

THE 68TH ANNUAL NORTHWEST
ANTHROPOLOGICAL CONFERENCE
26–28 March 2015

Co-Hosted by University of Oregon's Anthropology Department and
the Museum of Natural and Cultural History

Eugene, Oregon

Symposia, Panel Discussion, Contributed Papers, and Posters¹

Symposia

“...Any Road Will Get You There”: ODOT/ WSDOT Transportation CRM Symposium

State transportation agencies are some of the largest funders of cultural resources management projects in the region. ODOT, WSDOT and their consultants present highlights of some of the archaeological investigations conducted over the past year, as well as insights on potential changes or trends in methods and regulations in the near future.

Organizers: Carolyn Holthoff and Scott Williams

“...Any Road Will Take You There”: Highlights of ODOT and WSDOT CRM from 2014, Carolyn Holthoff and Scott S. Williams.

Naughty or Nice? Inherent Bias in the Interpretation of Female Material Culture, as seen through the Oak Street Parking Lot Site (35JA860), Central Point, Oregon, Chelsea Rose.

The Bly Mountain Realignment: A View of Collaborative Cultural Resource Management in Klamath County, Oregon, Paul W. Baxter and Tobin Bottman.

14,000 Year BP Record of Fluvial Loess Accumulation in an Upland Bog Developed on a Missoula Flood Gravel Terrace below the Historic Union Train Station: Implications for Early-Holocene Upland Site Burial and Preservation in Portland, Oregon, Curt Peterson and Rick Minor.

An 8,000 Year Old Buried Surface & Associated Cultural Materials Near Puget Sound, Washington, Alexander E. Stevenson and Michele Punke.

Years Below the Prism: a Recent Discovery along Lake Sammamish, Washington, Paula Johnson, Chris Lockwood, and Tom Minichillo.

Interpreting the Exposed Pilings at the Siuslaw River (Florence) Bridge, Brian O’Neill.

¹ Abstracts of individual papers can be found at <http://northwestanthropology.com/volumes.php>

New Interpretations of Coast Salish Culture and Society

Recent archaeological and ethnographic studies of Coast Salish peoples indicate useful new directions for research and which show the utility of combining both fields in new ways and thinking through several temporal scales. Among these new approaches are a closer look at the role of violence and defense in the early contact period; the examination of food resources, including herring; the rise of new forms of leadership; and the role of mountains in Salish history and identity.

Organizers: Bruce G. Miller and Bill Angelbeck

A Local Practice Based Approach to Coast Salish Rock Paintings: The Xelas of the Tsleil - Waututhngs, Jesse Morin.

Upper Skagit Tribal History Reframed, Bruce G. Miller.

New Perspectives on Coast Salish Landscape Use and Ceremonialism: An Archaeological Investigation of Rock-Shelters, Morgan Ritchie and Ian Sellers.

Investigating Landscape, Sustainability and Social Change over 3500 years at the Montague Harbour Site, Galiano Island, BC, Colin Grier.

Reconstructing Modes of Production in the Coast Salish Past: Ever-Shifting Socioeconomies throughout Seasonal Rounds, Bill Angelbeck.

Cascade Pass: A Pre-Mazama Alpine Camp in the Northern Cascade Range of Washington State, Robert R. Mierendorf.

Howard A. Hanson Dam Archaeological District (DT 184) Revealed through Data Recovery Excavations at Late-Archaic Hunting Camp, King County, Washington, Jason B. Cooper.

Results of Microwear and Residue Analyses of Quartz Crystal Microblades in the Salish Sea, Rachael Kannegaard.

Measuring Maternal and Infant Health: A Four-Field Approach

Maternal and infant health serves as the foundation of well-being for every community in the world. Anthropologists and associated fields in the social sciences and public health recognize the importance of fostering an environment in which maternal and infant health can be optimal. However, it has been recognized particularly by social scientists, that the reality of optimizing maternal and infant health has been a challenge since before the Neolithic. Panelists will discuss the structural and historical implications of maternal and infant health within the context of their research, grapple with measuring maternal and infant health, and provide applications for future research.

Organizer: Holly Horan

Prenatal Stress, Culture, and Preterm Birth in San Juan, Puerto Rico, Holly Horan.

The Curation of the Umm el-Jimal Osteological Research Collection: Maternal and Infant Health in a Transitioning Society, Dawn M. Alapisco.

Women and Epidemics: The Gendered Inequity of Ebola, Sudy Storm.

Nation as Clinic: Brazil's National Children Department and the Politics of Maternal and Infant Health (20th Century perspectives), Cari Maes.

Beyond Life and Death: Negotiating Definitions of Safety in Birth, Leah Houtman.

Oregon's Military Heritage: Archaeological Research of the Past Two Hundred Years of Military History in the Region

A military presence in Oregon has been strong since the initial arrival of Euro-Americans to the Northwest. How such a presence manifested itself on the landscape and the degree of evidence remaining from past military activities is still being discovered. Archaeological excavations have occurred at several historic forts over the past 30 years while recent investigations have attempted to locate and subsequently interpret a historic battlefield. This symposium brings together scholars from a number of universities, federal and state agencies, and private contractors to summarize the wealth and breadth of military research efforts, to date, and to examine how future research and Section 106 compliance efforts can work toward interpreting the role and importance of military sites and their future management.

Organizer: Dennis Griffin

The Military History of Oregon – Rich, Diverse and Little Known, Dennis Griffin.

Pacific Coast Forts of the 1850s: Archival Maps as Archaeological Survey Data, R. Scott Byram.

U.S. Army Fort Umpqua – Past Work and Future Research, Kevin Bruce and Justin Eichelberger.

The Meat of the Issue: Mid-19th Century Military Faunal Remains as a Measure of Class Structure at Fort Vancouver, Headquarters of the Columbia Department (Pacific Northwest), Elizabeth Horton.

The Archaeology of the Hungry Hill Battlefield, Mark Tveskov.

The Fort Klamath Archaeological Project: Preliminary Findings, Kyle Crebbin and Mark Tveskov.

The Archaeology of Class, Status & Authority Within Mid-19th Century U.S. Army Commissioned Officers: Examples From Fort Yamhill & Fort Hoskins, Oregon 1856–1866, Justin Eichelberger.

The House that Sheridan Built: Musings of a Skeptical Archaeologist, David Brauner.
Cultural Landscape of Camp Adair: A World War II U.S. Army Cantonment in the Willamette Valley, Oregon, Rick Minor and Kathryn Toepel.

Fire!

Fire has long been a major modifier of the Pacific Northwest ecosystem. In the last decade alone, the Northwest has experienced the 50,000-acre Biscuit Fire of 2002, the B&B and Deer Creek Fires in 2004 and 2005, the 2006 Tripod Complex Fire, the 2013 Colockum Tarps Fire, and most recently, the massive Carlton Complex, Douglas Complex, and the Beaver Creek Fires. The radically altered post-wildfire landscape creates research challenges and opportunities and requires the development of responsive and flexible management strategies. Looking backward, our forests, shrub-steppe, and grasslands are fire-adapted; research indicates that significant portions of fire-modified northwest landscapes may be the result of deliberate management by early inhabitants. Looking forward, the threat of wildfire and repairing fire damage creates management challenges, solutions must be at least partially informed by the results of archaeological research. Fire-induced changes affect the archaeological record, which in turn affects research design, survey strategies, and data interpretation. The interdisciplinary Fire Symposium considers fire both as phenomenon and artifact, and will include discussions of the effects of wildfire in grasslands, shrub-steppe, and forested environments, reading the forested landscape, reconstructing fire histories, fire and the anthropogenic landscape, and using fire to evaluate field methodologies, among other topics.

Organizer: Katherine M. Kelly

Identifying Fire Managed Landscapes in the Pacific Northwest – a Multidisciplinary Approach to a Burning Question, Kelly M. Derr.

Reading Forest Stand History to Inform Artifact Context, Fire and Disturbance in the East Cascades, Jamie Bass.

Late Holocene Human-Fire Relationships at Sunrise Ridge, Mt. Rainier National Park, Washington, Megan K. Walsh, Patrick T. McCutcheon, and Michael Lukens.

Report from the Hot Tin Roof - Post-Fire Fieldwork on the Methow, Katherine M. Kelly.

Fire's Influence on Canoes within the Plateau Culture Area, Shari M. Silverman.

Seeds: Rare, Medium, or Well Done? Melanie Diedrich and Kayla Snyder.

The Archaeology of Wildland Firefighting, Lucas Hugie.

"Let Me Stand Next to Your Fire" (After it Cools Down), Maurice Major.

Rising Tides: Global Perspectives on Island Archaeology

The archaeological study of islands worldwide provides ample case studies to investigate how peoples with “limited” resources modified their environments to suit their needs. Islands provide a natural boundary within which to study issues of human caused environmental alterations, sustainability, risk management strategies, and cultural transmission. In addition, erosion along coasts caused by rising sea levels and human assisted modification threatens to destroy much of the archaeological record of coastal peoples. This session highlights research on islands around the

world to increase awareness of the issues peoples faced with living on islands both in the past and present.

Organizer: Aaron S. Poteate

Tear it Loose: The Creation of Anthropogenic Environments on Smaller Islands, Aaron S Poteate.

Artifact Networks and Cultural Transmission in East Polynesia, John T. O'Connor and Frances J. White.

Visibility Analysis of Defensive Settlements on Rapa, Brian Lane and Robert DiNapoli.

Risk and Uncertainty in Polynesian Dryland Agriculture, Robert J. DiNapoli and Alex Morrison.

Archaeological Perspectives on Micronesian Colonization and Cultural Change, William S. Ayres.

Roasting Breadfruit in Micronesia: A Combined Macroremain and Phytolith Analysis, Maureece Levin.

Deforestation, Drought, and Humans: The Collapse Theory Is Dead— New Evidence of Adaptability and Survival on Rapa Nui, Candace Gossen.

Landnám Tephra and the Settlement of Iceland: Preliminary Results, Magdalena M. E. Schmid.

Learning from the Past—Legacy Collections

There are no doubt hundreds if not thousands of collections in curation facilities that are worthy of a second or third look. New research frameworks and technological advances make looking at these old or legacy collections worthwhile. You have to know the past to understand the present. (Carl Sagan)

Organizer: Mary Anne Davis

A New Look at Soft Technology from the Biderbost Site, Kathryn Bernick.

Basket Weavers and Collectors; Research on the Mrs. Isaac Lee Patterson Collection at the UO Museum of Natural and Cultural History, Elizabeth Kallenbach.

Laughter Lifted From the Loom—Cultural reciprocity in the Raven's Tail weaving community of Damascus, Oregon, Mathilde Lind.

Meeting with an Old Friend: Dry Sailing to Rock Art Sites in Southern Idaho, Mary Anne Davis.

Initial Analysis of Materials from the 1979–1980 Excavations at the Pines Site on Manastash Ridge in Central Washington, Christopher Moose.

100 Years Revisited: Diamond Jenness' 1914 Barter Island Excavations and the Progress of Systematic Archaeology in Alaska, Joshua D. Reuther, Jason S. Rogers, Chris Wooley, Owen Mason, Jill Baxter-McIntosh, and Robert Bowman.

Western Washington Legacy Collections –Topics to Ponder, Lorelea Hudson.

Place, Inequality, and Moral Economies

Foucault's influential concept of governmentality emphasizes the way in which subjects are formed, classified and disciplined in terms of dominant gazes and technologies of power/knowledge. These papers consider ways in which these disciplinary forces and optics are challenged, interrogated, and re-channeled by subaltern persons and communities. We give special attention to practices of gifting, sharing, mutual support and peace-building through which actors produce 'moral economies' and hidden transcripts within larger capitalist or neo-liberal settings.

Organizers: Bryce Peake and Kathleen Piovesan

Managing Risk on the Street: Forging Alliances and Building Trust, Hillary Matson.

Peace, Love, Unity, and Respect: The Moral Economy of Rave Culture, Brittany Anderson.

Beyond the Eyes of the Dominant: Reciprocity and Peace-building on the Street, Saeed Mohamed.

The Body as a Battlefield of Resistance: Cracking the Skulls of the "System" in a Polynesian Performance, Patrick E. Molohon.

Discussant: Optical Regimes, Moral Economies & Somatic Power, Bryce Peake.

State Violence and Multicultural Displacement in Portland, Oregon, Gennie Nguyen.

Masculinities & Gendered Living among One-and-a-Half Generation Immigrant Deportees in Nogales, Sonora, Mexico, Tobin Hansen.

Health, Equality, and the Political Meaning of "Vulnerability" in Vancouver's Healthy City Strategy, Kathleen Piovesan.

Discussant: Place, Inequality, and Moral Economies, Hope Amason.

Toolstone Geography of the Pacific Northwest

The Pacific Northwest contains substantial and diverse lithic resources technologically important to native peoples of the region for making stone tools. Obsidian, chert, basalt, jade, and other toolstones occur in high concentrations in certain geological contexts. Since time immemorial, native peoples have had an intimate knowledge of these toolstone resources. Archaeologists are just beginning to learn about them and how to apply that knowledge to understanding the archaeological record. This symposium consists of papers from contributing authors to a forthcoming edited volume on Pacific Northwest toolstone sources. The papers explore the

cultural geography of lithic resources including studies of toolstone quarries, lithic procurement strategies, reduction technologies, and their social contexts.

Organizers: Terry Ozbon and Ron L. Adams

Major Toolstone Geography of the Pacific Northwest, Terry Ozbon.

Toolstone Geography in the Upper Skagit River Valley and Adjacent Areas, Robert R. Mierendorf and Kevin E. Baldwin.

Elk Pass Obsidian and Precontact Band Territory in the Southern Washington Cascades, Rick McClure.

Columbia Hills Toolstone Quarrying, Ron L. Adams.

Estimating Biface Production at a Basaltic Andesite Workshop in the Blue Mountains: Twenty Years of Hindsight, Kenneth Reid, Matthew J. Root, and Daryl E. Ferguson.

New Perspectives on the Stockhoff Quarry: Toolstone Procurement at a Quarry Complex in the Blue Mountains of Northeastern Oregon, Nicholas Smits.

Tracking the Trade in Central Oregon Obsidians through the Pacific Northwest, Thomas J. Connolly, Craig E. Skinner, and Paul W. Baxter.

Glass Buttes, Oregon: 14,000 Years of Continuous Use, Daniel Stueber and Craig Skinner.

Obsidian Use in the Willamette Valley and Adjacent Western Cascades of Oregon, Paul W. Baxter, Thomas J. Connolly, and Craig Skinner.

Upper Klamath River Obsidian Frequencies, Joanne M. Mack.

Community-Based Environmental Anthropology

Environmental anthropology is a growing component of the discipline that cuts across the traditional subfields of anthropology and includes a significant applied component. This session brings together scholars and students working on community-based environmental anthropology research projects in the Pacific Northwest and beyond. Community-based research prioritizes the needs, collaboration, and research questions of our communities of study while contributing to decolonization efforts that seek more balanced power relations between scholars and communities of study. Collectively these papers illustrate the integral connection between people, place, and culture, while illustrating the value of community in the research process.

Organizer: Thomas W. Murphy

Ecology of Whiteness: Mormons, Indians, and Boy Scouts, Thomas W. Murphy.

Why Environmental Professionals Need Project Management Training: a Study of Mitigation in Washington State, Alexa C. Ramos.

Understanding Community Through the Soles of Their Shoes, Ashley Pickard.

Two Sisters Return: A Community-based Assessment of Wildlife Activity on Traditional Snoqualmie Land, Laurie Ross.

Mapping Sustainability: An Interdisciplinary Undergraduate Research Project, Alicia Kelly.

Successes and Setbacks: Current Methodological and Theoretical Approaches to Historical Archaeology in the Northwest

Researchers studying historical archaeological sites in the Pacific Northwest have employed a broad range of approaches ranging from evaluating site structure, analysis of site formation processes, to the taphonomy of individual artifacts. In addition, current research on a range of historical sites has helped to diversify the narratives of the individuals working and living in early western communities. This symposium will explore recent trends in methodological and theoretical approaches to historical archaeology in the Northwest and explore the successes and failures of these studies.

Organizers: Christopher Ruiz and Chelsea Rose

The Dalles Chinatown: An Unexpected Discovery, Maryanne Maddoux.

Pre-1900s Chinese Mining in Northeastern Washington State, Lindsey Porter.

Women, Children and Agency in the Early Oregon Country, Mollie Manion.

Getting Burned: Fire, Politics, and Cultural Landscapes in the American West, Chelsea Rose.

Preliminary Results from Archaeological Investigations at the Charles and Melinda Applegate House, Yoncalla, Christopher L. Ruiz, Patrick O'Grady, and Liz Carter.

The Decomposition of Historical Glasses, Elizabeth Harman, Sidney Hunter, and Ray von Wandruszka

Redefining Community Archaeology: Shared Experiences and a Collaborative Approach to the Site Stabilization Efforts Following the Oso Mudslide

AECOM assembled a diverse team of spotters and archaeologists to assist Snohomish County with the site stabilization efforts following the massive mudslide in March 2014. This three month project focused on the recovery of human remains and personal items from the 300,000 cubic yards of search and rescue piles that were created during search and recovery immediately following the slide. The community was intimately involved in every aspect of the project and their feedback and involvement shaped the most crucial milestones of the project: the recovery of a more than 1,000 personal items and the recovery of the final victim. This symposium focuses on how the community was integrated into the project and how the success of the project was directly influenced by community involvement, team diversity, and the integration of archaeological methods into the monitoring, recovery, and reunification process.

Organizer: Stacy Bumback

The Complexities of Designing and Implementing the Archaeological Monitoring and Recovery Efforts for Oso Mudslide/SR530 Site Stabilization Project, Stacy Bumback.

A Unified Team: Integrating Local Spotters and Archaeologists, James H. Mayer and Vonne VanLaningham.

Challenges of Locating a Tribal Cemetery Outside the Oso Slide Area /SR530 Site Stabilization Project, Kerry Lyste.

What We Found: Personal Item Collection At The Oso Mudslide, Sarah Meyer.

Reconstructing the Past: Paleoecology of the Pacific Northwest

Paleoecological studies are an integral aspect of archaeological analysis because they enhance understanding of environmental conditions experienced by cultural groups in the past. Paleoecological records can provide information on a multitude of physical and temporal scales, contributing both high resolution details and data on long term environmental change to interpretation of archaeological contexts. This symposium brings together multidisciplinary fields employing varied and unique research methods in paleoecology in an effort to contextualize Pacific Northwest archaeology. Topics include ongoing research on palynology, isotopic analysis, paleoentomology, geomorphology, archaeobotany, zooarchaeology, sea level change, fire history, and other subjects used in paleoclimate reconstructions.

Organizers: Jaime Dexter-Kennedy and Chantel Saban

Paisley & Connley Caves: Examining Cultural Activity Through a Paleoenvironmental Approach, Chantel V. Saban

The Fish (Pisces) Remains of Paisley 5 Mile Point Caves, R. Patrick Cromwell and Kyle Suzenski.

Sleep Tight: Were the Occupants of Paisley Caves Plagued by Bedbugs? Martin E. Adams.

Macrobotanical Analysis of Hearth Features at LSP-1 Rockshelter, Lake County, Oregon, Jaime Dexter Kennedy.

Autumn in the Valley: Paleo-ecological Findings at an 800 Year Old Ceramic Bearing Site in Southeastern Oregon, Scott Thomas, Patrick O'Grady, Margaret Helzer, Carolyn Temple, and Chuck Morlan.

Preliminary Analysis of Faunal Remains from Summit Island (49-XHI-43 and 49-XHI-44), Bristol Bay, Alaska, Molly Casperson.

Reconstructing the Fire History of Hecate Island on British Columbia's Central Coast, Kira Hoffman.

Toward a Better Understanding of Holocene Fire-Climate-Human Interactions in the Pacific Northwest: The Usefulness of Macroscopic Charcoal & Pollen Analysis of Lake Sediments, Megan Walsh.

Using Pollen to Reconstruct Environments of the Past: Lessons from the Interior Mesic Forests of Northern Idaho, Erin M. Herring and Daniel G. Gavin.

Rock Art and Rock Features Research in the Northwest

An emphasis on rock features and rock imagery within a landscape context offers a range of research potentials. This symposium will present and extend research with attention to recent collaborative efforts about traditional land and resource uses. Presentations indicate locational to landscape relationships. This includes rock imagery on boulders, basalt panels and escarpments, and stacked rocks, cairns, walls, blinds, circles and rings. This research demonstrates the need to enhance understanding of changing environments and climates over the millennia—and into the future. Preserving and protecting rock features and rock imagery in cultural contexts and archaeological landscapes is emphasized.

Organizer: Douglas Beauchamp

Petroglyph boulders on the Rogue River at Two Mile Creek: Intentions and Actions, 1974–2015, Douglas Beauchamp.

The Landscape of Klamath Basin Rock Art, Robert J. David.

Isn't that Just Another Rock? An Overview of Rock Features Classified or Known as Singularly Placed, Pedestaled, Window, and Boulder Feature Types, Stephen T. Jankowski and Perry Chocktoot.

Heiltsuk & Wuikinuxv Rock Art: Reminders on the Landscape, Aurora Skala.

Upper Klamath Rock Features: "Rain Rocks." Joanne M. Mack.

Overview of Stacked Rock Features at Cottonwood Canyon State Park: Examining and Expanding Criteria, Nancy Nelson.

Using Image Stitching Software to Display Complex Glyptic Images Located at Pine Bar, Hells Canyon NSA, ID: A Field Experiment, William Schroeder.

Sacred Site or Curiosity...? Esther Stutzman.

Cascadia Cave Rockshelter, David G. Lewis.

5th Annual Maritime Heritage Symposium—Protection, Preservation, and Public Archaeology

This year's maritime symposium focuses on the protection and preservation of maritime heritage in the Pacific Northwest. In particular, topics will cover maritime heritage areas, maritime salvage law, underwater archaeology guidelines, and protection of cultural resources through public

outreach. Presentations highlight volunteer maritime heritage oriented projects in the Pacific Northwest, their methods, and the strides these organizations are currently making towards documenting and preserving the coastal, submerged, and extant maritime history of the region.

This symposium also shares a range of current research regarding pre-contact and historic cultural resources found in coastal and submerged settings throughout the Pacific Northwest. In the course of the presentations we will explore: coastal and marine geomorphology, hidden shell middens, surveys of Washington's maritime heritage and submerged resources, the salvage of submerged cultural resources for profit, and the formation of non-profit maritime archaeology societies.

Organizer: Jacqueline Marcotte

Recent Research on Marine Geomorphology and Coastal Landforms in the Alaskan Arctic, Jason Rogers.

Hidden Middens: Identifying and Assessing Submerged Subsurface Shell Midden Deposits in Garrison Bay, San Juan Island National Historical Park, Northwest Washington, Elizabeth A. Horton

Preventative Nautical Archaeology: Protecting and Recording our Historic Ships Before they Become Shipwrecks, Nathaniel Howe.

A Maritime Resource Survey for Washington's Saltwater Shores, Spencer Howard, Susan Johnson, and Katie Chase.

An Admiralty Anchor from Admiralty Bay, Washington: Is it the HMS Chatham's Lost Anchor? Scott S. Williams.

A Survey of State Underwater Archaeology Programs and Underwater Guidelines, Jeanette Hayman.

A Brief Survey of Washington's Submerged Cultural Resources, Jacqueline Marcotte.

Diving Into the Community: The Maritime Archaeological Society, Christopher Dewey.

A Cultural Landscape Approach to Submerged Cultural Resource Management: Cultural Heritage Ecotourism Opportunities for the Shipwrecks of Lake Union, Seattle, Washington, Zachary L. Meyer.

Technical Diving of Submerged Artifacts, Paul Hangarter.

Discussion.

Current Perspectives on the Historical Ecology of the Northwest Coast

Studies exploring the relationship between humans and the ecosystems they inhabit are growing in number in sophistication. This symposium features recent studies in the northwest coast addressing human-environmental interactions, resource use, and resource rights through diverse perspectives incorporating ethnographic, zooarchaeological, ethnobotanical, and

ethnoarchaeological research. Our intent is to present a wide range of views that address the complex and dynamic interplay between humans and plant and animal systems from sites spanning from southeastern Alaska to the northwestern California Coast.

Organizer: Colin Christiansen

Land Otter–Human Interaction and Avoidance at Kit'n'Kaboodle (49-DIX-46), Dall Island, Alaska, Madonna Moss.

The Ethnoarchaeology of Mass Harvested Smelt in the Southern Pacific Northwest Coast, Shannon Tushingham.

From Labrets to Cranial Modification: Credibility Enhancing Displays and the Changing Expression of Coast Salish Resource Commitments, Adam N. Rorabaugh and Kate Shantry.

Fish Dominance, Fish Diversity, Fish Stability at the Parry Lagoon Midden, DgRv-006, Galiano Island, B.C. Justin Hopt.

Native American Fisheries of the Northern California & Southwestern Oregon Coast: A Synthesis of Fish Bone Data & Implications for Late Holocene Storage & Socio-Economic Organization, Colin Christiansen.

Wiyot Archaeology & the Historical Ecology of Humboldt Bay: A View from Manila (CA-HUM-321), Shannon Tushingham, Janet P. Eidsness, Justin Hopt, Colin Christiansen, Angela Arpaia & Julilani Chang.

Climate Change and the Future of California Archaeology, Michael Newland.

Assessing the Timing of the Introduction of Bow and Arrow Technologies in the Salish Sea and Its Implications for the Coast Salish, Tiffany J. Fulkerson and Adam N. Rorabaugh.

Historical Ecologies of swætix^wtəd in the Duwamish-Green-White River Watershed, Joyce LeCompte.

Under the Bridge: Archaeology on the Tideflats of Seattle's Smith Cove

Nestled in the tide flats of Smith Cove was one of Seattle's small shantytowns, occupied between 1911 and 1941. In 2014, construction monitoring uncovered the remnants of this community, and with it, materials representing an itinerant, low-income, multi-cultural population. The following papers describe the site's landmaking, history, faunal assemblage, and story. The artifacts recovered at 45-KI-1200 indicate the presence of Native Americans, Japanese, Chinese, and Euro-Americans, and demonstrate how Smith Cove functioned as a multi-cultural nexus of traditional practices within a modern industrialized urban landscape during the first half of the twentieth century.

Organizer: Alicia Valentino

Overview and Setting of the South Magnolia Combined Sewer Overflow (CSO) Control Project, Chris Lockwood.

Life on the Sandspit: A Brief History of Smith Cove's Tideflats Community, Katherine F. Wilson.

Eating Around the Margins: Evidence of Culturally Distinctive Butchering Patterns in a 20th-Century Seattle Shantytown, Tom Ostrander.

A Chinese Coin and Flaked Glass: The Unrecorded History of Smith Cove, Alicia Valentino.

Panel Discussion

An Open Discussion Panel of Cultural Resource Topics for Students and Entering Professionals (sponsored by the Association for Washington Archaeology)

AWA Student Directors, Moderators: Emily Tabor and Lisa Catto

Are you interested in research and career opportunities in archaeology? Come to a panel discussion with representatives from state and tribal historic preservation offices, federal and state agencies, cultural resource management firms, and academia. Questions may be submitted online prior to the panel (<http://bit.ly/1vk4bEf>) or asked during the session. Examples of topics include advancing career work, interactions between panel groups, and what it takes to find work. Food/beverages provided.

Panelists: Mary Rossi (Applied Preservation Technologies); Dennis Lewarch (Suquamish Tribe THPO); Michelle Hannum (Plateau Archaeological Investigations); Stephanie Neil (Squaxin Island Tribe THPO; US Forest Service); Todd Koetje (Western Washington University); Robert Kopperl (SWCA); Stephenie Kramer (Washington SHPO).

Contributed Papers

Zooarchaeology, Subsistence, and Diet

Chair: Patrick O'Grady

Plateau Mass Fish Procurement: Who Did What? Kristina M. Hill and Janie R. Knutson.

Estimating Sturgeon Abundance in Archaeological Contexts: Controlling for Identifiability and Fragmentation, J. Shoshana Rosenberg and Virginia L. Butler.

Stranded on Sauvie Island: Making Use of Natural Fish Traps, Sarah Jenkins, Eva Hulse, and John Fagan.

New Evidence of Prehistoric Fishing in the Clearwater River Region, North Central Idaho, Robert L. Sappington.

The Emergence of the Commercial Dive Fishery for Sea Cucumbers and Its Impact on Individuals, Communities and the Ecology, Daniel Monteith.

Does Size Matter? Examining Changes in Shell Size and the Factors that Prompt Them at Cherry Point Archaeological Site in Washington State, Emily Taber and Katrina S. Chatburn.

The Holocene Occurrence of Mammals in the Clearwater and Lower Snake River Regions of Idaho, Jenifer Chadez.

From Household to Empire: the Zooarchaeology of Diouboye, Senegal, Auschere Caufield.

Archaeology of the Far West

Chair: Albert C. Oetting

35LA1245: A Long Term Camp Locale on the McKenzie River, Lane County, Oregon, Albert C. Oetting.

Archaeology of Susan Creek Campground, Robert R. Musil.

Lost in the Shuffle: A Look at Some Sites in the Douglas Fir Region, Ann Bennett-Rogers.

Homesteading in the Oregon Coast Range: Archaeological Investigations in the Indians Creek Watershed, Siuslaw National Forest, Lindsey Stallard.

Romancing the Debitage: The Lithic Debitage and Projectile Points at Bernard Creek Rockshelter, Idaho, Shaun Dinubilo.

A Changing Valley, a Changing People: The Prehistoric Occupation of Northern Warner Valley, Oregon, Donald Pattee.

Obsidian Procurement Patterns: XRF and Obsidian Hydration Results from Four of the Shoshone Complex Sites in Southeastern Oregon, Scott Thomas.

Archaeological Investigations at the Qiqéyt Village Site (DhRr-74) in Surrey, British Columbia, Sarah K. Smith.

Exploring Archaeological Methods and Applications

Chair: Chantel Saban

Investigating Historic Hydraulic Gold Mining Complex: An Evaluation of GIS/LIDAR Remote Sensing Methods, Grant County, Oregon, Wilbur Barrick and Don Hann.

Testing the Association of Chipped Stone Crescents with Wetlands and Paleo-Shorelines of Western North America: A GIS-based Spatial Analysis, Gabriel Sanchez.

Geoarchaeological Prospection for Buried Early Sites in the Lower Salmon River Canyon, Idaho, J.D. Lancaster and Loren G. Davis.

Calcined Bone as a Reliable Medium for Radiocarbon Dating in the Pacific Northwest, James C. Chatters, James Brown, Steven Hackenberger, and Patrick McCutcheon.

Untangling Depositional Palimpsests at Weasel Cave, North Ossetia, Russia, Todd Koetje.

Archie Field Data Recording: Increasing Site Recording Accuracy & Efficiency, Alex Nyers, Karl Vollmer, and Chantel Saban.

The Zooarchaeology of Bonneville Estates Rockshelter: 13,000 Years of Great Basin Hunting Strategies, Bryan Hockett.

Radiocarbon Dating the Fur Trade: A Bayesian Analysis of radiocarbon dates from the Meier Site, Lower Columbia River, Thomas J. Brown and Kenneth M. Ames.

Field Staples: A Look at the Subsistence Patterns of Archaeological Workers, Breanne Taylor and Josh Moss.

The Zooarchaeology of Bonneville Estates Rockshelter: 13,000 Years of Great Basin Hunting Strategies, Bryan Hockett.

Interpretation of Historical Sites, Artifacts, and Features

Chair: Jonah S. Blustain

Hot Stuff: The Archaeology of Oregon's Uranium Mining Industry, Jonah S. Blustain.

Building a History: The Inventory and Evaluation of CWU's Built Environment, Lauren Walton.

An Exploration of the Vernacular Architecture at the Robert Newell Farmstead (35MA41), Emily Modelski.

Reedsville Farm Data Recovery Project- Preliminary Results, Mini Sharma-Ogle, Karry Blake, and Ross Smith.

Fort Colville, Washington—Now You See It, Now You Don't, William White.

Fun and Games: Evidence of Play at Fort Boise, Mairee K. MacInnes and Amanda C. Biemann.

Power Belts, the Spermatic Economy, and Masculine Panic at the Turn of the Century, Dan Martin.

Message in the Bottles: Analysis and Interpretation of Site 45WH1001, Woodstock Farm Bottle Dump, Whatcom County, Washington, Ian R. Lewis.

Fillings, False Teeth and a Fluoride Tray: Dental Artifacts at the Kooskia Internment Camp. Kaitlyn Hosken and Kristen Tiede.

Lines in the Sand: Integrity, Identity, and NRHP eligibility criteria for historic-era linear landscape features at the project and praxis scales in Washington, William Schroeder and Christopher Landreau.

The Whole is Greater than the Sum of its Parts, or so it would seem: Case Studies Evaluating Irrigation Structures in Central Washington, William Schroeder and Christopher Landreau.

Public Archaeology and Heritage Management

Chair: Richard M. Pettigrew

By the People, for the People: Designing Archaeology Outreach Programs with Local Governments, Julia Rowland.

The Making Archaeology Public Project: Its Significance and Practical Applications, Richard M. Pettigrew.

Creative Mitigation and Community Outreach: A Smart (phone) Application, Brent Hicks.

Striving for Balance: Issues of Cultural Affiliation and Culturally Unidentifiable Remains in NAGPRA and the New Rule, Brittney A. Eubank.

Rest in Peace: The Implementation of the Native American Graves Protection and Repatriation Act at Southern Oregon University, Patricia Halleran-Cislo.

Seeing the Forest for its History: Interpreting Heritage Trees as Cultural Resources in Portland, Oregon, David-Paul B. Hedberg.

Addressing Burning Problems using Creative Solutions: Long Draw Fire Rehabilitation Project. Mini Sharma-Ogle, Tara Gauthier, Don Rotell, and Sally Bird.

What Went Right? Two Nez Perce CRM Projects, Patrick Baird and Alan G. Marshall.

A Career in Cultural Anthropology: Opportunities & Suggestions for Ethnographic Work with Native American Tribes in the Northwest, Donald Shannon.

Liglig, A Historically Important Site in Central Nepal: A Call for Archaeologists, Harvey Blustain and Malinda Stafford Blustain.

Using GIS to Assess Israeli-Palestinian Border Proposals, Christen Phaneuf.

Anthropology of Contemporary Society

Chair: Taylor Phillips

American Rape Culture: A Need for Education, Taylor Phillips.

Single Mothers and Welfare: A Theoretical Perspective, Amara Fiegel.

Exploration of Zef Culture, Racial Politics and Shifting Opportunities in Post-Apartheid South Africa, Casey Polmueller.

Schoolteachers and Popular Resistance in Honduras: Interrupting Neoliberal Education Policies from Within the State, Jordan Levy.

Heritage Tourism on a Personal Level, Jenny Dellert.

Enoethnography: A Cultural Study of Grape Growers and Wine Makers in Southern Oregon, Maureen Battistella and Mary Jane Cedar Face.

The Perfect Match: How Online Dating has affected courtship rituals in the Willamette Valley of Oregon, Joshua Lasky.

Current Issues in Physical Anthropology

*Female-Female Bridging Behavior in Tibetan Macaques (*Macaca thibetana*) at Mt. Huangshan, China*. Grant J. Clifton, Lori K. Sheeran, R. Steven Wagner, and Lynch Jin Hua Li.

Traditional Medicine and Baby Clinics; Health care and politics on the Flathead Reservation 1900 to 1940, Christina Heiner.

A Unity of Meaning: Reconciling Medical and Anthropological Periosteal Terminology, M. Travis Shelley.

Eastern Oregon University Model of Chemical Profiles Released during Human Decomposition, Sarah Trotter.

Reading the Bones: Osteological Analysis of Human Remains from Barbados, Eastern Caribbean, Tiffany Hansen, Sarah M. H. Steinkraus, Lourdes Henebry-DeLeon, and Steven Hackenberger.

The Archaeological Evidence for Crucifixion, Christen Phaneuf.

Technological Studies

Leatherworking in Precolonial West Africa: Exploring recent archaeological evidence from Kirikongo, Burkina Faso and Diouboye, Senegal, Stephen Dueppen.

Ceramic Production in Korean State Formation, Rory Walsh.

Cooking Features, FCR, and Land-use Intensification in the Portland Basin, Paul S. Solimano.

Sticks With Stones: An Experimental Test of the Effect of the Atlatl Weight on Atlatl Mechanics, David I. Cain and Elizabeth Sobel.

The Search for Clovis Blade Technology in the Northern Great Basin, Michael F. Rondeau.

Navigating Identity, Attitudes, and History

Chair: Briece Edwards

A Critical Review of Reverse Ecopoiesis in the Anthropocene, Julie Raymond.

Indigenous Knowledge: Conveying Content through a Virtual World Format, Rodney Frey.

Understanding Gender Identity and the Two Spirits, Clarissa Cress.

Visualizing History on the Grand Ronde Reservation, Ian Kretzler and Briece Edwards.

Culture and Attitudes Towards Science in Idaho, Laura Putsche, Leontina Hormel, John Mihelich, and Debbie Storrs.

Cilantro, Anise, Cumin: Yum or Yuk? Sarah C. Keller.

Use of Hair Stereotypes in Celtic Folklore, Holly Anne Frazier.

Cultural Encounters, Past and Present

Chair: Michelle Lynch

Heiltsuk Adoption of Euro-American Material Culture at Old Bella Bella, British Columbia, Michelle Lynch.

The Expansion of Catholicism: An Exploration of St. Joseph's College, the First Catholic Boarding School for Boys within the Oregon Territory, Cayla Hill.

Crow Archaeology and Oral Histories: the Illustrative Story of Arrow Rock and the Little People of the Pryor Mountains, Victoria Bochniak.

Language Revitalization and the Socialization of Sociocultural Norms, Rebecca Wood.

Russian Colonial or Russian Colonial-Derived Architecture in an Alaskan Creole Village, Afognak, Alaska, Ann Sharley.

Non-Migration Redux, Donald Tyler.

The New Face in the Gaelic Community: Women in the Cultural Forefront, Diane Williams.

Migration, alterity and temporality: Migrants from Myanmar in south-western Thailand, Inga Groß.

Whatever Happened to Zulay? An Otavaleña's Journey, Sharon Sherman.

Posters

Poster Symposium

Exploring the History of Brewing Across the Pacific Northwest

Organizers: Alexander Stevenson and Patrick Reed

Over the last thirty years, the craft beer industry has brought the Pacific Northwest to the cutting edge of beer brewing, but this industry has a long history in the region. Large and small breweries alike in Eugene and Lane County celebrate the history of the city through their beer and their buildings. Each year, the Northwest Anthropological Conference is hosted in towns with rich histories of brewing, and this convergence of beer lovers who are archaeologists, anthropologists, and architectural historians provides an excellent opportunity to explore the unique history of brewing in each town. Our session will present some of the stories from the region's nearly 120 year history of beer making and will hopefully have some beer on hand to make the experience that much more enjoyable.

Post-Prohibition Eugene and Lane County Brewing: Home brewing and the rise of the Craft Industry, Chrisanne Beckner.

Hops History in Lane County: Deep Roots, Personal Connections, Tiah Edmunson-Morton.

Material culture of Pacific Northwest Breweries, Patrick Reed.

Exploring the history of brewing across the Pacific Northwest through the lens of Northwest Anthropological Conference, Patrick Reed and Alexander Stevenson.

Early Breweries of Eugene and Lane County: Archaeological Potential and History, Alexander E. Stevenson and Chrisanne Beckner.

Posters

Peace, Love, Unity, and Respect: The Moral Economy of Rave Culture, Brittany Anderson.

Kerf Patterning on Animal Cremains: a Preliminary Analysis of Microscopy Methods, Christopher Barrett and Nambi Gamet.

*Juvenile Javan Gibbons (*Hylobates moloch*) Vary Gesture Use by Recipient's Attentional State at the Gibbon Conservation Center (Santa Clarita, CA)*, Melanie Bell.

Settlement on the Baker River, 1880–1926; Claiming Land and Getting By—The Henry Edgar Homestead, Sharon Boswell and Christian Miss.

The Archaeology Roadshow: A Model for Community Engagement and Public Education in an Urban Area, Virginia Butler, Lyssia Coffey, and Virginia Parks.

Excavating Into the Unknown—Unearthing Historic Chinatown in The Dalles, Tobin Bottman and Larissa Rudnicki.

Preliminary Assessment of Primate Molar Morphology Using 2D Geometric Morphometrics, Amy Byers, Kathlena Anderson, Stephen Frost, and Michel Waller.

Excavation at The Manila Site (CA-HUM-321), Amanda Carroll, Cassady Williams, and Shannon Tushingham.

Macro Analysis: In the Field vs. In the Lab Use Wear Identification, Erin Chenvert, Desirae Probasco, and Patrick McCutcheon.

The Jim Rock Historic Can Collection Online Database at Southern Oregon University, Ashland, Kyle Crebbin, Chelsea Rose, and Shana Sandor.

Geophysical Survey at the Blackwell Island Site (10KA481), Kootenai County, Idaho, Steven Dampf and John Dorwin.

Archaeological Investigations of a Late Holocene Site (35MU234) on the Lower Columbia River Floodplain, City of Fairview, Multnomah County, Oregon, Michael Daniels, Kanani Paraso, and Daniel Gilmour

Digging Deeper: Where is the Geoduck (Panopea Generosa) in Archaeological Shell Middens? Ryan Desrosiers.

The Ground Slate Transition on the Northwest Coast: Establishing a Chronological Framework, Joshua Dinwiddie.

Compiling Excavated Archaeological Data at a Large-scale: Preliminary Results, Jonathan Duelks, Nathan Jereb, Kristin Leonard, and Paul Solimano.

Encountering the Unknown: Lessons Learned During Mass Excavation of the North Access Portion of the Alaskan Way Viaduct Replacement Project, Patrick Elliott and Tyler Graham.

Tell Me About It! Leah Evans-Janke, Ariana Burns, and Dakota Wallen.

Movement Progression in the Collective Movements of Tibetan Macaques (Macaca thibetana) at Mount Huangshan, China, Gregory Fratellone.

Stylistic Variation in Projectile Point Styles in the Columbia Plateau and Northern Great Basin at the Pleistocene-Holocene Transition, Jerry R. Galm, Stan Gough and Fred Nials.

The Sanders Site Stone Tool Collection – Macroscopic Lithic Analysis of Formed Tools from a Middle Columbian Upland Site, Patrick Garrison.

Preliminary Revision of Windust Chronology, Daniel M. Gilmour, Thomas J. Brown, and Paul S. Solimano.

Radiocarbon Dating and Long-term Economics at an Ancient Coast Salish Village in coastal southwestern British Columbia, Colin Grier, Valda Black, Tiffany Fulkerson, Paige Hawthorne, Lindsay Kiel, Juliet McGraw, Brandon McIntosh, Lori Phillips, Katie Richards, Adam Sackman, and Eric McLay.

Bioarchaeology, Barbados, Eastern Caribbean: Isotopic Analyses of Teeth and Bone from Human Remains, Tiffany Hansen and Steve Hackenberger.

Cobble Chopper Sites in the Vancouver Lake/Lake River Archaeological District, Dana Holschuh and Alexander Gall.

Say "Yes" to the Mess: The Archaeological Curation Crisis and Canoe Camp, Rowan Kaufman.

New perspectives on Native American occupation of the Puget Lowlands of Washington during the Late Pleistocene-Holocene transition from the Bear Creek Site (45KI839), Robert Kopperl, Amanda Taylor, Christian Miss, and Kenneth Ames.

Working to Death: The Rise of Chronic Kidney Disease in Central America, Nicole K. Larsen.

The Effects of Low Temperature Recrystallization and Isotope Depletion on Biogenic Aragonite Taxa of the Northwest Coast, Susan C. Larsen.

Learning to Shave: Experimental Archaeology of Antler Debitage, Ian R. Lewis.

Public Archaeology and Local History: A Collaboration Between Homeowners and Archaeologists at the Booker House in Jacksonville, Oregon, Sarah Lind.

Small Town Skid Row: Historical Analysis of Historic Block 3 Walla Walla, Washington, ca 1940, Kelsi McDaniel.

A Spatial Analysis and Reinterpretation of a Late Holocene Occupation Along the Yakima River, Washington, Christopher D. Noll and Charles Norred.

Wind, Waves, and a Hidden Spit: A Case Study from 45IS298 on Whidbey Island, WA, Michelle North.

Addressing Vaccine Hesitancy in Portland, Oregon, Kelsey Paden.

Assessing the Nutritional Value of Freshwater Mussels on the Western Snake River, Jeremy W. Johnson and Mark G. Plew.

Exploring Public-Professional Relationships in Archaeology: Case Study from Sauvie Island, OR, Martin Plumer.

Site 35CO2: Finding Context Through Comparison, Kelley Prince Martinez.

Paleoamerican Parasitism: Infections that Signal the Origin & Route of Migration, Karl Reinhard, Elizabeth Rácz, and S. L. Gardner.

Archaeological Investigations at the Washington Portland Cement Company Cement Plant, Concrete, Washington, Brandy Rinck.

Smudge Pits of Fort Vancouver, Anna Robison-Mathes.

*Age & Sex Class Differences in Sex Behavior of Immature Tibetan Macaques (*Macaca thibetana*)*, Anne Salow

A Comparison on Two Upland Campsites between Puget Sound and the Plateau, Kate Shantry and Michele Parvey.

Beverage Cans & Pull Tabs: A Refreshing Look, William Schroeder.

Childhood in a Pit—Artifactual Expression of Childhood in Early 20th Century Ellensburg, Washington, Stephanie Simmons.

Historical Chinese Opium Cabin in the Malheur National Forest, Mary Sutherland.

Assemblage Structure in the Yakima Uplands Foldbelt, Central, WA, Allie Taylor, John Davis, and Steven Hackenberger.

Field Staples: A Look at the Subsistence Patterns of Archaeological Workers, Breanne Taylor and Josh Moss.

Relative Dating of Petroglyphs at Hole-in-the-Ground, Malheur County, OR with Portable X-ray Fluorescence, Cyrena Undem and Jack Johnson.

Public Archaeology in Western Idaho, Dakota Wallen.

Do You Have Prince Albert in a Can? Kim Wessler.

Preliminary Analysis of Shellfish Deposits at the Manila Site (CA-HUM-321): Species Typology and Resource Locality, Cassady Williams, Amanda Carroll, and Shannon Tushingham.

John Player and Sons Medium Cut Tobacco Tins, Diane Zentgraf.

Journal of Northwest Anthropology

Memoir Series¹

The *Journal of Northwest Anthropology* publishes occasional monographs and multi-author collections under the *Memoir* series. Those issued prior to 2005 appear as *Northwest Anthropological Research Notes Memoirs*. Authors interested in publishing through this series should contact the *Journal of Northwest Anthropology* editors at the Richland, WA, office (JONA@pocketinet.com).

The following are titles of the memoirs published to date:

Memoir 1 (1967)

An Examination of American Indian Reaction to Proposals of the Commissioner of Indian Affairs for General Legislation, 1967 Deward E. Walker, Jr.

Memoir 2 (1973)

Influences of the Hudson's Bay Company on the Native Cultures of the Colville District..... David H. Chance

Memoir 3 (1976)

Quileute Dictionary J. V. Powell and Fred Woodruff, Sr.

Memoir 4 (1978)

Flat Glass: Its Use as a Dating Tool for Nineteenth-Century Archaeological Sites in the Pacific Northwest and Elsewhere..... Karl G. Roenke

Memoir 5 (1979)

A Bibliography of Idaho Archaeology, 1889–1976 Max G. Pavesic, Mark G. Plew and Roderick Sprague

Memoir 6 (2002)

It's About Time (h̓i̓wes wiyéewts'etki) It's About Them (paamiláyk'ay) It's About Us (naamiláyk'ay): A Decade of Papers, 1988–1998 Michael S. Burney and Jeff Van Pelt, editors

Memoir 7 (2012)

Festschrift in Honor of Max G. Pavesic Kenneth C. Reid and Jerry R. Galm, editors
\$19.99

¹ The *Journal of Northwest Anthropology* publishes occasional monographs and collections under the *Memoir* series. *Memoirs* 7 through 12 are available through Amazon.com. *Memoirs* 1 through 6 appear as *Northwest Anthropological Research Notes Memoirs*, and are available electronically from the Richland office; printed copies are available through Coyote Press, P.O. Box 3377, Salinas, California 93912.
<<http://www.californiaprehistory.com>>

Memoir 8 (2012)

Action Anthropology and Sol Tax in 2012: The Final Word? Darby C. Stapp, editor
\$10.99

Memoir 9 (2014)

Rescues, Rants, and Researches: A Re-View of Jay Miller's Writings on Northwest Coast Indian Cultures..... Darby C. Stapp and Kara N. Powers, editors
\$10.92

Memoir 10 (2015)

Tribal Trio of the Northwest Coast..... Kenneth D. Tollefson
\$14.95

Memoir 11 (2015)

An Ethnographic Assessment of Some Cultural Landscapes in Southern Wyoming and Idaho.....
Deward E. Walker Jr., Pamela Graves, Joe Ben Walker, and Dan Hutchison
\$49.95

Memoir 12 (2016)

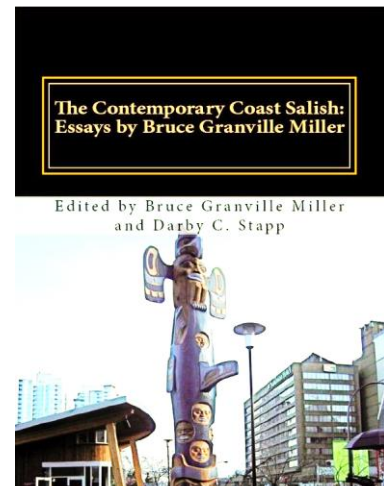
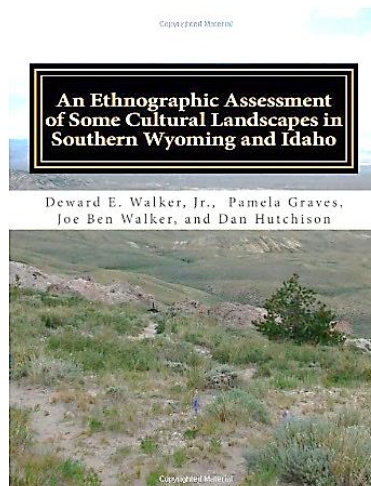
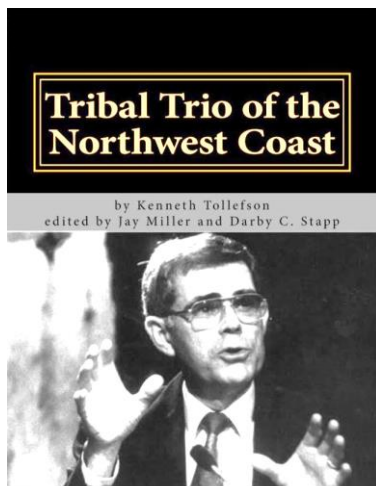
The Contemporary Coast Salish: Essays by Bruce Granville Miller Bruce Granville Miller and
Darby C. Stapp, editors
\$19.95

Memoir 13 (expected 2017)

The 50 Year Index for the Journal of Northwest Anthropology Darby C. Stapp and Deward E.
Walker, Jr., editors
\$12.00

Memoir 14 (expected 2017)

Amoss Amassed: The Collected Works of Pamela Thorsen Amoss Jay Miller and
Darby C. Stapp, editors
\$ TBD



THE 68TH ANNUAL NORTHWEST ANTHROPOLOGICAL CONFERENCE

26–28 March 2015

Co-Hosted by University of Oregon's Anthropology Department and
The Museum of Natural and Cultural History

Eugene, Oregon

Sleep Tight: Were the Occupants of Paisley Caves Plagued by Bedbugs?

Martin E. Adams, Paleoinsect Research.

The host-parasite relationship between humans and bedbugs including the common bedbug, *Cimex lectularius*, is believed to have originated in the Old World many millennia ago at a time when humans lived in bat-occupied caves. All cimicids are ectoparasites of mammals and birds, and feed on multiple hosts – including humans. The Paisley Caves site (35LK3400) contains New World evidence of human-bat cohabitation, and the remains of 14 individuals of the New World species *Cimex latipennis*, dated to almost 11,000 years old, were recovered from Cave 2. These represent the oldest *Cimex* remains recovered to date anywhere in the world. This paper will not only discuss the history of the association between humans and bedbugs, but will also use evidence from bedbug ecology and modern case studies to argue that the Paleoindian populations at Paisley Caves may have suffered the same irritations from these parasites that humans endure to this day.

Columbia Hills Toolstone Quarrying.

Ron L. Adams, Archaeological Investigations Northwest, Inc.

Archaeological investigations in the Columbia Hills of south-central Washington have revealed myriad sources of cryptocrystalline silicate toolstone material. Densely clustered pre-contact cryptocrystalline silicate quarries and smaller lithic procurement sites are scattered across the crest of the hills. The lithic material found at these procurement locales is of exceptional quality and ideal for tool making. Archaeological evidence indicates that this toolstone resource was dug from mining pits and reduced from large boulders that scatter the surface. Analyses of lithic artifacts from these procurement sites offer insights into pre-contact reduction technologies. Based on the apparent methods of toolstone reduction and the spatial relationship between this lithic landscape and pre-contact villages in the area, this paper presents a model for pre-contact toolstone procurement strategies of the Columbia Hills.

The Curation of the Umm el-Jimal Osteological Research Collection: Maternal and Infant Health in a Transitioning Society.

Dawn Marie Alapisco, Oregon State University.

Osteological remains provide essential information regarding the health and disease patterns of past populations. This paper will discuss the curation of a pre-Muhammad osteological collection of the Bedouin peoples of Jordan from the Late Roman through the Early Byzantine periods, focusing specifically on the findings on female and infant remains that may be indicative of disease and malnutrition associated with transitioning from a pre-agricultural to agricultural society. These remains are critical measure of female and infant health in this population and can be used as a proxy to understand the historical significance of sex and gender-based divisions of labor that continue to exist within the extant Bedouin population. Female and infant remains also have the potential to indicate patterns of weaning, a practice that is relevant for understanding health in both extinct and extant populations – information that can be extrapolated to understand dietary delocalization and its impact on health.

Peace, Love, Unity, and Respect: The Moral Economy of Rave Culture.

Brittany Anderson, Central Washington University.

Each year tens of thousands of individuals travel great distances to the largest rave event in the Pacific Northwest, located at an outdoor arena in Washington State. Social expectations at rave events such as this are forged by the rave values of peace, love, unity and respect, referred to by ravers as PLUR. Ravers promote PLUR through the sharing of drugs, alcohol, kandi bracelets, and costumes. This presentation analyzes fieldwork from this rave in order to contemplate apparent contradictions within rave culture that are fostered when the moral economy of PLUR meets conspicuous consumption. Ravers strive for an economy outside market forces while at the same time reinforcing market economy through ticket sales, camping supplies, costumes, and original payments made for bartering material. How do participants at raves practice solidarity yet remain individual and how are these two positions reflected in moral obligations and economy?

Reconstructing Modes of Production in the Coast Salish Past: Ever-Shifting Socioeconomies throughout Seasonal Rounds.
Bill Angelbeck.

The concept of modes of production has been a constructive form of analysis for chiefdom and state societies archaeologically. Here, I consider the analysis of modes of production among complex hunter-gatherers such as the Coast Salish. As first applied by Marx (and later by Eric Wolf), the analysis involved a large-scale approach to historical epochs concerning economy, tying together the means of production (tools) to the relations of production (sociopolitical organization). Yet, conceived at an epochal scale, the utility for archaeologists working within the Northwest Coast is rather generalized (e.g., "kinship mode of production"), without much explanatory power. Here, I offer that the analysis of modes of production can be effective if we apply it not broadly to characterize entire epochs but towards economies at the microscale, assessing seasonal rounds. In the Coast Salish past, this reveals socioeconomic modes of production that are multifaceted annually and over time.

A Local Practice Based Approach to Coast Salish Rock Paintings: The Xelas of the Tsleil-Waututhngs.
Chris Arnett and Jesse Morin

Here, we consider a practice-based, non-interpretive approach to indigenous rock painting (xela:ls) in Indian Arm (Tsleil-Wat) that regards rock painting as a material signature of practice. Because of the direct historical and cultural continuity of Tsleil-Waututh oral histories and practices to Indian Arm, in B.C., it is possible to anchor this study in Coast Salish cultural traditions of sxwoyiam (origin stories) and snuwylh (cultural teachings). Continuity of cultural practices associated with the use of tumulth (red ochre based paint) suggest that the pictographs in Indian Arm is historically situated in the proto-contact era of demographic collapse. In light of the important protective and curative qualities attributed to tumulh, rock paintings are a material signature of culturally prescribed practice by specialists to preserve and protect important ancestral places and people.

Archaeological Perspectives on Micronesian Colonization and Cultural Change.
William S. Ayres, University of Oregon.

Archaeologically-known pottery from prehistoric contexts in Eastern Micronesia, Pacific Islands, provides a perspective on anthropological issues important in the study of island societies and more generally for material culture measures of migration, technological adaptation, settlement expansion and inter-island contact, as well the transformation of status in complex-ranked societies. Pottery production on volcanic high islands in Micronesia has been found to be important from the time of initial discovery and colonization, but was eventually lost as a ceramic industry in later prehistoric times. Pottery from Nan Madol and other sites on Pohnpei Island shows two major ceramic industries from the time of initial colonization more than 2000 years ago and extending up to approximately 800 years ago, at which point the manufacture of pottery was abandoned. The technological and stylistic variation in pottery production, as well as its varying archaeological contexts, offers evidence for understanding its manufacture, functional use, and ritual aspects.

What Went Right? Two Nez Perce CRM Projects.
Patrick Baird and Alan G. Marshall, Nez Perce Tribe.

The Nez Perce Tribe Cultural Resource Program is the Tribe's response to on-going changes in their cultural patrimony due to development or private, public, and professional interest in their heritage, particularly in archaeological resources. The *Nimípuu* people have an on-going cultural tradition of protecting their heritage, and in the last 20 years, federal preservation guidelines and laws have started to acknowledge that heritage is more than recording, preserving, or "mitigating" archaeological sites. There are successes. The Nez Perce Tribe Cultural Resource Program recently conducted two projects producing significant advances in compliance by identifying Tribal resources and concerns through archaeological, ethnohistoric, and ethnographic approaches. We describe these projects with the Umatilla National Forest and Verizon Wireless and discuss "what went right," thus pointing to a more satisfactory use of these laws.

Kerf Patterning on Animal Cremains: a Preliminary Analysis of Microscopy Methods.
Christopher Barrett and Nambi Gamet, Western Washington University.

We investigate the utility of scanning electron microscope (SEM) methodologies in observing saw kerf patterning on burnt bone cut with different types of saws. SEM analysis of kerf walls provide observations that stereo-microscopes cannot. Kerf wall observations and interpretations on cremains found within archaeological and forensic contribute to SEM validity in methodologies of anthropological investigations. We divided one *Bos taurus*, one Equidae, and two *Cervus elaphus* long bones into three 9 cm segments using four different tools. Incineration of bone segments was completed using a fire pit. Temperatures were monitored using a Digi-Sense thermocouple thermometer. Thin sections were prepared from the cut portions of each segment after burning. Observations of kerf patterning were made using light and SEM. Fractures and kerf wall patterning were observed using two different microscopy methods. SEM provided further observations in comparison to stereo-microscopes of kerf wall characteristics in cremains.

Investigating Historic Hydraulic Gold Mining Complex: An Evaluation of GIS/LIDAR Remote Sensing Methods, Grant County, Oregon.

Wilbur Barrick and Don Hann, Warm Springs Geo Visions and the Malheur National Forest.

Extensive remains of historic hydraulic (placer) gold mining complex occur within the Middle Fork John Day River drainage in the Blue Mountains, a region noted for extreme topographic relief and dense vegetation cover, as well as significant information potential in the research domain of historic gold mining. Laser image ranging and detection (LIDAR) digital elevation data and a geographic information system (GIS) were utilized in a remote-sensing investigation. The study identified and digitally mapped over nine hundred mining features and evaluated the effectiveness of GIS/LIDAR remote sensing techniques. The findings inform knowledge of historic gold mining and the suitability of LIDAR remote sensing techniques in future studies.

Reading Forest Stand History to Inform Artifact Context, Fire and Disturbance in the East Cascades.

Jamie Bass, Washington Department of Fish and Wildlife.

Forests are disturbance-based ecosystems that leave a readable history of those disturbances in their species composition, density, soils, etc. In fire-dependent ecosystems, such as the shrub-steppe and dry mixed conifer forests of the East Cascades, fire leaves datable clues that can be read in the field that can inform artifact context, as well as give a picture of the ecosystem change and human use over the past several hundred years. Having the basics in identifying tree species, tree age, stand dynamics, and signs of fire will help inform which disturbances have occurred, when, how this can give artifacts context, and what sort of artifacts are likely to be found. In addition, fire science in recent years has become a large and technical field that can provide resources at the extremely local level, and understanding how to utilize those resources to inform context is necessary for archaeologists working in these ecosystems.

Enoethnography: A Cultural Study of Grape Growers and Wine Makers in Southern Oregon.

Maureen Battistella and Mary Jane Cedar Face, Southern Oregon University.

The culture of wine is particularly suited to an ethnographic analysis and is a microcosm of the larger culinary sphere. Thanks to a small grant from the Erath Family Foundation, we identified 82 individuals, vineyards, wineries or agencies that are significant in the contemporary growth of the wine industry in the Rogue, Applegate and Illinois Valley growing areas as well as Klamath County. To date 20 in depth oral histories and 436 documents or images have been collected. Our work with the grape growers and wine makers of Southern Oregon studies land use, founding and funding, marketing, family succession and sensory experience. Further, the research affords us the sheer pleasure of meeting those passionate about wine, traveling through extraordinary landscapes and the opportunity to taste fine wine. The data collected through the project are presented in a non-traditional format, through the web portal at Southern Oregon University's Archives program.

The Bly Mountain Realignment: A View of Collaborative Cultural Resource Management in Klamath County, Oregon.

Paul W. Baxter¹ and Tobin Bottman², ¹U of Oregon Museum of Natural & Cultural History and ²Oregon Dept. of Transportation.

A proposal to realign and widen a nearly 10 mile section of Oregon Highway 140 over Bly Mountain in Klamath County prompted an initial cultural resource survey in 2003. Subsequent design changes resulted in additional pedestrian and exploratory survey projects and site evaluations over the ensuing decade. These investigations cumulatively identified over 60 cultural resources in and adjacent to the project corridor. Among the resources identified were extensive stacked or placed rock feature sites, which, in Klamath tradition, are physical manifestations of prayer that mark spiritual landscapes. These features, prehistoric and modern, attest to the tribe's continuing connections with their ancestral landscape and the supernatural, while presenting unique and on-going management challenges. This paper discusses the process of meeting the needs of a modern highway design and construction, while accommodating and safe-guarding traditional Klamath tribal values.

Obsidian Use in the Willamette Valley and Adjacent Western Cascades of Oregon.

Paul W. Baxter¹, Thomas J. Connolly¹, and Craig Skinner², ¹Museum of Natural and Cultural History, University of Oregon and ²NW Research Obsidian Studies Lab.

The distribution of geochemically characterized obsidian has long been used to give insight into prehistoric trade networks. We examine patterning in the obsidian sourcing data from 4953 artifacts recovered from 115 sites in order to understand obsidian procurement and use within the Willamette Valley and adjacent Western Cascades of Oregon. Within this data set, twenty-four obsidian sources from six regions of Oregon and northern California are represented suggesting the presence of long term trade routes and distribution networks.

Petroglyph boulders on the Rogue River at Two Mile Creek: Intentions and Actions, 1974-2015.

Douglas Beauchamp, Arts Consultant.

Petroglyph sites are rare in Oregon west of the Cascades. Southwest Oregon's most important place with petroglyphs is a beach inundated during the high water flow of the Rogue River. In recent decades Two Mile Creek's petroglyph-bearing sandstone boulders have been honored, studied, ignored, damaged, lost, and removed. Today seven of the boulders are located in a park in Agness, their third location since removal in 1977. Sand, gravel, brambles, and moss cover fifty-nine in situ boulders. My primary

purpose is not to analyze the place or the petroglyphs. Instead, I consider our ideas of this place and the petroglyphs and the resulting actions. With a focus on the period from 1974 to the present, 2015, I have assembled and will explicate material from diverse sources. Finally, I encourage the responsible state agencies to complete a baseline study leading to inclusion on the National Register of Historic Places.

Post-Prohibition Eugene and Lane County Brewing: Home brewing and the rise of the Craft Industry.

Chrisanne Beckner, Historical Research Associates.

On December 5, 1933, President Roosevelt ended prohibition nationally, legalizing the production and sale of alcohol. However, the law allowed only large breweries to produce and distribute beer. Home brewers continued to operate in the shadows under a limited prohibition specific to their craft until citizens in Eugene, Oregon and elsewhere challenged the federal government to legalize home brewing. In 1979, President Carter signed legislation out of California that decriminalized home-based brewing, and first Washington, California, and then Oregon made home brewing legal statewide, setting the stage for a microbrewing revolution in the Northwest. Recently, beer historians have estimated that roughly 90% of microbrewers begin as home brewers. This poster examines the post-prohibition brewing history of Eugene and Lane County, Oregon and examines the roots of the microbrewing community that has flourished locally since the 1980s.

Juvenile Javan Gibbons (*Hylobates moloch*) Vary Gesture Use by Recipient's Attentional State at the Gibbon Conservation Center (Santa Clarita, CA.)

Melanie Bell. Central Washington University.

Communication of adult and juvenile animals can vary greatly, in part a reflection of juvenile maturation. We explored gestures used in communication by captive Javan gibbons (*Hylobates moloch*). We predicted that senders would be equally likely to use all gesture modalities (tactile, visual, actions, and facial expressions) when the recipient was attending (facing the sender) but would use tactile gestures and actions when the recipient was non-attending (oriented away from the sender). We collected data from two gibbon groups ($N = 4$ individuals) using all-occurrences sampling and an ethogram to score behaviors from video recordings. We observed 843 interactions over 20 days. Juveniles used visual gestures and facial expressions significantly more when the recipient was attending and tactile gestures significantly more when the recipient was non-attending. These data show that juvenile Javan gibbons used gestures that are appropriate to the recipient's attentional state in three out of four modalities.

Lost in the Shuffle of Space and Time: A Look at some sites in the Douglas-fir Region.

Ann Bennett-Rogers, USDA.

This paper documents the results of archaeological excavations at two sites on the Sweet Home Ranger District of the Willamette National Forest, in western Oregon. Located on the west slopes of the Cascades, both of these sites, 35LIN542, a biface cache, and 35LIN537, an open air campsite, were excavated in the 1990s, but the information on these sites has been poorly documented. Both sites will be discussed, as will their significance within a regional context.

A New Look at Soft Technology from the Biderbost Site.

Kathryn Bernick, Royal British Columbia Museum.

The Biderbost wet site (45SN100) was excavated by the Washington Archaeological Society in the 1960s and early 1970s, and descriptions of selected perishable artifacts as well as typologies of the basketry were published at the time. The materials comprise the second largest assemblage of ca. 2,000-year-old perishables recovered from the Northwest Coast and have been featured in regional comparative studies albeit without the benefit of comprehensive descriptive information. My recent detailed analysis of the basketry and cordage revealed attributes that refine characterization of the assemblage from technological, stylistic, and functional perspectives with implications for site interpretation. The new information about the basketry augments existing claims of resemblance to contemporaneous specimens from the Fraser delta while showing inter-assemblage variation. However, the Biderbost cordage that I analyzed does not correspond to existing summaries; different approaches to classification account for only some of the discrepancy.

Liglig, a Historically Important Site in Central Nepal: A Call for Archaeologists.

Harvey Blustain and Malinda Stafford Blustain, Gorkha Foundation.

Liglig Kot is a hilltop fortress/palace complex in central Nepal. Occupied over many centuries, its conquest in 1559 by Drabya Shah began the dynasty that united Nepal in the 18th century and then ruled the country until 2008. The site has seen cursory surveys but has never been thoroughly appraised by professional archaeologists.

Harvey did ethnographic research at Liglig in the 1970s, Malinda is an archaeologist and museum professional, and both lived there from 2012-2014. For three years they have worked with the national Department of Archaeology and local communities to initiate a program of archeological research, historic preservation, and economic development at Liglig. Their efforts have gained traction, but what is needed now is systematic archaeological assessment and excavation. This paper describes the site and work to date, and is a call for archaeologists to join the presenters in investigation of this important complex.

Hot Stuff: The Archaeology of Oregon's Uranium Mining Industry.

Jonah S. Blustain, Industrial Archaeologist.

Although it was the first nation to split the atom, the United States did not have a reliable domestic supply of uranium ore at the end of World War II. To address this strategic need, the Atomic Energy Commission instituted a series of policies in the 1950s and 1960s to engineer a popular wave of exploration for a domestic source of uranium. Thousands of people caught "Uranium Fever" and began prospecting for radioactive material. Oregon, like many western states, had a small uranium industry. Avocational and professional prospectors examined large swaths of the state. Although it did not produce as much uranium ore as Arizona and Utah, Oregon mines produced sufficient quantities of uranium to merit a dedicated uranium mill. Traces of these prospecting and mining feature systems can still be identified archaeologically. This paper provides a framework for identifying cultural resources associated with Oregon's uranium mining industry.

Crow Archaeology and Oral Histories: the Illustrative Story of Arrow Rock and the Little People of the Pryor Mountains.

Victoria Bochniak, University of Idaho.

Arrow Rock, located in the Pryor Mountains of southern Montana, is a place for travelers to offer gifts in return for their safe passage through the Pryor Gap. These gifts are mostly left by members of the Crow community and meant for the Awa-Kulay, or Little People, living in the mountains. The Little People are described as dwarves that are both human and supernatural beings that can act as spiritual guides for the Crow Tribe. Throughout Crow history stories are told of the Little People being seen across Crow Country, visiting individuals during vision quests, and at larger events. Arrow Rock is an important location for the relationship between the Crow and the Little People because it is said to be where they met for the first time. Arrow Rock is also unique for archaeologists due to two archaeological collections of the gifts left for the Little People. The first was excavated in 1939 by Oscar T. Lewis and the second by Nels C. Nelson in 1946. This paper presents the initial findings of a reanalysis of those collections in conjunction with Crow Oral Histories.

Settlement on the Baker River, 1880-1926; Claiming Land and Getting By--The Henry Edgar Homestead.

Sharon Boswell and Christian Miss, SWCA Environmental Consultants.

The lure of property ownership and opportunities for timber and mining claims brought many new people to the Baker River Valley beginning in the 1880s, but these settlement opportunities lasted only a short time. The Stone and Webster Company saw the river's potential for power generation and by 1911 the company had made arrangements to purchase the dam site and the land that would be flooded behind it. Now owned by Puget Sound Energy, Lake Shannon covers the former homes of most of the Baker River settlers. The Edgar Homestead Site, 45SK253, was identified in 2001, recognized for its potential to provide information on early historic settlement along the Baker. Since 2005 archaeologists have annually monitored the site when reservoir drawdown permitted. Data recovery undertaken in February 2013 included excavation of structural remains and other features that provide new evidence of rural lifestyles during this early period of Northwest development.

Excavating Into the Unknown - Unearthing Historic Chinatown in The Dalles.

Tobin Bottman, Larissa Rudnicki, Oregon Department of Transportation.

The City of The Dalles has proposed a pedestrian undercrossing to better connect the downtown to the waterfront. In one of the oldest incorporated cities in Oregon, the undercrossing is within The Dalles Historical Commercial District, primarily the portion that once was the Chinese district. Deeply buried structural elements and associated archaeological resources are anticipated to be encountered, but they are so deeply imbedded that traditional excavation methods are not applicable. Mitigation of potential effects to resources will be accomplished by comprehensive background research which will in turn inform a detailed monitoring plan and protocol for inadvertent discovery of cultural materials during construction. The findings will in turn inform interpretive panels to be installed in the finished undercrossing plaza to relay the untold history of Chinese life in The Dalles to the public.

The House that Sheridan Built: The Musings of a Skeptical Archaeologist.

David Brauner, Oregon State University.

The return of the Commander's residence to its original location at Fort Hoskins two years ago was the beginning of an historical, architectural, and archaeological analysis of the building that is still ongoing. The structure was built in 1856 as the commander's residence at Fort Hoskins that is located in southern King's Valley in the central Coast Range of western Oregon. The house was built under the direct supervision of Lt. Philip Sheridan. Captain Christopher Augur was the first and longest serving resident of the house. Fort Hoskins was decommissioned in 1865 and the house was moved to the community of Pedee circa 1869. Archaeological exploration began at Fort Hoskins in 1976. Excavations continued in 1977, 1993, and 2010. Assumptions about the material culture record and the daily life of the soldiers at the fort generated from the historical records and archaeological data have recently come under critical review with the discovery of an 1861 oil painting of the fort as well as the return of a significant surviving building. Disturbing thoughts about the power and limitations of the archaeological record at this and other historical sites has occupied this researcher's thoughts of late. The musings of this researcher relative to the state of the art of historical archaeology will be discussed.

Radiocarbon Dating the Fur Trade: A Bayesian Analysis of radiocarbon dates from the Meier Site, Lower Columbia River.
Thomas J. Brown and Kenneth M. Ames, Portland State University.

This presentation demonstrates the value of Bayesian methods for analyzing radiocarbon dates from proto and early historic contexts where the nature of the calibration curve makes precise calibrations using traditional calibration methods problematic. Our example is the Meier site (35CO5), located on the Lower Columbia River. The site contains the remains of a plankhouse dating between ca. AD 1400 and the early fur-trade era. A small assemblage of historic trade goods indicates the household participated in the fur-trade. Understanding its role in the trade has been made difficult by our inability to firmly establish an abandonment date because of the period's radiocarbon calibration problems. By integrating contextual information from the excavations into a Bayesian model, we have re-analyzed the site's radiocarbon chronology. Our analysis suggests the Meier site was abandoned earlier than originally thought and thus may have only briefly participated in the fur-trade.

U.S. Army Fort Umpqua – Past Work and Future Research.
Kevin Bruce and Justin Eichelberger, Siuslaw National Forest and Oregon State University.

In 1856 U. S. Army Fort Umpqua was established with Fort Yamhill and Fort Hoskins as part of a three fort system designed to guard the Oregon Coast Reservation. Constructed on the North Spit of the Umpqua River near modern-day Reedsport, Oregon, Fort Umpqua was responsible for monitoring traffic along the southern boundary of the Reservation and to provide military support for the Umpqua Indian Agency. The post performed these duties until the federal government withdrew the garrison for service in the Civil War in 1861. While extensive archaeological investigations have occurred at Fort Yamhill and Fort Hoskins by Oregon State University, investigations at Fort Umpqua, conducted by the Siuslaw National Forest, have been limited and unreported. This paper provides an overview of investigations at Fort Umpqua, as well as a discussion of potential research questions that can be addressed through the analysis of current collections and future archaeological investigations.

The Complexities of Designing and Implementing the Archaeological Monitoring and Recovery Efforts for Oso Mudslide/SR530 Site Stabilization Project.
Stacy Bumback, AECOM Technology.

The AECOM team was comprised of a team of archaeologists, technical staff with monitoring experience, and community members with previous spotting experience. A total of 1,001 personal belongings associated with the survivors, victims, and their households were recovered during the three month project. Designing and implementing a program based on safely and respectfully monitoring all construction activities to recover personal items by a truly integrated team of professionals and community members was essential to the success of the project. Staffing and safety was at the forefront of the project; however, the emotionally charged decisions, the pressure to decide in an instant what items were recovered, and the regular interactions with survivors and victim's families weighed heavily on every single team member. The support and camaraderie of the team was a key element of success. This presentation discusses the protocols, important discoveries, personal experiences, and community perceptions that shaped the project.

The Archaeology Roadshow: A Model for Community Engagement and Public Education in an Urban Area.
Virginia L. Butler, Lyssia Coffey, Virginia Parks, Department of Anthropology, Portland State University.

Public engagement is a critical part of the archaeologist's tool kit. One common approach to engagement involves creating an "Archaeology Day" with temporary exhibits/ hands-on activities designed to educate the public about archaeology and stewardship. Developing and maintaining an annual "Archaeology Day" celebration event in Portland requires a diverse base of support from multiple community organizations with common interests and passions in archaeology/history. For the past three years, Portland State University's Department of Anthropology has been working closely with community partners (companies, tribes, historical societies, universities, agencies) to develop and host "Archaeology Roadshow." We highlight our achievements to date and present future goals, including plans for the May 30, 2015 event on PSU campus. Legendary Portland-born chef James Beard once said, "Food is our common ground, a universal experience." Capitalizing on the event's proximity to the nearby Portland Farmer's Market, our theme this year is "The Archaeology of Food."

Preliminary Assessment of Primate Molar Morphology Using 2D Geometric Morphometrics.
Amy Byers, Kathlena Anderson, Stephen Frost, Michel Waller, University of Oregon.

We used 2D geometric morphometrics (GM) on primate molars to determine how well primate dental morphology could be captured and if landmark based methods could distinguish different primate groups. Sixty occlusal digital photographs were taken of primate maxillary and mandibular molars. Two observers (AB, KA) collected eleven 2D landmarks on lower molars. Landmarks were placed on the images using TPSdig and were superimposed with general procrustes analysis in MorphoJ. Superimposed landmarks were analyzed with principal components (PC) analysis to evaluate overall patterns of molar shape variation and canonical variates analysis (CVA) was used to examine group differences. The first two PC's accounted for 48% of variance and separated lemuriforms from haplorhines with loriforms and dermopterans intermediate along PC1, lemurs having buccally placed paraconids and larger but narrower talonids. PC2 largely distinguishes dermopterans from primates, which have narrow trigonids and larger hypoconulids. These initial results were encouraging and larger sample sizes should improve them.

Pacific Coast Forts of the 1850s: Archival Maps as Archaeological Survey Data.

R. Scott Byram, Byram Archaeological Consulting.

Many of the most accurate maps of 19th century fortifications and other posts have been relatively inaccessible in archives in the Washington D.C. area. Research at the National Archives has yielded scans of extensive materials relevant to the study of west coast archaeological military sites. Following the methods I outlined in the book *Triangulating Archaeological Landscapes* (2013 UC Berkeley eScholarship, open access), this paper demonstrates the value of U.S. Coast Survey manuscripts over GLO records and other archival resources that are more readily available but less detailed. Dating to the early 1850s, USCS maps, drawings, and descriptions of sites including ruins such as Fort Clatsop, military bases, earthwork batteries, agency posts, defensive blockhouses and the Camp Castaway shipwreck post are presented as archaeological data, along with more recent survey data.

Sticks With Stones: An Experimental Test of the Effect of the Atlatl Weight on Atlatl Mechanics

David I Cain and Elizabeth Sobel, US Army Corps of Engineers; Missouri State University.

Archaeologists have long debated the effect of the atlatl weight on atlatl mechanical performance. Some argue that the atlatl weight has an advantageous effect. Others believe it has no meaningful effect, and still others believe it has a disadvantageous effect. Experimental efforts to resolve this debate have been inconclusive due to the use of human atlatlists, which introduce uncontrolled biomechanical variation. We redress this problem through the construction and use of an atlatl launch machine, which provides unprecedented experimental control over mechanical variables. Using the machine, we test the Range Hypothesis and Precision Hypothesis of atlatl weight effect. Statistical analyses of data from 350 experimental launches indicate that compared to the unweighted atlatl, the weighted atlatl typically has a lower range but greater precision. These results offer some resolution to the atlatl weight debate and have implications regarding atlatl mechanics generally.

Excavation at the Manila Site (CA-HUM-321).

Amanda Carroll, Cassidy Williams, Shannon Tushingham, Washington State University.

The Manila Site (CA-HUM-321), located on Humboldt Bay in northwestern California, has a long and important human history of marine subsistence acquisition patterns. Its unique location, between Humboldt Bay and the Pacific Ocean, offers a variety of marine and estuarine food resources. Excavations at CA-HUM-321 exposed shells, animal bone, lithic remains, FCR, and charcoal within midden deposits. The abundance and diversity of dietary and other residues indicate that CA-HUM-321 was a home base village by about 1300 BP. This poster summarizes collaborative archaeological work the Blue Lake Rancheria and neighboring Wiyot Tribes at CA-HUM-321 and forms potential research questions for further study. Flotation samples, along with other data from the site are currently being analyzed.

Preliminary Analysis of Faunal Remains from Summit Island (49-XHI-43 and 49-XHI-44), Bristol Bay, Alaska.

Molly Casperson, Bureau of Land Management and University of Oregon.

Preliminary analysis of the faunal remains from archaeological sites 49-XHI-43 and 49-XHI-44 on Summit Island, Alaska, indicates that site residents harvested several kinds of marine animals between 2820±70 BP and 1000±100 BP. Terrestrial species are also minimally represented in the assemblage. The age distribution of animals identified in the collection provides evidence of harvest strategies, site seasonality as well as Late Holocene climatic conditions in northwest Bristol Bay.

From Household to Empire: The Zooarchaeology of Diouboye, Senegal.

Auschere Caufield, University of Oregon.

This paper explores the economic and cultural processes that created the unique faunal record at the archaeological site of Diouboye in the Upper Senegal region. Diouboye is a late Iron Age site occupied from AD 1000 to 1300. The Faunal record from this site shows a focus on wild resources from the riverine environment. Overall, Diouboye produced a large faunal assemblage with particularly high frequencies of medium bovids and reptiles. In addition, pottery decoration indicates the inhabitants were closely related to the Mande society to the south. Long distance trade was a major part of the economy of the Mande state. This included trade in secondary animal products such as leathers and skins. Oral histories and ethnographies also document the spiritual importance hunting held in Mande society. This research aims to explain the role these processes had in forming the faunal assemblage from Diouboye.

The Holocene Occurrence of Mammals in the Clearwater and Lower Snake River Regions of Idaho.

Jenifer Chadez, University of Idaho.

Nineteen prehistoric zooarchaeological assemblages have been recovered from the Clearwater and adjacent lower Snake River regions in Idaho. Nearly 60% of the early prehistoric assemblages (ca. 10,000-6,000 B.P.) are comprised of bear (*Ursus* spp.), while deer (*Odocoileus* spp.) dominate both middle (ca. 6,000-3,000 BP) and late (ca. 3,000-500 BP) prehistoric assemblages. Bighorn sheep (*Ovis canadensis*), bison (*Bison bison*), and pronghorn (*Antilocapra americana*), all of which have been extirpated from the study area, together comprise up to 2.5% of the total faunal assemblage and 6.5% of the late prehistoric assemblage. Within each phase, rabbits and large rodents comprise ≤3% of the total assemblage. The relative frequencies of mammals across

all sites suggests a focus on large mammals (>25 kg) which is consistent with the findings of Lyman (2013) across sites in Eastern Washington.

Calcined Bone as a Reliable Medium for Radiocarbon Dating in the Pacific Northwest.

James C. Chatters¹, James Brown², Steven Hackenberger², Patrick McCutcheon²,

¹Applied Paleoscience and ²Central Washington University.

Efforts to build cultural chronologies in the western flank of the Cascade Range have been stymied by a lack of reliable material for radiocarbon dating from non-midden sites. Where fluvial deposits have not isolated occupation surfaces, charcoal is an untrustworthy medium for dating because its source can rarely be identified as undoubtedly cultural. Unburned bone fails to survive the acid soils of the conifer forest ecosystems. Calcined bone, however, does sometimes survive and is a potentially reliable means for dating open archaeological sites in conifer forest regions. We conducted a comparison of charcoal and calcined bone AMS ages from seven archaeological sites in Washington, Idaho, and British Columbia, and measured ages of calcined bone from three previously undated archaeological components. Calcined bone measurements fell within 2σ of the charcoal measurements in nearly all comparisons and produced ages consistent with associated cultural material in the sites of undetermined age.

Macro Analysis: in the Field vs. in the Lab Use Wear Identification.

Erin Chenvert, Desirae Probasco, Patrick McCutcheon, Central Washington University.

The Bishop Hollow site (45KT1975) on the Yakima Training Center (YTC) is a lithic scatter site with evidence of resource procurement. Initial lithic analysis was conducted without the aid of magnification and subsequent analysis used a binocular microscope with 20X and 40X magnification. The two samples were then compared and the similarities and differences were used to assess the analytical effects of doing lithic analysis with and without magnification. Early results show that in the initial analysis there was 1.7% of objects identified with wear and the subsequent analysis there was 5.4% with use wear. We have taken these results and explored the implications of such analytical biases imposed by doing lithic analysis with and without magnification. These results are relevant to those CRM and research settings where analysts are considering whether they should use magnification in stone tool analysis.

Isn't that Just Another Rock? An Overview of Rock Features Classified or Known as Singularly Placed, Pedestaled, Window, & Boulder Feature Types.

Perry Chocktoot¹ and Stephen Todd Jankowski², ¹Tribal Historic Preservation Officer- Klamath, Modoc, and Yahooskin Paiute Tribal Nation and ²Willamette National Forest.

In current archaeological contexts and field research, identifying and recording rock features is still a confusing and cumbersome task. Especially hard to discern manuports such as boulders, windows, pedestaled, and table style forms. This presentation reviews and focuses on existing ethnographies and academic research of indigenous practitioners to archaeologists. Again such discussions demonstrate that rock features are distinct monuments and part of archaeological landscapes that require attention and thorough inspection in conjunction with tribal consultation efforts. A more focused and comprehensive understanding for identifying and categorizing 'unusual rock features' morphological attributes, and their typological associations, is presented in order to assist land managers, archaeologists, researchers, ethnographers, and academics alike.

Female-Female Bridging Behavior in Tibetan Macaques (*Macaca thibetana*) at Mt. Huangshan, China.

Grant J. Clifton¹, Lori K. Sheeran¹, R. Steven Wagner¹, and Jin-Hua Li², ¹Central Washington University, ²Hefei Normal University.

Bridging is an affiliative interaction in which two individuals lift an infant or juvenile between each other and lick the infant's genitals. Male-male bridging has been studied in several macaque (*Macaca*) species; however, female-female bridging has received little to no focus. Bridging between males is believed to act as an agonistic buffer, but it may function differently for females. We studied female-female bridging in provisioned Tibetan macaques (*M. thibetana*) at Mt. Huangshan, Anhui, China from August-September 2014. We predicted that female-female bridges would show distinct patterns when compared to what has been reported for males. We recorded bridging using all-occurrences and focal-animal sampling of 8 adult and 4 subadult females. Our data suggests that female-female bridging in this study group is not consistent with the trends reported in male-male bridging, and that it is likely related to motherhood and female interest in infants. NSFC (30970414, 31172106); NSF-OISE (1065589).

Native American Fisheries of the Northern California and Southwestern Oregon Coast: A Synthesis of Fish Bone Data and Implications for Late Holocene Storage and Socio-Economic Organization.

Colin Christiansen, Washington State University.

This paper presents a new synthesis of fish bone data from sites in Brookings Harbor, Oregon to the King Range in northern California toward a better understanding of fisheries exploitation by people in the region over the last 2,000 years. A greater emphasis on small screen sizes has shown smaller fish frequently to be as important as their large counterparts. The available literature and data from previous research in the Northwest California / Southwest Oregon coast region reveal a regional patterns within the study area: for example, the findings suggest a focus on smelt (osmerids) at sites north of Humboldt Bay, while evidence

at southern sites suggest a dependence on intertidal fish (e.g., pricklebacks). In this paper we examine the archaeology of fish, and highlight implications for the development of mass harvest techniques, technology, and storage.

Tracking the Trade in Central Oregon Obsidians through the Pacific Northwest.

Thomas J. Connolly, Craig E. Skinner, & Paul W. Baxter, Museum of Natural & Cultural History, University of Oregon.

A great range and volume of goods were distributed throughout the Pacific Northwest by means of an ancient and far-reaching trade network, with principal exchange nodes from southern British Columbia to Oregon. Many trade commodities were perishable, and not detectable archaeologically; by contrast, tool stone, and especially obsidian, is durable, abundant, and trackable, and serves as an important tool in tracing ancient trade routes and relationships. Roy Carlson (1994) has reported that nearly 25% of obsidian artifacts identified in British Columbia derive from Oregon, and over 95% of that material represents just four sources. We review the distributions of obsidian from two of these, the central Oregon Newberry Volcano and Obsidian Cliffs quarries. Obsidians from both sources exhibit similar northward geographic trajectories, suggesting that both served largely similar end users who were part of the same economic network.

Howard A. Hanson Dam Archaeological District (DT 184) Revealed through Data Recovery Excavations at Late-Archaic Hunting Camp, King County, Washington. Jason B. Cooper, AMEC Foster Wheeler.

Archaeological research over the last 30 years has documented a remarkable collection of prehistoric sites along the relic Green River channel found during low water behind Howard Hanson Dam in King County, Washington. In the area known historically as Eagle Gorge, Archaic archaeological sites dot a denuded reservoir landscape in proportions similar to the number of Douglas fir and western red cedar stumps that also cover the watershed's ancient terraces. Annual raising and lowering of the reservoir behind the dam adversely impacts the previously documented sites and also exposes previously unknown archaeological sites from time to time. Fieldwork in 2011 and 2014 focused on the data recovery excavations at six prehistoric sites, including site 45KI1083 which is a late prehistoric hunting camp with excellent faunal preservation. Coordination with the U.S. Army Corps of Engineers-Seattle District and Muckleshoot Indian Tribe under an existing Programmatic Agreement has directed archaeological research toward mitigating adverse impacts to cultural resources as a result of managing the Additional Water Supply Project at the dam.

The Jim Rock Historic Can Collection Online Database at Southern Oregon University, Ashland.

Kyle Crebbin, Chelsea Rose, and Shana Sandor, Southern Oregon University Laboratory of Anthropology.

Jim Rock was an archaeologist known for his passion for the humble 'Tin Can.' Prior to his death in 2010, Rock spent much of his lengthy career focusing on education and outreach. Rock amassed a comparative collection of bottles and cans, which he housed in suitcases and carted around teaching both the public and the professional archaeological community about the importance of often overlooked and undervalued artifacts, particularly cans. Rock's 1987 volume "A Brief Commentary on Cans" remains instrumental in historical archaeology in the American West. Upon his death, the collection was given to the Southern Oregon University Laboratory of Anthropology (SOULA), who continues to use it as a teaching aid. In the interest of honoring Rock's legacy and sharing his collection with a wider audience, SOULA collaborated with the Southern Oregon University Hannon Library in the digitization of the collection within a searchable database available to the public.

The Fort Klamath Archaeological Project: Preliminary Findings.

Kyle Crebbin and Mark Tveskov, Southern Oregon University Laboratory of Anthropology.

Fort Klamath played an important role in the Euro-American settlement of the Klamath Lake area, from its establishment in 1863 until it was abandoned in 1890. The fort is particularly well known for the role during the rebellion against American colonialism led by the Modoc leader Kientpuash (aka Captain Jack) during the 1870s. Since 2013, the Southern Oregon University Laboratory of Anthropology (SOULA) has been working with the owner of the Fort Klamath property to better understand the physical layout of the site, its boundaries, and its archaeological potential.

Understanding Gender Identity and the Two Spirits.

Clarissa Cress, Eastern Washington University.

This paper will discuss the history and changing roles of Native Americans who identify as Two Spirit. Historically, Two Spirits were those who did not confine their gender identity to that of their biological sex. Today, the term Two Spirit is reused by LGBT Native Americans to emphasize the historic depth of these identities within native communities. Through a review of scholarly and popular articles, I will expand on the ideas and possibilities of gender identification as they apply to Two Spirits in the Woodland and Plains areas of North America. Through exploration of the unique qualities possessed by Two Spirits and their acceptance among their communities, I hope to distinguish some parallels and differences between Two Spirits and gender identity as understood by in the modern LGBT community, honing in on the differences between gender fluidity and homosexuality and the ways in which these ideas are linked.

The Fish (Pisces) Remains of Paisley 5 Mile Point Caves.

R. Patrick Cromwell¹ and Kyle Suzenski², ¹Portland State University and ²Arizona State University.

The Paisley Caves contain evidence of human habitation as early as 14,500 cal. yrs. BP. The dry and sheltered environment within these caves has resulted in excellent preservation of faunal remains, including previously unanalyzed Pisces bones and scales. Presented here are the results of the identification and statistical analysis of Pisces remains from Cave 2, with a focus on deposits dating between ~15,000 and 11,000 cal. yrs. BP. This work contributes to our understanding of local Terminal Pleistocene/Early Holocene paleoecology at this important site.

Geophysical Survey at the Blackwell Island Site (10KA481), Kootenai County, Idaho.

Steven Dampf and John Dorwin, Historical Research Associates, Inc., Avista, and the Kalispel Tribe of Indians.

Following the requirements of FERC's Programmatic Agreement for relicensing, Historical Research Associates, Inc., assisted Avista Corporation in developing Historic Properties Management Plans for the Spokane River Project in eastern Washington and northern Idaho. In addition to archaeological site monitoring, implementation procedures include formal evaluation to determine a site's eligibility for listing in the National Register of Historic Places. Site 10KA481 is considered a high-priority artifact scatter with at least eight deflated fire-modified rock concentrations, and suffers from impacts due to development, recreational access, and shoreline erosion. HRA initiated the first phase of evaluation utilizing two non-invasive geophysical survey techniques, magnetometry and resistivity, to identify the presence of buried archaeological features for further investigation and to address the integrity of those features and the remaining buried site. These preliminary results are helping delineate activity areas associated with the use of fire and determine depth of the features.

Archaeological Investigations of a Late Holocene Site (35MU234) on the Lower Columbia River Floodplain, City of Fairview, Multnomah County, Oregon.

Michael Daniels, Kanani Paraso, and Daniel Gilmour, WillametteCRA.

WillametteCRA has completed data recovery excavations at precontact site, 35MU234. Deposits date to between 3,900 to 1,000 years ago, representing some of the oldest radiocarbon dated archaeological materials on the lower Columbia River floodplain and spanning the hypothesized change from mobile foraging to sedentary, storage-based systems. The stone tool assemblage is diverse and feature content suggests a wide range of resources were processed and consumed, although a common element may be some type of fruit or berry. The assemblage is slightly different from those local assemblages representing residentially mobile systems. Differences seem one of degree, however, particularly in the intensity of activities that occurred. The increased intensity of tasks probably reflects the intensification of activities expected as logistical systems develop in the Portland Basin. Comparing the site assemblage with several nearby Late Holocene field camps suggest 35MU234 was similar to these field camps, but with an emphasis on plant processing.

The Landscape of Klamath Basin Rock Art.

Robert J. David, University of California, Berkeley.

For the past three decades, efforts to interpret Klamath Basin rock art symbols using information from ethnographic literature and concepts of sacred landscapes have advanced our understanding of the art. This approach, however, is limited by the assumption that the rock art symbols served a uniform purpose in every social context. From my research of the past decade in the Klamath Basin I have inferred that rock art designs are not distributed randomly across the landscape. Instead, rock art displays appear to vary predicatively across three archaeologically-defined contexts that I have identified as settlement sites, frequently used areas and special use areas. In the research presented here, I use this apparent pattern to propose a context model for the rock art of the Klamath Basin and suggest that Klamath Basin shamans situated their varied repertoire of sacred symbols within these distinctive contexts in order to structure the way people encountered and experienced them. Understanding how rock art is patterned on the landscape has led to refined interpretations in an area where relatively little rock art research has been done.

Meeting with an Old Friend: Dry Sailing to Rock Art Sites in Southern Idaho.

Mary Anne Davis, Idaho State Historical Society.

John Curtis was a retired NASA engineer and Idaho rancher and needed something to do. He set an aggressive task to record all of the rock art sites in southern Idaho. His collection – site forms, photographs, VHS tapes, and ideas – provides a look at the vast array of rock art in southern Idaho and how these sites fit into the greater prehistory of Idaho. Taking another look at these types of legacy collections, whether archaeological collections or site documentations, can open up new enquiries for research and give new meaning to the importance of such collections.

Heritage Tourism on a Personal Level.

Jenny Dellert, Historical Research Associates (HRA).

Heritage tourism is a lofty concept, so how does one bring it down to a personal level? I will describe the process of applying heritage tourism to my personal family-related project. The project centers on property that was once the family farm and is now a city park. I will outline the process of how I intend to compile historical background research and photographs to create content for

a larger utilization, using the innovative Next Exit History mobile application. This will demonstrate how information on a small-scale level can be shared with a broader audience, allowing for the opportunity to educate, inform, and preserve knowledge in a unique way.

Identifying Fire Managed Landscapes in the Pacific Northwest – a Multidisciplinary Approach to a Burning Question.

Kelly M. Derr, Heritage Research Associates, Inc.

Fire, both natural and anthropogenic, is a key component of Pacific Northwest ecosystems. Modern fire suppression has altered historic fire regimes creating forests vastly different than those encountered by EuroAmerican explorers. Ethnographic accounts demonstrate that Native American groups in the region used understory fire to manage plant and animal communities, and have likely done so for millennia. Forest managers recognize the importance of using understory fires to promote ecological diversity and maintain forest health, but highlight the difficulty of identifying anthropogenic fire regimes in ecological records. This paper discusses current sedimentary fire history research as it relates to anthropogenic fire use and explores using charcoal morphology as a line of evidence in deciphering how fires burned in the past and when fires may be attributed to human ignition. The goal is to lay out a useful research approach for investigating anthropogenic burning in the Pacific Northwest.

Digging Deeper: Where is the Geoduck (*Panopea Generosa*) in Archaeological Shell Middens?

Ryan Desrosiers, Western Washington University.

The large bivalve, Pacific Geoduck (*Panopea generosa*) has not been reported or identified in Northwest Coast shell middens. Due to its large meat yield and relative ubiquity within the Salish Sea region, it seems unlikely that geoduck was not exploited in prehistory. In the process of sorting shell samples from the Tse-whit-zen site (45-CA-523), thin, flat body fragments that appeared more consistent with geoduck than other clams were found, but they lacked definitive morphological characteristics such as hinges. To attempt to confirm the tentative identification, crystallographic textures were examined. I utilized a scanning electron microscope (SEM) to determine crystallographic textures of three prevalent species of shellfish found in Puget Sound; *Leukoma*, *Panopea*, and *Tresus*. I found that all species examined displayed different crystallographic textures. Therefore crystallographic texture analysis may function as a method of determining the presence of geoduck within shell middens in the absence of readily identifiable specimens.

Diving Into the Community: The Maritime Archaeological Society.

Christopher Dewey, Maritime Archaeological Society.

This paper looks at the role of community-based, non-profit, maritime archaeology organizations in public education and awareness, historic shipwreck preservation, and the science of maritime archaeology, in the Pacific Northwest. An examination of exemplar programs around the country leads to a review of current efforts in Oregon including the newly formed Maritime Archaeological Society.

Seeds: Rare, Medium, or Well Done?

Melanie Diedrich¹ and Kayla Snyder², ¹Archaeological Macroflora Identification (AMI) / Tierra Right of Way, ²Central Washington Anthropological Survey (CWAS).

This presentation is an overview of a seed charring experiment. It was conducted to record any morphological changes to various seed samples that are caused by heat. Seven different types of seeds were placed inside a small muffle furnace at temperatures ranging from 400-800 degrees F. for 15 to 30 minutes. The results of the seed charring showed varying degrees of morphological changes that were recorded photographically. It is the hope that with this experiment and others like it, the Pacific Northwest Native Seed Library already assembled by Melanie Diedrich will grow to encompass visual examples of the charred forms of seeds. This sort of library can then be used as a reference tool for researchers to compare and better identify charred seeds found in archaeological contexts.

Risk and Uncertainty in Polynesian Dryland Agriculture.

Robert J. DiNapoli and Alex Morrison, University of Oregon and International Archaeological Research Institute, Inc.

Prehistoric Polynesian agriculture is typically divided into two contrasting systems of the wet and the dry. Unlike wetland agricultural systems, dryland agriculture was almost completely dependent on rainfall, which created a high potential for risk and uncertainty. It is generally assumed that dryland field systems were highly susceptible to droughts, resulting in food shortages with various societal consequences, such as conflict and the emergence of social complexity. This has been an especially important topic in Hawai'i. Here, we use explicit theoretical definitions of risk and uncertainty to explore the effect of resource fluctuations from droughts by investigating spatiotemporal rainfall patterns on Hawai'i Island, with particular emphasis on the Leeward Kohala Field System (LKFS). We employ geostatistical and time-series modeling to quantify the intensity, frequency, and periodicity of droughts in the LKFS and discuss the implications of our results for Hawaiian agriculture and emerging sociocultural patterns.

Romancing the Debitage: The Lithic Debitage and Projectile Points at Bernard Creek Rockshelter, Idaho.

Shaun Dinubilo, University of Idaho.

Several methods have been utilized to obtain information about past human behavior involving: mass analysis, debitage/bone weights, cultural chronology, breakage patterns, and thickness/length ratios of projectile points at Bernard Creek Rockshelter, Idaho. The use of these methods addressed several of my research questions and some assumptions about the site. This re-analysis of the site reveals certain trends about raw material frequencies found within the debitage. One of the major issues that was discovered is a tradeoff between quartz and obsidian debitage that happened at 7193 BP. Eventually quartz became completely replaced by obsidian. The completion of the re-analysis of the lithic material offers some suggestions as to why this change occurred.

The Ground Slate Transition on the Northwest Coast: Establishing a Chronological Framework.

Joshua Dinwiddie, Historical Research Associates.

This poster summarizes research which establishes the earliest appearance of ground slate points; a technology considered to be one of the archaeological hallmarks of mid-to-late Holocene Northwest Coast peoples. The emergence of ground slate points in the archaeological record is frequently marked by a concurrent decline in the prevalence of flaked stone points, a phenomenon referred to as "the ground slate transition." Until now, the specific timing of the emergence of these tools has been ill-defined. This research utilizes a database of artifacts counts, provenience information, and radiocarbon dates drawn from a sample of 94 artifact assemblages in Alaska, British Columbia, and Washington to make inter-site comparisons of the earliest appearance of the technology. The chronology presented here provides an important tool for evaluating theories about causes of the ground slate transition, as well as providing a foundation for greater understanding of aquatic subsistence strategies and technological decision making.

Compiling Excavated Archaeological Data at a Large-scale: Preliminary Results.

Jonathan Duelks, Nathan Jereb, Kristin Leonard, and Paul S. Solimano, Portland State University and Willamette Cultural Resources Associates, Ltd.

A vast amount of precontact archaeological data is excavated and reported at great cost to the public. Data from flagship sites are often used in other analyses, but data from numerous, smaller, single component sites or those sites found not eligible for NRHP listing are rarely used. This poster presents an introduction to and preliminary results of a pilot project to compile quantitative archaeological data into a single database from sites where excavation has occurred. Excavated data is being collected from the Portland Basin, Lower Willamette Valley and adjacent Cascades in Washington and Oregon. When completed, the database should be usable for large-scale land-use studies, as a source for information available in CRM literature, and for significance evaluations that move beyond intuition and rely more on comparisons of quantitative data.

Leatherworking in Precolonial West Africa: Exploring recent archaeological evidence from Kirikongo, Burkina Faso and Diouboye, Senegal.

Stephen Dueppen, University of Oregon.

Leather was of great importance to ancient West African societies. It was used for clothing, armor and ritual items, and was likely an important export commodity, at least by the early 2nd millennium CE. While leather production may have been the work of specialized craftspeople, like those found in many areas today, very little is known of the history of this practice. Recent archaeological research at the sites of Kirikongo, Burkina Faso during the 15th-16th centuries CE and Diouboye, Senegal during the 11th-14th centuries CE have yielded evidence of leather production at different scales and with different technologies. This paper will explore how leather production can be recognized in sites in the region, how different scales of production can be ascertained from archaeological remains, and what this means for understanding the emergence of specialist crafts in ancient West Africa.

Hops history in Lane County: deep roots, personal connections.

Tiah Edmunson-Morton, Oregon Hops and Brewing Archive, Oregon State University.

In the first half of the 20th century hops grew all along the Willamette River valley, from Keizer to Grants Pass, with hundreds of acres of small family farms dedicated to the crop and thousands of temporary workers employed for the September harvest. Oregon ranked first in U. S. production of hops from 1905-1915 and again from 1922-1943, but behind this robust agricultural industry history are family connections and personal stories. This poster will summarize Lane County's hops history, but will also share Tiah's own family story as the descendant of a hop farmer.

The Archaeology of Class, Status, and Authority within Mid-19th Century U. S. Army Commissioned Officers: Examples from Fort Yamhill and Fort Hoskins, Oregon 1856-1866.

Justin E Eichelberger, Oregon State University.

Established in early 1856 Fort Yamhill and Fort Hoskins were constructed to guard the Oregon Coast Reservation. Charged with monitoring the northern boundary of the reservation these posts served as "post-graduate schools" for several officers who would later become high ranking generals during the American Civil War. These men, often affluent and well educated, held the highest

social, economic and military ranks at these frontier military posts. This paper examines the material culture associated with six of the commissioned officer's houses from these posts. The archaeological assemblages from these houses vary in terms of artifact quality, quantity and variety by military rank and suggests that although mid-19th century U. S. Army officers were united by notions of class, status and authority they were competitive individuals that were interested in displaying and affirming their military, social and economic position through conspicuous consumption during ritualized behaviors such as calling, dining and hunting.

Encountering the Unknown: Lessons Learned During Mass Excavation of the North Access Portion of the Alaskan Way Viaduct Replacement Project.

Patrick Elliott and Tyler Graham, Washington State Department of Transportation.

Archaeological monitoring can be a crucial component to any large infrastructure project. Monitors are asked to determine composition of soil, identify any cultural material, and if needed, interpret where particular sediments are derived from. Mega projects such as the Alaskan Way Viaduct Replacement Project can consist of large scale challenges while monitoring. These challenges include construction sequencing issues, changes in approach based on field conditions, the potential to encounter unidentified issues such as hazardous materials associated with historic resources or near historic resources, and additional training or equipment required to create a safer monitoring environment. This poster will summarize the lessons learned during North Access mass excavation.

Striving for Balance: Issues of Cultural Affiliation and Culturally Unidentifiable Remains in NAGPRA and the New Rule.

Brittney A. Eubank, University of Montana.

The goal of NAGPRA and its legislative revisions is to balance the interests of Native Americans in the return of their ancestors with the interest of museum communities in maintaining cultural heritage, and to correct the mindset of Native American remains as specimens of curiosity. Though NAGPRA has made great strides in this effort, the obvious glitches within the law cannot be ignored; most notably, how to deal with culturally unidentifiable remains. Vague statutory language, lax establishment of cultural affiliation, the liminal state of non-federally recognized Native American groups, and the disassociation of funerary objects represent where the law has missed its target.

This paper investigates each of these issues, indicating where the law has failed to eradicate loopholes that can allow for negligence and subversion. By identifying NAGPRA's weaknesses, we can begin to find effective ways to ameliorate them while keeping in mind the best interests of all parties.

Tell Me About it!

Leah Evans-Janke, Ariana Burns, and Dakota Wallen, University of Idaho.

This work is a compilation of twenty-seven oral histories recounting the best and worst of Elk River, Idaho, from 1909-1936. These personal accounts detail all aspects of small town life from courting to racial and religious tension, social habits, and daily life within a community dominated by the lumber industry. Approximately 1200 people lived in Elk River and all were dependent on the fortunes of the Potlatch Lumber Company. In 1936, the Potlatch Mill was shut down and the town died almost immediately. What lived on was a close knit community that stood together in the face of personal adversities and national hardships despite the segregated living conditions.

Single Mothers and Welfare: A Theoretical Perspective.

Amara Fiegel, Eastern Washington University.

From the birth of government funded welfare in 1935 through current discussions of welfare reforms, the media and politicians have used rhetoric to make poor single mothers the "other." This paper will apply Galtung's model of the rhetorical and enacted route from cultural violence to structural violence ending in direct violence to this case. To explore the in the creation and "reform" of the welfare system, I will use discourse from various sources such as addresses to congress, public policy, media sources and women's personal accounts as well as analyze directly the policies that were created in response to this discourse. This will demonstrate how demonizing welfare and its recipient's shifts focus from the real problems that create poverty and inequality.

Movement progression in the collective movements of Tibetan macaques (*Macaca thibetana*) at Mt. Huangshan, China.

Gregory Fratellone, Central Washington University.

Collective movements involve synchronously moving animals that go in the same direction, maintain cohesion and reach new locations. We present data on the progression of collective movements in Tibetan macaques (*Macaca thibetana*) by analyzing their movements in relation to female presence and social networks. All-occurrence sampling was used to investigate collective movement patterns, and focal and scan sampling were used to retrieve information on their affiliative and agonistic behaviors for a complete social network analysis. There were a total of 128 successful collective movements recorded over a two-month period. Social network analyses of collective movement revealed a correlation with affiliation and agonism. There was a significant difference in successful movement time between movements weighted by female presence and those unweighted, which may be due to the matrilineally-structured societies and strong female bonds present in this species. Supported by NSFC (30970414 & 31172106) and NSF-OISE (1065589).

Use of Hair Stereotypes in Celtic Folklore.

Holly Ann Frazier, Eastern Washington University.

Hair color is described often in ancient Celtic folklore and other epic sagas. In Celtic folklore, the supernatural fairy folk were often depicted with specific hair colors associated with the type of fairy, for example beautiful women were usually described as having red or golden hair. Morbidity and black hair were often associated with a type of fairy folk such as the washerwomen, or banshee, who were described as having unruly black hair. The most common color associated with the supernatural in these tales was the color red. Red hair was especially frequent among the fairy folk, who were also often viewed as mysterious and quick-tempered. This paper will use British folklore to observe use of hair color, and other applications of the color red, to characterize the fairy folk. In Celtic Folklore, specific colors for clothing and hair were used to convey stereotypic personality characteristics of supernatural beings.

Indigenous Knowledge: Conveying Content through a Virtual World Format.

Rodney Frey, University of Idaho.

Discussed will be an attempt at authentically and appropriately conveying Indigenous epistemology and praxis. Working collaboratively with Indigenous communities, it has become evident that in attempting to convey their stories the research design must not only seek to identify the content of their ways of knowing and doing, but also present it in a format and means consistent with that content. There is an unequivocal relationship between *what* is conveyed and *how* it is conveyed. How are we to convey phenomena that only exists as an event, dependent on human participation (including that of the non-native anthropologist), i.e., convey phenomena not predicated on Cartesian Dualism and Aristotelian Material Reductionism, while also assuring that the event is anchored to and expressive of Indigenous meaning? Taking a cue from Indigenous storytelling techniques, discussed will be an attempt at conveying the meaning of the Indigenous through the means of 3-D Virtual World technology.

Assessing the Timing of the Introduction of Bow and Arrow Technologies in the Salish Sea and Its Implications for the Coast Salish.

Tiffany J. Fulkerson and Adam N. Rorabaugh, Washington State University.

Recent studies addressing the timing of the introduction of bow and arrow technologies in the Northwest Coast and surrounding areas highlight the dynamic relationship between technology, subsistence, and social organization. In this study, we apply Hildebrandt and King's (2012) dart-arrow indices and discriminant function analysis to a sample of 3091 hafted chipped stone tools from 49 archaeological sites spanning 5000 years in the Salish Sea. The results suggest differential timing of the introduction of arrow technologies in the region, with the earliest evidence of its use appearing at 3500 BP and ubiquity in the region by 2500 BP. These results correspond with reported increases in terrestrial mammal specialization at this period and with recent interpretations regarding shifts in projectile technologies and subsistence as they relate to broader social transformations.

Stylistic Variation in Projectile Point Styles in the Columbia Plateau and Northern Great Basin at the Pleistocene-Holocene Transition.

Jerry R. Galm, Stan Gough, and Fred Nials, Eastern Washington University.

The physical record of Paleoindian-Late Paleoindian prehistory in the Columbia Plateau and Northern Great Basin is dominated by samples of projectile points loosely assigned to various complexes. We examine the considerable diversity represented in these point samples. Point samples defined for the Windust Phase, Lind Coulee complex, Western Stemmed Tradition, and even the Clovis complex exhibit a degree of diversity not typically noted from other regions of North America in this time period. This raises many questions, including the timing of the appearance of various point forms as well as possible relationships between coeval complexes. The question of how to explain this degree of variation in point styles is examined, as are probable associations between point styles and spear/atlatl composite weapons systems.

The Sanders Site Stone Tool Collection – Macroscopic lithic analysis of Formed tools from a Middle Columbian Upland Site.

Patrick Garrison, Central Washington University.

The Sanders Site is located along Johnson Creek in the Mid-Columbia region. 45KT315 is characterizes an intensively used upland shrub-steppe site. Excavated in the early 1970's, the tool forms represented at the site show evidence of 8 thousand years of tool form use and evolution. This research will be a macroscopic lithic analysis of the formed tools recovered from the site during the two phases of excavation. Methods used will be a paradigmatic classification and diagnostic projectile point key to identify what technology is present at the site. Research questions will include how and when tool forms changed, if they correlate with known sequences in the region, and if tool forms moved from a more curated tool form dominate technological organization to a more expedient and opportunistic tool kit.

Preliminary Revision of Windust Chronology.

Daniel M. Gilmour, Thomas J. Brown, and Paul S. Solimano, Willamette CRA.

Windust is an early cultural phase on the Columbia Plateau belonging to the Western Stemmed Tradition. Much of the seminal work establishing the timeframe of Windust is now decades old and suffers from imprecise dating. In this poster, we review previously compiled data, update stratigraphic interpretations, apply radiocarbon reservoir correction when possible, and model existing radiocarbon assays within a Bayesian framework. This poster is a first step to establish a new high-precision chronology for the Windust Phase.

Deforestation, Drought, and Humans: The Collapse Theory Is Dead— New Evidence of Adaptability and Survival on Rapa Nui.

Candace Gossen, Skagit Valley College.

Challenging the previously accepted theory that humans deforested Rapa Nui and caused collapse, I focused rather on uncovering the role of climate change. Sediment cores from Rano Kao were radiocarbon dated and 9m of core were sampled for oxygen isotopes revealing 15,000 years of global climate events. Detailed palynological studies supported a recurring 700-year drought cycle. With rapidly depleting ecological diversity, a major cold-dry event began in 1390 C.E. and lasted 115 years, until 1505 C.E. Within the cores, 40 native plants were identified, of which 17 were trees, including four new palms. The palm pollen did not disappear but rather continued on, even sparsely so, well into the 1800s. Spring of 2014, a sacred water fertility site was uncovered where palm trees were planted in a ceremonial pavement below an *ahu* at Ava Ranga Uka. Experimental cores will soon unfold a deeper story between trees and people.

Investigating Landscape, Sustainability and Social Change over 3500 years at the Montague Harbour site, Galiano Island, BC.

Colin Grier, Washington State University.

Archaeological research at the substantial Montague Harbour site on Galiano island, British Columbia dovetails with broader objectives of understanding how small scale, place-based societies manage their ecological and social contexts to create sustainable and resilient strategies over the long-term. Here, I report on fine-grained analysis of the anthropogenic landscape at Montague Harbour, including nested screen sieving of matrix samples from the main midden feature at the DfRu-13 site. This research is coupled with the generation of fine-grained paleoecological data from a nearby upper elevation lake sediment core that spans the late Pleistocene and entire Holocene. I report on preliminary analysis of this sediment core, and tie both data lines to larger questions of how Coast Salish peoples invested in the Montague Harbour landscape and new social institutions over time so as to construct a sustainable framework for settled village life over 3500 years.

Radiocarbon Dating and Long-term Economics at an Ancient Coast Salish Village in coastal southwestern British Columbia.

Colin Grier, Valda Black, Tiffany Fulkerson, Paige Hawthorne, Lindsay Kiel, Juliet McGraw, Brandon McIntosh, Lori Phillips, Katie Richards, Adam Sackman and Eric McLay, Washington State University.

Past archaeological research at the Montague Harbour site on Galiano Island has produced a baseline for indigenous settlement history in southwestern British Columbia over the last 3500 years. However, key pieces of data have been lacking, including systematic radiocarbon dating and fine-grained analysis of the constituents of the extensive shell midden deposits at the site. We present new data that outline the nature and organization of indigenous subsistence economies over the last 3500 years. We situate these data in relation to how Coast Salish peoples increasingly built and modified locations on their landscape in order to promote resource diversity, sustainable food production, and continuity of settlement in the southern Gulf Islands.

The Military History of Oregon – Rich, Diverse and Little Known.

Dennis Griffin, Oregon State Historic Preservation Office.

Oregon has a very diverse history of military sites that date back to the arrival of Lewis and Clark and their establishment of Fort Clatsop. As a result of subsequent Euro-American settlement in the region, the discovery of gold, and Oregon gaining statehood, Oregon settlers played a major role in numerous regional Indian wars and provided training and soldiers for later international conflicts and protection at home. Such activities involved the construction and use of over 300 military forts and camps, battlefields and radar installations throughout the state, with few such locations having since been verified or formally recorded. Their location is often difficult to pinpoint and little effort is currently spent in their identification or assessment. This presentation offers an initial assessment of Oregon's military history with thoughts on how related sites can be located, recorded, evaluated and interpreted.

Migration, alterity and temporality: Migrants from Myanmar in south-western Thailand.

Inga Gruß, Cornell University.

Migration, as a move through space and time, affects temporal understandings of self, others and larger social realms. It challenges people to reevaluate their taken-for-granted knowledge about their life worlds. This paper focuses on the encounter with unexpected difference and change among labor migrants from Myanmar on the west coast of Thailand in Phang Nga province. In

order to learn to deal with this new unpredictability, migrants' subjective play with time develops into a coping mechanism. Essentializing familiar identities across time and space and the nostalgia for a lost present enable migrants to maintain a romanticized, familiar context in which to understand the world. The interrelated perception of time and space that are underlying the process explicated here are explored in this presentation through the close ethnographic with an elderly migrant workers.

Rest in Peace: The Implementation of the Native American Graves Protection and Repatriation Act at Southern Oregon University.

Patricia Halleran-Cislo, Southern Oregon University.

In June of 2014, a research project began as part of Southern Oregon University Laboratory of Anthropology's (SOULA) effort to carry out repatriation under the Native American Graves Protection and Repatriation Act (NAGPRA). This study examines the history of Native American's cultural, political, religious, and human right to control their dead, while focusing on the implementation of NAGPRA as it applies to a small university with limited resources. As a student intern in collaboration with SOULA, I drafted notices of inventory completion, consulted with federal agencies, American Indian tribes, and local historians, and conducted extensive literature review and historical document analysis. This presentation will share the results of this research project, and will explore the unique case studies in SOULA's collection.

Technical diving of submerged artifacts.

Paul Hangartner, Maritime Documentation Society.

The Maritime Documentation Society (MDS) is currently working with regional maritime archaeologists to survey submerged cultural resources, and increase our knowledge of Washington's maritime heritage. Many shipwrecks, particularly those located in Washington, lie at depths that are impossible to reach without technical diving. Technical diving requires specialized training, extending dive depths well beyond the reach of the average sport diver. A technical dive team provides a unique set of skills for maritime archaeology research, including the chance to observe a site that might remain relatively undisturbed. This presentation highlights some of the challenging and rewarding surveys undertaken by the technical divers at MDS.

Bioarchaeology, Barbados, Eastern Caribbean: Isotopic Analyses of Teeth and Bone from Human Remains.

Tiffany Hansen and Dr. Steve Hackenberger, Central Washington University.

Bioarchaeological studies have grown in sophistication and are now helping test assumptions about island garden agriculture (palm, cassava, and/or maize) and the relative contributions of marine proteins. Bone and teeth samples from five sites on Barbados and one on Barbuda were processed by the Center for Applied Isotopic Studies, University of Georgia, and data are reported for $\delta^{13}\text{C}_{\text{co}}$, $\delta^{13}\text{C}_{\text{ca}}$, $\delta^{15}\text{N}_{\text{co}}$, and $\delta^{18}\text{O}_{\text{ap}}$. Stable isotope ratios, adjusted ratios, and apatite-collagen spacing correspond with results from elsewhere in the Lesser Antilles. After adjustment, all of the $\delta^{15}\text{N}$ bone and teeth samples are within the food web range for marine protein resources. Adjusted values for samples from Heywoods, Chancery Lane, Goddard, and Light & Power sites are indicative of a marine diet. A Shell Oil site sample has a value indicating terrestrial resources (fauna or C_3 plants).

Reading the Bones: Osteological Analysis of Human Remains from Barbados, Eastern Caribbean.

Tiffany Hansen, Sarah M.H. Steinkraus, Lourdes Henebry-DeLeon, and Steven Hackenberger, Central Washington University.

Taphonomic data and numerous pathologies are documented for human remains from five archaeological sites on Barbados. This partial sample of remains, selected for radiocarbon and isotopic analysis, are being analyzed by students and staff at Central Washington University. The remains were recovered as part of long term investigations conducted under the auspices of the Barbados Historical Museum. Although the sample includes only a very small portion of several individuals, and all remains are highly fragmented, the remains provide great examples of burial process, biomechanical developments, trauma, and infectious disease.

Masculinities and gendered living among one-and-a-half-generation immigrant deportees in Nogales, Sonora, Mexico.

Tobin Hansen, University of Oregon.

One-and-a-half-generation immigrant deportees are brought to the U.S. from Mexico as infants or youth and decades later forcibly expelled by the U.S. government as adults over the Mexican border. This state imposed exile to unfamiliar Mexican border communities wholly transforms deported men's everyday work and living configurations and masculine self-identities. Based on ethnographic research and life-history interviews in Nogales, Sonora, Mexico this paper explores the gendered contours of men's lives *as men* after forcible displacement from the U.S. I demonstrate how, in the gendered spaces of Nogales, deported men mobilize ideas of manhood and masculine companionship to find work and create care communities constituted by sharing food, clothing, and intimate living spaces. Frequently, one-and-a-half generation deportees' gendered solidarity networks—as friends, homies, compa's, and bros—constitute primary material and emotional support during banishment to Mexico, where they have scarce employment opportunities and become targets for organized crime and law enforcement.

The Decomposition of Historical Glasses.

Elizabeth Harman, Sidney Hunter, and Ray von Wandruszka, University of Idaho.

It is a common misconception that glass does not decay. Depending on the composition of a glass, which is highly variably, and the nature of the environment, the material can decompose in a variety of ways. This is especially true if the glass is exposed to a moist environment for extended periods. The result may be a complete breakdown of the glass matrix, akin to a "rotting" process in which the glass object loses its structural integrity. Alternatively, a milder course of events may cause the glass to "sweat" out certain components that either form a patina or, more interestingly, lead to the formation of materials that could be mistaken for the original contents of a bottle or jar.

A Survey of State Underwater Archaeology Programs and Underwater Guidelines.

Jeanette Hayman, ESA.

In an effort to better understand proven methods for the protection and preservation of submerged cultural resources, this presentation focuses on a survey of state underwater archaeology programs, the type of projects undertaken at state level, and the use of underwater archaeology guidelines. Although Washington State has an abundance of submerged cultural resources, little archaeological research has been completed. States like Rhode Island, Massachusetts, North Carolina, and Georgia have implemented programs to manage, survey, excavate, and educate the public on their underwater heritage. By learning from other state's proven methods of research, protection, and preservation, Washington has the opportunity to start a dialogue about potentially developing its own institution led by professional maritime archaeologists, and further raising the public's awareness about protection of these fragile resources.

Seeing the Forest for its History: Interpreting Heritage Trees as Cultural Resources in Portland, Oregon.

David-Paul B. Hedberg, Pacific Historical Review/ Portland State University.

Portland's urban forest is rooted in the city's history. Anyone is likely to encounter Portland's popular nickname "Stumptown." While partially accurate, the name Stumptown overshadows the historical re-development of the forest itself. My project with the Portland Heritage Tree Program focuses on the ways in which cultural resource managers can use trees to interpret history. I argue that Portland Heritage Trees are some of the city's oldest living cultural and natural resources. The culmination of the project is a walking tour and image-rich field guide entitled *From Stumptown to Tree Town*. The project connects archival collections, historical individuals, architectural history, and archaeological evidence to living trees in the field. With engagement as its primary goal, the project invites the public to explore various research methods, to get outside to see history in the real world, and make meaningful connections to themes in urban, social, and environmental history.

Traditional Medicine and Baby Clinics; Health care and politics on the Flathead Reservation 1900 to 1940.

Christina Heiner, University of Montana.

Traditional healing practices of Plateau natives were complex and met their health concerns. Oral history, stories, and experience conveyed to native peoples the importance of following strict guidelines regarding their relationship between themselves, members in the community, and the spirit world as illness could develop from taking those relationships lightly. Medicine treatments predated European contact but also developed as Plateau peoples "adapted to the environment, economic, and political changes wrought by Europeans." Many of the traditional medicine practices continued under the assimilation policies of the United States although native peoples were persecuted and punished for their religious beliefs. The following papers examines the federal government's health policies and how the two medical systems played out together on the Flathead Reservation during the early part of the 20th century.

Using Pollen to Reconstruct Environments of the Past: Lessons from the Interior Mesic Forests of Northern Idaho.

Erin M. Herring and Daniel G. Gavin, University of Oregon.

Reconstructing past environments is essential to any archaeological study examining the relationship between plants, people, and the landscape. By determining the timing of arrival (or approximate time) of certain species we can examine the relationship between species, climate, and past cultures more accurately. Western redcedar is an ecologically and culturally important tree throughout the Pacific Northwest. Its distribution along the coast has been the focus of several studies, but little is known about the timing of arrival in its interior distribution in Idaho, or whether it survived the Pleistocene glaciations in place. New pollen and macrofossil lake sediment records from the southern edge of the interior distributions of two dominant mesic tree species, western redcedar and mountain hemlock, show that these species only recently arrived (<7000 years ago), having likely dispersed from coastal populations. Expansion into their interior distributions was likely limited by both climate and competition with already established forests.

Creative Mitigation and Community Outreach: A Smart (phone) Application.

Brent Hicks, Historical Research Associates.

The Pend Oreille PUD operates the Box Canyon Dam Project under a FERC license that includes a requirement to provide Interpretation and Education of cultural resources content. HRA worked with the Kalispel Tribe and agency stakeholders to create a

website and Next Exit History mobile application to make historical information available to anyone with internet capability. The intent was to provide such content to interested parties, but also as a way of attracting tourists to Pend Oreille County, the poorest in Washington State, to broaden the impact of the I&E requirement.

The Expansion of Catholicism: An Exploration of St. Joseph's College, the First Catholic Boarding School for Boys within the Oregon Territory.

Cayla Hill, Oregon State University.

St. Joseph's College was located within St. Paul, Oregon, the first Roman Catholic mission in the Pacific Northwest. The St. Paul mission was established in 1839 by Father Francois Blanchet, four years after the French-Canadian settlers in the area had requested the presence of a Catholic priest. On October 17th, 1843 St. Joseph's College was officially dedicated becoming the first Catholic boarding school for boys within the Oregon Territory. Two priests, Fathers Antoine Langlois and Jean-Baptiste Zacharie Bolduc alternated as headmaster until the school's closure in June 1849. This paper discusses the results of my Master's thesis at Oregon State University, which examined the expansion of the Catholic Church during the development of the Oregon Territory. Both the historical and archaeological record were investigated in order to better understand the daily experiences and activities of these Catholic priests as well as the significance of their institution, St. Joseph's College.

Plateau Mass Fish Procurement: Who Did What?

Kristina M. Hill and Janie R. Knutson, Eastern Washington University.

The process of mass fish procurement and preparation is an important aspect to the native populations who inhabited the Plateau Cultural Area. In this paper we will compare the process of mass fish procurement and the gender roles related to the preparation of fish among the Kalispel, Spokane, and Yakima Tribes during the early historic period. A comparison of the gender roles of mass fishing and preparation practices among tribes will include who prepared the fishing toolkits, who conducted the fishing, who and how they prepared the fish. We will also examine storage practices in association with collection of fish. This study will also analyze historic photographs for the purpose of visualizing gender roles in association with fishing practices. Ethno-historic records will be accessed in order to connect the fishing process with the collected photographs. Finally, this paper will review the evidence to compare the gender roles in each tribe.

The Zooarchaeology of Bonneville Estates Rockshelter: 13,000 Years of Great Basin Hunting Strategies.

Bryan Hockett, Bureau of Land Management, Nevada.

Bonneville Estates Rockshelter (eastern Nevada) preserves a record of changing hunting patterns from the Paleoindian to the ethnohistoric periods. Diachronic changes in hunting patterns at Bonneville Estates, as well as a host of other cave and open-air sites from the Great Basin are compared with eight broad climatic phases recognized in the Great Basin. Recent studies of large-scale artiodactyl trapping structures and projectile point frequencies present a more complete picture of long-term shifts in hunting strategies in the Great Basin. Overall, there is much variability in the hunting of large and small game through time at individual sites, suggesting that local environmental and social conditions exerted considerable influence in micro and macro scale hunting patterns across the Great Basin. Creating an "average" Great Basin hunter by combining all the data analyzed here suggests limited artiodactyl hunting during the Paleoindian period followed by an upward trend in large game hunting through time. There is no significant drop in artiodactyl hunting intensity at any time over the last 5,000 to 6,000 years, despite major changes in climate and technology.

Reconstructing the fire History of Hecate Island on British Columbia's Central Coast.

Kira Hoffman, University of Victoria.

The coastal temperate rainforests of British Columbia's Central Coast are comprised of old growth, mixed-aged stands within a mosaic of bog-forested ecosystems. This region receives > 4000 mm of annual rainfall, and fire disturbances caused by lightning are thought to be very rare. We attempt to distinguish the roles of both natural and cultural (Indigenous) fires using multiple lines of evidence from tree ring records, fire-scarred trees, soil charcoal and spatial links to known settlement areas. To reconstruct the Holocene fire history of the study area located on Hecate Island (N 51° 38' W -128° 05'), thirty 400m² forest mensuration plots were systematically established in a 287-hectare area burned in 1893. Several fire events are recorded across the study area, suggesting that cultural fires and possibly the use of fire as a vegetation management tool have a broader impact on forest dynamics on the Central Coast than previously known.

Cobble Chopper Sites in the Vancouver Lake/Lake River Archaeological District.

Dana Holschuh and Alexander Gall, Archaeological Services, LLC.

Cobble chopper sites are characterized by a widespread, low density surface distribution of cobble artifacts. These sites are well-known in the Pacific Northwest but until recently have received relatively little attention in the Lower Columbia Region. Archaeological Services, LLC (ASCC) has carried out testing and evaluation at three cobble chopper sites within the Vancouver Lake/Lake River Archaeological District (VLLRAD) in southwestern Clark County, Washington. This poster will present a preliminary synthesis of methodologies and data from these sites as well as directions for future work to explore their data potential.

"...Any Road Will Take You There": Highlights of ODOT and WSDOT CRM from 2014.

Carolyn Holthoff¹ and Scott S. Williams². ¹Oregon Department of Transportation and ²Washington State Department of Transportation.

At ODOT and WsDOT we seem to spend most years wondering where we're going. Will there be funding for CRM? Will they change Section 106 and 4(f) to the point where any protections for cultural resource management are lost to us? Will there still be CRM programs alive within the DOTs, or any other state agency? But perhaps there's a freedom and creativity in not knowing the answers, perhaps Lewis Carroll was right when he said "If you don't know where you're going.... any road will take you there." While this has been another year of *business as usual* we've noticed changes in regional and national trends in transportation cultural resources management that are worth sharing. This talk and the following session papers will step through those exciting changes and discoveries of transportation CRM in 2014.

Fish Dominance, Fish Diversity, Fish Stability at the Parry Lagoon Midden, DgRv-006, Galiano Island, B.C.

Justin Hopt, Washington State University.

In recent years the focus of subsistence studies in the southern Northwest Coast has shifted to a more descriptive, localized, and historical approach. This has largely been done at the regional to sub-regional level, offering a more nuanced understanding of how and why subsistence changes occur along the coast. Although research has shown the usefulness of this scale of analysis, a smaller, site level analysis also proves beneficial, especially when containing some level of temporal coverage. Here, faunal material is evaluated from the midden component of site DgRv-006, Galiano Island, British Columbia, Canada. This large shell midden contains faunal material from two distinct plankhouse occupations encompassing two separate time periods, the Marpole and Late, allowing an evaluation of potential changes in subsistence overtime at this specific local.

Prenatal Stress, Culture, and Preterm Birth in San Juan, Puerto Rico.

Holly Horan, Oregon State University.

Puerto Rico has the highest rate of preterm birth in the entire United States (U.S.) jurisdiction, ranking third globally just below Malawi and Congo. Often masked by composite rates of obstetrical outcomes in the United States, Puerto Rico's unusually high preterm birth rate presents a unique opportunity to understand how the experience and expectations of pregnancy affect the psychosocial and physiological well-being of pregnant females and gestational age at delivery in a middle-income territory. With an attention to local biologies, mixed-methods, and cultural consensus modeling, this paper will discuss methods that will be used to assess the relationship between social and biological measures of perceived maternal stress and how they may be related to the existing structure of Puerto Rico - serving as an underlying etiology of preterm birth on the island.

Hidden Middens: Identifying and Assessing Submerged Subsurface Shell Midden Deposits in Garrison Bay, San Juan Island National Historical Park, Northwest Washington.

Elizabeth A. Horton, National Park Service.

The multi-component English Camp/Garrison site (45SJ024/025) is situated on a broad terrace on the west side of Garrison Bay, at San Juan Island National Historical Park, San Juan Island, Washington. Archaeological excavations in terrestrial deposits have identified expansive shell midden deposits dated to between A.D. 500 and 1800. Previous underwater investigations in this area have been limited to the intertidal zone of the shoreline. Recently, the National Park Service (NPS) identified additional shell midden deposits covered by active mudflats extending into the neritic zone of Garrison Bay from the backshore. Sediment core extractions and limited subsurface excavations were completed by the NPS to enhance our understanding of vertical land movement and pre-contact lifeways in this portion of the San Juan Islands. This paper presents results of preliminary analysis on submerged stratification, and challenges encountered while assessing submerged site integrity and its relationship with known terrestrial shell midden deposits.

The Meat of the Issue: Mid-19th Century Military Faunal Remains as a Measure of Class Structure at Fort Vancouver, Headquarters of the Columbia Department (Pacific Northwest).

Elizabeth Horton, National Park Service.

Fort Vancouver in southwest Washington served as the administrative headquarters for the U.S. Army in the Pacific Northwest through the latter half of the 19th century. Codified social and economic divisions between personnel were reinforced and reproduced by the military system at the household level through the dissemination of food resources. Excavations of residential structures and outbuildings associated with different personnel classes offered an opportunity to better understand the relative importance of meat in the diet. To more accurately assess military herd economy and personnel subsistence relationships, mid-19th century butchery cut and meat yield analytical units were developed that more closely match the unit of acquisition than those typically used by analysts. This paper presents these units and patterns discerned that provide insight into the processing, consumption, and disposal of food, and whether these trends reflect historically documented class differences and food preferences at this post.

Fillings, False Teeth, and a Fluoride Tray: Dental Artifacts at the Kooskia Internment Camp.

Kaitlyn Hosken & Kristen Tiede, University of Idaho.

The Kooskia Internment Camp (KIC) near Lowell, Idaho, housed Japanese internees during World War II. Kooskia was home to 256 Japanese men who helped to build U.S. Highway 12. As detainees of the U.S. Department of Justice, these individuals were treated as foreign prisoners of war and were subject to the conditions of the 1929 Geneva Convention, which gave the internees the right to adequate medical care. Artifacts recovered from the site indicate that dental care was available. A review of the Geneva Convention, all dental related artifacts, and archival documents will provide insight into the quality of dental care available to internees at the KIC. Additionally, a comparison between the dental care at Kooskia and other internment facilities will provide a base-line comparison for internee health care. Furthermore, an understanding of these conditions will provide the basis for a study of the internees' individual responses to their dental health.

Beyond Life and Death: Negotiating Definitions of Safety in Birth.

Leah Houtman, Oregon State University.

Home birth is culturally uncommon in the Republic of Ireland due in large part to the perception that it is less safe than birth in a hospital, yet this claim rests only on clinical definitions of safety: A live and uninfected, uninjured mother and child. However, interviews with eleven women who planned home births in County Cork, Ireland revealed that, while safety was a primary concern of expecting mothers when choosing where they would give birth, their ideas of what that meant often diverged greatly from the standard clinical definition. The various definitions included mental and emotional wellbeing, control over the environment, and protection from unwanted interventions, in addition to the expectation of a live and unhurt baby. This paper explicates these alternative definitions of safety while exploring the implications the multiplicity of perspectives may have on policies and practices regarding birth and the notion of reproductive justice.

A Maritime Resource Survey for Washington's Saltwater Shores.

Spencer Howard, Susan Johnson, Katie Chase, et al., Artifacts Consulting, Inc.

In 2010-2011, Artifacts Consulting, Inc. completed a survey and inventory of above-grade, built environment properties relating to Washington's maritime heritage. (No archaeological or traditional cultural properties were included.) The goals were to: 1) Understand what types of properties within the survey area contribute to Washington's maritime character, 2) Identify the level of integrity of surveyed properties to inform stewardship efforts and critical attrition areas, 3) Identify direct threats to properties and broader integration needs with related governmental policy and planning efforts to provide a tool for the long-term planning efforts of other agencies and departments and 4) Link history and properties to better promote heritage tourism, providing communities with tools to promote their own stories. This presentation will give a brief overview of the project, the major findings, and a current status for the proposed National Maritime Heritage Area.

Preventative Nautical Archaeology: Protecting and Recording our Historic Ships before they become Shipwrecks.

Nathaniel Howe, Northwest Seaport.

There is no rule that a vessel has to become a shipwreck before nautical archaeologists can reel out their tape measures. Intact historic vessels are likely the most informative material culture record available for deepening our understanding of our maritime past. Although intact vessels have certainly undergone many modifications, skilled archaeologists can identify successive phases of repair and adaptation and distill an impressively thorough and dynamic understanding of a vessel and its cultural and technological contexts—an understanding that will, in turn, shed light on less understood vessels wrecked on the seafloor. Archaeological analysis of existing vessels is rarely pursued despite the profound impacts it has for research, preservation, and public awareness. Nautical archaeologists have an important role to play in the ongoing preservation of surviving historic vessels and 'preventing them from becoming shipwrecks.'

Western Washington Legacy Collections – topics of ponder.

Lorelea Hudson, SWCA Environmental Consultants.

The Martin Site (45PC7) and the Spokane Street historical middens (45KI529 and 530) are only three of many sites with collections that should be revisited. The Martin Site, a shell mound/village site, was identified in 1947 by Richard Daugherty and later tested (1957) and “excavated” in 1959, 1974, and 1976. Structural features, interpreted as house remains, were identified and lithic artifacts, terrestrial and marine mammal bones collected. Radiocarbon dates are 1860+/- 100 years BP and 1440+/- 100 years BP. At the time, this site was the only excavated prehistoric structure recorded on Washington coast south of the Ozette site (45CA24) at Cape Alava. The Spokane Street sites were identified in 2002 while monitoring utility relocations. Artifacts from both sites dated from 1880s to 1920. Both collections were processed and catalogued but never analyzed.

The Archaeology of Wildland Firefighting.

Lucas Hugie, University of Idaho.

Wildland firefighting is a unique topic for a historical archaeologist to study. The use of fire to manage a landscape is typically the focus of those with environmental and ecological academic backgrounds. In most cases those that fight wildland fires rehabilitate

the landscape to remove evidence that for a few critical moments humans tried to dictate where a fire would be allowed to burn. For my thesis I chose to examine six wildland fire sites in Yellowstone National Park and evaluate them based on Christian A. Kull's method described in "Landscapes of Fire: Origin, Politics, and Questions." This method allows researchers to piece together evidence and locate sites of historical fires. Instead of focusing on the environmental impacts of fire I chose to look for evidence of those that sought to suppress the blaze. What material culture is left behind? How fast to firelines fade into the landscape?

Stranded on Sauvie Island: Making Use of Natural Fish Traps.

Sarah Jenkins, Eva Hulse, and John Fagan, Archaeological Investigations Northwest.

Two pre-contact archaeological sites were discovered during an archaeological survey on Sauvie Island in 2014, in an area undergoing habitat restoration to reduce the occurrence of fish stranding during periods of low water in the Columbia River. Both sites are located in a dynamic floodplain environment. Faunal remains associated with tool debitage, fire-cracked rock, and charcoal suggest seasonal camps focused on fish processing. Most of the fish species represented in the assemblages favor shallow floodplain ponds and sloughs. People used this area for fish processing for at least 500 years, and radiocarbon dates indicate at least three unique occupations. Sedimentation in between the occupation layers reflects a dynamic environment characterized by regular flooding, shifting sandbars, and seasonal floodplain ponds. People may have taken advantage of these natural fish traps during periods of low water.

Assessing the Nutritional Value of Freshwater Mussels on the Western Snake River.

Jeremy W. Johnson & Mark G. Plew, Boise State University.

Shell remains from two mollusk species *Gonidea angulata* and *Margaritifera falcata* are commonly found in archaeological sites along the western Snake River. There have been, however, no attempts to assess their nutritional value and dietary role. To further understand the role of mussels within prehistoric diets, the nutritional values of these species were calculated and compared with prey values of other species commonly found in riverine settings in southwest Idaho. Though the caloric value of mussels is relatively insignificant, these species do contain important levels of iron, carbohydrates, vitamin A, and ascorbic acid. Of particular note is the increase in protein, glycogen and lipids during late winter and into spring. A discussion of the life-history of these species provides for consideration of the possible seasonal use during the spring of mussels as a valuable source of calories, proteins, fat, and sugars during a time when other resources were scarce.

Years Below the Prism: a Recent Discovery along Lake Sammamish, Washington.

Paula Johnson¹, Chris Lockwood¹ and Tom Minichillo², ¹ESA and ²King County Roads Services Division.

A Rails-to-Trails project constructed by King County in multiple construction phases has been subject to a Section 106 Programmatic Agreement administered by WSDOT. This project is located on a railroad grade built in the late 1880s along the east side of Lake Sammamish. Most of the cultural discoveries in earlier phases of work involved historic-era railroad related resources, however in July 2014 Native American cultural deposits below the railroad prism were identified. The cultural deposits found on the former beach surface date to 6600 ybp and represent a great diversity of lithic materials and projectile point types. This site provides interesting discussion points on field methods within trail corridors, historic railroad construction techniques, Programmatic Agreements, and the site itself.

Basket Weavers and Collectors; Research on the Mrs. Isaac Lee Patterson Collection at the UO Museum of Natural and Cultural History.

Elizabeth Kallenbach, Museum of Natural and Cultural History, University of Oregon.

The Patterson basketry collection was acquired by Governor Isaac Lee Patterson and wife Mary Elizabeth Woodworth between 1894 and 1903. With over three hundred Native American baskets from the Pacific Northwest, it is one of the largest collections at the Museum. Phase one of this project focused on documentation efforts, including photography of baskets and review of associated archives, including the original collecting journals of Mrs. Patterson. Her journals reveal a complicated narrative about native basket weavers, federal Indian agents, and art collectors of the time. In some cases, weavers and collectors named in the journal have been identified, leading to some surprising outcomes. Phase two research efforts will use journal data to aid in the examination of cultural styles, artistic preferences, and temporal context of the baskets, hopefully adding to the historical narrative of basket collecting and weaving in Oregon during the turn of the 19th century.

Results of Microwear and Residue Analyses of Quartz Crystal Microblades in the Salish Sea.

Rachael Kannegaard, Western Washington University.

This paper describes the results of my master's thesis research on a quartz crystal microblade assemblage from six sites in the Salish Sea dating to the Locarno Beach Phase (3500-2400 BP). Using microwear and residue analyses, I identified a variety of wear patterns on blade edges, as well as multiple residues on their surfaces including inorganic (e.g. red ochre) and organic materials (e.g. fish and human proteins). My analysis of these artifacts indicates these tools served multiple purposes and were utilized for animal processing and possibly ceremonial activities.

Say "Yes" to the Mess: The Archaeological Curation Crisis and Canoe Camp.

Rowan Kaufman, University of Idaho.

Across the United States there are hundreds of archaeological collections being housed in repositories. Unfortunately, many of these collections have very little or even incorrect data associated with them. The material recovered from the Canoe Camp site near Orofino, Idaho is no exception. Locating the inventory forms associated with the collections, and locating the actual collections is difficult, since they are currently managed by several institutions. This is another example of how the crisis of curation is affecting collections in the United States. The use of a standardized inventory form to ensure consistent information, and the inclusion of information on all artifacts recovered from Canoe Camp in a single document would be beneficial. Currently, information from the inventory forms associated with this site is being entered into a comprehensive database, and a standardized inventory form is being created to hopefully make future research on the artifacts easier to carry out.

Cilantro, Anise Cumin: Yum or Yuk?

Sarah A.C. Keller, Eastern Washington University.

Whether a person likes or dislikes a specific food's taste is the result of factors that may be biological, social and/or idiosyncratic. The larger study of which this paper is a part, investigates the causes of strong aversion in some individuals to certain foods that are otherwise accepted in American culture. This particular paper focuses on likes and dislikes of various herbs and spices. As the result of a previous pilot study it became apparent that the ability to discern and describe the taste of specific herbs/spices is often more difficult than for other bulkier ingredients. It is proposed, however, that individuals with a genetic-based aversion to a specific herb/spice may still detect and identify it in very low concentrations. Three groups of participants were surveyed: professional chefs/sous chefs and cooks; gourmets/gourmands/foodies; and a convenience sample of adults who did not identify with either of the other two groups.

Mapping Sustainability: an Interdisciplinary Undergraduate Research Project.

Alicia Kelly, Edmonds Community College.

Mapping Sustainability is a grass-roots, interdisciplinary, undergraduate research project at Edmonds Community College. Our goal is to increase awareness of and access to sustainable resources and practices. Students explore available food and sustainability options, write reviews evaluating sustainability in local businesses, and reflect on connections between this experience and course materials in anthropology, English, and diversity studies. Results of this research are published on an interactive online map, which is open and available to the public. Mapping Sustainability is building healthy communities and a healthy planet, through sharing resources and information. This undergraduate research project creates connections in communities, and instills confidence and competence in students, as well as breaking down barriers between education and real-life.

Report from the Hot Tin Roof - Post-Fire Fieldwork on the Methow.

Katherine M. Kelly, Washington State Fish and Wildlife.

I was less than a year on the job when 250,000 of "my" forest burned in Washington State's Carlton Complex Fire. The year I was hired, the 80,000 acres burned in the Colockum-Tarps Fire, a burn representing so significant a management issue that it was included as our hypothetical management challenge on the job interview. Post-fire management presents a cascading series of challenges and opportunities for cultural resources managers, however fire effects are rarely factored into long-term planning. In this presentation, I share the results of my post-fire fieldwork in the burned forests, and discuss the opportunities to test and refine theory, based on observations on the Methow Wildlife Area in Okanogan County, Washington.

Chert Artifact-Material Correlation at Keatley Creek using Geochemical Techniques.

Heather Kendall, Simon Fraser University.

Globally, chert is the most common rock material found in archaeological contexts. Its prevalence on the Earth's surface in Quaternary deposits and relative abundance in archaeological contexts indicate that it was an important resource material for ancient populations, and as such, can provide information about toolstone exploitation in prehistory. The results of this research suggest a local origin for the chert artefacts recovered from ST 109 at the Keatley Creek site (EeR1-7) in the mid-Fraser region of south-central British Columbia, but also a remote origin for the toolstone deposits within the study area. Elemental characterization suggests that although the deposits are geographically separate, they likely derived from a much larger parent source, redeposited in the mid-Fraser region by glacial activity prior to human occupation of the area.

Macrobotanical Analysis of Hearth Features at LSP-1 Rockshelter, Lake County, Oregon.

Jaime Dexter Kennedy, University of Oregon.

Over the past five field seasons, collaborative research at the LSP-1 rockshelter in Oregon's Warner Valley conducted by the University of Nevada, Reno archaeological field school and Bureau of Land Management has revealed a record of human occupation spanning the Holocene. This paper presents preliminary research results for macrobotanical data obtained at LSP-1 rockshelter and provides a window onto the ecology and diet of Holocene hunter-gatherers. Archaeologically preserved seeds and

charcoal collected in hearth features offer evidence for plant foods processed and consumed in the rockshelter. These data are evaluated within a framework of regional climate change and are compared to local paleoecological records in order to better understand human-environmental interactions through time in southcentral Oregon.

Untangling depositional palimpsests at Weasel Cave, North Ossetia, Russia.

Todd Koetje, Western Washington University.

Middle Paleolithic cave and rockshelter deposits are notoriously complex, but hold out the promise of shedding light on important aspects of Neanderthal site structure and function. In this paper I apply a variety of exploratory techniques with an eye to untangling the deposits around a Mousterian hearth from ca 65 k years ago. The result is a clearer picture of the use and reuse of a portion of the cave and how it relates to the more extensive deposits from contemporary and subsequent occupations.

New perspectives on Native American occupation of the Puget Lowlands of Washington during the Late Pleistocene-Holocene transition from the Bear Creek Site (45KI839)

Robert Kopperl, Amanda Taylor, Christian Miss, and Kenneth Ames, SWCA Environmental Consultants.

The Bear Creek site in Redmond, Washington has yielded important information about Native American settlement, subsistence, and technology in the Puget Lowlands during the Late Pleistocene-Holocene transition. New data is presented on chronology, paleoenvironmental reconstruction, and lithic analysis conducted as part of the 2013 data recovery investigation. New dates contribute to an age model that places the initial archaeological component prior to 10,000 cal BP. Occupation of this lakeshore ended by the early Holocene as the position of the shoreline shifted and the local environment became a wetland. The lithic assemblage is dominated by an expedient flake technology, but also contains bifaces, retouched tools, and associated debitage. Analysis focuses on procurement strategies of local volcanic and metasedimentary cobbles and extra-local materials, production sequence of flake tools, and technological comparisons of the Bear Creek stemmed and concave-base points with Paleoarchaic technologies of Western North America including Clovis, Western-Stemmed, and Olcott traditions.

Visualizing History on the Grand Ronde Reservation.

Ian Kretzler¹ and Breece Edwards², ¹University of Washington and ²The Confederated Tribes of Grand Ronde.

The history of the Grand Ronde Reservation is one of complex demographic, cultural, and economic change. Originally encompassing over 60,000 acres in northwestern Oregon, the reservation was populated by Native communities representing over 27 bands and tribes from across western Oregon. In subsequent decades, various governmental programs altered traditional settlement patterns and facilitated the transfer of valuable land to timber companies and settlers. In this paper, we provide a visual account of these events through GIS. Synthesizing historical documents, archaeological data, and ethnographic reports with late nineteenth and early twentieth century maps of the reservation, we track shifting patterns of land use, parcel division, and ownership through time. In addition to enhancing our understanding of Grand Ronde Reservation settlement history, this research enables identification of areas in which spatial references concentrate. These may prove fruitful locations for future archaeological investigations chronicling stability and change experienced by tribes on the reservation.

Geoarchaeological Prospection for Buried Early Sites in the Lower Salmon River Canyon, Idaho.

JD L. Lancaster and Loren G. Davis, Oregon State University.

A Western Stemmed Tradition artifact assemblage discovered at the Cooper's Ferry site in potential association with ages of 11,410–11,370 radiocarbon years before present (B.P.) has prompted questions of where sites of similar ages may be buried in Idaho's lower Salmon River canyon landscape. To accelerate the discovery process, we employed a geoarchaeological research framework wherein late Quaternary landforms were mapped and their associated sediments and soils investigated along an unexplored reach of the river. Bulk soil organic matter radiocarbon ages, soil geomorphology and tephrochronology revealed a record of landscape evolution spanning 15,800–4,095 B.P. A widespread soil formed on terrace fills and alluvial fan deposits, was buried by fluvial sands and loess sometime after 12,700–12,300 B.P., and has the potential to hold late Pleistocene-age archaeological sites. A model of landscape evolution and preservation potential of buried early sites is presented for archaeological research and cultural resource management applications.

Visibility Analysis of Defensive Settlements on Rapa.

Brian Lane and Robert DiNapoli, University of Oregon.

Fortifications and defensive features have a long history of study globally, including small Pacific islands. This paper follows recent trends in quantitative analysis of visibility from and to probable defensive features on the island of Rapa in the South Pacific. Understanding of placement decisions for forts and settlements are important for a more accurate interpretation of the past. Application of established theoretical frameworks that deal with decision making and spatial placement aid in understanding the configuration of settlement forts on Rapa. Data are analyzed with geographic information systems with the goal of understanding likely visual relationships between fortifications and the most likely resources being defended.

Working to Death: The Rise of Chronic Kidney Disease in Central America.

Nicole K. Larsen, Western Oregon University.

In the past two decades alone, over 20,000 people in Central America have died from chronic kidney disease (CKD). The alarming growth in the number of CKD victims has raised major concerns in both the public health sector and among the general populations of Central American countries. In my poster, I discuss the prevalence of CKD in Central America today. I first outline the relationship between individuals afflicted by CKD—most of whom are agricultural workers—and their exposure to various agrochemicals (e.g., pesticides and fertilizers) through farm work. I then present the working conditions and regional factors based on geography, altitude, and ambient temperatures that factor into CKD prevalence as well, arguing that exposure to these factors account for the CKD epidemic across Central America. I conclude by discussing possible actions that public health officials in Central America could consider for effectively addressing this escalating epidemic.

The Effects of Low Temperature Recrystallization and Isotope Depletion on Biogenic Aragonite Taxa of the Northwest Coast.

Susan C. Larsen, Western Washington University.

For archaeologists reconstructing paleoenvironments, marine invertebrate shells preserved in middens are valued for information they hold about the paleoclimate. However, some of these shells could yield inaccurate data about the past if they have been heated, leading archaeologists to interpret warmer past climates. To explore the conditions of recrystallization in biogenic aragonite shells, I have conducted an experiment with bivalve taxa commonly found in Northwest Coast middens. I collected live specimens from Samish Island. Of the two valves of each individual, I retained one as an unaltered control, and heated the other. After mineralogical and isotope analysis of the heated and control valves, I found that biogenic aragonite shells recrystallize into calcite between 300° and 400°C, and lose significant amounts of heavy oxygen isotopes used for paleoenvironmental reconstruction. This occurs at lower temperatures than archaeologists may expect, and without the characteristic charred appearance often associated with burning.

The Perfect Match: How Online Dating has affected courtship rituals in the Willamette Valley of Oregon.

Joshua Lasky, Western Oregon University.

The increased use of online dating has raised various questions regarding shifts in contemporary courtship rituals. To better understand these effects, I conducted a general literature review and an ethnographic research project in the Willamette Valley of Oregon. Working with 10 adult participants over a 6-month period, I found that online dating gives people new ways to practice courtship, but does not change why people court each other. To substantiate my findings, I discuss how the use of online dating has changed over the past 20+ years and how public perspectives towards the practice have shifted. I conclude by delineating the role online services play in the courtship rituals of adults looking for relationship and love, and demonstrate the need for further research regarding virtual courtship practices in the United States.

Historical ecologies of swætixʷtəd in the Duwamish-Green-White River Watershed.

Joyce LeCompte, University of Washington.

Expanding on the Burke Museum's "Puget Sound Traditional Foods" database, this project used archaeobotanical, ethnographic, and historical evidence to enhance our understandings of the co-production of people, plants, and place in the historic Duwamish-Green-White River Watershed. I compared the archaeobotanical record with regional ethnographies to analyze the role that plants played in pre-contact Coast Salish diets, and the interplay between the particular nutritional and ecological properties of plants and Coast Salish daily life. The primary goals of this project were 1) to augment the Puget Sound Traditional Foods database with more information about plant use (both for food and as technologies), 2) to gain greater insight into indigenous stewardship of upland terrestrial habitats, and 3) to investigate the relationship between social networks and plant foods. The study provisionally affirms archaeological theories of resource intensification beginning ~2,500 – 3,000 years BP. The study also provides preliminary insight into the interplay between the location of particular plant foods in the watershed and Coast Salish social organization as documented in the ethnographic record. The higher proportion of root foods in the inland and montane sites gestures toward dietary differences between saltwater and inland, where carbohydrates may have played a more important role. This in turn may have shaped the extent to which landscapes were managed for culturally important root foods on the Enumclaw Plateau.

Roasting Breadfruit in Micronesia: A Combined Macroremain and Phytolith Analysis.

Maureece Levin, University of Oregon.

The identification of features where people have cooked is an important component of paleoethnobotany; these features can provide information on how plants are prepared for consumption. In Eastern Micronesia, breadfruit is an important staple crop and has likely been part of the diet since initial settlement. However, few studies directly investigating its past production and use in the region of have been conducted. This paper uses combined macroremain and phytolith analysis to identify breadfruit production at an historic feature on Temwen Island, Pohnpei, Micronesia. Charred breadfruit exocarp was recovered, indicating breadfruit roasting. Phytolith analysis does not provide direct evidence of breadfruit, but does reveal other taxa that are not present in flotation samples, demonstrating the utility of analyzing multiple lines of botanical data. Thus, this project presents new direct evidence of breadfruit cooking and a model for approaching a more comprehensive study of plant remains in cooking sites.

Schoolteachers and Popular Resistance in Honduras: Interrupting Neoliberal Education Policies from Within the State.

Jordan Levy, Pacific Lutheran University.

What happens when resistance to neoliberalism comes from the same people responsible for implementing such policies of governance? In Honduras, governments following the 2009 military coup have been privatizing most basic public services, including the national education system. Schoolteachers, however, reject the neo liberal spirit of these reforms, even though they are the state agents ultimately responsible for implementing these policies in the everyday contexts of schooling. Teachers fear that now only children of the rich will have access to a primary and secondary education in Honduras. But instead of holding prolonged strikes, teachers are developing adept ways to promote a public image of their compliance with the new laws, at the same time they mobilize popular resistance against such neoliberal governing policies. Based on fieldwork in 2012, the first year of these reforms, I argue that teachers' partial compliance is a strategic form of interrupting neoliberalism from within the state.

Message in the Bottles: Analysis and Interpretation of Site 45WH1001, Woodstock Farm Bottle Dump, Whatcom County, Washington.

Ian Richard Lewis, Equinox Research and Consulting International, Inc.

To most people, a bunch of bottles in the dirt is simply that, a bunch of bottles. Trash. Perhaps recycling. But mainly useless trash. Even as archaeologists, we recognize such objects as trash, yet the difference is we do not see this trash as useless. Site 45WH1001, a historic bottle dump dating to the early 1900s, was inadvertently discovered winter 2014 by sewer utility trenching within the Woodstock Farm Campus in Whatcom County, Washington. Much historic and archival information is available regarding the occupants of Woodstock Farm, but the message contained in these bottles provides even more insight into one of the most fascinating and influential founding families of Whatcom County.

Learning to Shave: Experimental Archaeology of Antler Debitage.

Ian Richard Lewis, Equinox Research and Consulting International, Inc.

Antler, due to its dense nature, was used for a variety of tools, ranging from points and pressure flakers to wedges and handles. Many archaeologists recognize the characteristic marks left on antler as a result of adzing to reduce antler beams into manageable pieces and blanks. Similar to bone, antler can sometimes even be flaked and fractured, though not as easily as stone. However, not much notice has been given to antler shavings in the archaeological record. There are three types of antler shavings, or curls. The goal of this experimental archaeology was to test whether or not the three types of antler shavings are produced sequentially, possibly similar to the primary, secondary, and tertiary flakes of the lithic reduction sequence.

Laughter Lifted From the Loom - Cultural reciprocity in the Raven's Tail weaving community of Damascus, Oregon.

Mathilde Lind, University of Oregon.

"Laughter Lifted from the Loom" explores how Raven's Tail weavers in Damascus, Oregon navigate questions of authenticity within their own group and of cultural reciprocity and appropriation with the Alaskan coastal tribes (Tlingit, Haida, and Tsimshian) that use Raven's Tail regalia in their traditional ceremonies. Raven's Tail weaving is a traditional Alaskan coastal form of twining used to produce ceremonial garments. It was lost for over 150 years before being reconstructed by a non-native weaver through museum research. She then taught Native Alaskan and non-native weavers, whose garments have since reentered traditional ceremonies. This parallels the decline and reinvigoration of weaving as a community activity in American culture. Through participant observation and interviews, this research reveals how the Damascus weavers simultaneously and intentionally participate in both revivals, interacting meaningfully with the tribes while forming an authentic community centered on shared creative practice.

Public Archaeology and Local History: A Collaboration between Homeowners and Archaeologists at the Booker House in Jacksonville Oregon

Sarah Lind, Southern Oregon University Laboratory of Anthropology.

An ongoing collaboration between a private landowner and the Southern Oregon University Laboratory of Anthropology (SOULA) has led to an educational and comparative collection that is shedding new light on the working class families in 19th century Jacksonville, Oregon. To date, over one thousand artifacts have been catalogued from The Booker House. Artifacts range from child's toys, to pressed glass tableware, to medicine bottles. The goals for this collection include creating portable, accessible ways to transport artifacts for public archaeology and providing a unique opportunity to share physical aspects of history with the public. This site and the resulting collection highlight the potentials of collaboration between homeowners and archaeologists.

Overview and Setting of the South Magnolia Combined Sewer Overflow (CSO) Control Project.

Chris Lockwood, Environmental Science Associates.

Construction of King County Wastewater Treatment Division's South Magnolia CSO Control Project resulted in discovery of 45-KI-1200, a deeply buried historic site within the tideflats of Seattle's Smith Cove. This paper discusses the natural environment of Smith Cove and developments leading to filling of the tideflats. The background of the project and opportunities for preconstruction cultural resources management are also presented.

Heiltsuk Adoption of Euro-American Material Culture at Old Bella Bella, British Columbia.

Michelle Lynch, Simon Fraser University.

The contact-era Heiltsuk settlement of Old Bella Bella, British Columbia, site of both HBC Fort McLoughlin (1833-1843) and a Methodist mission (1880-1890), existed during a time of rapid change resulting from interactions with Euro-American groups. Notable among these changes is a shift from traditional plank houses to European-style single-family frame houses that occurred shortly after missionary arrival. Using data collected during a 1982 excavation, this study compares the artifact assemblages from Fort McLoughlin, one contact-era traditional plank house, and one frame house to analyze changes in the frequencies of various artifact types between the two contact periods. By looking at how European goods were incorporated by the Heiltsuk into their culture over time, this research examines the process of adoption of Euro-American material culture on the Northwest Coast and explores the idea that material culture was actively used by the missionaries as a tool of enculturation.

Challenges of Locating a Tribal Cemetery Outside the Oso Slide Area /SR530 Site Stabilization Project.

Kerry Lyte, Stillaguamish Tribe of Indians.

While no Stillaguamish Tribal members were victims of the Oso Mudslide, this area falls within the ancestral area of the tribe and has been utilized and occupied by tribal members for many thousands of years. The tribe has a sacred site (Mount Higgins) just outside the slide area, and historically, tribal members homesteaded just upstream (and downstream) from the mudslide. One of the pressing questions we were faced with in the days following the slide was whether a cemetery was being flooded out by the water that backed up, and where exactly that cemetery was located. Using historic maps (ex: GLO, Anderson), ethnographic research, field visits, and interviews with current property owners and tribal members, we were able to positively identify the cemetery and register it in the DAHP database. I will go through some of research and methodology of this process.

Fun and Games: Evidence of Play at Fort Boise.

Mairee K. MacInnes, Amanda C. Biemann, University of Idaho.

The ideal child of the 19th century was seen and not heard, and today the lives of these children are often overlooked in the documentation of the past. They did, however, have a lasting impact on their surroundings in the American West. Recent excavations of a surgeon's quarters at Fort Boise reveal insights into some of the earliest evidence of play in the state of Idaho. Artifacts unearthed from below the home's porch include toys and educational materials dating to the turn of the twentieth century.

These artifacts, rather than being discarded into a trash area, were lost beneath the floorboards. The child-related artifacts, along with some other artifacts of domesticity hint at past activities played out on the quintessential home surface: the front porch.

Upper Klamath Rock Features: "Rain Rocks".

Joanne M. Mack, University of Notre Dame.

There are many types of rock features within the Upper Klamath River Drainage System in California and Oregon: rock pits in talus slopes, rock walls, rock rings, rock cairns, and what are called "rain rocks." Rain rocks are boulders pitted with shallow cupulas, which in other areas of the West have other names. In the Upper Klamath some are large and well known, but others are quite small and can easily go un-noticed. Along the Upper Klamath River all known rain rocks are on or immediately adjacent to villages and within view of the river. Among the Shasta, medicine people used these cupula-rocks to control rainfall, which in turn controlled water levels of the river and affected salmon runs. Therefore, rain rocks are art and mechanisms for the control of the environment, influencing the available amount of an important food resource.

Upper Klamath River Obsidian Frequencies.

Joanne M. Mack, University of Notre Dame.

The Southern Cascades, Klamath Basin, Modoc Plateau, and Warner Mountains within southern Oregon and Northern California provide many discrete sources of obsidian. The archaeological sites of the Upper Klamath River Drainage lie just west, northwest, and southwest of these sources. Commonly anthropologists presume a community uses the closest source. However, distance may not be the only variable to influence source use. Possible variables include tool quality, time, tool class, and cultural interaction, preferences, and boundaries. Thus distance may not be the only variable, accounting for observed toolstone distribution in the UKRD; cultural interaction and identity seem more important. The relevant data for developing this hypothesis results from a pilot study that included the XRF analysis of a sample (434) of obsidian tools from 49 sites and 7 isolates, indicating distance is unlikely to be the *only* variable to consider in this region's obsidian source use.

The Dalles Chinatown: An Unexpected Discovery.

Maryanne Maddoux, Oregon State University.

The Chinese laundry site (35WS453) at 210 East First Street, is an integral component of a one block Chinatown in The Dalles, Oregon. Its location next to the Columbia River, in close proximity to the Oregon and Barlow trails, makes The Dalles Chinatown an especially diverse and historically significant area of the Pacific Northwest. The Chinese laundry site has had a dynamic history including multiple floods and a catastrophic fire which are still evident in the stratigraphic record at the site. Archaeological excavations at this site (35WS453) have yielded a dense material record that reanimates this landscape with gambling, opium use,

and a multitude of social and economic activities. The Chinese Laundry offers a rare glimpse into the recreational gaming and everyday activities associated with the lives of early Chinese immigrants in a small town at the turn of the century.

Nation as Clinic: Brazil's National Children Department and the Politics of Maternal and Infant Health (20th Century perspectives).

Cari Maes, Willamette University.

This paper analyzes public health policymaking targeting mothers and children at the time of the founding of Brazil's National Children's Department in 1940. It examines the ways in which doctors for the first time became federal officials and attempted to apply their peri-natal clinical practices to Brazil's fledgling public health system. Intriguingly, this department's interventions in the 1940s not only represented a unique fusion of biomedical practices and pioneering public health programming aimed at women and children, but also paved the way for increased state involvement in reproduction and child rearing. This historical examination helps frame our understanding of recent, high-profile cases of state and medical overreach, such as a sharp increase in forced c-sections, as a part of a longer evolution of reproductive justice, biomedicine, and public health in modern Brazil.

"Let Me Stand Next to Your Fire (After it Cools Down)"

Maurice Major, Washington Department of Natural Resources.

Wildfire and controlled burns create opportunities (and sometimes obligations) to do archaeological survey under conditions radically different than what most archaeologists are used to. While there may be constraints due to safety concerns and fire-related taphonomy, fire generally offers unparalleled visibility that allows archaeologists to both cover more ground than usual and to zero in on details usually hidden in the bushes. After a couple years of opportunistic fire-chasing, I share some observations about the methodology and techniques of post-fire survey, the fleeting glimpses of some data that may only appear after fires, and other data that go up in smoke.

Women, Children and Agency in the Early Oregon Country.

Mollie Manion, Oregon State University.

Due to the patriarchal societies that most historical archaeologists research, many of the historical documents are often written for, by or about men. Historical archaeologists have often interpreted these archaeological sites as if these male heads of household were the only ones in the household contributing to the archaeological record or making any meaningful decisions in the past. However, the research at 35MA41, the Newell Farmstead, have revealed that women and children were not only active members of their household, but essential to the development of the early Oregon Country. Evidence at the Newell site has shown that women were in charge of the domestic household, including childcare, farming, animal raising and indigenous traditional skills.

A Brief Survey of Washington's Submerged Cultural Resources.

Jacqueline Marcotte, ESA.

Washington State has approximately 28,000 miles of shoreline, 8,000 lakes, over 150 rivers, and 40 bays/estuaries. The Department of Archaeology and Historic Preservation estimates that more than 1,000 shipwrecks lie on state owned aquatic lands. Other underwater resources include (but are not limited to) prehistoric stone and historic metal anchors, prehistoric fishing hooks, stone net anchors and weights, bridges and railroad cars, as well as locomotives and aircraft. In an effort to better understand the breadth of submerged cultural resources in Washington, this presentation focuses on a survey of known (and some little known) sites sunk beneath the waters of the state.

Power Belts, the Spermatic Economy, and Masculine Panic at the Turn of the Century.

Dan Martin, Temporal Diagnosticians.

Power Belts were the first personal, portable, electronic devices and they sold in the tens of thousands. Find out what they were for; discover what they looked like! Contemplate the Mystery: what world view created them? Why have they disappeared?

Site 35CO2: Finding Context through Comparison.

Kelley Prince Martinez, AINW.

The Rylander/Decker archaeological site (35CO2) is a late prehistoric site located near Scappoose, Oregon. The Rylander collection contains artifacts indicative of a village site and was recovered during farming activity at the Rylander homestead between 1909 and 1946. The Rylanders are allowing access to the collection from site 35CO2 to AINW. Analysis and documentation will be conducted prior to donation by the Rylanders to the UO's Museum of Natural and Cultural History. A portion of site 35CO2 was excavated by members of OAS from 1960 -1963. Artifacts recovered were collected and bagged with provenience information. After the excavations, artifacts were classified then returned to the individual who excavated the block. By examining OAS records, artifact classifications, and remaining artifact collections, I aim to give the Rylander collection, which lacks provenience, context through comparison, thus increasing understanding of the village site in the context of the Lower Columbia River Valley.

Managing Risk on the Street: Forging Alliances and Building Trust.

Hillary Matson, Central Washington University.

At night in San Diego's historic Gaslamp district, street performers, or buskers can be found trying to capture the attention of passersby as they make their way to the nearest restaurant or nightclub. These buskers work for tips on crowded sidewalks adjacent to corporate entertainment venues. This ethnographic study explores how buskers in the Gaslamp forge alliances with those they share the streets with, including night club promoters, bouncers, passersby and cab drivers. These alliances are both actively sought out and inactively acquired. Through participant observation, direct observation, and interviews, I explored how gifting and creating networks of trust can help buskers manage risk and earn respect. How do buskers benefit from alliances formed within this corporate controlled environment, yet still maintain their independence from it?

A Unified Team: Integrating Local Spotters and Archaeologists.

James H. Mayer and Vonne VanLaningham, AECOM.

The SR530 Incident Debris Removal project required a large crew composed of people with varying backgrounds and different relationships to the slide. While the routine of day to day operations were often uneventful, the project was also one of exceptionally high emotional sensitivity. It was also a project that required a daily commitment to keep one's self and co-workers safe. This presentation will examine the experience of two crew members with different backgrounds. The emphasis will be on our thoughts and feelings going into the project, what our day to day roles were, and our perspectives at the projects end.

Elk Pass Obsidian and Precontact Band Territory in the Southern Washington Cascades.

Rick McClure, U.S. Forest Service – Retired.

At the landscape level, the embedded procurement strategies of hunter-gatherer-foragers may produce archaeological distributions of toolstone material that reflect the home ranges or territories of a specific group or band. The distribution pattern of Elk Pass obsidian within the southern Washington Cascade Range provides an example from the southwest Plateau region. Located in an alpine setting at the crest of the Cascades, the geochemical source is a toolstone quarry (45LE286) used as early as 6500 B.P. Distance-decay curves for formed tools and lithic debitage demonstrate the limited distribution of Elk Pass obsidian, with little to no evidence for exchange. The archaeological distribution for the material is limited to a radius of 52 km, and confined entirely to the upper Cowlitz River basin. Mechanical properties or quality of the toolstone may be a factor limiting distribution. The pattern of distribution suggests toolstone use was restricted to a specific band or small group of related bands with direct access to the Elk Pass quarry.

Small Town Skid Row: Historical Analysis of Historic Block 3 Walla Walla, Washington, ca 1940.

Kelsi McDaniel, Fort Walla Walla Museum.

Located in downtown Walla Walla (city), Washington, Historic Block 3 was inhabited by a diverse set of residents, along with the city's City Hall in the 1940s. During a cultural resource assessment, Fort Walla Walla Museum found historical sources that referred to this area as "skid row." Skid rows are typically home to decrepit hotels, bars, and brothels frequented by unsavory characters. However, Walla Walla's does not seem to meet this image. This poster is the result of researching census records, city directories, historical maps, and other historic sources to determine what exactly made Historic Block 3 a skid row in the 1940s.

What We Found: Personal Item Collection At The Oso Mudslide.

Sarah Meyer, AECOM.

Dozens of personal belongings were recovered everyday onsite, amounting to 1,001 items total. We utilized archaeological laboratory procedures to process these "artifacts," though protocols were customized as needed in order to establish a system that worked for the unique demands of the project, especially as the vast assortment of items expanded in quantity and content. It was especially important to maintain stringent records for each and every belonging recovered. Spotters also had an emotional investment in many of the items collected, and so all voices were heard whenever the decision to save an item became complex. This presentation discusses the system for personal item collection and processing, its components, and the unexpected aspects of coming face to face with what was and wasn't salvageable.

A Cultural Landscape Approach to Submerged Cultural Resource Management: Cultural Heritage Ecotourism Opportunities for the Shipwrecks of Lake Union, Seattle, Washington.

Zachary L. Meyer, University of Washington.

The interdisciplinary field of marine and environmental affairs focuses on the dynamic relationships between society and the natural world. These interactions overtime create a *cultural landscape* where archaeological resources, such as historic shipwrecks, serve as a tangible link to the interactions between humans and nature that have shaped the modern landscape. The *cultural landscape approach* offers a framework to address interconnected social-ecological systems in a holistic manner consistent with the direction of modern natural and cultural resource management. This thesis utilizes the cultural landscape approach and the ideals of ecotourism to develop tourism recommendations for incorporating shipwrecks and other submerged cultural resources into the modern social-ecological system of Lake Union, Seattle, Washington.

Cascade Pass: A Pre-Mazama Alpine Camp in the Northern Cascade Range of Washington State.

Robert R. Mierendorf, TA.QT Studies.

A stratified record of human occupation, tephra deposition, and soil accretion is revealed from test excavations at 45CH221, on an alpine saddle on the Cascade Range crest. A radiocarbon-based chronology on 12 anthropogenic wood charcoal samples from four cultural components indicates Early to Late Holocene use of Cascade Pass. Two pre-Mazama rock-sided pits date between 9,700 and 7,100 cal. years BP. Foraging in localized alpine resource patches and trans-Cascade alpine travel linking both Northwest Coast and Plateau populations have been traditional indigenous practices for at least the last 9,500 years.

Toolstone Geography in the Upper Skagit River Valley and Adjacent Areas.

Robert R. Mierendorf, Kevin E. Baldwin, TA.QT Studies.

The Upper Skagit Valley cuts through the core of the northern portion of the Cascade Range, uniquely positioned as the convergent headwaters of the Fraser, Skagit, and Columbia Rivers. The valley also cuts into chert bedrock, where it was quarried since the Early Holocene. Data from Salish ethnohistoric records, archaeological surveys and excavations, and museum artifact collections define the Hozomeen chert toolstone quarry complex based on physical, petrographic, geographic, and technological criteria. Artifact-to-source correlations show that most toolstone use was within 20 km of bedrock quarries but that it circulated to distal outlier sites located up to 150 km distant, an expanse covering portions of the Northwest Coast and Plateau. Radiocarbon dates and time-sensitive artifacts indicate use for 10,000 years or more. The toolstone's technology is organized according to raw material abundance, quality, access, and distance to lowland settlements. Routes of toolstone dispersal from the quarry complex followed river corridors and topped alpine divides, including the Cascade crest, and circulated to distant lowland riverine villages.

Upper Skagit tribal history reframed

Bruce G. Miller, University of British Columbia.

By engaging longer temporal frames than customary in ethnohistory, Upper Skagit tribal past and present takes on a particular shading. Using archaeological regional perspectives, ethnographic data from four key researchers (Collins, Snyder Miller, Malone), published accounts and pioneer records, I argue that the long-term spine is of an oscillation between aggregation/disaggregation. I explore themes of mountain/waterscape peoples; of egalitarianism v. hierarchy in interpreting the history/culture of the Upper Skagit people. I incorporate data from all of these disciplines to examine the means by which the tribe has retained cohesion in light of destructive forces of colonialism. I use photos from the late June Collins in making these points.

Cultural Landscape of Camp Adair: A World War II U.S. Army Cantonment in the Willamette Valley, Oregon.

Rick Minor and Kathryn A. Toepel, Heritage Research Associates.

Camp Adair was a 56,000-acre U.S. Army post where troops were trained for combat during World War II. At its peak from 1942 to 1944, Camp Adair had a population of 40,000, making it the second largest city in Oregon. At war's end, Camp Adair was declared surplus. In subsequent years, almost all of the 1800 buildings in the 2500-acre cantonment were removed, leaving the street system and the concrete piers, pads, and foundations from former buildings as the primary indicators of the former post. Today, a large portion of the cantonment lies within the E.E. Wilson Wildlife Area managed by the Oregon Department of Fish and Wildlife (ODFW). This paper reviews the results of a recent study undertaken to assess the archaeological potential in the cantonment undertaken as part of the planning process for future wildlife habitat restoration in the Wildlife Area.

An Exploration of the Vernacular Architecture at the Robert Newell Farmstead (35MA41).

Emily Modelski, Oregon State University.

This presentation will explore the architectural material culture excavated at the Robert Newell Farmstead (35MA41) in the current Champoeg State Park. The focus specifically is the vernacular architecture or the features and construction methods used that both reflect the environment and the cultural traditions of the dwellings occupants. The Robert Newell farmstead is a well preserved site that reflects the (1830s-1860s) settlement history of Champoeg, first settled by French Canadian fur trappers who were then slowly overcome by a large American homesteading population. As excavations took place at the site, it became clear that several periods of construction had occurred reflecting these different cultural building traditions. This presentation will explore the unique French Canadian and American construction styles as seen at the Robert Newell site, as well as the literature and previous work that has been completed surrounding this subject.

Beyond the Eyes of the Dominant: Reciprocity and Peace-building on the Street.

Saeed Mohamed, Central Washington University.

Low-income African immigrant young men in U.S. metropolitan areas are subjected to police surveillance as well as stereotypical media representations, which emphasize violence, drug abuse, and criminality. In my fieldwork with youth in a major Pacific Northwest city, I studied the ways in which this dominant gaze is both internalized and redirected. This paper concentrates on one nighttime ethnographic incident, in which a potential gunfight between two groups of young men was narrowly averted through replacing one form of negative exchange with a positive exchange action. In this social drama, an escalation of insults led to the ominous brandishing of weapons. At a critical moment, one of the principal's attention was reoriented through the gift of marijuana,

reminding him of bonds of fictive kinship with his companions and pacifying the situation. When can such gift economies co-exist with, or overcome, hegemonic structures of power and violence?

The Body as a Battlefield of Resistance: Cracking the Skulls of the "System" in a Polynesian Performance.

Patrick Evan Molohon, Central Washington University.

Through the analysis of a Marquesan haka performance in a touristic setting in Tahiti, this paper explores the notion of the Polynesian body as a site of struggle between the gaze and premonitions of cosmopolitan French tourists of the exotic other, and the resistance and self-interiorizing of the body by Marquesans. Many contemporary Marquesans choose to migrate to the more urbanized, popular tourist destination of Tahiti, for work, schooling, and medical procedures. Removed from their native land, Marquesans still build upon traditional cultural practices and worldviews, while simultaneously actively creating innovative aspects of their experience in the new setting. I gathered stories of how tourist performances create and affirm Marquesan culture via ethnographic research, participant observation and interviews in August, 2014, Pape'ete, Tahiti. How does the body, prone to commoditizing processes within the tourist system, also emerge as a site of moral economy, community empowerment, and generalized reciprocity?

The Emergence of the Commercial Dive Fishery for Sea Cucumbers and Its Impact on Individuals, Communities and the Ecology.

Daniel Monteith, University of Alaska Southeast.

In the 1990s the commercial dive fisheries began to expand in many areas along the Pacific Coast. This research will focus on the harvesting of sea cucumbers in Southeast Alaska and the Galapagos Islands, Ecuador. Both fisheries created development opportunities fueled by a boom in the market demand for sea cucumbers. The rapid development of these fisheries heavily impacted the availability of the resource and the marine ecology. Two decades after the initial boom we can examine the viability and sustainability of this fishery for these two regions.

Initial Analysis of Materials from the 1979-1980 Excavations at the Pines Site on Manastash Ridge in Central Washington.

Christopher Moose, Central Washington University.

The Manastash Pines site (45KT346) was excavated in 1979 and 1980 by Dr. James Alexander as part of a Central Washington University field school. The recovered artifacts were set aside to be analyzed at a later time. In 2012, as part of a larger project revisiting prior university excavations, I began cataloging over 18,000 artifacts, scanning excavation records, and analyzing all of the fauna and a sample of the lithics. A total of 2,586 faunal specimens were examined, most from deer-size mammals (92%), and many burned (59%). Most (95%) of the collection was less than 3 cm in maximum size. Identified species include deer, elk, pronghorn, bison, and various rodents. A single marmot tibia exhibited butchery cut marks. Four XRF obsidian samples were sourced to Oregon. Fourteen projectile point show use from the Vantage phase through the Cayuse phase. This project demonstrates the data available from previously excavated sites.

Land Otter-Human Interaction and Avoidance at Kit'n'Kaboodle (49-DIX-46), Dall Island, Alaska.

Madonna L. Moss, University of Oregon.

Kit'n'Kaboodle is located on Dall Island in southeast Alaska. Despite its remote location, people intermittently occupied the site during spring and summer from 5700 to 1500 cal BP. Dense lenses of tiny fish bones also indicate the site was occasionally occupied by *Lontra canadensis*, known locally as "land otter." How faunal remains deposited by people were distinguished from those left by land otter is described. Other caves and rockshelters along the somewhat marginal outer Northwest Coast are also likely to have attracted animal activity at times when humans were not present. The faunal remains accumulated in the absence of people provide another window into local ecology, and allow us to better appreciate why the Tlingit viewed land otter and Land Otter Man (Kóoshdaa kaa) as they did. These analyses provide a more complete portrait of the relationship between humans and land otters in southeast Alaska.

Ecology of Whiteness: Mormons, Indians, and Boy Scouts.

Thomas W. Murphy, Edmonds Community College.

Growing up in Mormon communities in southern Idaho in the 1970s and 1980s, I learned from my parents that our Haudenosaunee ancestors had become "white and delightful" through conversion to Mormonism, aided by intermarriage. Yet, at the same time that I was taught to act white, I was also asked to dress up in face paint, feathers, and a bison headdress and play an ecological Indian in secret rituals in an LDS Church sponsored Boy Scout program. This auto-ethnographic paper draws from decolonization theory to critically examine the historical and ecological roots of a seven-generation effort to turn Indians white through religious, social, and environmental changes. I contend that the process was as much ecological as religious and social. These ecological changes, if not altered, risk the survival of the next seven generations of our family and larger community.

Archaeology of Susan Creek Campground.

Robert R. Musil, Heritage Research Associates, Inc.

The Susan Creek Campground Site (35DO383) was first recorded in 1985 along of the North Umpqua River in Douglas County, Oregon. In 1992 test excavations at the site exposed a deeply buried pre-Mazama component in the northwest corner of the site. In 1996 a Passport In Time project was undertaken in that area to further investigate this lower component. A small assemblage of artifacts was recovered and a conventional radiocarbon date of 7640 ± 60 BP was returned on charcoal from the pre-Mazama component. Seventeen years later, a second Passport In Time project was conducted, and a second small assemblage of artifacts was recovered from the pre-Mazama component. A second conventional radiocarbon date of 6910 ± 30 BP was obtained on charcoal from this lower deposit. This paper will discuss the excavations that have been conducted at the campground over the years focusing on the pre-Mazama component.

Overview of Stacked Rock Features at Cottonwood Canyon State Park: Examining and Expanding Criteria.

Nancy Nelson, Oregon Parks and Recreation Department.

Since 2010, Oregon State Parks has been documenting a variety of archaeological sites at Cottonwood Canyon State Park, including precontact and historic stacked rock features. This presentation will provide an overview of these features found adjacent to the John Day River, the traditional homeland of the Tenino. Close attention was given to several criteria to authenticate the features, which will be examined to assure that all lines of evidence were used to authenticate the rock features. In addition, it is suggested that criteria be expanded to include non-destructive analysis. For instance, should identifying the species of lichen be a baseline criteria in the event that lichenometry can be used in future analysis? Can site visits with tribal staff help legitimize the precontact features that may be in question? Subsequently, those rock features with cultural significance will be protected by promoting stewardship of archaeological sites with state parks' visitors.

Climate Change and the Future of California Archaeology.

Michael Newland, Society for California Archaeology.

Anthropogenic climate change is a threat to archaeological resource across the Pacific seaboard and beyond. Sea level rise caused by climate change is starting to destroy archaeological and tribal heritage sites along the California coastline. Ironically, recent studies suggest such sites hold promise for studying past climate shifts and the human and natural responses to them. The Society for California Archaeology (SCA), through the efforts of its Climate Change Committee, has created a volunteer program for identifying sites along the California coast that spans agency boundaries and tribal territories. As part of the program, tribal collaboration and post-study media communication play prominent roles. The SCA program is a model of one mechanism for identifying and recording archaeological sites before they are gone, and a means for discussing climate change and archaeology in a public forum.

State Violence and Multicultural Displacement in Portland, Oregon.

Gennie Nguyen, University of Oregon.

This paper will examine the politics of race, class, and place in Portland, Oregon, taking a modest and preliminary step at theorizing inequality after Ferguson, including what counts as inequality. I will pay special attention to how post-Ferguson protests nationally have translated to the local level, shining a bright spotlight on long-term inequalities in Portland. Produced by the state, inequalities in Portland include repeated experiences of displacement of people of color through internment, "natural" disasters, labor exploitation, gentrification, and welfare "reform". This paper views displacement as a key factor in the creation of multicultural spaces as "different" people are displaced and sometimes confined to new areas. I investigate how people make claims of displacement and towards multiculturalism, how institutions and organizations make claims to why recognizing difference matters, and how effective those claims are to unmaking inequality.

A Spatial Analysis and Reinterpretation of a Late Holocene Occupation Along the Yakima River, Washington

Christopher D. Noll and Charles Norred, Versar, Inc.

In 2014, site 45BN422 was included in a multisite archaeological testing project along the Yakima River, Washington. Expectations for the site were based on previous reports that it was a pithouse village. Archaeological testing revealed a 4.5 hectare site with deposits as deep as 1.9 meters below ground. Despite its size, the density of materials is not substantial and concentrations of material are randomly scattered throughout the site. The site contains abundant debitage from local stone types, several informal chipped stone cores, very few formal tools, mammal, fish, and shellfish remains, and several large hammerstones. Analysis of the types of materials represented in each artifact concentration suggests that the site is an important task camp area that was repeatedly used during the acquisition of various animals for subsistence, and was not a long-term residential base camp or village as previously thought.

Wind, Waves, and a Hidden Spit: A Case Study from 45IS298 on Whidbey Island, WA.

Michelle North, Equinox Research and Consulting International Inc.

Shell midden sites rich in cultural importance and material found along shorelines are effected by the coastal processes that exist in conjunction with the landforms they are built upon. The presentation is a case study of a shell midden matrix identified during salvage work during the City of Oak Harbor 42 Inch Storm water Outfall Project on Whidbey Island in Oak Harbor, WA. The matrix had been heavily effected by erosional processes and storm events prior to becoming covered by modern fill, which effectively hid this portion of the site and the landform it exists on, until its excavation in 2014.

Archie Field Data Recording: Increasing Site Recording Accuracy & Efficiency.

Alex Nyers¹, Karl Vollmer², Chantel Saban¹, ¹Oregon State University, ²Dalhousie University.

'Archie' is an online, light-weight, open source inventory system for archaeological artifacts. With feedback from real world use in the field over the last several years, Archie has evolved into a robust, secure application capable of handling hundreds of active users and millions of entries. Archie supports associating multimedia files such as photos, audio and video commentary, and 3D scans of artifacts all without any specialized client software beyond a web browser. The use of Archie in large field school operations is an example of how things are developing technologically and how this technology will be of service to smaller excavation and survey projects as time progresses. Two sites will be discussed as examples of the success of the Archie system: Cooper's Ferry in Idaho and Connley Caves in Central Oregon.

Artifact Networks and Cultural Transmission in East Polynesia.

John T. O'Connor and Frances J. White, University of Oregon.

The colonization of Polynesia was a motivated dispersal of culturally related human populations on a massive geographic scale. The settlement of distant oceanic islands involved the development and sharing of technological information specific to local environments, including exclusively stylistic aspects of artifact design. Here we measure similarity in line-attachment-devices (LAD) among artifact fishhook assemblages to determine significant cultural relationships among island populations. Artifacts are classified according to a paradigmatic protocol, similarity/dissimilarity coefficients are calculated, and relational networks are compiled based on the degree of statistical similarity among artifact groups. The quantification of artifact similarity among fishhook assemblages allows for the construction of undirected network models that illustrate the transmission of technological information in a non-hierarchical structure and contribute to a better understanding of human relations in prehistoric Polynesia.

35LA1245: A Long Term Camp Locale on the McKenzie River, Lane County, Oregon.

Albert C. Oetting, Heritage Research Associates, Inc.

Site 35LA1245 is a large artifact scatter with a variably dense, stratified buried cultural deposit on the mainstem McKenzie River near the South Fork McKenzie. EWEB-sponsored test excavations revealed a site covering 500 m along a transmission line corridor. Two buried cultural components were identified, with artifacts found to 1.3 m in depth. A radiocarbon age of 4810-4450 cal BP, projectile points, and obsidian hydration age estimates place the lower component in the Middle Archaic; hydration age estimates indicate the upper component is Late Archaic. Spatial variability of the buried components suggest that people shifted occupation and activity locales over time. This setting, on a widening canyon floor near the confluence of two rivers is an ideal location for a long term campsite with varied activities, and one that embodies the reported preferred locations of Molala winter villages.

Interpreting the Exposed Pilings at the Siuslaw River (Florence) Bridge.

Brian O'Neill, Museum of Natural and Cultural History, University of Oregon.

A series of wooden pilings are visible from the shoreline at the north and south approaches to the Siuslaw River Bridge at Florence on the Oregon coast. A number of these lie within ODOT's Siuslaw River Bridge Cathodic Protection APE and may be impacted by the erection of temporary construction bridges. Archival studies and field work conducted by the Museum have identified these as the early 20th century structural remains of a slipway, cannery, ferry landing, and construction falsework.

Eating Around the Margins: Evidence of Culturally Distinctive Butchering Patterns in a 20th-Century Seattle Shantytown.

Tom Ostrander, Environmental Science Associates.

Three culturally distinct food-ways are evidenced in the faunal remains recovered from 45-KI-1200. By examining the evidence left by processing tools and butchery methods, we have identified three culturally distinct use patterns. Conventional Western butchery and processing was practiced concurrently with Sino-Japanese processing, which was characterized by using culturally distinctive tools and methods on Western commercial cuts of meat. We also believe we have evidence of ethnographic period Native Americans utilizing skeletal material from wild fauna in traditional practices such as tool manufacture and bone marrow and grease extraction.

During occupation of the shantytown Chinese and Japanese immigration into the United States was banned, and Native Americans were denied citizenship if they participated in traditional practices. These individual were at the periphery of society both

geographically and legally. This continued utilization of traditional practices gives direct evidence to the importance of food-ways in the maintenance and formation of cultural identity.

Major Toolstone Geography of the Pacific Northwest.

Terry Ozbun, AINW.

"Toolstone" is a combination of two terms that form a compound word referring to lithic materials used for technological purposes – quite literally, stone for making into tools. Geography is the study of the physical features of the earth's surface and their arrangement and relationships, especially with regard to human interaction with the environment. A great variety of lithic raw materials used in traditional flaked-stone technologies occur in Pacific Northwestern North America. However, three main lithological classes (*cryptocrystalline silicates (CCS)*, *volcanic glass or obsidian*, and *crystalline volcanic rocks*) are ubiquitous in prehistoric archaeological assemblages. Primary geological sources for these toolstone classes are differentially concentrated in certain areas. This paper represents an initial attempt to characterize and map the larger toolstone geography of the region.

Addressing Vaccine Hesitancy in Portland, Oregon.

Kelsey Paden, Portland State University.

Since the introduction of the smallpox vaccine in 1796, large scale vaccination projects in the U.S. have controlled nine major diseases and decreased the presence of vaccine preventable diseases by 95%. However, high rates of under-vaccination tend to cluster geographically, leaving communities vulnerable to outbreak. In the 2013-2014 school year, Oregon State boasted the highest rate of kindergarten non-medical vaccine exemption in the country. This small undergraduate research project (n=5) provides qualitative data from five vaccine hesitant mothers in Portland, Oregon. These mothers endorsed many factors identified in existing larger studies conducted in other regions, such as the belief that they can control their child's susceptibility to disease, and doubts about the reliability of vaccine information. Seeking to understand the viewpoint of this specific community is important to designing and implementing effective vaccine hesitancy intervention.

A Changing Valley, a Changing People: The Prehistoric Occupation of Northern Warner Valley, Oregon.

Donald Pattee, Applied Archaeological Research, Inc.

Warner Valley, Oregon was occupied as early as the terminal Pleistocene (~11,000 radiocarbon years ago [^{14}C B.P.]). Random and non-random pedestrian survey conducted over three field seasons by the Great Basin Paleoindian Research Unit (GBPRU) in the northern portion of the valley, which has been designated the Northern Warner Valley Study Area (NWVS A), has identified over 100 previously unrecorded sites dating to the Paleoindian and Archaic periods. This study considers all site data (e.g., site size and location, types of tools present, lithic debitage attributes) as well as x-ray fluorescence data for 185 obsidian projectile points and debitage from the NWVSA. Using these data, I test the hypothesis that a pronounced shift occurred in prehistoric lifeways of Paleoindian and Archaic groups there following the Pleistocene-Holocene transition. Results suggest that changes in subsistence strategies, occupation intensity, and lithic technological organization occurred, which are reflected in site and stone tool attributes.

Discussant: Optical Regimes, Moral Economies, and Somatic Power.

Bryce Peake, University of Oregon, Intel Labs.

How do we discuss the politics of belonging, effervescence, and non-/anti- commoditized communitas? How are moral economies, at their foundation, sensorial experiences that defy the demarcation of the rational and irrational? As a discussant for this panel, I will draw the papers together to answer these questions, while introducing examples from my own historical ethnographic work on gender, science, and media technology in Gibraltar and the United States.

14,000 Year BP Record of Fluvial Loess Accumulation in an Upland Bog Developed on a Missoula Flood Gravel Terrace below the Historic Union Train Station: Implications for Early-Holocene Upland Site Burial and Preservation in Portland, Oregon.

Curt Peterson and Rick Minor, Heritage Research Associates, Inc.

Artificial fill and underlying natural soils, located below the Union Train Station in Northwest Portland, OR, were tested for composition, age and landscape indicators with bore holes (17 in number to 15-20 m depth subsurface). The artificial fill (as much as 6-7 m thickness) was discriminated from native soils (10-15 m thick), which included silt overlying gravel. The underlying gravels represent a Missoula Flood gravel terrace tread (14-15 ka) at 3 to -8 m elevation NAVD88. The silt deposits locally include subaerial paleosol Bw-horizons, rooted mud (wetland) and non-rooted mud (pond) sections. The basal silt deposits at -3 m and + 3 m elevation, respectively, date to 10,240-10,190 and 14075-14240 cal BP. The silt units were deposited well above the reach of early-middle Holocene Willamette River flood levels (-50 to -10 m elevation) so they represent fluvial loess deposition in an upland paleo-bog. Such thick loess deposits could bury and preserve early Holocene cultural sites in the area.

The Making Archaeology Public Project: Its Significance and Practical Applications.

Richard M. Pettigrew, Archaeological Legacy Institute.

The year 2016 marks 50 years since passage of the National Historic Preservation Act (NHPA), which created the National Register of Historic Places, state historic preservation offices and the Section 106 process for the review of archaeological sites. All major American professional archaeological organizations are supporting the Making Archaeology Public or MAP Project to involve American archaeologists in highlighting for the public important things we have learned as a result of the NHPA. The MAPP organizes archaeologists within each state to answer the question: What are the most important insights into life in the past that we have gained from CRM archaeology? The end product of the MAPP will be series of short videos. Archaeological Legacy Institute will produce these videos using input and resources submitted by the state task groups. This paper describes the project and considers the implications of the MAPP for American archaeologists today.

Using GIS to Assess Israeli-Palestinian Border Proposals.

Christen Phaneuf, Eastern Washington University.

In 2009, David Makosky, a Distinguished Fellow at the Washington Institute for Near East Policy, proposed three possible solutions to the ongoing dispute between Israelis and Palestinians over the final borders of Israel and Palestine. The proposals addressed many concerns of both Israelis and Palestinians, including both the annexing of existing settlements adjacent to the 1967 border by Israel and the creation of a contiguous state in the West Bank for Palestinians. Makovsky is careful in the settlements he has chosen for annexation as well as the land granted to Palestinians, suggesting a near 1:1 land swap, however, he leaves many Palestinian villages compromised by the annexations. Using GIS-based analysis, this paper will consider the ramifications of Makovsky's proposals and, in particular, examine potential impact to Palestinian villages.

The Archaeological Evidence for Crucifixion.

Christen Phaneuf, Eastern Washington University.

A conservative estimate of the number of crucifixions during the Roman Republic and Empire is 30,000 individuals, but the only archaeological evidence of the practice is one individual from Giv'at ha-Mivtar in Israel. The influence of the account of the crucifixion of Jesus in Christian literature and iconography have provided the dominant expectations for crucifixion. As a result, an archaeologist would be led to expect nails associated with bones and/or the deposition of the body in a tomb. This paper considers why this evidence is rare in the archaeological record. It is proposed that there are misconceptions about both the use of nails and the methods of disposal of crucified bodies. A review of Roman and Greek literature, from the Second Punic War to Constantine, examines variations of this form of execution and alternative methods of disposal of the crucified bodies as well as linguistic and translation issues.

American Rape Culture: A Need for Education.

Taylor Phillips, Eastern Washington University.

This project explores attitudes toward rape culture among young adults in the Spokane area. Rape culture, an idea that first appeared in the 1970s and has been popularized in recent years, refers to the idea that central cultural beliefs, media images, social practices and societal institutions support and condone sexual abuse by normalizing, trivializing or eroticizing male violence against women and blaming the victims for their own abuse. I interviewed adults between the ages of 18 and 35 about rape culture and their response to it, asking how they understood rape culture, how it affected their lives, ways to educate their peers, and how we think about sexuality and sexual assault. I found that men and women had different views of rape culture, but both felt the biggest problem was silence about these issues. These findings suggest ways to improve how students are brought into the conversation about rape culture.

Courtroom Language and North American Rape Culture.

Taylor Phillips, Eastern Washington University.

This project explores the ways in which rape culture is perpetuated through language use in courtrooms in the United States. Through a review of linguistic and social science literature, this project explores scholarly understandings of how language use in courtrooms supports rape culture, rather than opposing or challenging it. This paper also explores how the language is an essential part of how rape culture is shared and learned. My main thesis claims that the vocabulary and tone of language used in the courtroom causes unjust stereotypes of rape, rape victims, and rape assailants. This project will also focus on how language use in U.S. courtrooms creates problematic kinds of perceptions of rape, rape victims and rape assailants which lead to unequal voice and power in the courtroom. This is an important issue for anthropologists to consider because rape is a major epidemic in U.S. culture and is perpetuated through enculturation.

Understanding Community Through the Soles of Their Shoes.

Ashley Pickard, Edmond's Community College/ University of Washington.

The soles of shoes are valuable artifacts for understanding community. The City of Mukilteo partnered with the Learn and Serve Environmental Anthropology Field (LEAF) School and AMEC in the summer of 2012 to conduct an archaeological investigation

in lower Japanese Gulch (45SN575) as part of a fish passage habitat restoration project. Artifacts recovered during this field school included glass bottles and fragments, ceramic vessels and fragments, metal objects, architectural debris and leather fragments. My research specifically examined the collection of leather artifacts; which primarily consisted of shoe fragments. Measurement and analysis of these fragments provide clues for understanding function of the shoes and sex and economic status of the Japanese Gulch population. In addition these leather artifacts demonstrated that these shoes were intended for practical everyday work and were used to their fullest extent.

Health, Equality, and the Political Meaning of "Vulnerability" in Vancouver's Healthy City Strategy.

Kathleen Piovesan, University of Oregon.

This paper will explore a contradiction within the politics of health and equality in Vancouver, Canada. In 2014, the Vancouver city government launched *A Healthy City for All* (HCA), which seeks to implement a set of social and economic goals to address health inequities. These goals are outside the jurisdictional or budgetary capacity of the city government. Further, vulnerability, a prevalent concept in strategy documents, seems to refer to inequity, but without clear reference to race, class, gender, or devolution of welfare policy. This paper will first seek the cultural and political meanings that might be associated with a strategy that offers measurable targets, but arises from an entity, the city government, which seemingly cannot achieve them. Second, it will consider the meanings of a health discourse that conceives of population-specific vulnerabilities and goals while only minimally treating them as inequalities situated within larger political and economic contexts.

Exploring Public-Professional Relationships in Archaeology: Case Study from Sauvie Island, OR.

Martin Plumer, Portland State University.

For my thesis, I will address questions concerning what archaeologists get out of working with the public, what the public gets out of doing "real" archaeology, and how archaeology engages sense of place and understanding of the past. This research will show how to model future projects to engender mutually beneficial public-professional relationships. I will conduct an archaeological reconnaissance on Sauvie Island (near Portland, OR) to locate new sites and delineate the boundaries of known sites, with a crew composed of both archaeologists and members of the public. I will conduct interviews of everyone involved before and after fieldwork. Ultimately, this project will work towards defining the relevance of archaeology to the public at large. Establishing this is of crucial importance to the field because while the public funds archaeology and is generally interested in the past, there are still widespread misconceptions about what professional archaeologists actually do.

Exploration of Zef Culture, Racial Politics and Shifting Opportunities in Post-Apartheid South Africa.

Casey Polmueller, Eastern Washington University.

The *Zef* subculture, popularized by musicians, is made up primarily of lower middle class white South Africans, this group uses style and extravagance within poverty as a means of expression and representation. This paper explores the meanings and implications of the *Zef* subculture as well as the place of poor whites in modern South Africa. The *Zef* movement is a reaction to the complicated history of race politics and poverty in South Africa. Their sense of racial grievance and frustration with the current situation is grounded in a historical perspective of shifting opportunities for white South Africans from the colonial period to the modern post-apartheid era.

Pre-1900s Chinese Mining in Northeastern Washington State.

Lindsey Porter, Eastern Washington University.

The pre-1900s mining industry in northeastern Washington State is poorly documented, especially in the archaeological record. Chinese laborers began immigrating to the Pacific Northwest during the mid-1850s California Gold Rush. Shortly after their arrival, Congress passed a series of laws aimed at restricting Chinese rights and immigration into the US, encouraging some to move north to Washington Territory. The remnants of their camps and mining locations are rarely mentioned in the historical and archaeological record. This paper will discuss the pre-1900s Chinese mining industry in northeastern Washington State. Focus will be placed on archaeological sites and artifacts, along with archival records, indicative of their mining, homestead, or camp locations to aid in developing a more accurate record of early Chinese mining in northeastern Washington.

Tear it Loose: The Creation of Anthropogenic Environments on Smaller Islands.

Aaron S. Poteate, University of Oregon.

Archaeological investigations in many of the world's seas and oceans have revealed that humans were able to colonize even the smallest and most remote islands. Continued research has also demonstrated that islands—in particular smaller ones such as atolls—are highly susceptible to landscape transformation, the introduction of non-native plants and animals, and overexploitation of resources. Recent research in the Pacific has been focused on examining how peoples adapted to these "impoverished" and remote landscapes and thrived for centuries or even millennia with minimal environmental impact due to culturally defined sustainable practices. Archaeological research on Mwoakilloa (Mokil) Atoll in the eastern Caroline Islands has revealed the anthropogenic creation of a large earthen mound and taro patches, suggesting long-term occupation and more intensive food production strategies. Despite the introduction of non-native species and harvesting of local resources, there is currently no evidence of resource depression or species becoming extinct on the atoll.

Culture and Attitudes towards Science in Idaho.

Laura Putsche, Leontina Hormel, John Mihelich, Debbie Storrs, University of Idaho.

Increasing numbers of studies address distrust of science, many based on surveys. Some focus on media influence, others address correlations between religion or political orientation and attitudes towards science, while others discuss beliefs among some scientists that distrust results from ignorance that can be remedied through education – the "deficit model." These studies, however, do not provide in-depth understanding of exactly why people distrust science or the types of science distrusted. A qualitative study based on focus groups throughout Idaho provided insight regarding cultural factors that shape urban and rural residents' attitudes toward science. Among the major themes that emerged was greater distrust of regulatory science related to resource extraction, medicine, and climate change due to fears that livelihoods and independence were being threatened. Such fears may be tied to the role that resource extraction plays in the economy and to historical events that encouraged a libertarian identity among Idahoans.

Why Environmental Professionals Need Project Management Training: a Study of Mitigation in Washington State.

Alexa C. Ramos, Edmonds Community College.

Project management and human elements play a large role in determining project outcomes in advance mitigation projects. Advance mitigation is an important aspect of environmental preservation and restoration. President Obama issued an Executive Order in 2012 mandating government agencies to expedite permitting processes related to development. The Department of Interior responded with a report asserting advance mitigation as a recommended method for accomplishing the President's mandate. This community-based ethnographic study identifies nontechnical elements involved and their reported relative influence in two advance mitigation projects—Snohomish County Airport Wetland Mitigation Banking Program and Japanese Gulch Advance Stream Mitigation Project. The results of interviews with persons integral to project completion indicate support for the idea that nontechnical elements have a significant degree of influence on project success. As such, project management should be given more weight in the training of environmental professionals and project resource allocation both in the classroom and workplace.

A Critical Review of Reverse Ecopoiesis in the Anthropocene.

Julie Raymond, Idaho State University.

Memory is the opaque mystery; the oracle of human experience, human perception and outcomes. The metaphorical central processor, functioning regardless of human recognition; memory immortalizes descriptions of experience in widely dissimilar spheres like biology and culture. Coherence is intersected by a set of presumptions informed by memory, known as worldview. Worldview is the incognito operating system guiding individual and collective human interaction with the metaphysical and biotic components of our world. Worldview represents our collective truth and subtly coordinates our presuppositions about humanities place in time and space; writing order or disorder, into our shared reality. This paper will seek to reveal the influence of worldview on human interpretation of the natural world, tease out some of the major influences driving this worldview and understand how human behavior is shaped by collective assumption.

Material Culture of Pacific Northwest Breweries.

Patrick Reed, Portland State University.

The recent boom in the beer industry has been marked by the increased popularity and rampant growth of microbreweries; the Pacific Northwest is leading this charge. With such a dramatic rise in the popularity of beer as a cultural phenomenon, the question must be asked as to what the impacts will be on the material culture of the future? While containers and brewing techniques haven't changed much, many changes have been made in the materials associated with brewing equipment and the production process. This poster will explore the material culture of the brewing industry and its social consumption with a focus on local brewing trends and practices of the past and present that may serve as a guide for archaeological interpretations.

Exploring the history of brewing across the Pacific Northwest through the lens of Northwest Anthropological Conference.

Patrick Reed¹ and Alexander Stevenson², ¹Portland State University and ²Historical Research Associates.

Each year, the Northwest Anthropological Conference is hosted in towns with rich histories; sometimes the venues are far flung and sometimes they are modern urban centers. The towns all have at least one thing in common, a rich history of brewing. The archaeology, architectural history, and history of this industry is everywhere in the Pacific Northwest. Through this poster, we explain our vision for this session at NWACs to come and highlight trends in brewing and beer that have been seen across the region.

Estimating Biface Production at a Basaltic Andesite Workshop in the Blue Mountains: Twenty Years of Hindsight.

Kenneth C. Reid, Matthew J. Root, Daryl E. Ferguson, Idaho State Historical Society.

Archaeological data lend themselves to measuring rates of change better than amounts of change. This presentation summarizes how we used toolstone identification and geography or outcrop distribution, flake debris analysis, controlled biface and core replication experiments, and technological analysis and classification of samples from four analytic units excavated from a small upland workshop and hunting camp in the Blue Mountains of southeastern Washington to address questions of changing biface

production output over time. The authors are acutely aware that twenty years passed between backfilling the excavation and proofreading the galleys. We conclude with a few thoughts on what we would do differently today.

Paleoamerican Parasitism: Infections that Signal the Origin & Route of Migration.

Karl Reinhard, Elizabeth Rácz & S.L. Gardner, University of Nebraska, Lincoln.

Late Pleistocene-early Holocene Paleoindians were thought to have been free of the parasites that infect many human populations today in East Asia based on older theories that argued the Arctic acted as a "cold filter" retarding the entry of pathogens into the New World with human migrations. Researchers in the field of Archaeoparasitology have recently begun to change this perspective. Over four decades of research by Reinhard with prehistoric American remains has shown that heirloom human-specific parasites were dispersed throughout the Americas with some of the earliest human migrations. These included hookworm, pinworm, and whipworm. Evidence from the Paisley Caves of south-central Oregon indicate that hookworm infection persisted in ancient human migrations into the Pacific Northwest. Climatic conditions allowed hookworm infection to become established for a few thousand years. The diminishment of hookworms in the Northwest may have correlated with the diminishing lakes and wetlands following the Pleistocene- Holocene transition.

100 Years Revisited: Diamond Jenness' 1914 Barter Island Excavations and the Progress of Systematic Archaeology in Alaska.

Joshua D. Reuther, Jason S. Rogers, Chris Wooley, Owen Mason, Jill Baxter-McIntosh, and Robert Bowman. University of Alaska Museum of the North; Department of Anthropology, University of Alaska Fairbanks; Northern Land Use Research Alaska; Chumis Cultural Resources Services; Geoarch Alaska.

In the summer of 1914, Diamond Jenness of the Canadian Arctic Expedition engaged in what could arguably be called the first systematic archaeology in Alaska. Jenness' later work resulted in the identification and naming of the Old Bering Sea and Dorset archaeological cultures (among others), and was fundamental to early understanding of the human occupation of the North American Arctic. However, the implications of his initial investigations at Barter Island have largely been overlooked. Exactly one century later, Jenness' Barter Island collections are being re-analyzed, and a reappraisal of the significance of this work is presented here.

Archaeological Investigations at the Washington Portland Cement Company Cement Plant, Concrete, Washington.

Brandy Rinck, SWCA Environmental Consultants.

Archaeological investigations were completed at the Washington Portland Cement Company's Cement Plant (WPCC) that operated between 1905 and 1925 at what is now Puget Sound Energy's Lower Baker Compound in Concrete, Washington. Today, much of the WPCC is buried under landslide spoils. The archaeological investigations combined remote sensing with mechanical excavation to identify structural remains at the former WPCC factory and determine how useful gradiometry is within this industrial setting. Gradiometer anomalies were identified in seven grid areas, eleven of which were expected to relate to buried structural remains based on patterning and correlation with features shown on historical maps. Eight test pits were excavated and elements related to a clay storage building, rotary dryer room, platform, and motor room were identified. Although survey of an area with less interference would be ideal, excavation verified that most gradiometer anomalies corresponded with archaeological items and some are WPCC structural remains.

New Perspectives on Coast Salish Landscape Use and Ceremonialism: An Archaeological Investigation of Rock-Shelters.

Morgan Ritchie and Ian Sellers, Inlailawatash.

The study of rock-shelters is an emerging and productive focus of archaeological and ethnographic enquiry in the Central Coast Salish area. These protected places offer unique insights into past land and resource use, ceremonialism, and spiritually powerful landscapes. Recent investigations in the Indian, Hixon, and Stawamus River valleys north of Vancouver BC resulted in the identification of six rock-shelters from which we collected comparable datasets comprised of faunal, botanical, and artifact assemblages. We also established the radiocarbon age of each occupation layer in these shelters. We view these rock shelters as discrete sites with quantifiable dimensions and occupations, but also as significant sacred places in the broader cultural landscape.

Smudge Pits of Fort Vancouver.

Anna Robison-Mathes, ICF International.

Common components of Fort Vancouver archaeology, smudge pits are shallow, organic-filled thermal features. Designed to produce large amounts of smoke, smudge pits at this Hudson's Bay Company fort are theorized to be used for a range of functions such as resource production, disease prevention, and trash burning, and are presented in a range of settings across the site. The components and structure of these features help identify their use at Fort Vancouver and their contribution to that historic landscape.

Recent Research on Marine Geomorphology and Coastal Landforms in the Alaskan Arctic.

Jason Rogers, Northern Land Use Research Alaska, LLC.

Existing data on sea-level history and coastal landform evolution in the Alaskan Arctic are quite sparse. This paper reports on new materials and dates from recent geophysical and marine coring investigations in the Beaufort and Chukchi Seas. These results provide new data points for the Alaskan continental shelf relative sea-level curve, and help to refine our understanding of regional Late-Pleistocene and Holocene paleoenvironments.

The Search for Clovis Blade Technology in the Northern Great Basin.

Michael F. Rondeau, Rondeau Archeological.

The search for flaked stone diagnostic of Clovis technology beyond the obvious fluted points in the far west has discovered a range of generally Clovis style artifacts. The search has not found Clovis style percussion blade assemblages in the northern Great Basin of Oregon or in Nevada or California. Only the slightest trace of what might be Clovis blade technology has been noted while later percussion blade assemblages are present. The data is reviewed.

From Labrets to Cranial Modification: Credibility Enhancing Displays and the Changing Expression of Coast Salish Resource Commitments.

Adam N. Rorabaugh, Kate Shantry, Washington State University.

Recent developments in evolutionary psychology expanding on signaling theory provide key insights to the connections between expressing social commitments and resource rights. Credibility enhancing displays (CREDs) are a means to convince individuals of commitment to belief systems and can link costly acts or extravagant displays to social success. In the Salish Sea the transition from labrets to cranial modification from 3500-1500 BP has often been framed in terms reflecting a shift from achieved to ascribed social status. Other researchers have argued that labrets may reflect village scale identity not tied to political power. We suggest that an explicitly evolutionary approach provides novel insights into the changing material expressions of Coast Salish social commitments, specifically reciprocal resource access. The shift to cranial modification reflects increased CRED investment and cost, but not necessarily a transition towards ascribed status but instead may be changing expressions of the same forms of social commitments.

Naughty or Nice? Inherent Bias in the Interpretation of Female Material Culture, as seen through the Oak Street Parking Lot Site (35JA860), Central Point, Oregon.

Chelsea Rose, Southern Oregon University.

In spring of 2013, a rich early 20th century midden was inadvertently discovered under a parking lot in downtown Central Point, Oregon. The abundance and type of female related artifacts, when paired with a reference to a boarding house in the vicinity, suggested that the assemblage could be related to a brothel. Further research indicated that household was instead occupied by the head of the local temperance union, and her four daughters. The resulting information led to a more critical inquiry into the material culture as a reflection of sex and gender, versus sexuality, and highlights the bias, prejudice, and general deficit in our understanding of female material culture as an expression of identity and agency, versus evidence of vice.

Getting Burned: Fire, Politics, and Cultural Landscapes in the American West.

Chelsea Rose, Southern Oregon University.

The National Historic Landmark town of Jacksonville, Oregon is celebrated for its nineteenth century past. While saloons, hotels, and shops survive as testament to the days of the Oregon gold rush, the selective preservation of the built environment has created a romanticized frontier landscape. A sleepy park now covers the once bustling Chinese Quarter, which burned to the ground in 1888. Recent public archaeology excavations revealed the remains of a burned building, and led to a fruitful collaboration with the local fire department who helped illustrate the taphonomic processes of the historic fire. While fires often lead to the recovery of well-preserved archaeological deposits, the context of the fire itself as a socio-political artifact has been underexplored. Used as both a deliberate and opportunistic means of controlling and creating social and political landscapes, fire was effective at displacing, marginalizing, or even erasing populations like the Overseas Chinese from historic communities.

Estimating Sturgeon Abundance in Archaeological Contexts: Controlling for Identifiability and Fragmentation.

J. Shoshana Rosenberg and Virginia L. Butler, Portland State University.

Remains of sturgeon (*Acipenser* sp.) are ubiquitous at archaeological sites on the lower Columbia, but the unique nature of their skeleton poses problems for estimating sturgeon abundance. Sturgeon specimens can be identified as sturgeon even when the skeletal element is unknown due to the unique surface texture. Specimens that are unidentifiable to element represent a large proportion of sturgeon at archaeological sites, so including them in the analysis is important to accurately estimating sturgeon abundance. Differential fragmentation across contexts being compared adds additional challenge to estimating relative proportion of sturgeon to other fish taxa. In recent analysis of fish remains from Cathlapotle, a large Chinookan village on the Columbia River near Portland, a new counting method was developed that incorporates bone weight. This approach can be used to assess

differential fragmentation rates while still allowing for sturgeon abundance to be compared to abundances of other taxa quantified by NISP.

Two Sisters Return: A Community-Based Assessment of Wildlife Activity on Traditional Snoqualmie Land.

Laurie Ross, et al., Edmonds Community College.

At the Two Sisters Return conservation easement, students from Edmonds Community College are monitoring wildlife activity to assist the Snoqualmie Tribe in assessing the environmental impact of a proposed cultural center. This paper presents an overview of data collected over the past three years by students and staff from the Learn and Serve Environmental Anthropology Field (LEAF) School. Combining traditional ecological teachings with remote cameras, GIS mapping, and tracking skills, student research provides evidence that the site supports flora and fauna typical of maturing forests in the West Cascades, including migration and breeding of elk, deer, bears, and coyotes. The site is located at a center of human development in the forested foothills; analysis considers the site's potential role in human/wildlife interactions.

By the People, for the People: Designing Archaeology Outreach Programs with Local Governments.

Julia Rowland, Equinox Research and Consulting International (ERCI).

Public Outreach and education are critical to the work of archaeologists. Through outreach we can inspire our clients to act as good stewards for cultural resources, find new support for the protection of archaeological sites, unify communities, empower people, explore identity and perspective, expose people to new worldviews, and much more. Archeological outreach includes providing guidance to our local government clients on how they can best keep the people they serve informed. Over the past four years, Equinox Research and Consulting (ERCI) has worked extensively for and with the City of Oak Harbor in Washington. ERCI has had the opportunity to try out a variety of public education tactics and has worked with the City as they have provided archaeological outreach. Using the tried successes and failures in Oak Harbor, this talk will discuss how to design an archaeological public outreach program with a local government.

Preliminary Results from Archaeological Investigations at the Charles and Melinda Applegate House, Yoncalla.

Christopher L. Ruiz, Patrick O'Grady, Liz Carter, Museum of Natural and Cultural History, University of Oregon.

The Charles and Melinda Applegate House, built 1852-56, is listed in the National Register of Historic Places for its significance related to nineteenth century agriculture, architecture, and transportation. Previous investigations have focused almost exclusively on the house, but recent archaeological studies of the property by staff and students affiliated with the University of Oregon, Museum of Natural and Cultural History and Historic Preservation program have begun to search for archaeological evidence of the original claim cabin. Field investigations in Spring and Fall of 2012, encountered nineteenth and early twentieth century artifacts in the field west of the main house, a location family tradition identifies as the site of the original 1850 claim cabin. Museum archaeologists conducted GPR (ground-penetrating radar) mapping of the field to help identify buried features which yielded promising results.

Paisley & Connley Caves: Examining Cultural Activity through a Paleoenvironmental Approach.

Chantel V. Saban, Oregon State University & Museum of Natural & Cultural History University of Oregon.

Palynological analysis of Cave 2 at Paisley Caves, Oregon has enabled a high-resolution reconstruction of the Summer Lake paleoenvironment in direct association with cultural activities during the Younger Dryas and early Holocene. The recently re-opened Connley Caves archaeological site, located approximately 60 miles northwest of Paisley in the Fort Rock Basin, also shows potential of yielding dateable, high-resolution paleoenvironmental signatures as well, and a comparison of the two sites may yield significant similarities and differences in cultural activities as seen through artifacts, particularly during the Younger Dryas. This paper will highlight potential ecological similarities and differences between the two sites and what those results may mean in relation to the artifact assemblages recovered.

Age and sex class differences in sex behavior of immature Tibetan macaques (*Macaca thibetana*).

Anne Salow, Central Washington University.

Tibetan macaques (*Macaca thibetana*) engage in sexual behaviors for affiliative and reproductive purposes, but the rates and types of sexual behaviors used by immature Tibetan macaques have not been studied. We used an ethogram to score sex behaviors from videotaped focal samples of 14 male (6mos- 6yrs) and 12 female (5mos-5yrs) immature monkeys. We observed 669 sex behaviors, with bridging being the most common (N= 179) and genital manipulation the rarest (N= 26). Males had higher rates of sex behaviors per hour than females (9.08 and 5.65). Two-year-olds and infants had higher rates of sex behaviors per hour than other age classes (11.2 and 10.89). Future analyses will include the investigation of the distribution of sex behaviors in different social contexts.

Testing the Association of Chipped Stone Crescents with Wetlands and Paleo-Shorelines of Western North America: A GIS-based Spatial Analysis

Gabriel Sanchez, University of California, Berkeley.

We use ArcGIS and spatial analysis to quantitatively test a proposed association between chipped stone crescents and wetland environments in western North America. Dating between ~12,000 and 8,000 cal BP, crescents are often found in association with stemmed points of the Western Pluvial Lakes or Western Stemmed traditions. Many scholars have suggested that crescents served as transverse projectile points for hunting waterfowl, others have viewed them as more generalized and multi-purpose tools, possibly associated with wetland resource processing. In this paper we provide the first quantitative analysis of the proposed association between crescents and wetland habitats—testing their proximity to ancient pluvial lakes, marshes, rivers, estuaries, and islands using a GIS-based model. During the Terminal Pleistocene and Early Holocene, coastal habitats were highly dynamic and the Great Basin was cooler and moister than today, with numerous lakes and much more abundant marsh habitat. 8,000 years ago, environmental changes led to significantly drier conditions in the Great Basin, reducing lake and marsh habitat. Our results will help evaluate previous theories about the ecological association of crescents, as well as their function.

New Evidence of Prehistoric Fishing in the Clearwater River Region, North Central Idaho.

Robert Lee Sappington, University of Idaho.

According to all ethnographic accounts, fish were one of the staple foods for native groups in the southern Plateau, representing ca. 33% to 50% of the annual diet, with some Tribes consuming as much as 500 pounds per capita. Although the Clearwater River Region has been occupied for over 12,000 years, actual evidence of fish procurement in archaeological contexts is difficult to find. A review of archaeological collections from sites excavated since the 1960s suggests that net sinks are the most reliable indicator of fishing activity. Recent excavations at the multi-component Kelly Forks Work Center site (10CW34), on the North Fork of the Clearwater River on the Nez Perce-Clearwater National Forests, resulted in a series of radiocarbon-dated occupations from the early Holocene into the historic period, with fishing activity beginning ca. 9000 BP. The archaeological record for the Clearwater River Region indicates that fishing activity gradually increased over time.

Landnám Tephra and the Settlement of Iceland: Preliminary Results.

Magdalena Maria Elisabeth Schmid, University of Washington.

Until recently it has only been possible to date early archaeology in Iceland broadly to the Viking Age or 9th/10th centuries but advances both in excavation methods and analytical methods have shown that it is possible to obtain much narrower time ranges. Iceland has the most detailed tephrochronology in the world that inserts fixed temporal reference points in the soil record. Furthermore, both the increasing number of AMS radiocarbon dates as well as the application of modern methods of analysis, such as Bayesian statistics makes it possible to obtain better dates as well as resolve the reliability of diverse data sets. This study primarily focuses on the distribution of the so-called Landnám tephra at archaeological sites; this tephra derives from a volcanic eruption that happened around the time when Iceland was settled; therefore, it is crucial for dating early sites and contributes to a better understanding of legacies of colonization.

Beverage Cans and Pull Tabs: A Refreshing Look.

William Schroeder, Reiss-Landreau Research.

Believe it or not, some beverage cans and pull tabs are now historic-era artifacts. Zip, Snap, or Tab top cans were first introduced in 1962. By 1963, 65 brands used the new design. In 1964, Continental Can Co. introduced the U-tab. But early styles left sharp edges and people got injured. So in 1965, the Ring Tab was invented. Ring tabs were used until 1975, but were also a health hazard. That's when the Sta-Tab was invented, a style which persists until today. It is not always possible to tell the difference between a ring tab manufactured in 1965 from one manufactured in 1975, but they are distinctly different than Zip and U-tabs. This poster outlines can and tab chronology so that quick identification can be made in the field. The best way to tell if a can is an historic-era artifact is to research the label and company history.

Using Image Stitching Software to Display Complex Glyptic Images Located at Pine Bar, Hells Canyon NSA, ID: A Field Experiment.

William Schroeder, Reiss-Landreau Research.

Some glyphs on stone surfaces are isolated images, while others are part of a complex panel or set of panels. Beyond narrative descriptions, documenting glyptic images for site forms and reports is necessary to capture all the available information for future management purposes. Single-frame, static image close-ups of individual glyphs may not represent the nature of a site. The setting may be just as important as the glyph(s). Using digital cameras, image stitching software, and some basic guidelines, there are ways to capture complex glyptic imagery sites in a single frame which show the whole site "as it is." This presentation demonstrates a recordation method which anyone can use to provide better documentation. Free downloadable programs and trial versions offer a low-cost solution to "How can possibly I get them all in one frame?"-type situations in the field. Image stitching software can display other features besides glyptic images.

Lines in the sand: Integrity, identity, and NRHP eligibility criteria for historic-era linear landscape features at the project and praxis scales in Washington.

William Schroeder and Christopher Landreau, Reiss-Landreau Research

NRHP evaluation of linear structures should be as straight forward as the structures themselves, but it is not. Factors such as proposed actions in APEs, significance, and integrity come into play in real-world praxis. This presentation aims to help field personnel and cultural resources managers make responsible and thorough evaluations in recordation forms and compliance reports so that needless arguments do not take place in the consultation and review process. Our presentation is in two parts: the black-and-white letter of the law(s) and examples from our repertoire. We will focus our attention on relict railroad grades a.k.a. roadbeds and irrigation canals, but the rubric can be applied to any historic-era linear structure. We hope that others benefit from our suffering such that better evaluations and justifications are presented to regulators. The bottom line is: not all resources are valued equally and all rubrics involve degrees of subjectivity.

The Whole is Greater than the Sum of its Parts, or so it would seem: Case Studies Evaluating Irrigation Structures in Central Washington.

William Schroeder and Christopher Landreau, Reiss-Landreau Research.

The State of Oregon devoted 22 pages, Nevada 5 of 71 pages, California 12 of 57 pages, and 18 of 60 pages in the NRB 15 to linear resources, yet railroads fences and irrigation main canals are still viewed differently by different professionals, agencies, and States as to their significance and integrity. It would seem no two observers will see the same resource exactly the same, e.g. one Historic Railroad Property was recorded four times; the fourth time it was found eligible; four laterals of the same main canal were determined ineligible, yet two were determined eligible by the same regulating Agency. Either a resource is significant at the local, State, or Federal level, or it is not. Either a resource is eligible to the NRHP, or it is not. Either the whole resource is eligible, or some elements of it are and some are not. Therein lies the rub.

A Career in Cultural Anthropology: Opportunities and suggestions for ethnographic work with Native American Tribes in the Northwest.

Donald Shannon, Willamette Cultural Resources Associates.

This presentation discusses developing a career in academic and cultural resources compliance contexts for cultural anthropology students interested in working with Pacific Northwest Tribes. The goal is to provide students some direction on building a meaningful career in applied cultural anthropology. Suggestions for research, specifically related to gaps in ethnographic literature and fieldwork and recommendations on best practices are provided in conducting research with Tribes. Benefits of working for a Tribe in the region are highlighted, and the contributions of anthropology and ethnography to the compliance process required by Federal land managing agencies are discussed. Research topics include Tribal hunting and fishing, Tribal women in Oregon, Tribal perspectives on wildlife management, and knowledge/practices addressing Climate Change. Employment and internship opportunities with regional tribes are discussed, with examples and contact information provided.

A Comparison on Two Upland Campsites between Puget Sound and the Plateau.

Kate Shantry and Michele Parvey, SWCA Environmental Consultants.

Comparative site function analysis has implications for collector and forager strategies during the mid-Holocene, a period characterized by hunter-fisher-gatherer societies using seasonally occupied, multi-functional camps to exploit a broad resource and raw material spectrum. Sites 45KI1176 and 45KI57 were occupied adjacent to the Issaquah-Fall City trail on the same glacial outwash plain between Lake Sammamish and the Snoqualmie River. Both sites lack dates and fall into the nebulous category of Olcott (9000 to 4000 BP) based on artifact typologies. 45KI1176 is a logistical camp with short-term occupation, and this study looks at the lithic assemblage from 45KI457, in close proximity, to compare reduction of local materials and finishing, rejuvenation, and repair of imported material types.

Russian Colonial or Russian Colonial-Derived Architecture in an Alaskan Creole Village, Afognak, Alaska.

Ann Sharley, Architectural History & Archaeology! LLC (AHA!)

In 2012, at the request of the Native Village of Afognak, a multi-agency team led by SWCA Environmental Consultants documented Afognak Village, an Alutiiq Creole settlement abandoned following the 1964 Alaska earthquake and tsunamis. Village features included pre-contact and historical period archaeological sites, cemeteries, garden plots, trails, remnants of a Russian Orthodox Church, and numerous residences and outbuildings. At the time of the survey, nearly all buildings had at least partially collapsed, allowing observation of structural systems originally hidden beneath siding. Numerous buildings had been constructed of hand-hewn logs with finely dovetail-notched corners and moss chinking. This architecture was identified as Russian Colonial, or Russian Colonial-derived, based on (1) the history of the village; (2) overviews of traditional Russian, Scandinavian, and Alutiiq architecture; and (3) comparison with extant Russian Colonial buildings.

Reedsville Farm Data Recovery Project- Preliminary Results.

Mini Sharma-Ogle, Karry Blake, Ross Smith, SWCA Environmental Consultants.

Reedville Farm was established by Simeon G. Reed and William Ladd in the 1860s in modern day Hillsboro, Oregon as an example of what farming in the Willamette Valley could achieve. To this end the pair imported stock from Europe and built outbuildings to exacting standards to promote cleanliness and livestock health. An onsite creamery was constructed for the production of cheese. Though the farm is associated with Reed and Ladd, two prominent business men of the 19th century, neither inhabited the house at the farm. Today, all that remains of this once sophisticated farm are the creamery foundation, a brick foundation, and a brick-lined cistern, where excavations are ongoing. Creamery excavations revealed a unique architectural construction method employed to aid temperature control in the cheese manufacturing area. SWCA Environmental Consultants present here the preliminary results of data recovery efforts at the remains of this showcase farm (35WA90).

Addressing Burning Problems using Creative Solutions: Long Draw Fire Rehabilitation Project.

Mini Sharma-Ogle¹, Don Rotell², Sally Bird³, ¹SWCA Environmental Consultants, ²BLM Fruitland, Idaho, ³Warm Springs GeoVisions.

In July 2012, the Long Draw wildfire engulfed 563,338 acres in the BLM Vale District in Malheur County, Oregon, and was recorded as the largest wildfire in 150 years in Oregon. The Long Draw Fire ESR project was designed to stabilize rangelands at risk of invasion by exotic annual grass species and accelerated erosion. The BLM identified 60,000 acres that would be impacted by the ground-based reseeding effort; 40,000 of which were surveyed for cultural resources. SWCA Environmental, Warm Springs GeoVisions, and Ataw completed the initial survey in 6 weeks recording 917 new archaeological resources. SWCA created a GIS-based program, called the Cloud to provide real-time reports on our survey progress to the BLM. This helped BLM track identified resources on a daily basis and better informed their planning process. This paper will discuss some of the creative tools developed to complete this massive project successfully and safely.

A Unity of Meaning: Reconciling Medical and Anthropological Periosteal Terminology.

M. Travis Shelley, Eastern Washington University.

This study examines the descriptive language used by both physical anthropologists and radiologists in reference to periosteal lesions of osseous tissue. Interest in this topic arose while working with juvenile skeletal material in Romania in summer 2014, when it became clear that the literature heavily favored medical journals and clinical studies over a bioarchaeological approach. Much of the discussion of periosteal lesions in the medical literature focuses on diagnosis because of the difficulty of studying this pathology in living subjects. The bioarchaeological literature does not have this limitation. This study reviews relevant papers in the journals of both disciplines in an attempt to reconcile the differences in criteria and specificity in the application of various terms used by each field in order to propose a single defined nomenclature so that bioarchaeologists can take advantage of the much larger medical literature on periosteal lesions.

Whatever Happened to Zulay? An Otavaleña's Journey.

Sharon Sherman, University of Oregon.

Please note: This is a 40 minute film.

Twenty years ago, Academy Award nominated filmmaker Jorge Preloran spent 8 years in Ecuador and the U.S. documenting Zulay, a young indigenous woman negotiating multiple identities. But what happened to her in the decades that followed?

Filmmaker Sharon Sherman traveled to Ecuador and Zulay came to the U.S. in search of answers. As a cultural leader, single mother, and local entrepreneur, Zulay embodies the communal and the transnational. *Whatever Happened to Zulay? An Otavaleña's Journey* is the culmination of three decades of Sherman's exploration of the inter-relationships among tradition and innovation. This video offers a rare look at an ethnographic film's effect on its subject. The ancient Incan celebration of Inti Raymi serves as a vibrant backdrop for this new look at Zulay's ongoing struggle to balance the complexities of tourism, globalization, and ethnic identity. Zulay's daughter ponders how these concerns resonate for her generation. Made by women about women, a subtle feminist lens explores the contradictions indigenous women face.

Fire's Influence on Canoes within the Plateau Culture Area.

Shari Maria Silverman, Washington State Parks and Recreation Commission.

Fire shaped Plateau Culture Area canoes through numerous factors: water route characteristics, available construction materials, and manufacture processes. While geology determined primary water routes and their traits; fire-induced rock and soil failures altered water depth, flow rates, rapids, and turbulence. Fire also influenced the materials from which the watercraft were made. Intensity and frequency of fire determined which trees and other vegetation grew within the resource area. Various components of these available supplies worked well on waterways, such as pliable and sturdy western white pine (*Pinus monticola*) bark for bark canoes and durable western red cedar (*Thuja plicata*) wood for dugouts. In addition, builders applied fire during the dugout manufacture process. Burning pitch and steam were both utilized to hollow and shape the boats. Fire was used as both a diverse tool and manifold natural resource to travel the region's waters.

Childhood in a Pit: Artifactual Expression of Childhood in Early 20th Century Ellensburg, Washington.

Stephanie Simmons, Central Washington Anthropological Survey.

In the fall of 2014, Central Washington University's Facilities Management Department discovered a small garbage deposit during utility work. Archaeological investigations by Central Washington Anthropological Survey found that the artifacts within this deposit belonged to an Ellensburg family living on this block in the early 1900s. These artifacts provide a glimpse of childhood at this time in a small Washington State town.

Heiltsuk & Wuikinuxv Rock Art: Reminders On the Landscape.

Aurora Skala, University of Victoria.

This archaeological research focuses on locating, recording and typologising rock art designs within Heiltsuk and Wuikinuxv Nations' traditional territories. The two areas are located on the Central Coast of British Columbia, Canada. Community-engaged research was conducted in order to photograph a sample of pictographs and petroglyphs. The feasibility and benefit of digital contrast-adjustment of photographs (DStretch), to make visible faint traces of pigment which can no longer be seen, is explored. The photographs of 57 sites visited during this MA project illustrate how rock art can act as a reminder within the landscape. By visiting locations where rock art was created, and listening to stories told by the descendant communities, the deep history and significance of the rock art designs can better be comprehended. This presentation will consider how contemporary First Nations culture informs an understanding of the memories encoded on the landscape in the form of rock art.

Archaeological Investigations at the qiqéyt village site (DhRr-74) in Surrey, British Columbia.

Sarah K. Smith, Amec Foster Wheeler.

This paper provides a summary of the results of ongoing urban archaeological site mitigation and investigation at a proto-historic First Nation fishing village site in Surrey, BC. The site is located beneath a modern industrial park on the south bank of the Fraser River, directly across from New Westminster, the original capitol of British Columbia. The recovered artifact assemblage includes pre-contact lithic and bone subsistence tools as well as traditionally utilized modern material (i.e. chipped bottle glass) and historic household artifacts. Analysis of pre-contact, proto-historic and historic artifacts can shed light on how First Nation communities explored European concepts of fashion, time management, medicine and recreation. The site is known to have been occupied by First Nation peoples prior to European contact and was established as an Indian Reserve (IR) in 1879. IR#1 and IR#8 were continually occupied until the 1960s when the IR status was removed and the property sold to become the modern industrial foreshore.

New Perspectives on the Stockhoff Quarry: Toolstone Procurement at a Quarry Complex in the Blue Mountains of Northeastern Oregon.

Nicholas Smits, AINW.

The Stockhoff Quarry (35UN52) is one of the largest recorded archaeological sites in Oregon, encompassing over 3,400 acres of Craig Mountain in Union County. The results of a large-scale archaeological survey indicate that site 35UN52 represents part of a much larger quarry complex consisting of toolstone procurement locations and lithic reduction workshops across Craig Mountain and surrounding landforms. Pre-contact toolstone procurement appears to have been focused on sources of fine-grained crystalline volcanic rock associated with dacitic and andesitic flows of the Powder River Volcanic Field. Recent geologic mapping and preliminary geochemical data suggest that the toolstone commonly known as "Stockhoff basalt" includes multiple geochemical signatures that reflect the chemical heterogeneity of lava flows of the Powder River Volcanic Field.

Cooking Features, FCR, and Land-use Intensification in the Portland Basin.

Paul S. Solimano, Willamette Cultural Resources Associates, Ltd.

Land-use intensification, the process of increasing energy returns over time within a defined area, can occur through a combination of factors including changing targeted resources, technological innovation, scheduling, or altering social organization. Archaeologists generally believe land-use intensification occurred in the Portland Basin through the Holocene, but the intensification mechanisms are poorly understood. This paper compares data from the Portland Basin to a simple land-use intensification model developed by Thoms (2009) that employs fire cracked rock densities and the diversity and complexity of rock cooking features. Results indicate increasing fire-cracked rock densities through the Holocene, though densities vary considerably among sites. Feature diversity may increase somewhat, but features may not become more complex.

Homesteading in the Oregon Coast Range: Archaeological Investigations in the Indian Creek Watershed, Siuslaw National Forest.

Lindsey Stallard, Oregon State University.

There are nearly 4,000 land records pertaining to homesteading activity on the Siuslaw National Forest (SNF). Many of these records include detailed maps of homestead claims, descriptions of houses and structures, and information on agricultural production. Compared to the apparent wealth of historical information, there is relatively little known about the archaeology of these early twentieth century sites. Archaeological investigations can reveal information on the daily life of these small, family-

operated farms, set in the unique environment of the Coast Range. Specifically, archaeology focused on the household material culture can provide insight into regional consumer trends and living conditions. While working with the Siuslaw National Forest in September 2014, two such investigations were conducted on neighboring homestead sites in the Indian Creek watershed. Data from these sites will be the subject of this author's Master's thesis.

Early breweries of Eugene and Lane County: Archaeological potential and history.

Alexander E. Stevenson and Chrisanne Beckner, Historical Research Associates, Inc.

Little has been written about the early history of brewing in Eugene and Lane County. This poster compiles historic maps, newspaper articles and other documents to illustrate the history of beer production in the county which began in 1866, only seven years after statehood. Two breweries in Eugene and one in nearby Junction City provided beer to the less than 7,000 inhabitants of the county. With the 'local option' for prohibition in place as early as 1904, Eugene dried up and the remaining brewery eventually fell into disuse. Twentieth century development in Eugene has likely erased most archaeologically visible traces of the breweries; however, the Junction City Brewery still stands. With the repeal of prohibition the beer industry began to grow flourish again through home brewing and the eventual rise of craft beer.

An 8,000 year old buried surface and associated cultural materials near Puget Sound, Washington.

Alexander E. Stevenson and Michele Punke, Historical Research Associates, Inc.

Sound Transit is constructing a new train trestle just east of the Tacoma Dome in Tacoma, Washington. Archaeological monitoring and analysis of geotechnical and geoarchaeological coring was performed in 28 locations. Analysis of sediments extracted during coring revealed a deeply buried, former land surface approximately 65-70 feet below surface in two separate boreholes near the present-day margin of Puget Sound. Organic samples from the buried surface yielded radiocarbon dates of approximately 7750 cal B.P. Cordage and culturally modified petrified wood were also recovered from nearby boreholes and appear to be associated with the buried surface. Evidence of the former land surface was observed in additional bores drilled in the vicinity, suggesting the potential for additional cultural materials to be present and preserved in this deeply buried context.

Women and Epidemics: The Gendered Inequity of Ebola.

Sudy Storm, Oregon State University.

The Ebola epidemic began in the Kailahun District of Sierra Leone when a Maternal Child Health Aide contracted the disease from a Traditional Midwife. It spread quickly through this remote village region with the loss of women exceeding that of men. This presentation will discuss the cultural, economic, political, and environmental factors that put women at greater risk of infection and dying during an epidemic. It will explore the discordance between public health policy, international aid programs, and village reality. The historical backdrop of colonization, prolonged conflict, poverty, and patriarchy will be presented through the lens of critical medical anthropology to discuss the implications epidemics pose to global maternal child health. This presentation will share how the citizens of the Jawei chiefdom stopped the disease and saved themselves without international aid by using local resources.

Glass Buttes, Oregon: 14,000 Years of Continuous Use.

Daniel Stueber, Craig Skinner, Archaeological Investigations Northwest.

Late Pleistocene pre-Clovis and Clovis flintknappers to present day flintknappers have used Glass Buttes, one of the largest obsidian sources in Oregon, for toolstone procurement. This paper will discuss the nature, quality, and quantity of obsidian toolstone available at Glass Buttes, uses of this resource through time, new findings based on archaeological work that has been done there, impact of the modern flintknappers, and the current Bureau of Land Management plan for allowing and controlling modern procurement of obsidian at Glass Buttes.

Historical Chinese Opium Cabin in the Malheur National Forest.

Mary Sutherland, Malheur National Forest.

During the 2014 field season the Malheur National Forest hosted a week long Passport In Time archaeological investigation of a historical Chinese opium cabin. Passport In Time or P.I.T., a commonly used acronym, is a volunteer archaeology and historic preservation program developed by U.S. Forest Service. During the week of July 20th, Forest Service archaeologist and volunteers worked together to complete several 1x 1 meter test units at site H-645-0328. Surface inventories and site testing yielded a high volume of historic artifacts which include Chinese ceramics and opium paraphernalia. Artifacts recovered and cataloged from the 2014 P.I.T. project will be discussed and compared to similar discoveries in the region.

Does Size Matter?: Examining Changes in Shell Size and the Factors that Prompt Them at Cherry Point Archaeological Site in Washington State

Emily Taber, Portland State University.

The Cherry Point archaeological site (45-WH-1) is situated on the Strait of Georgia near Bellingham, Washington. The oldest occupation (represented in the "Northwest Block") includes an extensive shell deposit with dates from the Locarno Beach and

Marpole periods (3500 – 1500 BP). Population increase between these periods may indicate heavier mollusk harvesting and a decrease in shell size. Conversely, if Marpole specialization led to higher resource control, shell size may remain unchanged or increase. In 2009-2010, Western Washington University undergraduates Emily Taber and Katrina Schuster Chatburn attempted to correlate samples from the Northwest Block to Locarno Beach and Marpole periods. We analyzed several samples to test whether there was an apparent change in shell size, the results of which were mixed.

Assemblage Structure in the Yakima Uplands Foldbelt, Central, WA.

Allie Taylor, John Davis, and Steven Hackenberger, Central Washington Anthropological Survey, Central Washington University.

Thirty years of archaeological testing on the US Army Yakima Training Center have produced over twenty artifact collections from residential bases, quarries, lithic workshops and task sites. Inventory and locational models continue to define the relationships between these activities. Most testing reports are detailed; however, artifact data are only partly comparable. This project develops statistical and graphical comparisons of assemblages recovered from recent testing projects. Combining these results with data from earlier projects may help document and explain shifts in upland subsistence and settlement. Recommendations are shared for reanalyzing collections from earlier projects and expanding sample size as part of future projects.

Field Staples: A Look at the Subsistence Patterns of Archaeological Workers.

Breanne Taylor and Josh Moss, Willamette Cultural Resources Associates, Ltd.

In 1963, the Idaho State College conducted the Bruce's Eddy Data Recovery, in Clearwater County, Idaho. In 2015, WillametteCRA archaeologists spent 9 days in Klickitat County, Washington, conducting excavations for the Big-Eddy Knight Data Recovery. Comparing receipts compiled from both crews, we will determine how much was spent on groceries, gasoline and other field necessities and examine the popularity of specific food and non-food items over time. We will also highlight differences in quantities of fresh food items and processed food items purchased in 1963 and 2015. We will attempt to address questions such as; have there been any major shifts in the consumption of goods during field projects over time? Are there visible trends and if so, why? And, what role does accessibility play in the field archaeologist's diet?

Obsidian Procurement Patterns: XRF and Obsidian Hydration Results from Four of the Shoshone Complex Sites in Southeastern Oregon.

Scott Thomas, Bureau of Land Management, Burns District.

Introduced at the 2014 NWAC, the Shoshone Complex is a distinctive, relatively rare assemblage of artifacts (some made of chert from very distant sources), bovid or other large game faunal remains and percussion blade core technology. The 12 Complex sites are found in southeastern Oregon and appear to date to about 1500 AD. The faunal remains suggest most of the sites were primarily associated with Bison hunting and processing. The first inkling of the Complex was reported by William Lyons, Ph.D. while conducting research at the Lost Dune Site (35HA792) in the late 1990s. Since that time, 11 other sites, with closely similar assemblages, have been found. This presentation, after summarizing the essential elements of the Complex, will focus on obsidian XRF and hydration information from four Complex sites and discuss site contemporaneity and the local procurement patterns and travel within the region.

Autumn in the Valley: Paleo-ecological Findings at an 800 Year Old Ceramic Bearing Site in Southeastern Oregon.

Scott Thomas¹, Patrick O'Grady², Margaret Helzer³, Carolyn Temple, and Chuck Morlan,

¹Bureau of Land Management, Burns District, ²Museum of Natural and Cultural History, University of Oregon, ³Lane Community College.

Discovered in spring 2014, Locality 10 at Skull Creek Dunes Site (35HA496) is a very small site packed with a wide array of data. A 3 x 5 m scatter of bone fragments, fire-cracked ground stone pieces and lithic debitage surround a 2 m diameter charcoal-rich midden deposit. Numerous projectile points, artifacts of personal adornment and recreational pursuits were recovered. Most surprising were decorated ceramic vessel fragments, and a ceramic gaming piece. Many pieces of modeled clay suggest the clay was gathered and fired locally. The collected faunal assemblage is diverse, represented by seven genera or families. Equally rich is the floral assemblage recorded during flotation analysis; fourteen different plant genera were identified in the macro-botanical analysis for firewood charcoal and seeds. The site has been dated to 1245 AD (cal). This presentation will quickly review the material culture of the site and focus on the paleo-ecological data and, by extension, a climate reconstruction for the site vicinity.

Model of chemical profiles released during human decomposition.

Sarah Trotter, Easter Oregon University.

There are thirty prominent chemicals released from the human body during decomposition. Since the natural emission rate for each chemical, its evaporation rate, and the diffusion rate through the ground for each chemical is known, it is possible to calculate when each of these thirty distinct chemicals would disappear from a chemical profile as a function of both time and depth. This study presents a model for identifying the chemical profile for human body decomposition across both time, differential rates of emission and evaporation for each chemical, and depth, as a function of each chemical's capacity to diffuse through soils and sediments. The model is based on formulae for water solubility, first order degradations rates, soil density, and emission rates as part of human body decomposition. Knowing the profile for chemicals specific to human body decomposition as a function of time and depth

may allow for further research into methods for detecting clandestine burials or unidentified graves using chemical profiling equipment.

The Ethnoarchaeology of Mass Harvested Smelt in the Southern Pacific Northwest Coast.

Shannon Tushingham, Washington State University.

Smelt (osmerids) are a small fish that have been mass harvested by north coastal Native Americans for centuries, a living tradition that persists among many families on the north coast of California. Archaeological evidence of this tradition has been recently documented at several smelt camp and village sites, where an astonishing number of tiny smelt bone have been recovered using fine mesh recovery methods, a finding suggesting that small fish were an important, yet overlooked, part of the native diet. Collaborative ethnoarchaeological fieldwork with modern Tolowa fishers is directed at addressing gaps in ethno-historic data, providing information critical to understanding and interpreting the procurement, storage and processing of smelt in the past.

Wiyot Archaeology and the Historical Ecology of Humboldt Bay: A View from Manila (CA-HUM-321).

Shannon Tushingham¹, Janet P. Eidsness², Justin Hopt¹, Colin Christensen¹, Angela Arpaia³, and Julilani Chang⁴

¹Washington State University, Pullman; ²Blue Lake Rancheria, Blue Lake, California; ³Far Western Anthropological Group,

⁴University of California, Davis.

The Manila site (CA-HUM-321) is a stratified prehistoric midden site with an exceptionally long history of use by the Wiyot people. The site is located on Humboldt Bay, a major estuary system of the Pacific Northwest, in a strategic location with ready access to both open coast and estuarine resources. Our pilot study, conducted at a portion of the site owned by the Blue Lake Rancheria, included auger testing and constituent analysis of excavated materials. This work established that the site dates to over 1300 calibrated years before present (BP), and revealed the earliest evidence to-date of smelt fishing and intensive shellfish procurement on the North Coast of California. Furthermore, the diversity of remains, including stored resources such as smelt, indicate that HUM-321 represents midden associated with a Late Period residential base, possibly associated with the emergence of plank house villages in northwestern California.

The Archaeology of the Hungry Hill Battlefield.

Mark Tveskov, Southern Oregon University Laboratory of Anthropology.

Since 2009, the Southern Oregon University Laboratory of Anthropology has been conducting archaeological and documentary research into the Battle of Hungry Hill that took place between October 30 and Nov 1, 1855 during the Rogue River Indian War. The battle involved over 500 participants and was a major defeat for the U.S. Army, and the location and details of the engagement were soon lost to history. This paper describes the collaborative research that resulted in the re-discovery of the battlefield, and presents some of what we have learned about the battle itself and how it was remembered and mythologized over time.

Non-Migration Redux.

Donald Tyler, University of Idaho.

Scholars addressing human movements during glacial expansion and retreat leave the impression that there were large migrations of hunter-gatherers southward as glaciers advanced and migrations northward as glaciers retreated. However, small-scale hunter-gatherers do not generally migrate through or invade other hunter-gatherer territories given equivalent populations and technologies. I apply the concept of non-migration that Krantz developed to address movements of Neanderthals and *Homo sapiens* in Europe during glacial expansions and retreats. These populations would not have migrated south *en masse* during glacial expansions because there were already populations to the south that were experiencing similar ecological stresses. Those environments would not support increasing populations. Neither would they have migrated *en masse* northward with glacial retreat, but would have expanded into areas as resources became available. Only if the groups had some adaptation that allowed them to out-compete the existing populations, as *Homo sapiens* had over Neanderthals, would migration have occurred.

Relative Dating of Petroglyphs at Hole-in-the-Ground, Malheur County, OR with Portable X-ray Fluorescence.

Cyrena Udem¹, Jack Johnson², ¹SWCA, ²Burke Museum.

The recent use of portable X-ray fluorescence (PXRF) measurements of manganese patination as a means of deriving relative ages of numerous petroglyphs at the Hole-in-the-Ground site (35ML169) along the Owyhee River is presented. Utility and limitations of the method are evaluated, resulting glyph relative ages are displayed, and the implications of these results for interpretation of the local archaeological record and for ongoing BLM conservation efforts are explored.

A Chinese Coin and Flaked Glass: The Unrecorded History of Smith Cove.

Alicia Valentino, Environmental Science Associates.

Examination of artifacts recovered at 45-KI-1200 provides unexpected clues about the residents beyond the archival record. This paper tells the rest of the story about the community that lived in the Smith Cove tideflats in the early 1900s. The diverse artifact assemblage runs the gamut from a flaked glass scraper and glass debitage, to a Chinese coin and ceramics, to common, market accessible American wares. The result demonstrates the perseverance of cultural practices, the formation of community ties, the

consumption of alcohol (both legal and illegal) during Prohibition, and the health and lifeways of a marginalized population that was forcibly moved from their homes.

Public Archaeology in Western Idaho.

Dakota Wallen, University of Idaho.

This work is a history and progress report of public archaeology conducted in the Weiser River Basin. The majority of land in Idaho's Adams and Washington counties is owned by private landowners, and as a result has not been subjected to systematic survey documenting archaeological sites in the area. The regional public has expressed its interest in archaeological and historic research to create a better understanding of the occupation of the lands they now call home. Responding to this call is important because of the region's relationship to major cultural traditions such as the Western Idaho Archaic Burial Complex. It also serves to connect archaeology to the public and to help the local landowners to recognize and protect sites located on their lands.

Toward a better understanding of Holocene fire-climate-human interactions in the Pacific Northwest: the usefulness of macroscopic charcoal and pollen analysis of lake sediments.

Megan K. Walsh, Central Washington University.

Macroscopic charcoal and pollen analysis of lake sediments can be used to reconstruct past changes in local fire activity and associated vegetation shifts. While paleoenvironmental reconstructions from the Pacific Northwest based on these proxies do not necessarily indicate human impacts on the landscape, as is the case in agricultural regions of the world where lightning-ignited fires are rare, when compared with local to regional climatic and archaeological records they can provide valuable insight into past human-environment relationships. Numerous charcoal and pollen-based reconstructions spanning the past ~16,000 years exist from the Pacific Northwest, illustrating varying degrees of human impact on the landscape, and vice versa. Examples from the Willamette Valley, the western Cascades foothills, Mt. Rainier National Park, and the eastern Cascades will be discussed, focusing on the usefulness of these records for better understanding the role that fire played in Native American subsistence strategies.

Late Holocene Human-Fire Relationships at Sunrise Ridge, Mt. Rainier National Park, Washington.

Megan K. Walsh; Patrick T. McCutcheon; Michael Lukens, Central Washington University.

It is now widely accepted that humans have inhabited the Pacific Northwest for the past 13,000 years and used fire as a tool to manage low-elevation landscapes. Less widely understood, however, is the relationship between fire and humans in high-elevation environments, such as the subalpine forests and meadows of Mt. Rainier National Park (MORA). Here we detail the results of a combined paleoecological/archaeological study from the Sunrise Ridge area of MORA. Our goal was to compare the fire and vegetation histories determined from three lake-sediment cores with a record of human land-use activities, known from the Sunrise Ridge Borrow Pit archaeological site (45PI408). The unique depositional context of MORA, i.e., the presence of numerous well-dated tephra layers, makes it possible to easily compare these records—a situation that exists at very few locations. Our results detail important shifts in both fire and human land-use activities during the late Holocene.

Ceramic Production in Korean State Formation.

Rory Walsh, University of Oregon.

The earliest states in the southern Korean peninsula arose from confederated chiefdom societies, where individual polities maintained relative economic independence and individual identities. Historical accounts describe the emergent Baekje kingdom as conquering and subjugating the Mahan confederacy, but the archaeological record shows increasing evidence for the persistence of pre-state economic strategies, including a dispersed pattern of ceramic production, even as the new styles and technologies of the state took hold. Using Instrumental Neutron Activation Analysis, these production traditions and routes of exchange are examined to reveal a complex and multi-faceted expansion of the Baekje state.

Building a History: The Inventory and Evaluation of CWU's Built Environment.

Lauren Walton, Central Washington University.

Central Washington University's Facilities Management Department is tasked with maintaining and improving CWU's campus according to evolving needs and values of the university and resource management laws. The development and implementation of a Campus Master Plan, with a provision for resource management compliance, are parts of the ongoing and comprehensive process toward accomplishing this. Through the involvement of faculty, students, and the greater community in the planning process, Facilities encourages and fosters academic growth. This presentation examines the intersection of Facilities' goals with the educational goals of one graduate student in CWU's Resource Management Program. The product (to-date) of this intersection will be shared, including the inventory of CWU's built environment, a budding evaluation of CWU's buildings for NRHP building/district nominations, and the potential to integrate said evaluations into the Campus Master Plan.

Do You Have Prince Albert in a Can?

Kim Wessler, Oregon State University.

Pocket tobacco tins are one of the most commonly recovered artifacts in 20th century sites and can be extremely useful when determining site occupations. However, archaeologists are often missing the information required to date these tins because little work has been done to gain complete developmental chronologies of them. Prince Albert tobacco is often used as the default brand when pocket tobacco tins are found because of its popularity. Unfortunately, there is very little that is commonly known about its development, which makes the tins difficult to date. This poster presents a chronology of the various advances in Prince Albert pocket tin technologies and label changes from their first introduction in 1909 to the fall in popularity of loose leaf tobaccos in the late 1970s.

Fort Colville, Washington - Now You See It, Now You Don't.

William White, National Park Service.

Second only to Fort Vancouver, Hudson's Bay Company operated Fort Colville on the Upper Columbia River as a fur-trade establishment and isolated British outpost of civilization from its founding in 1825 to closure in 1871. The fort's location was subsequently inundated in 1941 by Lake Roosevelt, a storage reservoir for the Grand Coulee Dam project. To facilitate the construction of a second powerhouse at the dam the lake was drawn down to a level allowing salvage archaeology to be conducted at the site intermittently from 1970 to 1978. Normal operation of the dam requires annual lake drawdowns for the purpose of storing spring snowmelt runoff, during which time the site occasionally surfaces above low water levels. Exposed in the spring of 2014, a site condition assessment of this National Register listed property was conducted to evaluate erosion and sedimentation processes occurring at the site. This paper discusses the study's findings.

Preliminary Analysis of Shellfish Deposits at the Manila Site (CA-HUM-321): Species Typology and Resource Locality.

Cassady Williams, Amanda Carroll, Shannon Tushingham, Washington State University.

The Manila site (CA-HUM-321), situated between the Pacific Ocean and Humboldt Bay in northwestern California, has a long, rich, history of occupation and resource use. The site's unique location offered the Wiyot people the possibility for shellfish gathering in the Pacific Ocean as well as the acquisition of estuarine species in Humboldt Bay. Earlier studies have focused on site seasonality, climate change, and human subsistence within a collaborative framework (Tushingham, 2012). This poster augments previously gathered information about site use at CA-HUM-321. We report on our studies involving species-level identification of excavated shellfish, and discuss these findings with regard to potential harvesting locations. Through this we increase understanding of the importance of specific resource localities for both the historic and contemporary Wiyot people.

The New Face in the Gaelic Community: Women in the Cultural Forefront.

Diane Williams. Central Washington.

At the very core of anthropology is the ongoing question of how cultures develop, change, and adapt. Cultural perspectives on gender roles, for example, can change based on decisions made by both men and women as the members of emigrant populations navigate ways to survive in new environments. For centuries, the contributions of Scottish women as active tradition-bearers in Scotland have often been overshadowed by a focus on the many public roles of men. Since arriving in Cape Breton Island in the mid-18th century, the culture of the original Scottish settlers has experienced significant changes relative to the political and economic changes in the larger context of the region. My research examines the changing roles of contemporary Cape Breton Highland women (1950 – 2014) in the maintenance and transmission of Scottish culture and traditions, and challenges the assumptions of previous scholars that the language and culture are dying out.

An Admiralty Anchor from Admiralty Bay, Washington: Is it the HMS Chatham's Lost Anchor?

Scott S. Williams, Washington State Department of Transportation.

In 2008 a commercial diver discovered an Admiralty anchor in 40 feet of water in Admiralty Bay, Whidbey Island, and the anchor was recovered under permit in June 2014. The type of anchor originally suggested it could be the stream anchor lost by the HMS Chatham during its exploration of Puget Sound on June 9, 1792, but once recovered the large size of the anchor suggests it is not the HMS Chatham stream anchor and instead may belong to an unknown 19th century vessel. This paper briefly describes the recovery process and issues surrounding protection of historical underwater cultural resources in Washington State.

Life on the Sandspit: A Brief History of Smith Cove's Tideflats Community.

Katherine F. Wilson, Environmental Science Associates.

Recent excavations in Smith Cove identified the remains of a low-income, multicultural community dating between c.1911 and 1941. Being located on Seattle's tideflats, ownership of the area was disputed as early as the 1890s. Occupation continued into the 20th century with a marked increase after the Port of Seattle acquired the land and adjacent shipping terminal in 1911. Residents on Magnolia Hill pleaded with city officials to remove the squatters, while those on the flats held their ground. While sometimes raucous, the Smith Cove community housed families, unemployed widowers, and single working-men alike. The US Navy condemned the area in 1941, evicting residents and razing structures. Drawing upon census records, newspaper articles, city

directories, Sanborn Fire Insurance maps, US Coast and Geodetic Survey maps, and historic photographs, this paper presents an overview of life within this working-class community of beach houses, houseboats, and small shacks.

Language Revitalization and the Socialization of Sociocultural Norms.

Rebecca Wood, University of Montana.

This paper examines the ongoing language revitalization efforts of the Salish-Pend d'Oreille in order to understand the language and cultural change in this community. The Salish-Pend d'Oreille have become predominately monolingual in the non-traditional language, English, with fewer than 50 fluent Salish speakers remaining. Revitalization efforts began in the 1970s and yet the number of fluent Salish speakers has continued to decline, with fewer than 50 fluent speakers. Longitudinal observational data was collected on a variety of learning contexts, available to community members, and analyzed to determine what individuals are being socialized to and how socialization occurs in these environments. My research demonstrates that the community's revitalization efforts indirectly socialize children and other language learners to use language primarily in formal, institutionalized settings. I also suggest that language revitalization programs reflect the larger sociocultural practices and ideologies of the Salish-Pend d'Oreille community.

John Player and Sons Medium Cut Tobacco Tins.

Diane Zentgraf, Oregon State University.

This poster follows a timeline of the origins and changes to John Player and Sons Medium Cut Tobacco tins. Subtle changes can be seen to the can construction and lithographic artistic design changes to the images and trademark. This timeline follows the path from the first tins to the more current ones. A myriad of early 20th century containers serve as general horizon markers for archaeological assemblages. More study needs to be done on understanding changes to tin forms. This is just one company that the chronology has been done to help archaeologists in this process.