of skiing since the 1970s. As a result, they offered a new, long-range perspective on the events and patterns that I am studying. Their memories and opinions of ski development have added a personal touch to my project, adding the voices of everyday people often missing from official documents and newspaper accounts.

Please list publications and/or presentations based on your Redd Center research or program.

I presented this research at the annual meeting of the Pacific Coast Branch of the American Historical Association and will include it in my presentation at the Western History Association Conference in 2017.

If your research is not yet completed, what are the next steps in your research process?

At this point, I must conduct one more oral history and review Salt Lake Tribune articles from the 1990s. I will spend a month at the Huntington Library looking at promotional and religious materials related to skiing. Since my research for the first chapters of my dissertation is complete, I have begun writing.

METTE FLYNT

History, University of Oklahoma

“Reborn on Skis: Winter Recreation and the Transformation of the Wasatch Front, 1915–2002”

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

In the future, I plan to submit an article for publication based on my research. Ultimately, I will submit my dissertation manuscript for publication as well.

Comments

Thank you for supporting my research and taking an interest in my dissertation. Your financial support enabled me to spend more time getting to know the people who I describe in my dissertation. These connections will not only improve the quality of my work but also proved truly rewarding for me on a personal and intellectual level as I came to know the faces of Utah skiing. I look forward to updating you on my progress.

RABECCA LAUSCH

Biological Sciences, Northern Arizona University

“Gilded and Northern flicker hybridization in Arizona: using new methods to examine an old problem”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

My dissertation research investigates the vocalizations of Northern (*Colaptes auratus cafer*) and Gilded (*C. chrysoides*) flickers: two species of woodpeckers that are highly suspected to hybridize in Arizona and Nevada. The vocalizations of these two species have been assumed to be nearly identical, but this has never been formally investigated, and slight differences can be detected with a reasonably trained ear. Because the two species hybridize, researching possible reproductive barriers (or lack thereof) is especially important given the likelihood that changes in the climate of this region are likely to shift species ranges, increasing the range overlap of these two species, and potentially facilitating more hybridization.

I am analyzing vocalizations of both species from publicly available recorded vocalizations, but in order to detect statewide or regional patterns, I must record birds myself throughout the region to ensure adequate coverage.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

The funding I received from the Charles Redd Center has been instrumental toward my ability to travel to record birds for my research. Without it, I could not have traveled to as many locations to record as many individuals as I did. I have visited 98 locations across Arizona to record flickers, and I will add to this next summer as I continue to increase my sample size and record a greater geographic variety of flickers.

Please list publications and/or presentations based on your Redd Center research or program.

I have not yet published or presented based on my Redd Center research as I am still in the data analysis phase of my research.

If your research is not yet completed, what are the next steps in your research process?

The next step in my research process is to finish analyzing the vocalizations I have recorded as well as those obtained from publicly available data. Once the data are extracted from the vocalizations I will statistically analyze differences in vocalizations to determine whether the two species are different and whether vocalization characteristics vary geographically.

I will also conduct playback experiments to determine whether Northern and Gilded flickers react to their own species' vocalizations the same as they react to the other species' vocalizations.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

Once completed, I hope to publish my research in *The Auk*, *The Condor*, or the *Wilson Journal of Ornithology* and present it at conferences including the Arizona Field Ornithologists Annual Meeting and the Association of Field Ornithologists/Wilson Ornithological Society Joint Annual Meeting.

Comments

I am very grateful for the award I received from the Charles Redd Center. Having grown up on the east coast, I fell in love with the west the first time I stepped foot here, and I am so glad I have the chance to study the incredible birds that make the arid west their home.

PATRICK LOZAR

History, University of Washington.

“Behind and Beyond the Line: Indigenous Communities, International Borders, and Native Identities on the Columbia Plateau, 1850s–1920s”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

I traveled to and spent a week researching at the National Archives branch in Denver, CO in August. The records that I consulted at this archive was the Bureau of Indian Affairs, Flathead Indian Agency collection. I was able to access dozens and dozens of boxes of files related to my dissertation research that are only available at the Denver branch. I also researched for nearly a week at the Montana Historical Society Research Center in Helena, Montana. Here, I poured through diverse collections of local history and manuscripts that touched on indigenous people in the northwest portion of that state. Travel to and lodging at Denver and Helena were made possible, and the research successful, by the Charles Redd Center “Summer Award for Off-Campus Upper Division and Graduate Students.”

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My summer research goals consisted of approaching conventional archives, such as the federal Bureau of Indian Affairs records, through a transnational lens. When I read through the Flathead Agency records from the late nineteenth and early twentieth centuries, I looked out for references to one of the agency’s tribes, the Kootenai, and their connection to tribal kin just over the border in Canada. I expected to find a precious few documents, as little secondary literature has been written on this topic, but instead I found many references to cross-border or transnational activities of the Kootenai people who were associated with both Canada and the Flathead Agency in Montana. A welcome surprise resulting from my reading of the collections was a gender component that I had not previously considered; cross-border movements and nation-state associations affected Kootenai men, women, and families in different ways, with different consequences. These materials will prove crucial to some of the major points I will be making in my later dissertation chapters. Funding support from the “Summer Award for Off-Campus Upper Division and Graduate Students” allowed me to sit down and thoroughly engage with the archival records to identify these overlooked references.

Please list publications and/or presentations based on your Redd Center research or program.

The data I accessed at the archives in Denver and Montana will be incorporated in a dissertation chapter, from which I intend to draw in preparing an article manuscript in an academic journal. I plan to write a history article on the Kootenai people in the 1880s and 1890s and their experience with the US and Canada’s improvised border patrol measures at that time. This project, along with the corresponding dissertation chapter, is in its early stages but will be ready for submission by next spring.

If your research is not yet completed, what are the next steps in your research process?

The bulk of my dissertation research is complete. The archival research trips to Denver and Montana were some of the last that I will have had to do to finish out the research portion of the project. I have now begun to write my dissertation in earnest and hope to be finished with piece by next fall.

PATRICK LOZAR

History, University of Washington.

“Behind and Beyond the Line: Indigenous Communities, International Borders, and Native Identities on the Columbia Plateau, 1850s–1920s”

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

My future plans for publication based on the materials collected from research funded by the Redd Center include completing my dissertation, adapting the dissertation into a monograph, and getting no less than one article published in an academic journal. In the immediate future, I will be including these research materials in academic conference papers. I will be presenting at the American Society for Ethnohistory conference in October and the Western Historical Association conference in November. I will certainly inform the Center of my future publications and will mention the Center’s funding support in these manuscripts as well.

Comments

Thanks to the Charles Redd Center for this research funding award. I am honored and humbled to have been selected for the “Summer Award for Off-Campus Upper Division and Graduate Students” and to be joining the ranks of scholars associated with this prestigious institution.

LINDSIE MCCABE

Biological Sciences, Northern Arizona University

“As forest go do forest bees?”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With the funds from the Summer Award for Upper Division and Graduate Students I was able to continue asking my overall question. Can species move to higher elevations along an elevation gradient before current suitable habitat become unavailable? This summer I was able to double my samples size from last year, and deploy a total of 300 bee blocks at 9 sites along the San Francisco Peaks elevation gradient. Once colonized there bee blocks were places lower and higher in elevation to determine the larval survival rate in warmer and colder temperatures outside their current range of temperatures. The bee blocks are currently overwintering at their moved temperature while waiting for the bee to emerge into adults in the spring. Once we collect them we will be able to determine the threshold rates for the 21 species of Megachilidae bees on the San Francisco Peaks. 2016 -2017 experiment suggest that these wood nesting Megachilidae bees are restricted more to warmer temperature than they are to colder temperatures. Megachilidae larval survival rate was 30% lower when more to warmer temperature, than the control group. Larva that was moved up in elevation did just as well or better in survival rate than the control group at the nesting range temperatures. We expect to see these same pattern this coming year, just with more power to detect difference within species, nesting substrate and elevation effects.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

By being able to double the number of bee block set up as well adding more sites to the original plan, I am now able to look at multiple level question with in this single experimental design. Once the bee blocks are retrieved in the spring I will be able to look at emergence rates of each species, each cap type and well as individual elevation effects. With this funding I was also able to redesign our current bee blocks to optimize that nesting that was achieved at each elevation.

Please list publications and/or presentations based on your Redd Center research or program.

McCabe, L. M., Cobb, N. S., Butterfield, B. Temperature Constrains on High Elevation Bee Communities Due to Body Volume and Body Darkness. Functional Ecology. In Review

L. M. McCabe & N. S. Cobb “As Forest Go, Will Forest Bees” International Congress of Ecology; August 2017; Beijing, China

If your research is not yet completed, what are the next steps in your research process?

The next steps in this project is to collect the bee blocks and analysis that data that was set up during the summer. I will then be incorporating this data into ecological niche models for each of the 21 species of Megachilidae to accurately predict temperature thresholds for these critical species.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I will be presenting this work at the Ecological Society of America in 2018. This research should also yield at least two additional peer reviewed publications in the coming years.

Comments

Thank you!

JULIE RAKES

Life Sciences, Arizona State University

“Infectious Agent Characterization in Biological Soil Crusts”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Research was conducted on a newly discovered infective agent of biological soil crusts (biocrusts) to determine the type of infectious agent: protist, bacteria or virus. Chemical treatment with cycloheximide, combined with size filtration was performed. Fluorescence microscopy with DAPI staining, for visualization of DNA, was completed; however, due to the small size range of the infection, basic fluorescence scopes were only able to visualize damage to the prey, *Microcoleus vaginatus*, rather than the actual infective agent.

DNA extraction and sequencing were performed over a time course of the infection. This gave me a time range for active predation and the speed at which the predator kills. Three likely predatory sequences were also identified based on their correlative increase while the prey was in the death stage.

Rather than scanning electron microscopy (SEM), I am in the sample preparatory stages for transmission electron microscopy (TEM) for visualization of the bacterium over the course of the 5-day infective process. Training and use of the TEM are equally priced to SEM but TEM will allow me to visualize the predator's attack mechanism not only externally but internal to the prey, as well.

Additional biocrust cyanobacteria were also incubated with the predator and tested for susceptibility. Finally, I was able to do small scale tests of the viability of predator to survive without prey and to determine if it's spore forming.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Funding allowed me to determine that the predator is a bacterium based on its size range of 0.2 μ m to 0.8 μ m and its ability to withstand cycloheximide treatment. This fundamental piece of information was necessary in order to begin sequencing efforts to make a taxonomic assignment to the organism, as amplification of certain genetic sequences are based on type of species present.

DNA extraction and sequencing not only identified three potential organisms/sequences responsible for cyanobacterial death but a specific time frame in which the predator is most active, within 24 hours of introduction to the prey. Prey species experience a massive mortality event within this timeframe, wherein the majority of prey are killed.

Fluorescence microscopy indicated the results of predatory attack on cyanobacteria includes damage to the sheath surrounding *M. vaginatus*, leading to a loss of chlorophyll a to the surrounding environment. Individual cells within the sheath appear to swell and increase pressure on the filament, leading to a skeletal-like appearance of *M. vaginatus*.

I was also able to determine that there is prey preference within biocrust cyanobacteria. Thus far, the genera *Microcoleus* and *Schizothrix* are disproportionately more affected than other cyanobacteria of the biocrust.

Finally, tests show that the predator is able to remain viable for at least 5 months without the addition of new prey; however, it is not a spore forming bacterium.

JULIE RAKES

Life Sciences, Arizona State University

“Infectious Agent Characterization in Biological Soil Crusts”

Please list publications and/or presentations based on your Redd Center research or program.

N/A

If your research is not yet completed, what are the next steps in your research process?

My next steps include visualization of the bacterium and the mechanism of attack and infection via TEM and a second set of DNA extractions and sequencing over a shorter infection time course. Sequencing DNA from additional time points over the course of the first three days of infection will increase the resolution of predation timing. This will provide additional support to the three candidate organisms that were identified as potential predators during the first sequencing round and hopefully narrow down the candidates to a single individual based on the timing of *M. vaginatus*'s initial death phase that corresponds with the predator's replication and increase in numbers.

New plots of healthy biocrusts are currently being grown in our greenhouse and the isolated, lab passaged infection will inoculate these plots to determine its continued viability in native conditions. Chlorophyll a extractions, a gauge of phototrophic biomass, will be performed to determine the rate and extent of mortality for biocrusts in a controlled environment. This will be a baseline for extrapolating to rates in natural environments.

A survey of worldwide biocrust microbial community structure, including abundance of the predatory species, from the scientific literature will be undertaken to determine the prevalence of this organism in known biocrusts.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

Once the bacterium has been identified and the potential impact on biocrust health determined, I plan to submit for publication in the ASM journal, Applied & Environmental Microbiology. I would like to present this research at the 2018 American Society for Microbiology conference, as well as the upcoming International Workshop on Biological Soil Crusts 4.

Comments

Thank you very much for the grant. This funding allowed me to answer some very basic and necessary questions in order to set up additional experiments that will be a portion of my PhD dissertation.

MICHAELA RIFE

Art History, University of Toronto

“King Coal and the Silver Queen: The Visual Culture of Resource Extraction in Progressive Era Colorado”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

Thanks to funds from the Redd Center I was able to spend time at archives and collections in Denver, specifically the Western History Collection at the Denver Public Library and History Colorado. I was also able to visit and view artworks at the Denver Art Museum’s “The Western” exhibition, History Colorado’s “Backstory” exhibition, and the private Anschutz collection of western art. In the archives, I collected a tremendous amount of material relating to Denver mining expositions in the 1880s, the Pueblo Mineral Palace, and the Festival of Mountain and Plain which began in 1895 and continued into the early 20th century. I documented programs, catalogues, photographs, relevant newspapers, broadsides, and even a silver tiara given to the “queen” of one of the festivals. Placing this archival work alongside western art exhibition allowed me to look at Colorado and the larger West on multiple visual levels.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

Redd Center funds were essential in accomplishing my research goal, which was to find documentation and evidence of the way that resource extraction was exhibited and promoted to Coloradans in the late-nineteenth and early-twentieth centuries. I knew that expositions, festivals, and spectacles had occurred, but documentation is not readily available online or in secondary sources. The Denver Public Library and History Colorado collections opened up so many further avenues of inquiry for me. I discovered that noted artists like Albert Bierstadt and Thomas Moran exhibited in the International Mining Expositions, and thanks to the Denver Public Library’s rare holdings of the Rocky Mountain News archive, I was able to read the special issues devoted to the Festival of Mountain and Plain complete with illustrations of parade floats. Looking at all of these texts together and demonstrated the pervasiveness of extraction in public visual culture in the period of my study.

Please list publications and/or presentations based on your Redd Center research or program.

I will be presenting this material in a paper at the American Studies Association annual meeting in November 2017. Parts of it will also feature prominently in my dissertation on visual culture and extraction/agriculture in the Rocky Mountains/Great Plains 1890–1940.

If your research is not yet completed, what are the next steps in your research process?

The Redd Center grant allowed me to finish that specific component of my dissertation research. Now I am working to put that material in context with my section on New Deal murals, which I am currently research in Washington DC as a fellow at the Smithsonian American Art Museum.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

Because of the success of this research trip I’m thinking of working this material into a separate article combined with research recently completed at the American Antiquarian Society. Of course, when completed, I also hope to publish my dissertation!

Comments

I am so grateful to the Redd Center for this grant, I really couldn’t have collected so much material without it!

AMY SCHOTT

Anthropology, University of Arizona

“Suitability of soils in wind-deposited landscapes of Northeastern Arizona for long-term prehistoric agriculture”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

This award was used as part of a study to document the physical characteristics of the eolian (wind-formed) landscape in Petrified Forest National Park. On the Southern Colorado Plateau, varieties of agricultural techniques were used prehistorically across the landscape, depending on various environmental and landscape factors. The study area of the Petrified Forest National Park is on the southern edge of an extensive sand sheet, and was expected to be of poor quality for agriculture. However, archaeological research has documented long-term use of the landscape by agricultural Ancestral Pueblo groups, suggesting that the landscape was at least minimally productive over long timescales. I used the award to complete soil chemistry studies on samples from across the study area. Chemical studies included total nitrogen, total phosphorus, and available phosphate, which are all measures of soil quality for agriculture. The award accounted for a total of 39 of the 80 soil samples run for the above soil chemical tests. Soil chemical analyses were processed at an outside lab, and results were combined with other analysis of physical and chemical soil properties tested by the author. The combined soil physical and chemical tests are used to better understand the soil quality for agriculture, and to test the hypothesis that the eolian sediments in the study area could have supported prehistoric cultivation of crops, despite the sandy nature of the soils. Results indicate that soils in the study area are of somewhat poor quality, but were likely able to support agriculture. The result supports that hypothesis that agriculture was likely possible across the landscape, though may not have supported large populations.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

The area of the Petrified Forest National Park is an eolian environment, with sandy soils expected to be of poor or marginal quality for agriculture. However, archaeological research has documented that prehistoric agricultural groups used this landscape between c. A.D. 400-A.D. 1450. The long-term use of the landscape suggests that the geology here provides the right conditions for early farmers to successfully practice dry-farming in dune sediments; however, prehistoric sand-dune farming has not been investigated extensively. This study seeks to better understand the quality of soils for dry-farming in the study area, as well as how and why prehistoric peoples were able to farm successfully. Ultimately, this project investigates what characteristics enabled long-term successful adaptation to an arid environment in northeastern Arizona. The results of soil chemistry completed with this award are combined with other soil analyses to document soil quality in the study area. Results show that soils are of somewhat poor quality for agriculture, but likely could have supported crops. This implies that the area may have been considered a marginal area during the long-term prehistoric population. Archaeological evidence suggests the prehistoric peoples used the landscape in fairly low population levels, and that early farmers may have moved frequently to better use the marginal landscape. The results of this study support this hypothesis, and suggest that poor soil quality may have contributed to limiting population levels. However, the poor soil quality does not explain the long-term, continuous use of the landscape, which may be better explained by social factors.

Please list publications and/or presentations based on your Redd Center research or program.

Schott, Amy. 2017. Soil Quality and Agricultural Productivity in Petrified Forest National Park. Paper presented at the Pecos Conference for Southwestern Archaeology, Pecos, NM.

AMY SCHOTT

Anthropology, University of Arizona

“Suitability of soils in wind-deposited landscapes of Northeastern Arizona for long-term prehistoric agriculture”

If your research is not yet completed, what are the next steps in your research process?

So far, I have only processed soil chemistry studies for some parts of the study area. I plan to submit additional soil chemistry samples from other parts of the study area, in order to get a better picture of how soil quality varies across the landscape. These results will be used in spatial models of the study area using Geographic Information Systems. These models will look further at the relationship of soil quality to other environmental factors (geology, soil type, etc.) and how soil quality distribution relates to distribution of archaeological sites on the landscapes. Spatial studies of soil quality will show how environmental controls contribute to soil quality, and how prehistoric peoples used this landscape over time. I am especially interested in looking at whether use of the landscape changed over time, and how patterns of land use relate to environmental controls of soil quality. This project is part of my PhD dissertation research.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

When completed, these results will be presented at the Society for American Archaeology meeting in Washington DC in April of 2018. In addition, I plan to publish the results of this study in an archaeological journal as well as part of my PhD dissertation.

Comments

Thank you to the Charles Redd Center for Western Studies for supporting broad and interdisciplinary research in the Western US. This award has supported an important part of my research project, which is one data set that I am combining with many other data sets to get a complete picture of a complicated physical landscape and how human societies interact with this landscape over long time scales. This award makes such interdisciplinary projects possible.

CAROLINE TRACEY

Geography, University of California

“Neighbor is a Verb: Ranchers, the Military, and Conservation in Southeastern Colorado”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

My funding from the Charles Redd Center enabled me to travel to La Junta, Colorado, to complete the lion's share of my archival research, as well as conduct multiple key interviews, in my research about the Pinon Canyon Expansion Opposition Coalition. My interviews included members of the coalition and local conservation NGO representatives.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My summer 2017 research in southeastern Colorado helped me think more deeply about the role of range ecology in the Pinon Canyon expansion story. My interviews and archival research emphasized the importance of management practices, soils, and other ecological factors. This spurred me to enroll in multiple range science classes upon returning to UC Berkeley, and as I develop my research, I will be focusing more on the shortgrass prairie assessment conducted during the expansion fight.

Please list publications and/or presentations based on your Redd Center research or program.

None yet. It will form part of my dissertation project.

If your research is not yet completed, what are the next steps in your research process?

I am currently finishing my PhD coursework, applying for more funding, and preparing to write a dissertation prospectus and take my oral exams. After that, I plan to spend a year doing fieldwork in Colorado, and to prepare my dissertation.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

No immediate future plans, but I will notify the Redd center when I publish my work.

Comments

Thank you kindly for the funding. I am sorry this evaluation is a few days late!

FRANK WHITEHEAD

History, University of Arizona.

“The Two are Partners’: Rodeo Cowboys, Their Horses, and a Distinctly Western Relationship”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With the funds I received from the Charles Redd Center, I was able to visit three different archives in Texas and Oklahoma: the National Cowgirl Museum in Fort Worth, the National Cowboy & Western Heritage Museum in Oklahoma City, and the American Quarter Horse Museum in Amarillo. I traveled to all three archives over the course of one week in July.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

My primary research goal for this trip was to learn more about the history of the relationships between timed event contestants in rodeos and their horses. Visiting all three of these archives afforded me the opportunity to examine the records of multiple owners, trainers, and riders of timed event horses, as well as depictions of their relationships in rodeo advertisements and popular Western fiction and films. The collections that I was able to look through revealed that rodeo contestants often developed a close social bond with their horses. Spectators recognized that bond as similar to the hero/horse relationships in Westerns, so producers took advantage of it in advertisements to attract audiences to their rodeos.

Please list publications and/or presentations based on your Redd Center research or program.

I presented my research at the annual meeting of the Pacific Coast Branch of the American Historical Association in Northridge, CA on August 4th.

If your research is not yet completed, what are the next steps in your research process?

My research for this particular project is complete, but I plan to use most of the research from this project for my dissertation that I am currently writing.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I plan to eventually publish an article based on my research and presentation, but I have not yet decided which journal to submit to. If/when it is published, I will certainly recognize the Redd Center for its help in funding the research for the article, and I will notify the Redd Center.

Comments

I want to thank everyone at the Redd Center for this award. This research trip was enormously valuable for my dissertation, and it would not have been possible without this funding.

SAMANTHA WILLIAMS

History, University of California

“‘That was our home, and it needs to be remembered’: Erasing and Reclaiming the History of the Stewart Indian School”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With funding from the Charles Redd Center, I conducted research at five different facilities. In California I spent three days working at the National Archives and Records (NARA) facility in San Bruno, California, which maintains extensive archival holdings on the subject of my dissertation, the Stewart Indian School. I examined materials dated from the 1920s through the 1950s, which consisted of Stewart School student records, policy documents developed by school administrators, letters written by parents and students, school newsletter and magazine articles authored by students, and voice recordings of Navajo students who attended the school in the 1950s. I also worked with NARA archivists to identify additional records I may wish to view during subsequent research trips, and was able to narrow down which sets of records I will not be able to access for my project because of student privacy concerns and protections. I also visited the Stewart Indian School grounds in Carson City Nevada, the Nevada State Museum, also in Carson City, and spent time examining items at the University of Nevada, Reno (UNR) library and at the Nevada Historical Society in Reno. With regard to my Carson City research, I examined the oral testimonies of Stewart alumni, which I will cite in my dissertation, and analyzed exhibits related to the school. At UNR, I discovered Stewart School newsletters that included articles written by school alumni in which they discussed their professional and academic goals upon graduating from the institution, as well as evidence of ongoing negotiations between Stewart faculty and Native families. At the Nevada Historical Society I examined countless news articles related to the school, and also evaluated school year books and photographs, an analysis of which I will include in my completed dissertation.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

The research I conducted this summer is essential to my third and fourth dissertation chapters, which examine the impact of Indian New Deal reforms at the Stewart Indian School in the 1930s and 1940s, and the implementation of the Navajo Special Program at the school during the 1950s and early 1960s. With regard to the New Deal Era, I sought to understand whether and how federal reforms impacted the treatment of Native children at the school, and also to determine the extent to which local administrators complied with federal orders. I discovered that while federal officials sought an end to the assimilationist programs that had driven Indian education in the past, the faculty and staff of the Stewart School were in many cases reluctant to alter school practices, and in some cases blatantly ignored federal policy dictates. Students thus found themselves in a still oppressive environment, but, as in decades past, they also found ways to subvert the rules and expectations imposed upon them. With regard to the Navajo Special Program, which entailed the transfer of Navajo children from their homes to boarding schools such as Stewart, I determined that federal and local Stewart officials during this period gave up all pretense of ending assimilationist programs; instead, they worked diligently to strip Navajo students of their language skills and culture, and to transform them into individuals who could integrate into white American society. This program bore a strong similarity to those instituted immediately following the establishment of the Indian boarding school system, though in this case the impetus was not to save Native peoples from rapacious white settlers, but to hasten the termination of federal treaty obligations to the Navajo nation.

SAMANTHA WILLIAMS

History, University of California

“That was our home, and it needs to be remembered’: Erasing and Reclaiming the History of the Stewart Indian School”

Please list publications and/or presentations based on your Redd Center research or program.

I plan to publish and present materials from my fourth chapter, on the Navajo Special Program, in 2019. I expect to finish the chapter in February or March of next year and present it in the fall. I will look for a publisher at that time. I also plan to present my research at a Friday Forum session at my university this quarter.

If your research is not yet completed, what are the next steps in your research process?

I expect to completely finish my dissertation at the end of 2018. I am currently writing my third chapter, on the New Deal era at the Stewart School, and expect to finish it in November of this year. After that I will begin outlining and writing my fourth chapter, on the Navajo Special Program, which I expect to finish in early 2018. Without the research I conducted with funding from the Redd Center over the summer, finishing these chapters at this pace would be difficult, if not impossible.

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

I plan to publish and present materials from my fourth chapter, on the Navajo Special Program, in 2019. I expect to finish the chapter in February or March of next year and present it in the fall. I will look for a publisher at that time. I also plan to present my research at a Friday Forum session at my university this quarter.

Comments

I greatly appreciate the summer funding I received from the Charles Redd Center. It will enable me to complete two dissertation chapters at a fairly rapid pace, which increases the likelihood that I will complete my dissertation within UCSC’s normative timeframe. Additionally, as a parent, this funding enabled me to set aside several days to focus exclusively on my research and writing, which does not happen very often. Thank you!

ANTHONY WOOD

History and Philosophy, Montana State University

“Race, Ruination, and Exodus: Understanding the Impact of 1917 on Montana’s Black Community”

Please provide a brief narrative of the research or program you accomplished with funds received from the Charles Redd Center.

With support from the Charles Redd Center, I was able to spend five days in the Research Center and Archives at the Montana Historical Society in Helena. My time there was vital to accomplishing several research goals. I compiled a data set of critical homesteading, census, and city directory information that allowed me to track the movement of thousands of individuals and families who left failing homesteads from 1917-1930. This was my stated research objective when I applied for funding. I was able to complete this in four days, and then was able to spend my last day in Helena working through the manuscript collection of Rose and Taylor Gordon, which was available in the research center. Rose, an early black resident of Central Montana, saved many unpublished poems, short stories, and an autobiography which I was able to use in the third chapter of my thesis, on black nature writing and the African American Wilderness experience in Montana.

Please specify how Redd Center funds assisted you in answering your research questions or accomplishing your research/programming goals. In other words, what did you learn or accomplish?

By being able to compile the homestead data, and more importantly, being able to use MHS Polk City Directories and newspapers to trace these former homesteaders, the Redd Center has allowed me to show where these people went to, and what jobs they took in their new homes. From previous research, I learned that this period was precisely the time in which many black working and middle class families lost their jobs and were forced to leave the state. My research strives to expose the points of social and cultural contact between the historic black community of Montana and the lives of their fellow Montanans, white and black. The failure of the homestead boom is a critical narrative in state history that helps form place and community identity for thousands of people, even today. I think that it is important to show the how African American history is not separate from many Western narratives and even is fused to the history of a movement in which notably few black Montanans partook.

Please list publications and/or presentations based on your Redd Center research or program.

“Race and Ruination: 1917 and the Origins of Montana’s African American Exodus,” Panel Presentation, Montana History Conference, Helena Great Northern, Helena, Montana, September 22, 2017.

If your research is not yet completed, what are the next steps in your research process?

This research will continue to take shape and come into conversation with other research to form the fifth and final chapter of my Master Thesis, “The Ruination of the Frontier: Settler Colonialism and the History of Black Montana, 1880-1930.”

What are your future plans for publications and/or presentations? To assist us in our reporting, please notify the Redd Center whenever you publish work based on your research funded by the Center.

This chapter would likely only be published as part of a larger manuscript on the History Montana’s Black community, which would not occur for several years. If this does happen, I will send a notice to the Redd Center.

Comments

Thank you very much for your support. This was an incredibly time intensive task that I could not have done with out your funding for my travel and lodging.

VISITING FELLOWS

Tracy L. Brown; Sociology, Anthropology and Social Work; Central Michigan University.

TRACY L. BROWN

Department of Sociology, Anthropology and Social Work, Central Michigan University

Brian and Brenden,

I write to report on what it is I did during my semester with the Redd Center at BYU. As you know, my home institution is Central Michigan University, in Mount Pleasant, MI. I spent the fall 2017 semester at BYU, working on my project “‘Half Indians’: Pueblo Governance and Sovereignty after the Treaty of Guadalupe Hidalgo.” In my research, I seek to investigate how (or if) Pueblo Indians’ ambiguous status in New Mexico after the US-Mexico War impacted their political sovereignty.

I have a heavy teaching load at CMU. The only time I have to devote to this project is during the summers. I have done archival research each summer since 2013 (except in the summer of 2015), with trips to New Mexico lasting two weeks to as long as seven weeks. As is probably the case with many projects, it seems the more research I have done on this project the more I seem to need to do. Instead of feeling like I am approaching the finish line as time goes on, the finish line seems to recede into the distance! At the beginning of research on this project in summer of 2013, I imagined I would be finished with the archival work within 3-4 years. Now, I believe it might take me another twelve months of research before I can feel as though I have looked at all relevant record groups. I had planned to begin writing a book manuscript during my next sabbatical, which will occur in the 2019-2020 academic year. Now, it seems as though I will spend that sabbatical trying to finish my archival research on the project, and that writing won’t begin until sometime after 2020.

My fellowship at the Redd Center was valuable simply because it gave me time to stop and to take a pause in the archival research in order to gather my thoughts on what I will need to do to conclude the research leg of the project. Because I do not have a lot of time to focus on research, the time that I have had has been taken up with archival research. I therefore spent the first month that I was at BYU simply creating a bibliography of all relevant publications to my research topic by searching the BYU library catalog. I then checked out those books that I could locate in the BYU library that I thought were central to my research. I spent the rest of the time of my fellowship reading and taking notes on as much as I could get through. I focused on reading published primary sources – for example James Calhoun’s 500+ pages of published letters from when he was Indian agent in New Mexico. I also read anything that I could find on the legal status of Pueblo Indians after the war. I scanned anything that I did not have time to read. I also downloaded books and articles that were available to me through the library catalog or as a faculty member of BYU.

Being able to read and access this material has given me a much better understanding of the legal status of Pueblo people during the Territorial Period in New Mexico. I am on much more solid footing with regard to my understanding of the Pueblo situation at this point in time, and thus am able to understand what I see in the documentation that I am collecting. I suppose it does not sound very exciting – to say that I spent my entire time reading in my office! But, it is of course critical that I have time to read the historiography on my project.

In addition to this, I gave a presentation to the Western Studies faculty at BYU in late November. I concluded my fellowship by spending the first two weeks of December doing archival research in Santa Fe at the State Records Center. Since Provo is only about nine hours away from Santa Fe, it seemed a good idea to get in some archival research while I was on fellowship at BYU. At this moment, I am working on finding Pueblos in the New Mexico District Court records. As I’ve said to Brenden, this is often like looking for a needle in a haystack. Pueblos did not typically use the District Courts to adjudicate internal conflicts in their communities but those records do sometimes turn up. And when they do, they can be very enlightening – a window into the political functioning of those communities. So, I have committed myself to going through these

TRACY L. BROWN

Department of Sociology, Anthropology and Social Work, Central Michigan University

records, at least for the districts where Pueblo communities were located. I made progress on the Bernalillo District Court records during my December Santa Fe research trip (Bernalillo is the county that includes Albuquerque and numerous Pueblo communities). I expect to be finished with Bernalillo this coming summer. I have also made some progress on the Santa Fe and Taos District Court records. I hope to finish those counties up as well this coming summer.

I am grateful to have been given the opportunity to spend the semester in residence at BYU, to meet you both and Amy. Thank you again, and please let me know if this report is not sufficient for your reporting needs.

Tracy