

**ABSTRACTS OF PAPERS PRESENTED AT THE 45TH ANNUAL NORTHWEST
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STEVEN ACHESON
Archaeology Branch
Province of British Columbia

In the Wake of the Iron People: Changing Settlement Strategies Among the Kunghit Haida

Evidence of changing settlement strategies among the Kunghit Haida of the southern Queen Charlotte Islands, British Columbia, is presented, demonstrating the use of ethnographic and historical observation in settlement archaeology. In a direct challenge to the orthodoxy in Northwest Coast settlement archaeology, the data chronicle a 1600-year occupation where small, nucleated, year-round settlements, rather than large seasonally occupied, multilineage villages, appear typical of the region prior to historic contact. The conclusions reached account for and reconcile some of the ambiguity in the ethnographic and historical literature concerning subsistence activity, residency patterns, and political authority, as well as clarifying the role of historic contact in culture change on the Queen Charlotte Islands.

LILLIAN A. ACKERMAN
Washington State University

The Ideology of Women in the Plateau

Many anthropologists still believe that all women everywhere are on the periphery of their societies in terms of importance and participation. This does not seem to be true for traditional Plateau Indian women. Instead, women were at the core or center of most activities in the Plateau. A brief review of aboriginal Plateau women's roles in the economic, domestic, political, and religious spheres is presented. A discussion of the equivalent taboos placed on men and women illustrates the symbology of gender and the gender equality that existed in the aboriginal culture.

MARIAN ACKERMAN
Eastern Washington University

*Digging for Meaning: Interpersonal Communication Skills, Important
Tools for the Ethnographer*

Communication experts point out that spouses, siblings, and close friends miscommunicate frequently, but that these misunderstandings are usually realized only when they cause some disturbance in the relationship. Imagine the misunderstandings which take place

across cultures. Interpersonal communication skills -- "active listening" -- have been developed to help communicators understand the meaning in what is being said. Ethnographers know that digging for meaning involves much more than asking questions, for meaning is in people, not just in the words. I suggest that bringing "active listening" into the ethnographic interview can contribute to a better understanding of other cultures.

C. MELVIN AIKENS
University of Oregon

Fort Rock Basin Prehistory since Cressman

Cressman's 1938 excavations in Fort Rock Cave established the existence of an ancient desert culture in the northern Great Basin. The record of human occupation now spans the last 11,000 years, and perhaps more, in this distinctive setting of arid sagebrush flats, marshland, and sometimes lakes at the eastern base of the Cascades in central Oregon. Cressman focused on the early periods. Recent work extends the record through arid mid-postglacial times into the wetter Neopluvial, when fish camps and dwelling sites were established on distributary channels in the Paulina Marsh-Silver Lake-Fort Rock Valley system, and into Late Prehistoric times, when a large village of many substantial houses was created in the uplands at the eastern edge of the basin.

WILLIAM H. ALKIRE
University of Victoria

Coconuts in Ritual and Pioneering Contexts in the Central Carolinas

Within the coral island societies of the central and western Carolinas the coconut occupies a unique position in the plant inventory. As a food it is classified separately from other crops; in ceremonies and rituals it holds a preeminent position; and in pioneering contexts it is the first crop planted. This exceptional contemporary cultural position of the tree and its fruit has a number of possible implications in the reconstruction of the culture history of early migrants and voyagers within Micronesia and the Pacific.

KENNETH M. AMES
STEPHEN HAMILTON
Portland State University

Excavations of a Late Pacific Period, Southern Northwest Coast Plank House

From 1987 to 1991, Portland State University has excavated a large (14 x 30 m [46 x 98 ft.]) plankhouse at the Meier site (35-CO-5), near Portland, Oregon. The house stood for several hundred years between ca. 1400 and 1800 AD. We have sampled approximately 30% of the house's interior, concentrating our work along the dwelling's western side. Household social and economic organization is strongly reflected in the sediments, features, ecofacts, and artifacts encountered.

KENNETH M. AMES
 Portland State University
 HERBERT MASCHNER
 University of California, Santa Barbara

Prehistoric Population Dynamics on the Northwest Coast

Documenting demographic changes archaeologically is extremely difficult. Very large samples of radiocarbon ages provide a usefully surrogate measure of population trends over long periods of time. Very large samples of radiocarbon ages from the northern and southern Northwest Coast sub-areas, indicate that population growth in these regions was rapid after 5000 BP; that these regions had distinctly different population histories particularly after ca. 1500 BP and that populations in both regions may have been in decline before European contact.

WILLIAM ANDREFSKY, JR.
 Washington State University

Cascade Phase Lithic Technology on the Lower Snake River

Stone tool artifacts and debitage attributable to the Cascade Phase are examined from several sites on the lower Snake River. Extra emphasis is applied to organizational aspects of technology from three sites located on Swift Bar in Whitman County, Washington. The analysis suggests that Cascade phase occupations on the lower Snake River may not be as locally oriented as previously thought. The stone tool data indicate that Cascade phase occupations may occur in the form of many different kinds of sites and settlements, and that populations may have a much wider circulation. Additionally, the notion that available basalt use is a diagnostic characteristic of this phase does not necessarily hold.

MICHAEL G. AVEY
 Pierce College

Fluted Point Occurrences in Washington State

A number of fluted point summaries have been completed for Washington state. Each of these is different. A history of the recovery and recording of fluted points in Washington state is presented in order to clarify the data base.

SHILA BAKSI
 Washington State University

Code-Switching Among Bengali-English Bilinguals in the United States

Findings of a study of linguistic code-switching among Bengali speakers residing in the United States are presented. The findings show that there are significant patterns in the frequency of occurrence of English and Bengali words and sentences which relate to topic of conversation and other variables. Conversations were tape-recorded, transcribed in full,

and analyzed. Differences in male and female code-switching and variations between adults and children are also examined. The study shows that current social variables rather than previous language use in India significantly influence code-switching patterns.

ANDREW J. BARTON
Simon Fraser University

Dentalia Procurement Locations on the Northwest Coast

The occurrence of dentalia in archaeological sites in western North America is used by archaeologists to construct trade routes and to comment on contact between different prehistoric groups. The primary source for the dentalia recovered from prehistoric sites is usually seen as originating from locations along the west coast of Vancouver Island. The ethnographic and historically recorded locations where dentalia were procured are reviewed and changes that occurred during the Historic period are discussed. The technology developed and used by Nuu-chah-nulth people to fish for dentalia is discussed in relation to the prominence of the west coast of Vancouver Island as a source area.

JAMES W. BELL
Linn-Benton Community College

Remote Sensor Use at a Historical Archaeological Site, Champoeg, Oregon

Geophysical and geographic remote sensors were utilized at Champoeg, Oregon, for the detection and mapping of buried structures. Multiple sensors allowed overlapping coverage and aided in the accuracy of the interpretation process. Seismic profiling, aerial color infrared photography, soil conductivity surveys, and ground penetrating radar were used to detect subsurface features. Later excavation of portions of the site provided data on the accuracy of the remote sensor surveys. Indications from the study indicate a high degree of accuracy in detecting subsurface features. The remote sensor surveys aided in the planning and execution of the excavation process. The use of remote sensors in routine testing and excavation of historic archaeological sites is suggested.

JAMES W. BELL
Linn-Benton Community College

Subsurface Feature Detection by Remote Sensors at Fort Vancouver

Cultural resource management needs dictated the requirement to map the potential locations of subsurface features of Fort Vancouver National Historic Site, Washington. In an effort to conserve excavation costs and time, geophysical remote sensors were employed. Surveys using a soil conductivity meter and a ground penetrating radar were conducted over the same portions of the site. The survey results from both sensors were compared and interpolated with known probable locations from historical maps. Soil stratigraphy and past soil disturbance were also considered in the interpretation process. The result was a

series of maps, based on sensor data, identifying possible locations of significant portions of the Fort Vancouver settlement complex, dating from 1820 to 1855. These maps will be used as a planning tool for cultural resource management for the National Park Service.

ERIC O. BERGLAND
JEFFREY C. MCALISTER
Willamette National Forest
CHRISTOPHER STEVENSON
ASC, Inc. Diffusion Laboratory, Columbus, Ohio

A Comparison of Hydration Rates for Obsidian Cliffs Glass

Confidently assigning occupation dates to Cascade Mountain prehistoric lithic sites in western Oregon has always been difficult. This is largely due to the poor preservation of dateable organic cultural materials; that situation is compounded by the apparent longevity of projectile point styles and by the churning of cultural deposits in the forested environment. The authors present an induced hydration rate for Obsidian Cliffs glass (the dominant source of western Cascades archaeological obsidian) and compare that experimental rate with hydration rim measurements and radiocarbon ages from several Oregon archaeological sites.

KATHRYN BERNICK
Vancouver, British Columbia

Wet Site Story: A Chapter from the Lower Mainland of British Columbia

Perishable artifacts and wet sites have much to contribute to Northwest Coast archaeology, yet they are poorly documented from both research and management perspectives. This reflects a bias in favor of land-based occupation sites, as well as methods of field investigation unsuited to the detection of waterlogged archaeological deposits. In the Fraser delta, environments with a high likelihood for wet sites include intertidal river beaches and former creek beds and sloughs now buried under 2.5 m (8.2 ft.) of alluvium. Accelerating urban expansion threatens the cultural wetland resources and imparts urgency to a recommendation that archaeologists reverse the practice of overlooking wet sites.

KEVIN BERRY
Simon Fraser University

Prehistoric Dog Food: Stable Carbon Isotope Analysis from the Keatley Creek Site

Stable carbon isotopes have been used in past studies within the British Columbian Plateau to suggest that salmon resources may have contributed over half of the dietary protein within prehistoric human populations. The presence of numerous dog remains, found at the Keatley Creek site on the upper Fraser River, suggest that dogs were being treated specially and that they may have been consuming even greater proportions of salmon than their human masters. There are numerous variables which must be considered in a preliminary study such as this; however, the initial results provide important insights into the potential costs of keeping and breeding dogs in the region prehistorically.

BARBARA BICCHIERI
Central Washington University

The Utanum Creek Site Revisited

In the summer of 1991, archaeological testing of the Utanum Creek site (45-KT-101) was undertaken in a cooperative agreement between the Central Washington University and the Bureau of Land Management. This site, located in the Yakima River drainage of the western Columbia Plateau, was originally tested and excavated in the 1960s, and has contributed significantly to interpretations of prehistory in this region. The recent project entailed investigation of site stratigraphy and historic disturbance to address management concerns. The results of this project are summarized, with a note toward the role of historic land use in site formation processes.

ASTRIDA R. BLUKIS ONAT
BOAS Inc.

Do You Know What a "Whatzit" Is?

A number of small, finely-finished stone objects have been found in sites in the Fraser Valley, the Gulf Islands, and in western Washington. They have been labeled "whatzits" because their function is unknown. In collections of artifacts from the Baltic region of northeastern Europe, similar objects may be found. They are called *celu delisi* in Latvian and function as guides in the manufacture of rope and small woven straps. It is herein suggested that "whatzits" had the same function in the prehistoric manufacture of a variety of string, rope, and strapping in prehistoric Northwest cultures.

ASTRIDA R. BLUKIS ONAT
BOAS Inc.

Tuning the Ear and Adjusting the Vision: The Archaeology of Unfamiliar Cultural Contexts

The theoretical basis of North American archaeology is a product of a particular culture that places emphasis on hierarchies. I have concluded that the language we use for definition and description of prehistoric materials is biased by this emphasis. I have thus come to question why there are only camps and villages in the prehistoric Northwest. I would suggest that archaeologists working with native prehistory become more familiar with the continuity of Native traditions in a modern context. I have found that such an approach provides a more appropriate interpretive base and a better vocabulary for defining prehistoric traditions.

ROBSON BONNICHSEN
 CHARLES BOLEN
 MORT D. TURNER
 JOANNE C. TURNER
 MARVIN BEATTY

Center for the Study of the First Americans

*Excavations at Mammoth Meadow, Southwestern Montana, Reveal
 Hair Record in Paleoindian Component*

Archaeological investigations located approximately 60 km (37 mi.) southwest of Dillon, Montana, have revealed a large quarry and workshop complex. This complex, located at the base of the Beaverhead Mountain Range near the headwaters of the Everson Creek, is a significant lithic source center. Quality fine-grained cryptocrystalline rocks used for tool manufacture occur in a variety of colors and have attracted Native Americans to the area since the last ice age. At Mammoth Meadow locality, geoarchaeological investigations have focused on a three-meter record of fan colluvium, loess, soils, alluvium, and archaeological remains of the first terrace. At least ten archaeological components are represented and document a rich history of lithic workshop and habitation activities that bracket the Holocene and late Pleistocene. Excavations in 1991 of the contact between loess and fluvial gravel deposits exposed an early archaeological assemblage of core preforms, blade core preforms, macro blades, and large biface fragments. Flotation of sediments by Charles Bolen led to the recovery of a hair record of large and small mammals. Over 20 taxa are represented by their hair and include the extinct genera of horse (*Equus* sp.), caribou (*Rangifer* sp.), and mammoth (*Mammuthus* sp.). Also of interest is the discovery of a 32 cm long human hair that is currently being tested for DNA content.

VANDY BOWYER
 Simon Fraser University

*Yes, Little Things Mean a Lot: Implications for Paleoethnobotanical
 Analyses of Hunter-Gatherer Sites*

The study of plant remains is becoming an increasingly important component of archaeological interpretations. Plant remains are often overlooked as a useful tool to understanding hunter-gatherer-plant relationships because of assumptions about site use, the intensity of occupation, and plant preservation. Charred archaeological remains were examined from a Late Plains Archaic to Late Prehistoric hunter-gatherer site in the Big Horn Basin, Wyoming, yielding information on the past environment and the selection of plants for food and fuel. The potential and implications for paleoethnobotanical analysis of hunter-gatherer groups is explored and discussed.

DANIEL L. BOXBERGER
 Western Washington University

Ethnicity and Labor in the Puget Sound Fishing Industry

The early history of the development of the commercial fishing industry of Puget Sound is a complex set of relationships involving a number of different identifiable ethnic groups. Significant numbers of five different ethnic groups played an important role in the growth

and development of the Puget Sound fishing industry, yet by the 1930s the participation of all but those of European origin was negligible. The political economy of the Puget Sound fishing industry is investigated as a means of understanding the incorporation, and subsequent exclusion of, these labor groups.

TOBIAS BOYD
Reed College

Tattooing in Morocco: An Ongoing Conversation (in Permanent Change)

North Africa, though the subject of innumerable ethnographies and travel writings, continues to be portrayed as mysterious or unchanging. This message is nowhere more evident than in representations of women's facial tattoos, which are rarely discussed but frequently photographed. Closer examination reveals these tattoos are central to debates surrounding piety, modernism, and gender. These inscriptions provide a written history -- ephemeral as it is -- a record of cultural change and bodily practice which is at once a forum and an irreversible change.

ANN BRASHEAR
University of Oregon

A Model for Subsistence and Settlement Activities in the Fort Rock Basin with Special Attention to Upland Environments

A general model for subsistence and settlement patterns for the Fort Rock Basin depicts winter settlements in the lowlands, with excursions into the uplands for food resources during spring and summer. Year-round residence in the Squaw Butte uplands may have been feasible at times, given an abundance of food resources there. Recent archaeological survey data show that within an area approximately seven miles north-south by five miles east-west, there were pithouse sites, campsites, lithic scatters, and processing locations, leading to the suggestion that a full range of activity sites might be represented in this distinctive upland setting.

GREG BRASS
University of British Columbia

Hatzic Rock: "No Autographs, Please!"

Hatzic Rock is the name bestowed upon a large boulder (a glacial erratic in geologic terminology) outside Mission, British Columbia. Recently, this boulder has gained unprecedented fame and importance due to its cultural significance to the Sto:lo along with the archaeological importance of surrounding areas. A site interpreter who worked on the 1991 summer excavation of the site discusses his involvement in the project and shares his own observations of the apparent controversy surrounding this place and event.

DAVID BRAUNER
Oregon State University

The French-Canadian Archaeological Project: Return to Champoeg

The French-Canadian Archaeological Project represents an ongoing effort by archaeologists from Oregon State University to understand the early historic settlement of the Willamette Valley, Oregon. Our particular focus has been on a little-known group of French-Canadian trappers and voyageurs who, after leaving the service of the Hudson's Bay Company, were allowed to settle in the Willamette Valley with their families beginning in 1829. French-Canadians were the dominant ethnic group in the north central valley until 1843. Recent archaeological investigations in Champoeg State Park have enhanced our understanding of this population, but more importantly, the Champoeg project has begun to put the French-Canadian settlement into a clearer context relative to contemporary English and American settlers. The 1991 field season at Champoeg State Park involved the sampling of two late-1830s/early-1840s English cabin sites, an 1850s American cabin site, and an 1880s commercial building. A review of the 1991 field season and how these new data enhance our understanding of early historic settlement patterns and cultural developments in the old Oregon County are presented.

RICHARD BROLLY
Arcas Consulting Archaeologists Ltd.

The 1991 Investigations at the Little Beach Site (DfSj-100), Ucluelet, British Columbia

Preliminary results of test excavations at an early shell midden on the outer coast of Vancouver Island at Ucluelet are reported. The lowest deposits at the Little Beach site are configured to a higher sea-level characterized as the Ahous Bay Stillstand, which ended about 4000 BP. Bracketing radiocarbon ages indicate that the midden was occupied between 4000 and 3000 BP. Nineteen burials were discovered during the 1991 investigations, some associated with boulder cairns and whalebone. Few artifacts were recovered, but included a frequency of chipped stone higher than normal for sites on the outer coast and a ground stone assemblage including a possible labret and slate points. When the site is compared with other excavated sites on the west coast of Vancouver Island it appears to resemble the Shoemaker Bay site at Port Alberni more than the Yuquot site in Nootka Sound.

DAVID V. BURLEY
Simon Fraser University

On the Nature of Post Lapita Settlement Patterns in the Kingdom of Tonga

Recent research in the Ha'apai Island group, Kingdom of Tonga, has gathered numerous data on both the distribution of and configuration for sites dating after 2000 years ago. Interpretations of Tongan history and archaeology for this period unequivocally state that, following the initial colonization of the Lapita period, settlement pattern becomes non-nucleated, dispersed throughout the islands in closely spaced plantations. A return to aggregated village settlement, as characteristic of the islands today, is accepted as a nineteenth-century phenomenon, being a consequence of chiefly wars and the construction

of central fortifications. Archaeological data from Ha'apai suggest the contrary. Not only is there firm evidence for interior nucleated settlement, but cultural deposits associated with most contemporary coastal villages indicate considerable time depth for occupation. In sum, it is argued that, though considerable population increase has occurred in the post-Lapita period, the basic configuration of Lapita settlement pattern did not change substantially.

MICHAEL S. BURNEY
Umatilla Confederated Tribes

Traditional Use Areas and Cultural Properties on the Aboriginal Landscape of the Umatilla, Cayuse, and Walla Walla of Northeastern Oregon and Southeastern Washington

The Umatilla, Cayuse, and Walla Walla people (CTUIR) have jointly occupied vast areas of northeastern Oregon and southeastern Washington for hundreds or thousands of years. From the Columbia River to the highest elevations of the Blue Mountains these peoples, and neighboring Indian groups, have harvested the fish, animals, roots, berries, building materials, and medicines necessary for sustaining their way of life. These once abundant natural resources, and the landscape upon which they are distributed, continue to play a significant role in the contemporary culture and world view of the CTUIR, despite their degradation by development, harvesting of the natural resources by non-Indians, and transfer of ownership from the Federal Government into private ownership. This culturally significant natural landscape traditionally revered by the CTUIR is discussed in terms of traditional use areas, traditional cultural properties, ethnographic resources, and sacred resources.

R. SCOTT BYRAM
University of Oregon

Settlement Intensification in the Squaw Butte Uplands

The findings of a 1990 University of Oregon Field School Survey of an uplands region along the southeastern margin of the Fort Rock Basin are presented. Substantial cultural occupations have been evaluated in the lowlands of the Basin, but little investigation of the surrounding uplands regions had been conducted prior to the Fort Rock Basin Prehistory Project survey. Evidence of an extensive cultural occupation in the Squaw Butte Uplands was revealed during the 1990 survey. Site and isolated artifact distributions have been examined toward an understanding of changes in the use of these uplands through the Holocene period.

SARAH K. CAMPBELL
Western Washington University

Modeling Aboriginal Fisheries Productivity for the Upper Columbia River

Anadromous fish resources have been assigned a prominent role in interpretations of Plateau prehistory. However, although a systematic basis for modeling relative fisheries productivity has been developed by Schalk and others, estimates of relative productivity

have not been applied beyond synchronic description. A comprehensive model for estimating relative fisheries productivity within a river system is developed and applied to the upper Columbia River. Application of this model to evolutionary questions such as shifts in population distribution related to changes in population density is explored.

WILLIAM J. CANNON
Bureau of Land Management, Lake View District

Establishing a Stratigraphic Chronology for the Fort Rock Basin

Recent work by the Bureau of Land Management and Peter J. Mehringer of Washington State University on open dune sites in the Fort Rock Basin of southeastern Oregon has established a chronology of the distinctive strata of these dunes. Dating has been based upon both radiocarbon and volcanic tephra. Associated cultural remains provide clues to the occupation of the area which supplements work on closed cave sites in the region. The identification of dated strata and tephra in the Basin will provide dating possibilities for other sites.

ROY L. CARLSON
Simon Fraser University

Paleo-Shamanism on the Northwest Coast

Northwest Coast art is used to trace the shamanic belief system back to about 4000 BP. Three kinds of shamanic paraphernalia which appear sequentially in the archaeological record are probably indicative of regional shamanic networks or cults. The earliest and least widespread are spoons with shamanic motifs which date between 4000 and 2500 BP. Next in time and more widespread geographically are seated human figure bowls which date between approximately 2000 and 1000 BP. Last and most widespread are human figure pendants with dates within the last 1000 years preceding contact. Although the archaeological data discussed above are restricted to the region between Bella Coola on the north and the lower Columbia on the south, shamanic beliefs, although expressed in different ways, were probably also in operation throughout this same time span on other parts of the Northwest Coast.

A. SCOTT CATEY
GARY KERR
University of Montana

Erasing the Evidence

In 1990 two plumbers working in a crawlspace beneath a bar in a rural Montana town discovered what appeared to be human remains. The bones were later confirmed to be human and we were asked to perform a forensic analysis. Several of the bones appeared to have been cut with a sharp blade. Parts of the body which would permit identification of the individual were absent. The findings are presented using slides and the actual remains.

LESLIE CECIL
University of Montana

Specific Analysis of Hohokam Ball Courts with Respect to Core and Periphery Hierarchy

The different number and type of ball courts in a specific site indicate its social and political function because networks of social connections in the Hohokam region are structured through the ball court system. The region can be divided into core and periphery zones. Core regions, which have a greater social function, have both large and small courts. Peripheral areas, showing dependency on the core area, contain either one or no small court. There is a correlation between core and periphery site cluster patterns which is seen through the ball court system of the Hohokam.

JAMES C. CHATTERS
Batelle Pacific Northwest Laboratory

Bison, Salmon Productivity, and Settlement of the Southern Plateau Uplands

Around 2500 BP, after thousands of years of focusing their activities along major rivers, southern Plateau peoples became more active in non-riverine settings. It has been suggested that along the Snake River this move was triggered by the expansion of the bunchgrass steppe, which brought with it a surge in bison and elk populations. The recent discovery of a bison kill site in the driest part of the Columbia Basin provided the impetus to re-explore this issue. Archaeological data and a wide range of paleoecological indicators were brought to bear, including some new evidence for the characteristics of the early grassland. The results show that the grassland may have extended westward beyond its present limits, at least around 2100-2000 BP, and consisted of a now-uncommon species that requires late spring and early summer precipitation. Such conditions would have enhanced bison calf survival, resulting in higher ungulate biomass. At the same time, shellfish distributions and geomorphology indicate the aggradation of regional rivers, a condition not conducive to salmonid productivity. It appears that for several centuries after 2500 BP, the resources of the river weakened their pull on human consumers while the draw of the uplands increased. Although the grasslands retracted, bison disappeared, and the river again became productive after 1600 BP, use of the interfluvial plain continued until historic times.

JAMES C. CHATTERS
Sclerochron, Richland

Seasonality of Human Habitation in Hells Canyon

Hells Canyon of the Snake River is one of the most forbidding summer environments in the Pacific Northwest. Temperatures are extreme and riverine productivity is low compared to lower reaches of the Snake and Columbia rivers. Human habitation sites are nonetheless abundant since early in the region's prehistory. To determine when the canyon was used, seasonality of the Tryon and Camp Creek sites was determined from mussel shell growth patterns. The results were compared with mussel shell data from pithouse sites on the lower Columbia and Snake rivers, which are productive during the warm season. Mussels

from the Hells Canyon sites were collected only in winter and early spring, whereas the other settlements contain shells collected at various times of year.

JUAN CHAVARRIA
Boise State University
LEE SAPPINGTON
University of Idaho
DAVID SISSON

Bureau of Land Management, Cottonwood Resource Area

Lithic Analysis, Cottonwood Creek Divide, Hells Canyon.

Lithic tools and debitage are analyzed to determine the role of upland hunting and tool making/maintenance at a spring site located in the divide between the Snake and Salmon rivers. Results suggest intense site utilization spanning the last 3500 years and support Leonhardy's model of focal upland settlement. This model suggests a seasonal round tethered to upland sites rather than canyon or valley sites.

RICARD D. CHEATHAM
University of Oregon

Archaeological Investigations at Two Sites in the Upper Klamath Basin

According to early ethnographic accounts, a complex of Klamath settlements, consisting of winter villages and seasonal fishing camps, was located along the Williamson River for about five or six miles below its confluence with the Sprague River. Recent archaeological excavations completed at Beuksewas (a village site) and the Williamson River Bridge site (a spring fishing camp) reveal that both of these site-types were present in that locality from about 2000 years ago into the historic era. The cultural and biotic evidence from the two multi-component sites are compared to highlight the similarities and differences between the two sites.

LANYAN CHEN
University of British Columbia

Industrial Work in China in the 1930s

The Nationalist suppression of labor movements in the late 1920s demonstrated the Nationalist government's stance in industrial policies that brought the government into close interaction with mill owners and labor contractors in order to, among other purposes, control laborers and raise revenue. Industrial work in Republican China in the 1930s was undertaken in a sphere of intricate and coercive industrial relations formed particularly among industrial laborers, mill owners, and the Nationalist government in Nanjing. Industrial work in such a context is both exploitative and repressive. Some of the exploitative and repressive aspects of such industrial work are examined and an analysis is included of the consequences on the growth of laborers, mill owners, and the Nationalist Republican government in Nanjing.

HENRY CHOONG
University of Montana

*Politics, Economics, and Health in the Assiniboin-Sioux Population
of the Fort Peck Indian Reservation, Montana, 1885-1905*

Health conditions present at the Fort Peck Indian Reservation during 1885-1905 were determined in part by extant social, political, and economic conditions. The reservation government structure had economic and political control of critical health resources. The relationship between ill-health and the policies of the Bureau of Indian Affairs is one of dependency, where underdevelopment and the concomitant health conditions are attributable to uneven distribution of health-related resources. Some of the cultural factors that affected health are discussed.

THOMAS E. CHURCHILL
Coastal Magnetic Search and Survey

*Leftovers: From Jamaica to Dendroglyphs in South-Central Oregon -- Or --
Tom Dealy Damn Fool Shepherder*

Dendroglyphs found today near Snow Mountain, in southcentral Oregon, represent the remains of historic shepherded grazing patterns. These patterns also reflect the development of the area by the federal government. Historic documentation established the presence of four periods of activity. Data gathered from archaeological surveys provide evidence during these periods. Spatial patterns within allotments were revealed by carvings by Tom Dealy, Jay Smith, and others. Described in a "Jamaican-flavored" overview are the temporal and spatial patterns as shown by the distribution of carved trees near Snow Mountain, Oregon.

SUSAN C. COLE
University of British Columbia

From Native Community to Urban Center: What It Means for a Female Community Leader

Recent anthropological research on Northwest Coast women includes community studies that focus on women in tribal politics, life histories of prominent women in Native communities, ethnohistorical inquiries of women's changing economic roles, and urban studies on the experiences of Native women in the multi-cultural urban environment. In the past, few studies have combined these topics. This preliminary research takes a new approach by bridging these domains in its examination of the life of a female community leader.

THOMAS J. CONNOLLY
R. SCOTT BYRAM
University of Oregon

Hydration Analysis of Obsidians from the Caldera of Newberry Volcano, Central Oregon

Obsidian flows within the crater of Newberry Volcano, central Oregon, were systematically quarried for tool stone material throughout the Holocene. Geochemical analysis of Newberry obsidians suggest that, with few exceptions, obsidians from different flows within the crater cannot be distinguished by trace element profiles. Irving Friedman has previously calculated a hydration rate of 2.9/1000 years for obsidian flows within the crater. Archaeological test excavations conducted at a number of sites within the crater during 1990 and 1991 revealed cultural deposits ranging from pre-Mazama to late prehistoric times. The present study examines samples of obsidian flakes from eleven cultural components taken from six different sites. Several assemblages in the sample have associated radiocarbon ages. Our goal is to evaluate Friedman's hydration rate with the present data set, and to assign tentative ages to undated components in our sample.

JOHN P. COOK
Bureau of Land Management, Arctic District

Obsidian Characterization in Alaska

Another progress report concerning the long-standing research on obsidian in Alaska, including a summary of Instrumental Neutron Activation Analysis (INAA) on some 600 samples, is presented with a geographic distribution throughout Alaska and in Siberia and Canada. More than 20 discrete kinds of obsidian have been identified. Large numbers of obsidian cobbles from a major source (*BatzaTena*) in the Koyukuk River drainage, offer the opportunity to test the relationship between INAA and X-ray fluorescence (XRF) analysis. Some pilot studies utilizing microprobe analysis are incorporated.

MILLIE R. CREIGHTON
University of British Columbia

Constructing Connected Identities in Japanese Company Rituals

The initial year of membership in a permanent-employment track job in Japan has been presented not just as an intense training period but as a liminal time involving the construction of a new social persona and eventual aggregation of new recruits into their corporate communities. Based on research on major Japanese department stores, this work deals with the socialization of new company employees (*shain*) using examples from training programs, company retreats, and other rituals. Also addressed are the differential acceptance of this company community identity by gender, and what happens to those "individualists," male or female, who somehow do not feel themselves to fit in. Comparisons are made with the many ethnographies of corporate Japan written in the 1960s and 1970s. Since the research on department stores was conducted primarily from the mid- to late-1980s, it provides a comparative "update" to some of these earlier ethnographies.

DAVID F. CRELLIN
Simon Fraser University

Is There a Dog in the House?

Recently the skeletal remains of domestic dog (*Canis familiaris*) were uncovered at a prehistoric winter village site near Lillooet, British Columbia. A single skull was recovered from floor deposits in approximately the center of a large housepit, while the partial remains of at least nine individuals were recovered from the bottom of two large storage pits located on the perimeter of the floor area of the housepit. Preliminary analysis of the archaeological record and osteological data points to special treatment of the dog remains by the past inhabitants. The ethnographic record for the area is contradictory, but states that dogs were consumed by people as a food item. It is believed that the evidence to date suggests that some kind of ceremonial or ritual feasting may have produced these skeletal remains.

BRUCE CRESPIAN
Bureau of Land Management, Burns District

Recent Studies in the Catlow Valley Region of the Northern Great Basin

Catlow Valley is a pluvial lake basin near Steens Mountain in southeastern Oregon. Archaeological fieldwork by the U. S. Bureau of Land Management provides new data from surface surveys, feature recovery, and obsidian sourcing and hydration analyses, particularly at Skull Creek Dunes. These studies in the northern Great Basin provide insights into prehistoric land use patterns and regional exchange networks. Radiocarbon ages from exposed hearths and obsidian analyses of diagnostic projectiles may enable the development of a regional obsidian hydration chronology, a research orientation not previously applied in this area.

CAIRN CROCKFORD
University of Victoria

Native Labor: Sealing Their Fate

Pelagic sealing off the Northwest Coast and in the Bering Sea was a principal source of income for Nuu-chah-nulth men and women from the mid-1880s until the early-twentieth century. In 1911 an international agreement prohibited pelagic sealing. Two years later the Canadian government established a Royal Commission to determine eligibility for compensation to those individuals and companies whose livelihood had been affected by the treaty. More than eight hundred pages of testimony by Nuu-chah-nulth people survive in the Commission documents and include detailed information on the extent of individual participation in sealing and other primary industries. The claims of Nuu-chah-nulth sealers provide the framework for a discussion of the relationship between the Nuu-chah-nulth subsistence economy and the developing industrial economy in British Columbia.

SUSAN CROCKFORD
Pacific Identifications

*The Faunal Assemblage at Chesterman Beach, Vancouver Island:
Remains of a Seasonal Fishing Camp*

There are few analyzed faunal assemblages from Nuu-chah-nulth archaeological sites available for assessing and comparing resource and site use. The midden deposits at Chesterman Beach (DgSI-61) on the west coast of Vancouver Island were excavated in 1990 as a salvage operation, yielding over 5000 vertebrate faunal remains. The analysis of the faunal remains strongly suggest that the site served as a summer fishing camp, where some sea mammal and bird hunting was also undertaken. Quantification of the fish remains by size class and preferred habitat for those size classes revealed strong patterns of resource use. These results suggest that simple identification and quantification by species for fish may not be an adequate analysis method for these open-coast sites and perhaps not for other types as well.

DALE R. CROES
Washington State University

Basketry, Cordage, and Cultural Continuity

Analysis of southern Northwest Coast prehistoric basketry and cordage (three sites) has increasingly indicated a 3000-year continuum of Nuu-chah-nulth-like styles that is distinctive from at least 3000 years of Coast Salishan-like styles in sites of the Gulf of Georgia/Puget Sound (eight sites). However, statistical comparisons of stone, bone, and shell artifacts from these sites link well with culture type/phase assemblages defined in the Gulf of Georgia/Puget Sound region. The perishable artifacts are likely far more sensitive to ethnic continuity of Northwest Coast peoples for at least 3000 years in the south.

ALLISON CRONIN
University of British Columbia

Design Motifs in West Coast Art

Nuu-chah-nulth and Makah women are well known for the decorative wrapped-twined basketry they create. The images used to decorate wrapped-twined baskets are unique to the west coast of Vancouver Island and northwest Washington and indicate continuity from the late 1700s to the present. The geometric and representational designs woven into the baskets are also seen in the painting and sculpture of the region. Comparing the designs found on basketry to painting and sculpture suggests a strong connection and perhaps that the basketry motifs were predecessors of the other two mediums.

A. JOANNE CURTIN
 BETH BEDARD
 Ohio State University

Scalping and Slavery in Marpole Times: Evidence from the Tsawwassen Site

Ethnohistoric and ethnographic accounts indicate that scalping was not a European introduction on the Northwest Coast, but part of the aboriginal culture pattern associated with raiding, the capture of slaves, and the taking of trophy heads. Skeletal evidence from the Tsawwassen site (DgRs-2) suggests that this aboriginal pattern may have considerable antiquity, extending back in time at least to the middle Marpole period (ca. 2000 years BP). Osteological, dental, and mortuary data support the presence of three "outsiders" in the Tsawwassen skeletal assemblage, each of whom exhibits cut marks indicative of perimortem scalping.

ROBERT DAUGHERTY
 Pierce College

Still Working for a Gorilla

In 1990 the author presented a paper outlining the history, living conditions, and environment enhancement of Ivan, a silverback lowland gorilla residing in solitary captivity at the B & I Circus Store in Tacoma. The current work addresses the few changes that have occurred in Ivan's life, with additional discussion of the fallout from "The Urban Gorilla," a National Geographic documentary that was aired in March 1991. This documentary included a segment on Ivan and concluded with the announcement that the Dallas Zoo would accept Ivan in its new multi-million-dollar gorilla compound.

JEFFERSON D. DAVIS
 U. S. Forest Service, Wind River

Look Where You're Going, You Might Fall In: The Use of Global Positioning System to Map the Silver Star Pits

A series of 24 prehistoric talus pits and trenches were constructed on the slopes of Silver Star Mountain. In 1991 the first map showing exact pit locations was made using Global Positioning System satellite mapping equipment. The existence of the pits has been general knowledge for decades, first appearing in Forest Service maps and literature in 1928. They have been variously described as rifle pits, hunting blinds, vision quest sites, Indian Pits, and simply as "Pits dug by an ancient race." Their exact usage is still unknown but it is hoped that map survey will lead to increased understanding of their purpose.

JOHN DEWHIRST
Archeo Tech Associates, Victoria

The Nuu-chah-nulth Settlement Pattern: Then, There, and Now

The Northern and Central Nuu-chah-nulth settlement pattern from late prehistoric times to the present, as known from historical and ethnographic sources, is reviewed. Regional and historical expressions of this pattern are considered, with their implications for archaeological and historical analysis.

JOHN A. DRAPER
Washington State University

Bi-Polar Reduction: A Perspective from the Southern Northwest Coast and Interior Plateau

An examination of the archaeological literature for the southern Northwest Coast and interior Pacific Northwest suggest that the bipolar reduction of lithic materials was commonly practiced by prehistoric knappers. This same literature, however, also indicates that many archaeologists have failed to identify this reduction technique in lithic assemblages. Bipolar reduction is defined and technological attributes of cores and debitage produced by this technique are described.

JONATHAN C. DRIVER
Simon Fraser University

Charlie Lake Cave Excavations, 1990-1991

Excavations at Charlie Lake Cave (Peace River District, northeast British Columbia) in 1983 revealed a sequence of cultural and faunal material spanning late glacial to historic times. Further excavations at the site in 1990 and 1991 have added to the artifact and faunal sample. Described are new material from the Paleoindian component (ca. 1500 BP), evidence for an early microblade component (currently awaiting radiocarbon dating), further evidence of a mid-Holocene (ca. 4500 BP) component with similarities in lithic artifacts to Plains/Parkland cultures, and the presence of a ground stone industry in the later prehistoric components.

N. ALEXANDER EASTON
 Yukon College
 ANDREW MASON
 University of British Columbia
 CHARLES MOORE
 Underwater Archaeological Society of British Columbia

*Inundated Cultural Deposits at Montague Harbour, Galiano Island, British Columbia:
 Preliminary Results of 1990-91 Fieldwork Seasons*

Harbour Archaeology Project addresses the hypothesis that archaeological remains related to maritime cultural adaptations have been inundated by rising sea levels during the post-glacial period on the Pacific coast. Methods of research have included extensive coring in order to obtain data on the rate and scale of Holocene sea level rise, intertidal excavation of beaches fronting shoreline middens, and controlled excavation of submarine sediments. The data seem to suggest a fairly rapid transgression within the harbor during the late Holocene. Supporting this interpretation is an apparently stratified intertidal cultural midden overlying artifact-bearing mineral soils containing artifacts, and coherent stratigraphic distinctions within the submarine sediments, including a variety of artifacts and a rich organic strata dating to ca. 6800 BP.

PAMELA ENDZWEIG
 University of Oregon

Housepits on the John Day and Deschutes Rivers: A Summary

Pithouses have traditionally been equated with winter villages and considered a hallmark of the ethnographic pattern on the Columbia Plateau. Recent work, however, suggests a sequence of distinctive adaptive strategies not necessarily identical to those practiced by historic peoples of the region. Surface evidence of habitation sites along the John Day and Deschutes rivers, while generally undated, supports a discrepancy between prehistoric and historic lifeways south of the Columbia. The distribution and configuration of these sites is summarized and compared to evidence from adjacent areas.

REMI FARVACQUE
 Simon Fraser University

Aerial Remote Sensing and the Archaeological Survey: Efficiency Requested

Although the aerial remote sensing of sites has been employed in archaeology world-wide, it has tended to emphasize the recovery of large features in remote and/or high visibility environments. Areas like the Northwest Coast therefore have been largely ignored, and time-consuming ground truthing has remained the definitive means of recording/recovering archaeological resources. However, in the Fraser Lowlands, British Columbia, site discovery is not so much a problem of remoteness, but of legal accessibility. It is proposed here that aerial remote sensing be used to render more efficient, in terms of financial cost, ground time, and increased numbers of sites discovered, archaeological surveys (salvage or non-salvage) in areas of intensified human land use/occupation.

VICKI FEDDEMA
University of British Columbia

Going to the Dogs: Human Diet and Ceremonial Activity in Prehistoric Mesoamerica

Remains of *Canis familiaris* (the domestic dog) are frequent components of archaeological faunal assemblages in many parts of the world. In Mesoamerica, archaeological and ethnohistoric data indicate that domestic dogs played a variety of important roles in prehistoric society. Recent investigations along the Pacific coast of southeastern Mexico and northern Guatemala support the hypothesis that dogs, in the Early and Middle Formative periods (BC 650-1550), were valued as a dependable source of protein. They also suggest that dogs had some symbolic significance to humans and were important in ritual and ceremonial contexts, including competitive feasting.

SVETLANA FEDOSEEVA
History, Literature, and Language Institute
Siberian Department of Russian Academy of Sciences, Yakutsk

The Ymyakhtakh Culture of Northeast Asia

Both recent research and older materials are synthesized in this presentation to provide a picture of this Siberian culture of the period 4000 - 3000 BP.

MICHAEL D. FITZPATRICK
University of British Columbia

P. C.: Political Correctness or Political Censorship in Canadian Museums

The "Into the Heart of Africa" and "The Spirit Sings" controversies that recently engulfed two Canadian museums represent examples of the multi-vocal challenges being made to the myth of an integrated culture. If power is to rise above hegemony and if resistance is to go beyond frustration, we must develop a new consensus of representation that includes disenfranchised groups as well as the increasingly discredited white Eurocentric camp. In this way, Canadian museums can compassionately and honestly address the problem of who controls the power over object and symbol representation.

KNUT R. FLADMARK
Simon Fraser University

The Archaeological Implications of the Cheam Slide

The dating and extent of a major landslide which occurred in the Fraser River valley near Agassiz about 4300 years ago is described. It probably diverted the Fraser River from an original channel in the Sumas Valley northwards into its present course, with obvious implications on the distribution of the salmon resource on the southern Northwest Coast.

The paleocultural significance of this event may be indicated by the high incidence of local shell-midden sites which began accumulation about 4200 BP, and suggests that a significant chapter of lower Fraser prehistory may still await discovery in the Sumas Valley.

CHARMAINE FLEMMING
TERESA PARKS
CHELSEA RUDE
PAULA TSOODLE
VICKIE TSOODLE
RICHARD YOUNG
Tulalip Tribe

Tulalip Tribes Archaeology Program

During the summer of 1991 the Tulalip Tribes began a training session to familiarize our members with archaeological field techniques. Six members obtained college training in site survey, recording procedures, testing, excavation procedures (with conventional and hydraulic techniques), cataloguing, and artifact preservation. We prepared a slide presentation of this work for our young people at Tulalip Elementary School in an effort to show them the condition and considerable time depth (9000⁺ years) of our heritage sites. Since federal and state agencies do not seem to have the resources to protect and preserve sites in our traditional territories, we feel this local archaeology and education program is critical at this time.

LYNN FREDLUND
GCM Services

The Yellow Gopher Site: A Late Prehistoric Shoshone Campsite

The Yellow Gopher site (24-DL-423) is an extensive late-summer/autumn Shoshone campsite of very late prehistoric age along the banks of Warm Springs Creek in the upper Clarks Fork River basin near Anaconda, Montana. Features at the site include dwelling areas and bone dumps. Artifacts recovered include intermountain pottery, small tri-notched obsidian arrow points, and a variety of stone tools with a heavy reliance on obsidian. Bison and elk are the dominant fauna with moose, deer, beaver, rabbit, and grouse in the assemblage.

DOROTHY E. FREIDEL
University of Oregon

Late Quaternary Lake Level Fluctuations in Response to Climatic Variations in Fort Rock and Alkali Basins, Southcentral Oregon

When the earliest people arrived in what is now southcentral Oregon, large lakes filled the closed basins of Fort Rock and Alkali, where today sage and rabbitbrush thrive. These lakes rose and fell primarily in response to fluctuations in temperature and precipitation.

Relic shorelines which ring the basins are thus clear indicators of past climatic variations. In this study, lake evaporation and water balance models are used to estimate probable climatic conditions associated with selected high shorelines. This climate reconstruction will aid in establishment of likely environmental conditions and resource availability prevalent during the time of the region's first inhabitants.

DIANA E. FRENCH
Okanagan University-College

Power, Politics, and Ideology: Changing Architectural Form in the D'Arcy Island Leper Colony

The D'Arcy Island Leper Colony was operated off the east coast of Vancouver Island, British Columbia, between 1891 and 1924. How this predominantly Chinese institution was a symbol of racist ideology is demonstrated. Municipal politics in the City of Victoria, and provincial and federal legislation are related to changes in both the architectural form and function of the colony.

JERRY R. GALM
RUTH A. GALM
Eastern Washington University

Teaching the Teachers: Introducing Archaeology and the Earth Sciences to Native American Students

For the past two summers, Eastern Washington University received a grant from the Washington State Office of the Superintendent for Public Instruction to conduct a series of summer workshops aimed at enhancing and retraining earth science teachers. The program was offered for teachers of Native American students in the fourth through ninth grades. This presentation focuses on the role of archaeology and Native American ethnography in providing a culturally relevant curriculum and the context responses from local Native American communities. A course entitled "Geoarchaeology and Prehistoric Environments" was incorporated in the program to link the natural environment to the cultural environment and provide a context for instruction in Native American prehistory and traditional lifeways. Included in this discussion are reviews of the course methodology and the types of exercises and activities developed for classroom use.

HOWARD A. GARD
REBECCA M. POET
Batelle Pacific Northwest Laboratory

Depression Era Dugouts: Economic or Regional Adaptation

The discovery of two Depression Era archaeological sites on the Hanford Site in southcentral Washington has raised numerous questions about this significant period of American history. The sites date from the early 1930s and contain semi-subterranean

dwellings which are architecturally unique within the region. It is unclear whether these sites represent an economic adaptation precipitated by the Depression or a regional design developed to cope with lack of materials and a harsh climate. The sites provide an opportunity to evaluate analytical and research techniques and to illuminate a previously ignored period of history.

CHARLES GILMAN
Rainbow Bridge Consulting/University of Montana

Native Language Maintenance: Applying the African Experience

Native American and African language deterioration result from similar colonial domination of the speakers, and parallel practices in the missionary and government schools such as capturing children, forbidding use of the native language, destruction of tribal boundaries and political systems, and centralized politico-linguistic systems over diverse ethnic groups. The overall outcome has been large scale language death and abandonment in both continents. Successful African experiences suggest that Native American language maintenance programs can be improved by training Native linguists, developing wider uses for the languages, publishing educational materials, standardizing orthographies, and reducing divisive factors in the communities.

SUSAN GOLLA

Telling Stories: Problems in Ethnography and Translation

Translation -- and by implication all culturally sensitive ethnography -- is a tightrope act in which the translator/ethnographer attempts to bridge alien sensibilities without tipping the balance between them. Explored are issues in translation, both linguistic and cultural, with respect to Nuu-chah-nulth family legends collected by Edward Sapir in the 1910s. Particular attention is paid to the handling of Native social and psychological concepts.

SHEILA GREAVES
Athabasca University

The Cutting Edge: A New Look at Microcore Technology

Traditional, untested models of the significance of microcore technology in the interior Plateau relate its use to the spread of Athabaskan speakers, the production of a specialized tool, and a foraging resource procurement strategy. This research constructs and tests a model which focuses on the organization of microcore technology: why this particular tool design was selected and how its manufacture, use, and discard was distributed across the landscape. Data from 24 sites in two upland valleys of the Canadian interior Plateau indicate that microcore technology was variable in design goals and distribution, even within the same geographically and ethnographically defined region.

RUTH L. GREENSPAN
Heritage Research Associates Inc.

Recent Zooarchaeological Investigations in the Fort Rock Basin

Samples of vertebrate faunal remains were analyzed from two sites in contrasting environmental settings in the Fort Rock Basin. The Big M site is situated in the lowlands between Silver and Thorn lakes, and the Squaw Butte Village site is located in the uplands separating the Fort Rock Basin from the Chewaucan Basin to the south. Archaeofaunal data from these two sites are presented and interpreted in the context of other vertebrate faunal assemblages from the Fort Rock Basin. The Big M site occupies an area that is rich in paleontological deposits. Paleontological specimens are apparently well-integrated into the archaeological deposits at this site, and separation of the cultural bone and the non-cultural bone has proven challenging. Taphonomic research geared towards distinguishing between archaeofaunal and paleontological specimens at the Big M site is planned for the summer of 1992.

STEVEN HACKENBERGER
University of Wisconsin Centers

Cooperative Science and Education Projects, Snake and Salmon Rivers 1989-1992.

Cooperative field projects between universities, the Bureau of Land Management, and the U. S. Forest Service are making valuable contributions to interpreting and protecting archaeological resources. These cooperative efforts have developed during a period in which increased timber demands and recreation threaten the remaining undisturbed archaeological sites of the middle Snake and lower Salmon rivers. The projects are beginning to integrate the investigation of canyon and upland sites to test Leonhardy's model of focal upland settlement. This model reverses decade-old thought by stressing the focal nature of upland settlement and recognizing the atomistic and shifting nature of winter residence.

STEVEN HACKENBERGER
University of Wisconsin Centers
DEBORAH OLSON
Faunal Analysts, Pullman

*Hunting Pressure and Taphonomy: Canyon and Upland Faunal Assemblages,
Tryon Creek and Cottonwood Creek Divide, Hells Canyon*

Mean weight of bone fragments decreases through time at Knight Creek (2500 to 1500 BP). Alternative hypotheses cite resource stress and taphonomy as possible causes for decreased size of fragments. Analysis of fauna from inside and outside the Tryon Creek house deposit (1600 BP) and an upland site at Cottonwood Creek Divide (3500 to 500 BP) support hypothesized resource stress, and verify subsistence models simulated by Hackenberger and predator-prey outcomes forecast by Leonhardy and Kohler. Implications of resource stress include year-to-year shifts in winter settlement locations.

YVONNE HAJDA

Northwest Ethnohistorical Research Associates

Lake River Indians: Ethnohistorical Background

Only Lewis' and Clark's references to the "Shoto" Indians living around Vancouver Lake-Lake River distinguish these people from others in the "Wappato Valley," the slower-moving north-south stretch of the lower Columbia between the Sandy and Cowlitz. From 1792 to the malaria epidemics of the early 1830s, written records indicate that Upper Chinook speakers in that area resembled others on the lower Columbia but specialized in gathering, preserving, and exchanging local resources such as wapato, sturgeon, and eulachon. Typically for the Wappato Valley, this bounty led to a three- to four-fold increase in the Shoto's spring population.

DON HANN

Bureau of Land Management, Klamath Falls

The Tsagiglalal Petroglyph in the Context of Northwest Coast Art

The Tsagiglalal petroglyph has been one of the most studied examples of rock art in the Pacific Northwest. Its affinity to the Northwest Coast art tradition has been frequently noted but a thorough analysis of this relationship has not been completed. This analysis begins by examining the Tsagiglalal motif, determining its distinct stylistic traits, and identifying the existence of these traits in the greater Northwest. The results of this analysis indicate that although the Tsagiglalal motif is geographically restricted to the middle Columbia River area, it has been strongly influenced by northern Northwest Coast art.

DIANE K. HANSON

New Mexico State University

Non-Salmonid Fishes and Coast Salish Subsistence

Salmon are not always the most abundant fish taxa in archaeological sites of the southern Strait of Georgia. Other species were more common in three of the ten late prehistoric faunal assemblages having frequency data for fishes. At Pender Canal, sea perch dominated the assemblage. The most frequently identified fish at DcRt-1 were from the sculpin family, and at Crescent Beach, herring were most common. The focus on salmon in the ethnographic, historic, and archaeological literature has hidden the contribution of other abundant fishes to subsistence.

BRIAN HAYDEN
Simon Fraser University

Prehistoric Socioeconomic Organization at Keatley Creek, Lillooet, British Columbia

Excavations at the unusually large housepit site at Keatley Creek have revealed clear indications of complex social and economic organization during the last phase of occupation, about 1000 BP (and probably extending back another 1000 years). Analysis of faunal remains and lithics demonstrate differential access to (or use of) fish, mammal, and lithic resources on the part of residents in large vs. small housepits. There are also differences in storage capacity, the use of firewood, and in the degree of hierarchy displayed in the internal use of space (inferred from the analysis of living floor assemblages).

PHILIP M. HOBLER
Simon Fraser University

Long-Term Archaeological Research with Native Groups: Who Wins?

Some 25 years of interaction with coastal Native bands is drawn upon in examining the relationship of archaeology to the peoples "studied." The changes in research focus and "theoretical" orientation that can take place after long-term contact with the living representatives of the traditions studied is explored. "Grab-and-run" archaeological projects usually result only in jargon-riddled reports in academic journals. To put the plainest face on it, if white archaeologists are writing Indian history only for other white academics to read, the Native people are eventually going to shut us down. I suggest ways that a merging of the academic and the Native intellectual traditions concerning the past may come about. This melding of the two intellectual traditions, a potentially immense benefit to archaeology, may be the only way out of the muddle of sterile theory in which an "academics only" archaeology finds itself as this century draws to a close.

ROBERT S. HOGG
Canadian HIV Trials Network

Indigenous Mortality: Placing Australian Aboriginal Mortality within a Broader Context

Purpose: to evaluate whether contemporary Australian Aboriginal mortality patterns are different from those exhibited by Canadian Registered Indians, New Zealand Maoris, and American Indians. Methods: mortality patterns were compared by evaluating differences in life expectancy and in age- and cause-specific patterns of death. Results: this analysis demonstrates that Australian Aborigines are generally characterized by lower life expectancies at birth and higher age- and cause-specific death rates than those experienced by the other three populations.

ROBERT S. HOGG

St. Paul's Hospital and University of British Columbia

*Risk Factors for Coronary Heart Disease in One Western
New South Wales Aboriginal Community*

Objective: to assess whether Aboriginal risk factor prevalence levels are higher than those levels for adult Australians (all Australians) who participated in the 1983 National Heart Foundation risk factor prevalence study and the companion 24-hour dietary recall study. **Methods:** the survey was conducted in an Aboriginal community where contemporary circulatory system disease deaths rates are known to be very high. Differences in Aboriginal and all Australian risk factor prevalence levels were assessed by calculating relative risks and by comparing differences in the mean daily nutrient intakes. **Results:** Aborigines are more likely to be overweight or obese, to have diastolic hypertension, to drink heavily on a drinking day, to be current smokers, to derive a greater proportion of their total energy intake from fat, and are less likely to participate in vigorous exercise.

MARGARET HOLM

University of British Columbia

A Stylistic Analysis of the Prehistoric Art Record from Southwestern British Columbia

Beginning 3000 years ago and continuing to the present day is a record of surprising continuity between prehistoric art of southwestern British Columbia and historic Northwest Coast Native art. Gulf of Georgia area prehistoric sites also show evidence of the early coalescence of the Coast Salish regional art style with no qualitative decline in the late prehistoric or historic period as many researchers have suggested. The quantitative decline in artistic productivity since the Marpole prehistoric phase may reflect the lessening importance of personal adornment in marking wealth and status as inherited privileges became the status quo.

LUCILE HOUSLEY

University of Oregon

It's in the Roots: Plants and Plant Use in Southcentral Oregon

During the spring and summer of 1991 plant and plant community surveys were conducted in the Silver Lake and Picture Rock Pass area of southcentral Oregon. Plants and plant communities were inventoried at different elevations and during several growing periods. This presentation will identify "use" plants and their locations, attempt to interpret plant community dynamics for past distributions and correlate modern plant distributions with archaeological findings. A survey of Paiute and Klamath ethnographies will attempt to broaden the picture of plant uses when these sites were occupied.

GEORDIE HOWE
Arcas Consulting Ltd.

Tsawwassen: Stones, Bones, and Stuff

Some results of investigations into the lithic, bone, and antler artifacts that were analyzed from the Tsawwassen site (DgRs-2) are presented. The Tsawwassen site is reported in the ethnographic literature as a Coast Salish village during the historic period. The artifact assemblage from three periods, Marpole, the Marpole-Stselax Transition, and the Stselax, was examined. Discussion is provided in the quantity, types, and condition of the stone, bone, and antler tools, and detritus found at Tsawwassen during each period. Evidence from the archaeological investigations at Tsawwassen suggests the site was utilized during Marpole as extractive and processing-activities camp with a trend through time to a permanent or semipermanent residential base by the Stselax period.

DAVID R. HUELSBECK
Pacific Lutheran University
GARY WESSEN
Makah Cultural and Research Center

Late Prehistoric Settlement Seasonality in Makah Territory

Most of the published historic and ethnographic record indicates that the Makah, like their Nuu-chah-nulth neighbors to the north, moved their settlements seasonally to facilitate resource procurement. Beginning in the 1960s, archaeological research in Makah and Nuu-chah-nulth territory has raised questions about this interpretation. Nevertheless, some authors still maintain that the ethnohistoric model represents the precontact pattern in general and in particular that Swan's 1870 account of Makah settlement seasonality is accurate and complete. Recent research, combined with research over the last three decades, demonstrates that Swan's account is neither accurate nor complete.

MARIANNE BOELSCHER IGNACE
Simon Fraser University

Working Hides: Secwepemc Women's Work and Women's Values

The function and meaning of tanning hides within Secwepemc (Shuswap) culture is explored. Besides a brief ethnographic description of the steps, skills, and tools involved in preparing and tanning buckskins, the focus is on the practical and symbolic associations of tanning in the context of traditional and contemporary Secwepemc culture and world view. In particular, working hides, which is a dying art, embodies and perpetuates female values regarding endurance, skill, and judgment. Moreover, hides are regarded as living things derived from nature and the careful work invested in them expresses a woman's respectful relationship with animals and nature as a whole, and ultimately relates to the traditional ideology of resource management. Finally, tanning expresses some important aspects of the division of labor among women and men, the interrelationship between the sexes, and gender roles.

LOUISE M. JACKSON
University of British Columbia

*Cloth, Clothing, and "Notorious Lovers": Material Culture Texts as a Key to
Gender Visibility in Russian America*

Native women have received little attention in analyses of archaeological and documentary records of eighteenth- and nineteenth-century Russian America. Their material correlates are few and indexed references to women in historical accounts present them passively, as little more than numbers to be counted. Yet when exploring the trade of Western cloth and clothing in the same ethnohistoric sources a different picture emerges. Among other topics, we learn about Native women's education, employment, and the critical role they played in the conduct of the Alaskan fur trade -- as manufacturers, consumers, economic advisors, and traders themselves.

LOUISE M. JACKSON
University of British Columbia

From MOA to MOCA: Exploring the Contemporary in Museums of Anthropology

In response to claims that time has expired for anthropology museums, I first looked at what institutions such as University of British Columbia's MOA are currently doing and explored the relevance of such activities. How anthropological museums address contemporary issues such as Native land claims, AIDS, homelessness, and multiculturalism in long-term and temporary displays as well as educational programming is investigated. While high on agendas of academic anthropologists, these topics are most often visually encountered in contemporary art museums. Exploring why, I ask whether we should establish museums of contemporary anthropology as necessary complementary institutions to existing anthropological venues of material culture.

CAROLINE JAMES
University of Idaho

Nez Perce Women in Transition, 1877-1900

History tends to focus on the glory of Indian chiefs and their battles, with nothing on the Nez Perce women. During the period 1877-1900 many rapid changes occurred in the Nez Perce Nation. Historical photographs (100) focus on the role and status of Nez Perce women in: 1) history and politics; 2) the horse period; 3) domestic and traditional skills; 4) family; 5) crafts; 6) social activities; 7) Christianity; 8) agriculture; 9) education; 10) sanitarium and health; 11) travel; and, 12) religion and burial. Repercussions of these activities affect the present lives of Nez Perce women, which is evident in their oral histories. Nez Perce Indian women are a vital human resource, playing a key role in the Nez Perce cultural identity, and ensuring the survival of the Nez Perce culture within the larger, majority American culture.

MALCOLM A. JAMES
JOHN D'AURIA
Simon Fraser University

Prehistoric Obsidian Exchange in Northwestern North America

Our research involves the collection and chemical characterization of obsidian sources in northwestern North America. We are also sourcing artifacts (i.e., chemically matching them with their geological sources) recovered from archaeological sites in British Columbia in order to gain a better understanding of the extent and nature of the prehistoric exotics exchange network in northwest North America. We have characterized approximately 100 chemically-distinct types of volcanic glass from the study area. The study area includes southeast Alaska, Yukon Territory, British Columbia, Washington, Oregon, Idaho, Montana, and adjacent parts of northern California and western Wyoming.

LINDA JENCSON
University of Oregon

Post-Modern Shamanism: Gender, Class, and Ethnic Identity

"Shamanism" has only entered the American vernacular language within the last two decades, via the discipline of anthropology and a number of religious revitalizations employing shamanic techniques. Broad, comparative investigation of the phenomena reveals that the meaning and usage of shamanism differs among individuals along predictable lines of social boundaries. Wealthy jet-setters, middle class feminists, ghetto dwellers, and Native Americans may seek visions from spirits of the same name and historic mythology, but they receive very different messages from their supernatural guides.

DENNIS L. JENKINS
University of Oregon

Early Neopluvial Marsh Side Occupations at the Big M Site

Excavations exposed three house floors at the Big M site in the Fort Rock Basin. Northern Side-notched and Elko projectile points, ceramics, and olivella shell beads were recovered on these house floors. Artiodactyl, rabbit, and fish bones comprise major portions of the faunal assemblage. Ground stone forms a large portion of the artifact assemblage, suggesting roots and seeds were important to the aboriginal diet. Amphibian and water snake bones, fish hooks, and net sinkers all suggest the site was situated near a marsh when it was occupied between 3500 and 5000 radiocarbon years ago. Elaborate tool assemblages, houses with interior hearths, and cache pits all suggest a limno-sedentary settlement pattern may have existed in the Fort Rock Basin during the Neopluvial period.

ALDONA JONAITIS
American Museum of Natural History

The Mowachaht Whaler's Washing Shrine

Over the past three years, Richard Inglis and I have been conducting research on and writing a book about the Mowachaht Whaler's Washing Shrine, a unique artifact in the collection of the American Museum of Natural History. Some of the new analysis of this monument that have resulted from our research project is presented.

JUDY A. JONES
Washington State University

A Re-Examination of the Prophet Dance of the Northwest

In 1935, Leslie Spier presented a carefully constructed argument for the aboriginal existence of a Plateau complex of beliefs and practices which he termed the Prophet Dance, and asserted that it was the ultimate source of the Plains Ghost Dance of 1890 and similar revitalization movements in the Plateau. Scholarly debate ensued over the supposed pristine origins of the complex, but otherwise Spier's characterization has been generally accepted. Thus, while it appears as a basic assumption in much of the literature, the true nature of the Plateau Prophet Dance as hypothesized by Spier remains to be adequately questioned. The evidence regarding specific prophets, their songs, and their dances is reexamined in light of Plateau concepts regarding the functions and uses of music and dance. It is hypothesized that what Spier termed the Prophet Dance was not exclusively associated with prophetic activity, but was rather a prayerful, indigenous dance form that could be turned to prophetic use as needed. Native beliefs and practices are examined to show ways in which prophetic activity was integrated with the indigenous culture. This approach sheds new light on the true nature of revitalization movements in the Plateau.

GARY KEENAN
La Grande High School

High School Curriculum Design for Field Practices in Archaeology

Indiana Jones has caused a problem -- he's too exciting! The number of jobs available for unskilled workers continues to decrease rapidly and high school students today face greater pressures than earlier generations in the need to specialize. Their difficulty lies both in a general lack of information and the inaccuracy of the information they have. Because of the misleading popular image of archeology, I seek to give high school students a more realistic idea of the nature of field practices by involving them in an actual dig as part of a high school class.

GARRY KERR
University of Montana

Non-Sexual Reproduction of Humans

Casting human remains makes them widely available for study and display. Exact duplication is not only desirable but often necessary. There are a number of casting techniques and methods available. An inexpensive, yet highly accurate method using latex and plaster is discussed as well as several other methods.

DEANNE KINGSTON
Oregon State University

Illuweet (Teasing Cousin) Songs among the King Island Inupiat

Seven months of fieldwork with my uncle, an Alaskan Inupiat, and review of the literature about Inupiat songs shows a significant difference in emphasis on the types of songs. My uncle speaks most about the *illuweet* or teasing cousin songs while the literature rarely mentions this genre. Instead, there is mention of game songs, story songs (mainly about hunting), dance songs, animal songs and ceremonial songs. Inupiat songs' teasing cousin is described and the teasing cousin relationship is illustrated. In addition, a possible explanation is given as to why the teasing cousin songs are not mentioned in the literature.

CARI KRESHAK
Western Washington University

Material Culture Reflections of Social Status in Pioneer Bellingham

Historic cemeteries offer a material culture data base for studying the role of social status in the history of the Pacific Northwest. Preliminary research on status differences represented in headstones within Bellingham area cemeteries is reported. From "The History of Whatcom County," by Lottie Roeder Roth in 1926, I chose a sample of individuals who were socially prominent during the mid-1800s to early-1900s. By locating their headstones and comparing them to a randomly chosen sample of other headstones during the same time period, social status differences among the two groups is shown.

KARLA D. KUSMER
Delta, British Columbia

Faunal Resource Utilization at Tsawwassen, a Large Shell Midden in Southern British Columbia

Analysis of faunal remains from the Tsawwassen site, a large shell midden in southern British Columbia, suggests a change in site function occurred between the Marpole and Gulf of Georgia occupations, possibly in relation to changing deltaic environmental conditions. The faunal data from Tsawwassen also illustrates the importance of non-salmonid resources to prehistoric subsistence economies on the Northwest Coast.

Flounder, herring and related predators, and shellfish are important resources, in addition to salmon, throughout occupation of the site, although the relative importance of these resources changes through time. The species of shellfish utilized also changes through time.

EDWARD LABENSKI
Reed College

Imagining the Body: Life History and Symbolic Representation in Thompson Indian Society

James A. Teit's ethnographies provide a detailed account of the distinctive ways in which Thompson Indians controlled the image of the body. The sociocultural context of painting and tattooing the body with the ambition of revealing a certain significance behind its practice is examined. I argue that imagining the body is part of a complex process of defining the "self" and of positioning that person in a community. Images on the body are symbolic representations which allow for the synoptic formulation of both individual and group expectations and are closely involved with Thompson notions of power.

TAMARA E. LEITCH
Western Washington University

The Good Friars Never Would Have Guessed: Compadrazgo Revisited

In Mexico the Compadrazgo system of ritual kinship has taken forms never seen in Spain, yet traditionally, anthropologists have only acknowledged a European origin for the system. Evidence is presented which indicates a joint origin for the system -- Spanish and pre-conquest Mexican. Sources include sixteenth-century missionaries and historians as well as twentieth-century ethnographers.

DANA LEPOFSKY
PATRICK V. KIRCH
University of California, Berkeley

The Innovation of Pacific Irrigation Agriculture: Linguistic and Archaeological Evidence

Due to its similarity with Southeast Asian rice-paddy cultivation, it has generally been assumed that irrigation agriculture in the Pacific originated in Southeast Asia and was brought to the Pacific with the earliest Austronesian colonizers. A survey of archaeological and linguistic data from the Pacific questions this assumption. No dated examples of irrigation systems come from the earliest colonization period, and most sites date to the late prehistoric, post AD 1300. Further, although types of irrigation systems are generally similar across the Pacific, there are some minor regional variations. A survey of the linguistic data reveals no Proto-Oceanic terms associated with this type of cultivation. Instead, the data demonstrate shared terms within regions, but not across the Pacific as a whole. The linguistic data, combined with archaeological evidence allows us to place minimum and maximum dates for the initial use of irrigation agriculture in each of these regions.

CAROLE LINDERMAN
University of Oregon

*Effect of Fire on Obsidian Artifacts: Problem in Hydration Dating
in a Woodland Environment*

The effects of fire in grassland and woodland environments on the hydration rinds of obsidian artifacts are discussed. Implications from recent research involving the burning of slash and brush in a woodland environment indicates that heat generated from this type of fire affects surface and sub-surface obsidian artifacts. In a woodland environment, recent and past forest fires generate enough heat to affect the hydration rinds of surface artifacts. Prehistoric sites being excavated in woodland environments could have obsidian artifacts that have been exposed to forest fires and therefore have affected hydration rinds which would present a problem in trying to establish a hydration date for the stratigraphic levels where the artifacts occur.

EVA LINKLATER
Simon Fraser University

The Concept of Sacred Landscape and First Nations Peoples

The concept of sacred landscape as a mechanism by which cultural traditions and oral histories are transmitted among First Nations peoples is developed and promoted. Sacred landscapes connect past to present and, through physical features and named places, serve as mnemonic devices for Native heritage. When extensive areas of the contemporary landscape are destroyed by reservoir construction and the like, the consequences are far more than a loss of economic resources on traditional lands. Using the Nelson House Cree as a case study example, it is argued that the natural basis for oral traditions and myths are lost. This ultimately will have a major impact on cultural identity.

LORAIN LITTLEFIELD
University of British Columbia

The Economic History of Women in a Coast Salish Community

The historical and contemporary role of Native women in wage labor in British Columbia is explored. Historically Native women have been an important labor force for the economy of this province but today they constitute the highest unemployed minority group. While it is recognized that capitalist economies discriminate according to gender and race, it is argued that the contemporary conditions of Native women are also a product of government policies. These policies have effectively ignored Native women's specific needs.

ERNEST LOHSE
Idaho State University

Archaeology in the Active Voice: Who Controls Access to the Past?

Politically-charged archaeology has become the norm in many parts of North America. Native Americans assert that they must have a say in research into their past. Archaeologists acknowledge a moral debt to tribes, but are concerned over issues of ever-limited access to a past that they feel is a common cultural heritage. Idaho State University and the Idaho Museum of Natural History work actively with the Shoshone-Bannock Tribes in creative partnerships that emphasize active interpretation of the past, sharing roles of principal investigator on contracts and grants, sharing expertise in classroom teaching, developing strong multicultural experiences in archaeological fieldschools, and working together in politically-charged lobbying exercises aimed at conservation and initiation of new, more relevant laws. Access to the past is a sensitive subject. Archaeologists must develop an active, sharing approach to exploration of that past, or we may lose access to the record.

KEVIN J. LYONS
Eastern Washington University

The Problems and Potentials of Determining the Main Sequence of Root Crop Intensification in the Southern Plateau

Competing hypotheses have recently been proposed regarding the intensification of root crops and the development of the ethnographically-observed winter village settlement pattern in the Southern Plateau. Through the efforts of a number of researchers there is now a growing body of data that may address the sub-regional antiquity of root-crop intensification. Radiocarbon ages recovered from earth-ovens in the Calispell Valley, Lake Wenatchee, and the Cheney-Palouse tract of the Channeled Scablands presently indicate a bi-modal distribution through time for root-crop intensification. The discussion questions if this distribution of dates is a product of archaeological sampling or a meaningful phenomena in Plateau prehistory.

CHERYL A. MACK
Gifford Pinchot National Forest

In Pursuit of the Wild Vaccinium -- Huckleberry Processing Sites in the Southern Washington Cascades

Results of analyses of archaeobotanical and radiocarbon samples from log-fire drying trenches in and around the Indian Heaven Wilderness area of the Gifford Pinchot National Forest reveal evidence of huckleberry processing activities spanning several hundred years. These data, combined with descriptions of other attributes of processing features, provide a means of identifying huckleberry processing sites from both surface and excavated contexts. These sites provide evidence of resource intensification in non-riverine environments.

JOANNE M. MACK
Pomona College

Ceramic Artifacts at the Big M Site in the Fort Rock Basin

Lying in situ on a house floor at the Big M site in Fort Rock Basin two pipe fragments from a single ceramic pipe indicate the presence of a ceramic technology roughly 4800 years ago in this portion of the Northern Great Basin. The significance of the presence of this technology is explored, particularly in relation to cultural complexity and possible inter-regional and intra-regional cultural interactions.

ALEXANDER P. MACKIE
Royal British Columbia Museum

Nuu-Chah-Nulth Culture History -- Is Something Missing?

The culture history of traditional Nuu-chah-nulth territories has been based on evidence from excavations. The excavated materials have a sufficient degree of similarity to each other and difference from those of adjacent areas to cause prehistorians to classify them separately. This work examines materials previously excluded from reconstructions of the culture history of the west coast of Vancouver Island. Included are data from surface collections, site forms, miscellaneous materials in museum collections, and private collections.

QUENTIN MACKIE
University of Victoria

*Suggested Effects of Tool Use-Life History on the Classification of Ground Stone
Celts from Coast Salishan British Columbia*

Some results of a multivariate analysis of 1500 Coast Salishan ground stone celts are presented. A lack of clear typological structure is explained as the cumulative effect of low standardization of preform, repeated resharpenings and repairs over a long use-life, and periodic re-tooling. These factors constitute non-stylistic, non-functional influences leading to a convergence of celt morphology, regardless of the initial, intentional tool form. Intense reuse, reduction, and repair of the tools is suggested to be largely driven by a thrifty attitude towards the valuable, localized raw material.

ALAN McMILLAN
Simon Fraser University and Douglas College

Recent Research in Western Barkley Sound: The Toquaht Project

The first season of the Toquaht Archaeological Project involved informant research, site survey, and test excavation at the ethnographic Toquaht summer and winter villages. Preliminary assessment of the recovered data suggests that late prehistoric settlement patterns were markedly different than those recorded ethnographically. This is consistent with the emerging archaeological picture throughout Nuu-chah-nulth territory. Despite the

ethnographic tradition that the Toquaht are the "original" Nuu-chah-nulth group in Barkley Sound, their occupation could not be traced further than a millennium. Archaeological and ethnographic data from nearby areas suggest the possibility of an earlier cultural base.

MARK C. MANSPERGER

Tourism on the Island of Stone Money

Tourism often has damaging impacts on the cultures and environments of small-scale societies. This is true of many Pacific island states and nations; but what of tourism on the island that many researchers have called the most traditional place in the Pacific: Yap Island? Field research conducted during the summer of 1991 has surprisingly revealed a benevolent style of tourism on Yap. In contrast to other places, no displacement, crime, exploitation, or inflation, and very little social conflict is occurring as a result of tourism on the island. Tourism in Yap is discussed, offering Yapese perspectives on the situation and giving reasons why this type of low-impact tourism exists there.

ANTHONY MARAIS
Simon Fraser University

Tongan Fortification Sites

Fortification sites or *kolotau* are a distinctive feature of the Tongan archaeological landscape. They are found through out the Tongan islands with the majority of archaeological research focusing on those of the main island of Tongatapu. According to the ethnohistorical record the *kolotau* of Tonga are thought to be a relatively late addition to Tongan society not coming into use until the late-eighteenth or early-nineteenth centuries, known as the Tongan civil war period. Historical accounts also attribute the *kolotau* to the Fijians who became influential to many Tongan chiefs and warriors during the civil war period. Following the current research by Simon Fraser University in the Ha'apai island group in the kingdom of Tonga, four *kolotau* from this region will be identified and their place within the history of this region reexamined. Current archaeological evidence suggests that the *kolotau* of Tonga have a longer history of use than the civil war period and that they are not necessarily of Fijian origin, but indigenous to the local islands. By examining the *kolotau* in the broader context of western Polynesia and New Zealand along with the current archaeological evidence in Ha'apai, the question of Tongan *kolotau* origins is addressed.

GUY A. MARDEN
Wallowa-Whitman National Forest

Analysis of Radiocarbon Ages from the Wallowa-Whitman National Forest, Northeast Oregon

For the past ten years the Wallowa-Whitman National Forest has been collecting radiocarbon age determinations from various site types across the forest. The ages are reviewed to assess settlement patterns in relation to site type, compared with other northeast Oregon ages, and a tentative chronology is proposed.

M. VIRGINIA MARKHAM
Western Washington University

Cherry Point: A Fish Trap Camp

Fish traps played a major role in the development of the Euroamerican fishing and canning industry in the Pacific Northwest. The fish trap tending camp at Cherry Point, Washington, was one of many in operation at the turn of the century. These camps, supporting fish trapping operations, are essentially known only to those other than persons who lived near and/or worked at them. Fortunately, archaeological remains, historic photographs, and oral history provide an insight into this forgotten aspect of the fishing industry.

YVONNE MARSHALL
Simon Fraser University

Modelling Pre-European Nuu-chah-nulth Settlement Pattern

Over the past fifteen years, archaeological research on the west coast of Vancouver Island has focused primarily on the identification of sites through intensive coastline survey, with a view to developing models for pre-European settlement patterns using survey data. Classification systems for habitation sites have been developed by Haggarty and Inglis for the Pacific Rim National Park and by Stryd and Dewhirst for the Clayoquot area. Both use a combination of morphological and ethnographic criteria. From 1989 to 1991 an intensive site survey of the Nootka Sound area was conducted and a total of 92 habitation sites were identified. A new classification system based entirely on archaeologically-defined morphological features was developed for the Nootka Sound sites. It was then applied to other areas on the west coast of Vancouver Island and to Bella Bella and the southern Queen Charlotte Islands. Comparison of the various settlement patterns revealed in each area suggests that although systematic regional differences were present within the Nuu-chah-nulth area, a distinctively Nuu-chah-nulth, pre-European settlement pattern can be also be identified.

ANDREW MASON
DAVID POKCTYLO
University of British Columbia
GORDON MOHS
Sto:lo Tribal Council

A 5000-Year-Old Structure from Hatzic, British Columbia

The Hatzic Rock site, located east of Mission, British Columbia, was the location of a collaborative excavation by the University of British Columbia and the Sto:lo Tribal Council. The excavation, which took place in the spring and summer of 1991, concentrated on the remains of an 8 x 9 m (26 x 30 ft.) structure which was partially excavated into the side of a former river terrace. Large quantities of pebble tools and stemmed projectile points indicate a Charles Culture occupation dating from 4590 ± 70 BP for the surface and

4930±70 BP for basal levels. Structural data including approximately 60 post mold features, a partial interior bench, and a large drainage trench located parallel to the north side were uncovered. Ongoing analysis promises to provide substantial insight into this residential site structure.

JEFFREY E. MAUGER
Makah Cultural and Research Center

Tribal Collections Management: A New Paradigm

The assertion of cultural and/or legal ownership of anthropological collections by Native American groups impacts both research and researcher. Collections management systems must incorporate and reflect tribal cultural concerns, values, and priorities as well as those of non-Indians and the scientific community.

WILLIAM E. MAXWELL
University of Montana

Collection Catalogues and Ethnographic Reconstruction: Examples from the Plains

Material culture can contribute to ethnographic reconstruction. Well-documented items can disclose acculturation, trade networks, as well as other patterns and processes. However, the review of well-documented collections on Plains material culture is a problem of access. The few documented collections of Plains Native American items are widely distributed in university and museum collections. Collection catalogues are the best source for a primary review of a wide selection of items or show the diversity of a particular object type. Several collection catalogues that have enhanced this type of research are reviewed, as well as ways that these works can be improved for further probing.

GEORGE R. MEAD
Wallowa-Whitman National Forest

No-Budget Archaeology: La Grande Ranger District/High School

During the summer of 1991, an experimental project utilizing high school students as an archaeological field crew was initiated. Based on the results of this experiment, a second field season is planned for maximum data recovery. The project site is an isolated, historic camp, probably occupied by Chinese mining "gangs." The 1991 field season, one week in length, retrieved data which suggests that this site is unique to the district if not to the Pacific Northwest, a concept to be tested in 1992.

LARAINÉ MICHALSON
Vancouver Public Health

The Nursing Approach: Family, Community, and Service Delivery in Native Communities

In order to effectively organize the delivery of a wide range of services to clients, some Indian Health Service public health nurses use network models of social relations. This work builds on earlier nursing methodology, recent advances in modeling Coast Salish family networks, and experiences in public health nursing in a Coast Salish community. It is suggested these new approaches will allow staff to better understand the changing needs of clients.

BRUCE G. MILLER
University of British Columbia

Family Network Cycling and Health Services Delivery

A model of Coast Salish family networks is applied to understanding barriers to the use of health services faced by clients of the U. S. Indian Health Service (IHS). This model is an advance on previous applications of network concepts in that the analysis accounts for systematic changes over time (cycling) which influence (1) a client's familial support and (2) the relations of individuals to tribal and governmental institutions. Data are taken from fieldwork in a Coast Salish community in the 1980s and from ethnohistoric sources.

BRUCE G. MILLER
University of British Columbia

Tribal Land Implications for Gender Systems

Coast Salish gender systems have changed historically with the transforming political economy. A recent factor in this process is the elaboration of tribal court systems which imbed in the law current community notions of gender, but also non-Indian concepts and customary law. Although there is analysis of federal law and customary law, both of which have important implications for understanding the construction of gender, little attention is given to tribal constitutions, bylaws, and codes. A case study in which gender is a central issue in the struggle over new tribal code reveals why this line of inquiry is fruitful.

YURI A. MOCHANOV
History, Literature, and Language Institute
Siberian Department of Russian Academy of Sciences, Yakutsk

The Late Paleolithic of North Asia, 35,000 - 10,000 BP

The content of Siberian cultures of this period and their linkages with cultures of adjacent regions is presented.

GORDON MOHS
Sto:lo Tribal Council

Archaeology and the Sacred

This discussion is centered on the sacred heritage of the Sto:lo Indians of British Columbia and about archaeologists being sensitive to Native ways. The presentation explores many of the issues surrounding sacred sites and the challenges faced by the Native people living in the Lower Mainland area of British Columbia. Issues explored include: working with Native people, ethical considerations, legislation, aboriginal rights and title issues, resource management initiatives, and public education endeavors. The presentation touches upon recent excavations at the Hatzic Rock Site and includes an overview of sacred site types in the Fraser Valley.

SUSAN MOOGK
University of British Columbia

*Social and Cultural Relations Between the Native People and White Settlers
Around Alberni, 1787 to 1910*

The changes in how the Native tribes of the Alberni region were perceived in the records written by government agents, missionaries, and white settlers are examined. These changes are linked to the changing demographic and political balance between white people and the *Sheshaht* and *Opetchasaht* people in the Alberni Valley. How the social position of these tribes in relation to the white newcomers was altered over time is outlined, as well as how the Native culture was employed to meet the challenge posed by the white invasion.

VERA MORGAN
Eastern Washington University

A Protohistoric Fishing Camp in Willapa Bay

Archaeological investigations conducted along the North Nema River, Pacific County, Washington, produced remains of a multicomponent camp located less than one-half mile upstream from the ethnographic village of *Ma'Hoo*. Radiocarbon ages indicate occupancy of the site occurred primarily within the last 300 years. Evidence for structures was inferred from the presence of vertical cuts in the basal sediment deposits, postholes, and stake holes. Hudson's Bay era artifacts and lithic and glass tools complement the faunal remains recovered from excavated fire hearths. Analysis of faunal remains indicates the primary activities at this site involved fishing and fish processing. The paucity of artifacts, both in number and variety, falls outside the expected Chinook cultural complex as reflected from excavated sites along the Columbia River and southern Washington coast.

COLLEEN E. MURRAY
University of Washington

Letters to the Agent: Ethnohistoric Recovery of Plateau Women's Writing

Archival evidence indicates that during the decades of the 1930s and 1940s Native women frequently wrote the Agency Superintendents at eastern Washington and northern Idaho reservations. Brief notes and lengthier letters are partial narratives that reveal socioeconomic concerns and everyday circumstances. Analysis of their words enhances the reconstruction of Native women's lives during this neglected era of Indian social history.

ROBERT R. MUSIL
Heritage Research Associates Inc.

Archaeology on the South Shore Floodplain of the Columbia River

Archaeological research on the south shore floodplain of the Columbia River, located just to the east of the Portland International Airport, has its beginnings only within the last two decades. Urban development within the Airport Way Urban Renewal Area, situated on this floodplain, has resulted in a number of cultural resource investigations in what prehistorically had been a low wetlands setting. Archaeological evidence for human occupation on this hydric landform is discussed, based on both the earlier work, as well as a series of more recent testing projects carried out within the last year by Heritage Research Associates Inc..

FRANK MYKA
Pullman

Naga Identity and the Search for Cultural Sovereignty

The specific cultural and historical processes that have affected the Naga are addressed. By reviewing the history of relations between the Naga people and the British and Indian governments, I will attempt to show how Naga culture responded and changed to the pressures placed on it. Three specific forces will be addressed: the British government, Christian missionaries, and the Indian government. From the analysis of these forces a pattern emerges showing the tendency of Naga culture to resist assimilation and domination. Through this interpretation, it is shown that to the Naga, independence is a logical and necessary product of history.

GEORGE P. NICHOLAS
Simon Fraser University
Secwepemc Society, Cariboo College

Archaeology as Empowerment: The SFU/SCES Archaeology Fieldschool for Native Students

The SFU/SCES Archaeology Fieldschool Program is a collaborative project developed by Simon Fraser University and the Secwepemc Cultural Education Society to provide Native students in the British Columbia interior with a general background in archaeological field

techniques, especially those concerned with the identification, recording, and assessment of prehistoric sites. The educational component is tied to a research program that is focused on three aspects of southern Interior prehistory: (a) systematic survey for early postglacial sites; (b) investigation of long-term land-use patterns; and, (c) examination of non-pithouse sites. These educational and research goals have been developed in conjunction with the Kamloops Indian Band, with some aspects of site survey, testing, and excavation directed to their current land development plans. The role of archaeology as a potentially powerful tool of empowerment for indigenous peoples worldwide is discussed, and the results of the 1991 field season summarized.

ELIZABETH NORDLUND
University of British Columbia

Empowerment of the Women of the Seabird Island Band

For Native women, "self-government" really means empowerment to do the things that must be done for the survival of the band. Discussed are how issues of ethnicity and kinship have become the focus of the Native women of the Seabird Island Band. Empowerment has allowed them to reconnect the broken family ties and to prevent the loss of their children.

H. ODWAK
C. PURSS
J. DUFFY
B. GALDIKAS
P. VASEY
Simon Fraser University

The Scientific Mate Recognition System in Homo sapiens and H. erectus Reconsidered

The recognition concept of species is discussed in relation to hominids. It is argued that post-cranial aspects of the skeleton were important features of the hominid specific mate recognition system. It is concluded that *Homo sapiens* and *H. erectus* shared the same fertilization system and, in accordance with the predictions of the recognition concept of species, were the same species.

ALBERT C. OETTING
Heritage Research Associates Inc.

Another Look at Projectile Points as Temporal Indicators

The morphological stability of projectile point types and their use as temporal indicators has been debated in a series of recent papers. Replicative technological studies suggest that Great Basin dart points may pass through a variety of morphological forms as a result of use and rejuvenation, making their form a by-product of breakage and reworking, not an

indicator of age. These arguments are reviewed and are found wanting, since they fail to account for the phenomena that originally suggested that point types might have temporal significance: discernible patterns in artifact assemblages and type correlations with radiocarbon.

ALBERT C. OETTING
Heritage Research Associates Inc.

Archaeological Investigations on Buffalo Flat, Christmas Lake Valley, Oregon

Artifact types and radiocarbon-aged assemblages indicate that humans have used the eastern floor of the Fort Rock Basin throughout the Holocene. Geomorphic and botanical studies indicate this portion of the pluvial lake basin has been dry and has supported xeric vegetation since the early Holocene. Site distributions suggest that spatial patterns of land use varied over time as the local landscape evolved, but artifact assemblages reveal temporal continuities in the nature of economic pursuits in this arid environment. The flexible broad-spectrum subsistence strategy characteristic of the Western Archaic was operating in this dry basin by 9000 years ago.

BETH LAURA O'LEARY
New Mexico State University
SCOTT GILBERT
Yukon College
DOREEN GRADY
Taa Mun First Nation

*Cultural Limits on Salmon Harvesting among the Southern Tutchone:
A Case for Sustainable Resource Use*

Fish have been harvested for thousands of years in the Yukon by aboriginal peoples. Local control of salmon was an early casualty of Eurocanadian contact and later management by governmental agencies. The traditional knowledge of the Southern Tutchone of the southwest Yukon in the management of their salmon fishery is explored. The examination focuses on Southern Tutchone perceptions of salmon escapement and consideration and the economic and technological factors which influenced the direct limits on their harvest. It is argued that both traditional and scientific approaches to fisheries management can result in sustainable resource use.

NINA M. OLSON
Simon Fraser University

Profane Acts for a Sacred Cause: Accusations of Terrorism Reconsidered

The subject of the Sons of Freedom Doukhobor in Canada is utilized as a study to define their historic ethnic and inter-ethnic violence within a particular typology, and further create a more workable definition of terrorism. The causal action/reaction of victimization

by the state and the progressive escalation of response by the Freedomites from benign pacifism to terrorism is shown chronologically, while theoretical approaches to the question of ethnic terrorism is discussed in relation to the Freedomites.

NINA M. OLSON
Simon Fraser University

Tragedy of the Little People: The Case of Georgia's Doukhobors

Doukhobor ethnogenesis occurred in several regions of eighteenth-century Russia. Their ethnicity has Ukrainian, White Russian, and Greater Russian components with admixtures of Georgian, Armenian, Tatar, and other nationalities indigenous to the historical areas of exile. The concentration of Soviet Doukhobors resides on the Caucasian high plateau. This is a Georgian border zone neighboring Armenia and Turkey with a few villages to the southeast near and in Azerbaijan. These people and their ongoing tragic circumstances of resettlement -- a diaspora of non-territorial Little People, and the ethnopolitical forces at play which precipitated it -- are discussed.

BRIAN L. O'NEILL
University of Oregon

Pre-Mazama Occupation of the Dry Creek Site (35-DO-401), Southwest Oregon

Archaeological investigations conducted by the Oregon State Museum of Anthropology in 1991 at the Dry Creek site (35-DO-401) in the North Umpqua drainage of southwest Oregon confirmed an occupation in the upper drainage during pre-Mazama times. An occupational episode was discovered in a paleosol below ash and pumice identified as originating from the climactic eruption of Mt. Mazama approximately 6800 years ago. Site stratigraphy and radiocarbon assays on charcoal from this component are consistent with this estimation. The artifact assemblage from this lower component is comparable to Borax Lake pattern materials in northern California, dated there between 8000 and 5000 years ago, and similar to an undated assemblage in the Applegate drainage of southwest Oregon.

JOANNA OSTAPKOWICZ
Simon Fraser University

Sacred Visions: Meaning and Symbolism in Tlingit Shamanic Charms

While there has long been an interest in Northwest Coast art, much emphasis has been placed on monumental artforms such as totem poles, or alternately, on such pieces as masks and boxes. One of the less conspicuous but in no way inferior artforms is considered. Shamanic charms are tiny masterpieces of Northwest Coast carving in bone and ivory. Through their use by the shaman these charms played an important role in Tlingit society. The often emotionally intense and highly energetic art style of the shaman, unique in the Tlingit realm of highly restrained, sophisticated art, is analyzed and discussed. Discussion also touches upon the symbolism and iconography displayed in the charms.

EANE R. OSTERMAN
Eastern Washington University

The Ethnobiology of Haitian Zombification

The image of the zombie, a person raised from the dead, has been sensationalized in recent years. In response to an apparently verifiable zombi report, the ethnobiologist, Wade Davis, travelled to Haiti to investigate a possible folk poison used to create zombies. Davis uncovered the use of a folk poison that contained some very pharmacologically active compounds: atropine and hyoscyanine of the jimson weed plant (*Datura stramonium*) and tetrodotoxin (TTX), a potent neurotoxin, found in the body of the puffer fish (*Tetraodontiformes tetraodontidae*). The discussion focuses on the neurophysiological effects of TTX and on the folk beliefs that mediate this cultural phenomena of zombification.

LINDA PARK
University of British Columbia

Museum Anthropology: Speaking from the Margins

This is an attempt to dismantle the distinctions made between museum and university department anthropologists. Museum anthropologists are forced to speak from the margins of the discipline, despite the fact that their products can act as a window from which all anthropologists can gaze out at the rest of the world and find how the cultural "others" are responding to their work. Explored are three possible reasons for the marginalization of museum work: museum anthropologists work with corporeal "stuff," the staffs of museums are largely comprised of women, and museum anthropologists disseminate information to a different audience than their colleagues.

MARIA PASCUA
Makah Cultural and Research Center

The Makah Cultural and Research Center Example of Applied Anthropology

Discussed are: 1) anthropology's impact on the Makah Tribes for better or for worse; 2) how the Makah Cultural and Research Center (MCRC) has dealt with the various branches of anthropology; and 3) the MCRC's application of cultural anthropology, linguistics, and archaeology today -- our perspective.

TERI PAUL-MANN
University of Oregon

*Archaeological Investigations of the Table Rock Site: 1990 University of Oregon
Field School at the Fort Rock Basin*

Table Rock, a massive volcanic plug rising 1300 ft. (396 m) above Silver Lake at the southern end of the Connley Hills, is the location of a number of rock cairns and stone circles. The presence of food plants and artifacts collected suggest a subsistence-oriented purpose for the site, including gathering and hunting. Ethnographic evidence and the presence of the stone cairns suggests the site was used as a vision quest location as well.

MADILANE A. PERRY
Colville National Forest

What's the Black Stuff: Identification of Black Argillite at Lake Roosevelt and Curlew Lake

For the past fifty years, archaeologists have used the term "black argillite" to designate the black stone frequently used for tools on the upper Columbia River. Reexamination of lithics from the Kettle Falls area and the nearby Curlew Lake Valley indicates that this identification is not reliable. Microscopic examination of Curlew Lake lithics provides a standard for evaluation of several tests used to distinguish basalt from argillite in the field. [See pp. 203-208 of this issue.]

REBECCA McCLELLAND POET
Oregon State University

Strangers in a Strange Land: The Sisters of Notre Dame de Namur in Oregon

The Sisters of Notre Dame de Namur established the first religious boarding school in the Oregon Territory. Arriving in 1846, the Sisters built their home in St. Paul, Oregon, only staying in the area until 1851. The greatest struggle these middle-class women, raised within the convent system in Belgium, faced was not teaching the daughters of the French-Canadians, but survival in a strange land. Arriving unskilled and unprepared for the adventure ahead of them, how did these women learn to subsist? Archaeological excavations in 1985 and 1987 at St. Paul revealed the location of a cellar structure associated with the Sisters of Notre Dame de Namur. Analysis of this site, combined with historic documentation, may provide researchers insight into the day-to-day survival of these women.

GEORGE R. POETSCHAT
Oregon Archaeological Society

Volunteer Participation at 45-CL-12

Volunteers provided approximately 75 percent of the labor-intensive manpower for the July to September 1991 field excavations at 45-CL-12. These volunteers, any of whom have been paid for past field work, donated their time because of their interest in the prehistoric

45-CL-12 site. Currently accepted field methods were employed, including three-point proveniencing and extracting organic materials for ^{14}C analysis. The use of volunteers allowed the professionals to concentrate on documenting overall daily site activities, site interpretation, and supervision during subtle stratigraphic excavations and the uncovering of unique features. Many volunteers are participating in the Oregon Archaeological Society (OAS) Certification Program which includes extensive, professionally-supervised field and laboratory training, seminars by professionals, and required reading to provide trained volunteers for helping professional archaeologists. Site 45-CL-12 provided professionally-supervised opportunities for experience in field excavation methods and artifact identification at a prehistoric site as partial fulfillment of the certification requirements for the field excavation category.

BOB POWELL
Archaeology Branch, Province of British Columbia

A "Blueprint" for an Interior Salish Pithouse

A steatite pendant with an incised design illustrating a pithouse with nine supporting posts is described. Similarities and differences between the design on the pendant and the ethnographic record are discussed and a comparison is made with recently excavated house pits which possibly show multiple supporting posts.

MARGARET POWER
Vancouver, British Columbia

A New View of Chimpanzee Social Organization

Both naturalistic non-artificial feeding (unobtrusive) and provisioning (artificially feeding) methods have been used in field studies of free-living chimpanzees with sharply differing results. Researchers using naturalistic methods report nonaggressive apes with no dominance hierarchy, single leader, or enforced territoriality. Studies of provisioned groups in Gombe and Mahale National Parks, Tanzania, report aggressive, dominance-seeking, fiercely territorial groups. Current understanding of chimpanzee organization is based largely on these provisioned groups. The naturalistic studies are assumed to yield few data regarding social organization.

CATHARINA PURSS
Simon Fraser University

The Emergence of Modern Humans in Southeast Asia and Australia

Two opposing theories have been expressed by researchers advancing descriptive models for the evolution and distribution of modern humans in Southeast Asia. The Replacement Model and the Regional Continuity Model each utilize various lines of evidence to support its theories. However, both models suffer from inadequate data and controversial assumptions. Questions abound regarding problematic lithic typologies, doubtful

depositional sequences, out-dated faunal correlations, and flawed genetic-distance data. In addition, attempts to resolve this issue remain ambiguous within a taxonomic classification system that provides inadequate definitions for fossil species' differentiation.

LAURA PUTSCHE
University of Idaho

The Conditions Favoring Indigenous Organizations

Indigenous peoples have begun to mobilize themselves to protect their land and way of life. An analysis of movements in tropical regions of Latin America reveals social, political, and historical regularities among those most successful. Social movement theory, developed among sociologists, is useful in identifying many of these, though it must be modified for application to indigenous cultures. Relevant characteristics include a history of aggressively confronting intrusions, a pan-tribal unifying mechanism, an understanding of the sociopolitical system of the larger society, charismatic leadership, some crisis caused by intrusion that motivates and unifies, and a feeling that success is possible.

JEN PYLYPA
University of British Columbia

Accessing Native Healing: The Role of Family Networks

Recent studies focus on the necessity of incorporating both knowledge of community social structures and systems of referral to Native healers into health service delivery strategies in Native Indian communities. Interview data indicate that family network relationships and changes in these relationships over time affect the degree and patterns of community members' access to indigenous healing and western health services. By applying these ideas to an existing model of service delivery, the Swinomish Tribal Mental Health Project, the implications for health care delivery and the incorporation of Native healers into referral systems are considered.

KEN REID
Rain Shadow Research

Housepits and Highland Hearths: Comparative Chronologies for the Snake River and Blue Mountains.

Excavations at Pittsburg Landing in Hells Canyon in 1989 sampled a housepit cluster dating from 1600 to 1400 BP. These data bring additional resolution to an emerging picture of continuous housepit use along the lower Snake between 4000 and 400 BP with a possible interruption between 3100 and 2700 BP. By comparison, the emergent upland chronology based on 19 hearths at 9 spring-side camps indicates that the Blue Mountains were most extensively exploited between 2400 and 600 BP during the warmer, drier interstade between neoglacial advances.

MICHAEL RICHARDS
Simon Fraser University

Thermoluminescence Dating of Burned Rock

Fire-altered rock is often one of the most ubiquitous artifacts present at archaeological sites. These artifacts are often recorded and then discarded, as there is no practical reason to save them. This report is on recent work in which we have applied the thermoluminescence dating techniques used for pottery to burned rock samples from an archaeological site. The resulting ages are compared to corresponding radiocarbon ages. The practicalities of using thermoluminescence for routinely dating burned rock is also addressed.

MARY F. RICKS
Portland State University

Rock Art of the Fort Rock Region

Although pictographs and petroglyphs of the Fort Rock Basin are described in some of the earliest archaeological literature in Oregon, a review of research since the 1930s reveals limited literature and little analysis. Sites in the Basin are described which are listed in the Bureau of Land Management Rock Art Inventory. Research to date in the Basin is summarized, and the data these sites bring to the archaeological record are discussed. The need for careful analysis of rock art as artifact is stressed.

KATHIE ROAD
University of British Columbia

Three Poles: Problems in Public Documentation at the Museum of Anthropology

In the past few years anthropological museums and departments have been roundly criticized about the ways they represent and interpret cultures. Public documentation of in-house and permanent display collections is as vulnerable to such criticism as travelling and temporary exhibits. Described are specific problems encountered with respect to interpretation and representation in the creation of public documents for three cultural monuments, more generally known as totem poles, on display in the Great Hall at the Museum of Anthropology, University of British Columbia. While not claiming to have any "right" answers, it is hoped that the delineation of specific problems contributes to the recognition of general principles, future directions, and solutions.

JULIE ROBERTSON
University of British Columbia

Patriarchy, Technology, and Bureaucracy: Variation in the Mexican Management of Birth

American influence on birthing practices in Baja California, Mexico, varies with three types of health institutions: private hospitals, government worker hospitals, and public hospitals.

Proximity to the United States and use of the American model as a reference point by Mexican health authorities suggest that American patriarchal values, technological orientation, and bureaucracy have affected Mexican management of birth. These variables are found to differentially influence the relationships among health workers, midwives, and women. This work is based on interview data, questionnaires, and participant observation in the community of Enseñada in 1991.

ANN BENNETT ROGERS
ANTHONY E. PARQUE
Willamette National Forest

Santiam Wagon Road: Past, Present, and Future

The Santiam Wagon Road once extended from Albany, Oregon, to Boise, Idaho. Today approximately 33 mi. (53 km) are located in the Willamette National Forest, Oregon. In the process of incorporating the Santiam Wagon Road into the recreational opportunities of the forest, public input into the management process identified maintaining historic integrity as the primary issue. A review of the management goals, the cultural resource inventory, and the public support for preserving one of the last wagon roads across the Cascades is presented.

DONNELL J. ROGERS
Oregon State University

Hawaiian Laborers in the Pacific Northwest Fur Industry: Structural Differences

Archaeological investigations can reveal persistent traditions of ethnic groups. Hawaiians were employed in the fur trade of the Columbia River from 1810 through 1850. The Hudson's Bay Company employed them at Fort Vancouver, Washington, from 1825 through the end of this period. Data from the excavations of the servant's village at Fort Vancouver are compared with the built environment of contact period Hawaii. Similarity of structural remains suggests a persistence of tradition among the Hawaiian employees of the Hudson's Bay Company.

NICHOLAS ROLLAND
University of Victoria

The Paleolithic Colonization of Europe

The bulk of multidisciplinary evidence points to Africa as the hominid cradle with subsequent dispersal into Eurasia and beyond. The initial peopling of Europe occurs as part of the earliest population movement into Eurasia or as a separate event. Routes into Europe proposed so far include the Levant corridor or directly from North Africa across Gibraltar. The earliest hominid traces in Europe are mostly archaeological, dating back to between 0.90 and 0.73 MY, with a non-handaxe or non-Acheulian technological repertoire. Evidence points to central Asia and ultimately, east Asia for its origin, instead of the Levant or the Maghreb. The hominid colonization of Europe was therefore indirect and somewhat delayed. It is also synchronous and possibly linked with a major large mammal

turnover and dispersal event known as the "Early Quaternary" or "End-Villafranchian/Galerian Dispersal Event," both originating in central Asia and related to large-scale tectonic activity and climatic deterioration.

RICK SCHULTING
Simon Fraser University

*The Hair of the Dog: The Identification of a Coast Salish Dog-Hair Blanket
from Yale, British Columbia*

The identification of plant and animal fibers from archaeological contexts is often a difficult enterprise, due to the poor conditions in which most of these specimens survive. The identification of a textile recovered in such a context from the vicinity of Yale, British Columbia, is discussed. The specimen would seem to be the remnant of a Coast Salish blanket. While ethnographic and ethnohistoric accounts of the Coast Salish frequently mention a special breed of domestic dog whose hair was extensively utilized in the manufacture of Salish blankets, definite identification of an existing blanket in which dog-hair is an important constituent has been elusive. Given the deterioration of the diagnostic cuticle pattern, a rather different approach is taken to the identification of the fibres in this study. Stable carbon isotope analysis of the blanket reveals that the hairs are those of an animal which gained a considerable amount of its protein from marine sources ($X_6 \text{ }^{13}\text{C} = -15.1\%$). Comparison of the $\delta^{13}\text{C}$ values from the blanket fibres to those of the bones of domestic dogs from archaeological sites in the interior of British Columbia and to control samples strongly suggests that the specimen is indeed a Salish dog-hair blanket. Some of the implications of this finding in relation to possible socioeconomic processes underlying animal domestication and specialization are briefly discussed.

RICHARD SHUTLER, JR.
Simon Fraser University

El Niño and the Polynesian Exploration of the Eastern Pacific

The phenomenon known as El Niño is an anomalous and irregular warming of surface waters in the equatorial Pacific, with serious biological and meteorological consequences. El Niño characteristics are described, and the implications of these factors to Polynesians sailing canoes exploring the eastern Pacific 3000 - 4000 years ago is discussed.

KERRY SMALLWOOD
Western Washington University

Women's Symbol Systems in Australian Aboriginal Desert Paintings

Literature on Australian aboriginal culture reflects an anthropological bias that emphasizes men's position in society and treats women's ceremonies, social positions, and gathering activities as peripheral. This study uses women's desert painting symbols to investigate gender roles in aboriginal communities of central Australia. The paintings are analyzed according to the Dreamtime stories and activities depicted, in relation to the age, gender, community, and linguistic affiliation of the artists. The symbolic and stylistic similarities of

women's paintings contrast with men's paintings. The extensive body of women's symbols illustrate the complex social roles and activities performed by women in aboriginal communities.

ROBIN L. SMITH
Western Oregon State College

Bread and Circuits: Watermilling on the Industrial Frontier in Western Oregon

Industrial development of the Willamette Valley in the late-nineteenth century involved transfer of technology from East Coast industrial centers. The Sidney Mills site near Salem, Oregon, provided milling services for local wheat farmers and sold surplus power to a recently electrified town nearby. Strategies for industrial development and technologies employed at Sidney are explored in a report on the first season of fieldwork.

JIM SPAFFORD
Simon Fraser University

Artifact Distributions on Housepit Floors and Social Organization at Keatley Creek

Three housepits of varying sizes were excavated at the Keatley Creek site in the mid-Fraser River region. The distributions of lithic artifact classes identified three concentric zones, divided into radial segments by hearths, on the floor of the largest house. In both the small and medium houses, the clearest distinctions were between opposite sides of the floors. The concentric pattern in the largest house was interpreted as evidence for the division of space among several somewhat independent groups within a hierarchically-organized co-residential group. The bilateral patterns on the smaller floors were interpreted as evidence of a more egalitarian form of social organization.

TERRY SPURGEON
Archaeological Society of British Columbia

Park Farm Site (DhRq-22) Environmental Correlates

The Park Farm site (DhRq-22), excavated between 1984 and 1986, has been radiocarbon age-dated to 4175 ± 125 years BP (SFU). This multicomponent site should be interpreted with attention to the changing environments which characterize the Holocene, as should other sites in the region. The Fraser Valley region has been subjected to eustatic and isostatic changes since the last glacial period. The Fraser River has modified valley sediments while the delta front has moved substantially southwestward. The Pitt Polder adjacent to the Park Farm site is a drained and diked marsh once inundated by the sea which occupied the fjord now containing Pitt Lake. These changes and others would have affected cultural activities in the area.

GEORGE STATES
Simon Fraser University

*Prediction of Possible Unvisited Archaeological Sites Using a
Raster Geographic Information System*

The objective is to ascertain if a map can be computer-generated to show the possible and probable locations of undiscovered archaeological sites in the Lillooet area using the software package MAP II. With the computer map layers set up as they were in the project, nothing more precise could be said about what is happening within their boundaries than a general value or representative value allowed. In situations like this, reference to a pixel area class finds the best-predicted value for an unvisited point. In these map layers were point (or pixel) observations at the user's disposal -- a data set derived from a set of localities arranged on a regular lattice (or grid) over the area of interest. The points may be associated with a particular area or even a specific locality. Using a raster Map Analysis Package such as MAP II, it was possible that the spatial array of data points associated with the different layers enabled the user to make sometimes very precise statements (verbally and graphically) about the value of properties of interest at unvisited sites. The resulting final map "possible site locations" is a mathematically computer-generated map that, using all the available spatial characteristics of known sites, projects the location of possible, up-to-now undiscovered, sites in the study area.

MARY LEE STEARNS
Simon Fraser University

Fertility Patterns and Culture Change: A Limited Northwest Coast Example

The responsiveness of demographic behavior to social and cultural change is the focus of a long-term population study of a Northwest Coast Native community. Historical trends towards population decrease and increase raise questions about possible changes in fertility as well as mortality. Discussed are reproductive histories for women born into two early twentieth-century cohorts: 1900-09, when village population reached its lowest point, and 1930-39, when population recovery had begun. The study examines the proportions of females surviving to childbearing years (barely 60% in the earlier cohort) and those completing their reproductive years. Features such as age at first marriage, ages at first and last birth, interbirth intervals, numbers of children born, and a curious sex ratio are compared and tentatively related to the changing social context.

WIVECA STEGEBORN
Washington State University

Preservation and Ethnocide on the "Tear of India"

On the "Tear of India," or Sri Lanka, live "The Ones Who Come From the Jungle," the *Wanniya-laeto* (*Veddah*). For 2000 years their ancient hunting and gathering society has survived invasion by subsistence farmers and plantation developers and resisted the overwhelming cultural change brought by Aryans, Tamils, Portuguese, Dutch, and English colonizers. In the 1970s an independent Sri Lanka shifted to a tourism economy and created national parks as tourist attractions. The *Wanniya-laeto*, whose jungle home is

integral to their hunting/gathering economy, were suddenly considered intruders in this pristine environment, and forced to move. Ironically, preservationists have put an end to one of the few foraging cultures remaining in the world. Sri Lanka is well named the "Tear of India."

ALISON T. STENGER
RAY DE PUYDT
Institute for Archaeological Studies

Evidence of Different Late Prehistoric Populations along Lake River, Southwest Washington

The ethnohistory of southwest Washington excludes any association between the Native American populations and their manufacture or utilization of ceramics. The archaeological record, however, demonstrates both the existence and the manufacture of fired clay items. A change of population prior to the contact period is indicated by the archaeological evidence. This evidence is presented and conclusions drawn.

NANCY A. STENHOLM
Botana Labs, Seattle

Fort Rock Basin Botanical Analysis

The botanical remains recovered from house and grounds of three sites in the Fort Rock Basin is discussed. The study demonstrates that there is more archaeobotanical material in the samples than other cultural materials, and that sites disturbed by human agents retain their archaeobotanical potential. It serves as a cautionary tale for the collection of carbon samples, and for those who assume botanical materials do not exist in quantity in archaeological sites. The archaeobotanical assemblage consists of 22 flotation samples and two carbon samples from the Big M site, Carlon Village, and Squaw Butte. The flotation samples produced 286 gm of archaeobotanical material, 23 gm of bone, 17 gm of lithic flakes, and 0.5 gm of egg shell from 30 kg of site matrices. The archaeobotanical assemblage is composed of a minimum of 18 plant taxa distributed among 10 families, 15 genera, and 8 species of plants. The assemblage is 39% conifer charcoal, 56% hardwood, 5% edible tissue, and less than 1% other tissue by weight. The woods are a mixture of fuel and fabrication material.

LINDA STONE
Washington State University

Culture and Community Participation in Development: Historical Perspectives

Beginning in the 1970s, the enthusiasm for "community participation" as a development strategy in the Third World brought about a new interest in the influence of local cultural factors in the development process. The changes in the way the role of culture has been analyzed in relation to "participatory" approaches in development is traced, with particular reference to health programs. A look at these changes over the past decades reveals as much about the "culture" of outside "developers," and the influence of this culture on

development programs, as it does about the cultures of Third World rural communities. Recent discussions in the field of development anthropology incorporate this perspective and offer new criticisms of and challenges for the strategy of community participation.

BRUCE STORY
KIRSTEN RUE
Pacific Lutheran University

Lemur Dysfunction: Is It Biological or Social?

We studied one female and two male *Lemur macaco* at the Point Defiance Zoo in Tacoma, Washington. We found that there was an extreme lack of sexual behavior between the three Lemurs. Considering that these are an endangered species, this is disturbing. One male was hand-raised by humans and may have no concept of how to behave in a sexual confrontation. The other male was a fairly recent addition to the enclosure and may be uncomfortable within the new environment. Our observations suggest that the second male might eventually breed, providing there are no other biological or social problems.

FREDERICK STRANGE
Eastern Washington University

Problems of Studying Change among Peasants

Frustration with the adequacy of models of development across the spectrum from modernization through dependency to modes of production theory threatens to throw the study of change in contemporary peasant societies back to a blinkered empiricism. From the ethnographic side, the material and attitudinal changes in one Mexican village over a twenty-year span evinces evidence that could be marshalled to support any of the major theories. Strategies for leaping this impasse are explored. They include the matching and contrasting of peasants' own views of change with the theoretical models and give more attention to cultural impulses that motivate, rather than merely economic constraints that truncate, peasant action.

ARNOUD H. STRYD
MORLEY ELDRIDGE
ANNE ELDRIDGE
Arcas Consulting Archaeologists Ltd. and Millennia Research

Culturally Modified Trees on Meares Island, British Columbia

Two seasons of field survey and tree-ring dating were undertaken on Meares Island on the west coast of Vancouver Island for the purpose of documenting traditional tree use by Native people. A total of 1779 culturally modified trees (CMTs) were recorded, including 1334 bark-stripped trees and 445 aboriginally logged trees. Using probability theory, estimates were obtained on the total number of CMTs along the coast of the island. The survey revealed that the trees on Meares Island had been used extensively for the procurement of cedar bark, large planks, canoe logs, and logs for other purposes. At least two traditional tree-felling techniques were used. Over 400 CMTs were tree-ring dated.

The dates revealed that the trees along the coast of Meares Island have been used continuously by Native people since before the arrival of Europeans late in the eighteenth century to the 1980s.

SCOTT E. STUEMKE
Confederated Tribes of Warm Springs

*The Concept of Significance, Section 106, and Participation by Tribal Governments
and Other Native Americans*

The passage of the National Historic Preservation Act in 1966 and subsequent development of cultural resource management practices, have illustrated concern over the loss of cultural resources and heritage. The concept of significance has been a constant source of frustration and inspiration with academic and scientific interest guiding preservation and management. Native American participation in historic preservation programs is encouraged by the Section 106 process and needs to be viewed as a source for collaboration. A new era of cultural resource management must focus on partnerships and cooperation with Native Americans by addressing significance within the scope of a living community's cultural patrimony.

GREGG M. SULLIVAN
Simon Fraser University

Leaching of Shell as a Post-Depositional Factor in Northwest Coast Shell Midden Formation

Leaching of shell has been proposed to explain the formation of dark, highly organic, largely shell-less deposits often found at the base of shell middens on the Northwest Coast and other areas of the world. One hypothesis for how this might occur is discussed, and its applicability to two shell middens on the coast of British Columbia (Namu and Tsawwassen) is evaluated using results from sedimentological analyses.

ALEX A. G. TAUB
Western Washington University

*But Daddy, the Medicine Tastes Awful: Or Making the Teaching of Kinship Relevant and
Interesting to Teachers and Students*

Too often the teaching of kinship begins to sound more like getting a little child to take a cold medicine, and less like the teaching of an interesting topic in anthropology. Yes, teaching and learning kinship can actually be interesting. Addressed are a number of areas within kinship, as well as a number of approaches to teaching kinship, that can make the subject interesting not only for the students, but also for the instructor

BRIAN THOM
University of British Columbia

*The Whalen Farm Site: Problems and Rewards of Reanalyzing
Old Archaeological Collections.*

I have recently completed a reanalysis of the Whalen Farm site, a shell midden originally excavated in 1949-50 by the late Charles Borden. During this research, I encountered some basic methodological problems in reanalyzing "somebody else's material." Some general problems and rewards of analyzing old archaeological collections are addressed. Using examples from the Whalen Farm project, I will attempt to answer the methodological problems that arose. By outlining the difficulties experienced in this analysis, and showing the methods used to solve them, I hope to increase awareness of the value of reanalyzing archaeological material.

R. WAYNE THOMPSON
Idaho State University

House Stratigraphy and Residential Strategy, Hells Canyon.

Stratigraphic excavations were conducted to reveal the occupational history of a large house depression at Tryon Creek. Leonhardy identified eleven strata within the meter-deep house deposit; most strata are marked by gravel washed in from the steep fan above the house. Charcoal from the lowest stratum dates to ca. 1600 BP. Grain size and chemical analyses are used to infer seasonal and long-term periodicity in house occupation. Leonhardy approached microstratigraphy with great flare and stressed the importance of field technique to theoretical questions regarding residential strategy.

KATHRYN ANNE TOEPEL
RICK MINOR
Heritage Research Associates

*Prehistoric Adaptation in the Fort Rock Basin: A Class II Inventory
of BLM Lands in Christmas Lake Valley*

In 1979 a Class II Cultural Resources Inventory of BLM lands within the Lakeview District's Christmas Lake/Valley Planning Unit in southcentral Oregon was undertaken by the University of Oregon. A systematic interval sample was used during this field inventory to obtain a 10 percent sample of 94,560 acres within 8 pre-selected field inventory areas. Among the cultural resources recorded in the 66 quarter-sections surveyed were 102 aboriginal sites and 977 isolated finds. On the basis of the field results and previous research in the area, prehistoric use patterns inferred from the patterning of sites and temporally diagnostic projectile points in the Fort Rock Basin are discussed in terms of a three-phase cultural chronology closely tied to past climate changes.

DONALD TYLER
University of Idaho

If Modern Races Don't Exist, Why Are We So Good at Identifying Them?

A current trend in anthropology is to deny the existence of modern races. This is contrary to what the average person believes to be correct. Human races are aggregates of people who occupied identifiable geographic areas in the ethnographic present and have similar inherited biological characteristics. The spread of agriculture accounts for the distribution of modern "major" races. If anthropology is to make an impact on racial understanding it needs to explain why humans vary in appearance and to do so without introducing some racial meaning that goes beyond simple geographic variation.

LAURA VANCE
Simon Fraser University

Role Conflict of LDS Women

Ideal womanhood as it has been traditionally explicated by Latter-day Saint (LDS - Mormon) church leaders is explored as well as the reality of women's participation in wage labor that contradicts this religious ideal. Based on ethnographic data, it is demonstrated that LDS women experience role conflict and that this role conflict is mediated in Relief Society -- separate weekly meetings of the female membership of the church. It is suggested that future gender and religion research reconsider the patriarchal oppression-theoretical orientation.

DOMINIQUE VELLARD
University of Nantes, France

Ethno-Mathematics and Cognitive Science: A Field Study among Illiterate People in Mali (West Africa)

Most research in cognitive science suffers from an ethnocentric point of view especially in the area of mathematical reasoning. In studying majority subjects from western societies in which writing is a prominent feature, the role of oral language and mental procedures is difficult to establish clearly. On another hand, among prejudices concerning oral societies, one prejudice concerns the aptitude to deal with mathematics (non-3D perception, non-logical/formal reasoning, no arithmetic). Studying the traditional numeration system of the Bambara people (an ethnic group in Mali), we will show that an oral society can develop sophisticated systems. Furthermore, their ways to deal with money, the operation necessitated by the transaction with our decimal numeration system, led them to develop mental calculation processes. These procedures are presented and they are discussed in the general framework of cognitive science.

BRIAN C. VIVIAN
University of Calgary

North or South? Cultural Interaction in the Similkameen Valley

Archaeological and anthropological studies of the interior Plateau concur that the Fraser and Columbia plateaus are generally distinct regions of cultural development within the broader scope of Plateau culture. Although this distinction is consistently recognized, few if any studies have examined the processes of cultural interaction between the Fraser and Columbia plateaus. Forming a natural corridor between the Fraser and Columbia plateau regions, it is reasoned the Similkameen Valley is an excellent location to identify and characterize cultural interaction across the interior Plateau. The ethnohistoric land use of the valley is used to characterize patterns of interaction. Results are compared to the archaeological record, and conclusions reached on interaction within the Similkameen Valley are used to explain the development of interaction across the Interior Plateau.

JILL M. WAGNER
Pullman

Domestic Development and Reservations

A disproportionate number of domestic development projects within the United States take place on lands designated as Native American reservations. These projects have much in common with international projects carried out in Third World countries and the reservations themselves can often be assigned to Third World status based on established international standards. The results and impacts of development projects on reservations show striking parallels to international project results and impacts, especially in the areas of creating dependency, disrupting cultural systems, displacing populations, and increasing the wealth of the elite at the expense of the poor. Just as is seen internationally, projects on reservations initiated by indigenous populations are more successful and less disruptive than those from outside sources and, therefore, may be the more reasonable approach.

DOLLY B. WATTS
University of British Columbia

Reconstructing Family History Through the Use of Art Objects.

How family history can be reconstructed through the use of "art objects" within the museum is discussed. Chief Harry Mountain gave a feast in 1919, was arrested, and subsequently gave up his collection of ceremonial paraphernalia. Despite pressures from the church and government decrees, Harry accumulated new ceremonial paraphernalia and continued to hold feasts. It is this second collection, which wound up in University of British Columbia's Museum of Anthropology, that is used to reconstruct Harry's life history.

KATHERINE M. WEIST
University of Montana

The Changing Role of Farm Women

Field research with farm women in eastern Montana during the summer of 1991 indicates that significant changes have occurred in the roles of women as farms have become more mechanized, operating costs have escalated, and the role of the federal government has become more pervasive. Based upon these interviews, these changes are examined. Special attention is given to the diverse roles that farm women undertake today, both on and off the farm, and the affect which farm incorporation is having upon kinship relationships.

G. G. WEIX
University of British Columbia

Telling Ghost Stories: The Politics of the Workplace in Java

Spirit sightings in industrial workplaces in southeast Asia are discussed as a comparative problem about narratives of uncanny events. Ethnographers have interpreted spirit sightings as the expression of moral contradictions for young women confronted with new modes of discipline in factories. Narratives about ghosts also reveal a politics of language, in how men and women deflect their encounters with the uncanny. In the case of Javanese ghost stories, encounters of the living with the dead are described as uncertain exchanges, such that work is often recast within a general hierarchy and social order. While ghost stories may express social contradictions in the workplace, we would also want to attend to the cultural politics of narrative as creating, as well as expressing, new forms of discipline and work.

GARY WESSEN
Makah Cultural and Research Center

*Archaeological Activities and Programs of the Makah Cultural and Research Center,
Makah Indian Reservation, Washington*

The Makah Cultural and Research Center, the tribally-chartered cultural center of the Makah Indian Tribe, has been involved in reservation-based archaeological activities for a number of years. While these activities have been mindful of major research design questions of interest to the professional archaeological community, their principal focus has been Makah community concerns relating to such issues as housing and other development, timber harvesting, and mitigating the effects of the recent Tenyu Maru oil spill. A program being planned for the near future is the development of an Archaeological Resources Management Plan which can integrate both archaeological and Makah cultural values into the Tribe's resource management processes.

GARY WESSEN
Makah Cultural and Research Center

Recent Archaeological Investigations on the Makah Indian Reservation, Washington

Recent small-scale testing and evaluation projects undertaken within portions of two of the traditional villages of the Makah People have provided valuable new insights into the contents and significance of these sites. Both sites contain evidence of a wide range of maritime activities and multi-season occupation. Particularly striking, these efforts have substantially increased our knowledge of the temporal duration of these settlements. Testing at Neah Bay (45-CA-22) has demonstrated that occupation in this area began at least 2100 years ago. Testing at Waatch (45-CA-1) has demonstrated that occupation in this area began at least 3800 years ago.

IAN WHITAKER
Simon Fraser University

Inter-Ethnic Reciprocity in Two Reindeer-Herding Communities, Evenki and Sami

The mutual-exchange relationships of the Reindeer Evenki (Tungus) and Russian settlers in northernmost China were first described by E. J. Lindgren in the 1930s. The system ended shortly after World War II, although the Russian-speaking population did not immediately leave. In arctic Sweden a similar relationship between reindeer-managing Sami (Lapps) and Finnish-speaking farmers and merchants was observed by Robert Pehrson and me in the 1950s. My recent fieldwork in both areas confirms the abandonment of this symbolically important reciprocity, which is no longer practicable in either region. How both indigenous groups are being drawn into a wider politico-economic nexus is discussed.

PAMELA LEMON WILSON
Idaho State University

Inter-Ethnic Variability in Story Retellings by Anglo and Native American Students

Patterning of cognitive schemata appears to be very closely tied to sociocultural experiences of individuals during language acquisition. Culturally-distinctive schemata provide a general framework within which linguistic comprehension occurs. Inter-ethnic variability in comprehension and retelling of a Euroamerican and Shoshonean narrative by a matched set of Anglo and Native American students supports the premise of cultural variability occurring in cognitive organization. Increased understanding of school performance by students of different cultural backgrounds may be provided by this alternative explanation of student "success" in comprehension of narratives that are differently organized.

NINA WIMMERS
DENNIS L. JENKINS
University of Oregon

*Beads as Indicators of Sociological and Chronological Change in
the Fort Rock Basin of Central Oregon*

Decorative beads have long been recognized as significant indicators of social status, social interaction, and trade. Variable access through time to exotic beads and bead-making materials, as well as changing bead styles, has acted to make beads good chronological indicators also. The types of beads recovered in the Fort Rock Basin, their site types, and the locations they have been recovered from are reported, as well as the radiocarbon ages associated with them.

PAM WINDSOR
University of British Columbia

Regaining Voice

This discussion concerns the recovery and representation by First Nations people of their own heritage. The intent is a discussion of the silence and suppression of the voices of first Nations women throughout the history of British Columbia. Literature pertaining to the views and experiences of Native women in history is scarce. To explore this deficiency, the history of Native women in the British Columbia commercial fishing industry is discussed and the integral role they played in its development is revealed.

BRUCE WOMACK
Hells Canyon National Recreation Area

Archaeological Phases and Proposed Cultural Chronology, Hells Canyon.

We continue to refine the cultural chronology of Hells Canyon. Frank Leonhardy was inspired to develop a phase system for the lower Snake River after Warren Caldwell proposed the early phase system for Hells Canyon. Claude Warren and Max Pavesic revised Caldwell's chronology without the benefit of radiocarbon ages. Subsequently the better-dated Leonhardy and Rice chronology was extended to cover larger and larger areas, including Hells Canyon -- much to the dismay of Leonhardy. Well-dated assemblages and house occupations are now known and archaeological phases can be better formulated for Hells Canyon. The implications of these phases for cultural traditions and processes are discussed.

ALLISON YOUNG

Russian-Aleut and Russian-Tlingit Relations, 1743-1876

During the period 1743-1867 Russian fur hunters and merchants were actively involved in the lucrative sea otter fur trade in southwestern and southeastern Alaska. Contact with the Aleut and Tlingit populations of these regions resulted in cultural change within these societies. Russian-Aleut and Russian-Tlingit relations during the period 1743-1867 are compared. The focus is on two aspects of society which affect the nature of Russian relations -- the pattern of resource and property ownership and the pattern of authority within the community. Also discussed are other factors which influenced Russian contact and subsequent relations with the Aleut and the Tlingit. Discussion of these patterns centers on the extent of change and restructuring of these patterns during the period 1743-1867.

KATHLEEN Z. YOUNG
Simon Fraser University*The Negotiation of Croatian-American Ethnic Identity*

Northwest Washington state is the home of a significant number of Croatians from various Adriatic islands and the Dalmatian coast. Place of origin and time of family migration were influential in determining individual's ethnic identity. The host community has referred to them as Austrians, Germans, Italians, and Slavs. The renegotiation of ethnic identity among Dalmatian immigrants in the Northwest has continued from the turn of the century to the present. One local result of the recent war in Yugoslavia has been a decline in the use of the term "Slav" and an emergent identity as "Croatian."

SANDRA K. ZACHARIAS
Heritage Consultant, Vancouver*Aboriginal Training in Cultural Resource Management in the Queen Charlotte Islands*

Non-credit archaeological field schools and unofficial training of local Native band members during archaeological projects are not new in the Pacific Northwest. Recently, however, with improving aboriginal self-determination and government initiatives such as the Canadian federal "Access to Archaeology" program, band-level interest in archaeological resource management has increased. Drawing mainly on my experience with archaeological field training programs for members of the Haida community, 1984-85 (Kunghit Haida Culture History Project) and 1991 (CPS Gwaii Haanas/South Moresby Archaeology Project), issues of local management of archaeological resources, formal accreditation and professional credibility, and community empowerment are addressed.

JOHN K. ZANCANELLA
Bureau of Land Management, Prineville
PAUL CLAEYSSSENS

Research Opportunities in Central Oregon

Central Oregon encompasses three major physiographic provinces including the Deschutes-Umatilla Plateau, the Blue Mountain Range, and the High Lava Plains. This broad and diverse area is characterized by a rich array of archaeology and history, most of which is poorly understood. The Bureau of Land Management and the U. S. Forest Service are responsible for substantial portions of these physiographic provinces and the cultural resources occurring therein. Due to the wealth of mostly untapped data generated through agency CRM projects and the number of future projects expected, we are taking this opportunity to inform the profession of the excellent research potential available. The range of opportunities should appeal to contracting/consulting firms, universities, and students looking for thesis or dissertation topics.