

What is Archaeology and Why is it Important?

What is archaeology? People have been known to answer this question with a dozen different answers. Indiana Jones or digging-up dinosaur bones are popular though incorrect notions. Archaeology is a multidisciplinary or interdisciplinary study of material culture in an effort to reconstruct the past and understand how and why human societies have changed through time. Material culture is comprised of the physical evidence that remains from past human activities. This evidence includes the broken tools and cut bones left behind after an elk had been killed and butchered; the campfire or earth oven remaining from an earlier feast; or the tinned cans and glass refuse discarded near an historic homestead. These remains can tell us far more than the fact that someone has visited a certain locale in the past but can provide evidence of who these earlier people were, when they utilized an area (e.g., season, year), for what purpose, and how did their use of the land compare to how others viewed the same landscape.

The material remains (e.g., refuse, tools, clothing, art) left behind from past activities make up the archaeological record. Those remains that are a product of a task or occupation in a particular location form an archaeological site. It is by studying the composition of an archaeological site and comparing it to other sites across the landscape that archaeologists can attempt to reconstruct the history of human land use in both a local and regional context through time. This is essentially what archaeology is.

An archaeological site, as defined by the Oregon State Historic Preservation Office, is an accumulation of ten or more prehistoric or historic artifacts (e.g., flakes, projectile points, groundstone, cans, bottles, ceramics), or the presence of one or more features (e.g., fire hearth, housepit, rock cairn, cabin, mine tailings, modified tree), which alone or in combination define areas of human activity and/or events. Oregon State law protects significant sites on both public and private lands throughout the state. By working with federal and state agencies and private landowners, archaeologists seek to identify archaeological sites of local, regional and national significance and find ways to preserve them for the benefit of future generations.

In Oregon, prehistoric sites date back approximately 13,000 years ago, to a time when bands of ice age hunters (Paleo-Indians) tracked herds of mammoth and bison for food and clothing. Historic sites in Oregon date from the early 1800's to roughly the mid-1950's when Oregonians were engaged in various industries of commerce and trade (e.g., logging, mining, fishing, farming).

Despite the various ways in which artifacts and features can be preserved over time, they still represent only a fraction of a culture's material and intellectual heritage. Although it is true that political, social or religious beliefs and behaviors are rarely, if ever, preserved archaeologically, archaeologists are often able to reconstruct these important institutions indirectly by studying the archaeological record.

When each piece of the archaeological puzzle is examined and carefully placed within the framework of time, archaeology promises to not only improve our understanding of how Native and Euro-Americans once lived in Oregon, it can open the door of understanding into our own lives as well.

How to Recognize an Archaeological Site

In order to locate and identify an archaeological site, a thorough background research should be completed, followed by a field survey. A more in-depth analysis of a discovered site can include archaeological testing, excavation and evaluation of any recovered archaeological remains. Archaeologists use a variety of sources to reconstruct a history of a particular property or site. These sources may include: ethnographic and ethnohistoric documents, oral testimony, historic photographs, and the standing structures and physical evidence left behind from previous occupations.

This section is designed to help you identify sites within your area of management. Archaeologically, there are two types of sites (i.e., prehistoric or historic) a person might encounter when working or recreating outdoors. These site types may occur alone or in combination and range in size from a few feet in diameter to tens of acres. Archaeological sites can be found almost anywhere in the state of Oregon. They occur in every county and occupy nearly every environmental and/or ecological zone.

Prehistoric Sites

Nearly all prehistoric sites are Native American in origin and all predate Euro-American contact, which in Oregon occurred around 1805. In order to hunt, fish, gather roots and build living structures, Native Americans developed a broad range of tools to accommodate an even broader range of daily activities. As a result, the “kinds” of prehistoric sites one may encounter are many, and include but are not limited to:

1. Lithic Scatter: a lithic scatter is an area where stone flakes (i.e., debitage), tools and tool fragments are scattered about on top of the ground. This type of prehistoric site represents a location where stone tools were manufactured, used or repaired.
2. Quarry: a quarry is a lithic source area for the manufacturing of stone tools. The process of procuring stone materials often left behind quantities of flakes or debitage, cores, blanks and other products of stone tool manufacturing in addition to the natural deposits of stone material (e.g., obsidian, cryptocrystalline silicate [ccs], basalt).
3. Isolate Find: isolated finds can either be prehistoric or historic in origin and are the accumulation of 9 or less artifacts left behind from a previous activity or event. Although isolated finds are frequently looked upon as the product of a short, one-time event, they may in fact be the only visible remains of a larger buried archaeological site or feature.
4. Campsite: a campsite broadly refers to an area where people spent at least an overnight stay, but may have in fact stayed as long as a few weeks. Dwellings used in campsites were quickly constructed and were easily transported when necessary. Evidence of such structures can include pit depressions; post molds remaining from an earlier wooden frame or stone rings for lean-tos and wickiups (see Figures 1-3)¹. Artifacts from a seasonal campsite may include flakes, tools, and fire cracked rock from fire hearths and possibly earthen ovens. A campsite can either be sparse in its artifactual content, or contain a diversity of artifacts and features depending on how the site was use.
5. Village/Habitation Sites: refers to living areas where food resources were probably more accessible and travel to acquire it was more localized (e.g., along the Columbia River, along the coast). Dwellings used at these types of sites were more permanent in their construction, the indications of which occasionally are found in the archaeological record (e.g., longhouse depressions, juniper structures/lean-tos, remains of rectangular plank structures). Artifacts and

¹ Figures are located in the back of this document.

features associated with habitation sites include: decorations and ornamentation, extensive middens (including shell middens), fire-cracked rock and a very broad range of tools including groundstone (e.g., metate, mano, pestle, stone bowls, mauls, etc).

6. Cave and Rockshelters: caves and rockshelters, when available, provided convenient seasonal and occasionally permanent habitation living quarters, and welcomed protection from the elements. These natural shelters provided a unique environment for preservation of artifacts that normally deteriorate elsewhere (e.g., bone and wood tools, basketry, cordage and food items). Rock art is occasionally found on the interior or exterior walls of a cave or rockshelter, as is smoke staining from fires. Other features that might be associated with these types of sites include: fire hearths, cached artifacts and structural remains.
7. Features: a feature can be a concentration of artifacts or a grouping of unmodified objects (e.g., cobbles or boulders) that are stacked or arranged in a pile or circle, or a structure reflecting an activity or event (e.g., mine adit) that is associated with or created by humans. A single unmodified rock may seem meaningless, but several rocks arranged in a circle may indicate a temporary dwelling. In that example, a rock ring would be considered a feature. Other types of features include:
 - a. Earth Oven: earth ovens were underground pits lined with heated rocks and layered with sand and vegetation (for humidity and moisture) for the roasting of roots and bulbs (e.g., camas, wapato). The remains of these features will often produce a large quantity of fire-cracked rock and charcoal. Individual ovens ranged in size from 2 to 6 feet (or more) in diameter.
 - b. Fire Hearth: fire hearths were often represented by a small cluster of fire-cracked rock, with varying amounts (if any), of associated charcoal. When heated sufficiently, the soil directly below a hearth will often become oxidized and change in coloration to orange or reddish orange.
 - c. Shell Midden: shell middens are archaeological refuse deposits found in areas where freshwater or saltwater shellfish were processed as food items. Shell middens generally consist of a mixture of soil, charcoal, and various food remains such as bone, shells, carbonized plant remains, and fragments of tools. Shell middens are often found associated with campsites and villages along the Oregon coast, although a shell midden can also be found along any body of water where native people harvested freshwater mussels and clams.
 - d. Processing Stations: processing stations are features that are often considered to be indicators of a campsite. Occasionally food processing activities took place away from the camp. Sites that only contain a certain

type of feature, such as camas ovens, and very few other artifacts, are sometimes referred to as processing stations. Often these types of sites are not located near a water source, as they were simply the location where a certain type of processing activity took place (usually near where the resource was being gathered).

8. Rock Art: rock art refers to a type of archaeological site where engravings, scratches and/or paintings are applied to boulders, cliff faces, and the walls of rockshelters and caves.

Petroglyphs: are rock engravings made by a variety of techniques. Most were either pecked or abraded, although scratched designs are also quite common.

Pictographs: are rock paintings most often executed with red and white pigments, but black, yellow and green have also been found.

9. Rock Features and Alignments: rock features and alignments commonly include pits excavated into talus slopes (for storage, caches, burials) rock walls (used as fences or hunting blinds), and rock cairns or piles (used as markers and vision quest sites). These features can be found in isolation, or in clusters.
10. Culturally-Modified Trees: culturally-modified trees were shaped and/or modified by Native and Euro-Americans for a variety of purposes including: bark removed from cedar in order to manufacture baskets and clothing, bark from other types of trees (e.g., hemlock, white pine, ponderosa pine, silver fir and douglas fir) used for medicinal and manufacturing purposes, and historic graffiti (e.g., aspen grove art and name generally referred to as dendroglyph). One tree, the Ponderosa pine, would on occasion have a portion of its bark stripped off by Native Americans to get at the moist and pliable cambium layer as a possible source of food. Roots were harvested from cedar and spruce trees to provide basketry material, and branches of various types of trees were formed into unusual shapes when they were young to mark trails, campsites and other less obvious site types.
11. Prehistoric Trails: prehistoric trails and trade routes are often identified through historic records and oral histories. Today many of these trails have been improved and reused by the BLM and Forest Service for their public trail and road systems. Although in many areas original portions of prehistoric trails are still intact, many have disappeared either naturally or through land modification activities such as logging, farming, and fire suppression.

Historic Sites

In Oregon, historic sites must be at least 50 years old if located on Federally owned lands, and at least 75 years old if located on non-Federal public and private lands. Like prehistoric sites, historic sites are defined as having 10 or more artifacts or a feature, or a combination of both. Historic sites may be linear such as trails, roads, telephone lines, and mining ditches, or they may be non-linear such as a homestead, log cabin (see Figure 4), logging camp or hard rock mine. Historic sites also can reflect changes in our country's social and political policies in that sites may reflect the activities of such organizations as the Civilian Conservation Corp (CCC) and the Work Progress Administration (WPA) that were Depression Era programs initiated between WWI and WWII.

Examples of historic sites may include the following:

Forest Service sites and structures (ranger, guard & fire stations, lookouts); telephone lines (insulators, poles); spring, water and well developments; historic roads, trails and stock driveways; dendroglyphs (carved trees); barns and homesteads; cemeteries and graves; corrals; refuse scatters; fences; logging, mining and railroads artifacts and structures.

A common type of historic site is the refuse scatter. Refuse scatters are generally a surface accumulation (although they can be buried) of discarded debris. A refuse scatter located near a homestead, mining, railroad or logging camp may include whole or fragmentary pieces of:

ceramics, pottery, bottles, cans, make-shift furniture, appliances, cooking utensils, toys, clothing, buttons, beads, combs, tobacco pipes, coins, tools, and building materials.

What if I Find Artifacts on State Land?

Current state law (ORS 358.920 (1)(a)) states that “a person may not excavate, injure, destroy, or alter an archaeological site or object or remove an archaeological object located on public or private lands in Oregon unless that activity is authorized by a permit issued under ORS 390.235.” If the archaeological site involves human remains

(burials or cairns), it is also a felony to disturb them under State law (ORS 97.740). It is important to understand that human remains may not only be an indicator of a prehistoric or historic burial site, but it is also possible that the remains are an indication of a crime scene and therefore, regardless of the circumstances, when human remains are encountered, the site should be immediately brought to the attention of the State Police, the State Historic Preservation Office, the Commission on Indian Services, and the local Medical Examiner. The Commission on Indian Services will inform you of the appropriate tribes that need to be contacted.

People are encouraged to report the discovery of any archaeological site they find to the State Historic Preservation Office (SHPO) in Salem, Oregon. The SHPO is not only a research facility, it is also the State repository for Oregon sites and site-related information and they maintain a statewide database of archaeological information. The Oregon SHPO maintains site records on approximately 25,000 prehistoric and 12,000 historic sites. The SHPO library has a current inventory of nearly 20,000 archaeologically related reports, journals and books.

It is important to note that, because most of the archaeological sites in Oregon have not been evaluated as to their importance or significance a conservative rule of thumb is to assume that all sites are of value until they have been professionally evaluated.

Can I Use Land Containing Archaeological Sites?

When considering what to do about a piece of land you want to use or develop that has one or more archaeological sites (i.e., prehistoric/historic) on it, there are at least two questions that should be asked:

1. Can the archaeological site(s) be **Avoided**?
2. If the archaeological site can't be avoided, how do we **Mitigate** the resource so the impact to the site is **Minimized** ?

In most cases, archaeological sites occupy only a small part of lands that are to be developed. When sites are located and are in danger of being impacted, the most cost effective and prudent alternative is to have the site boundaries determined by a

professional archaeologist, and then (if possible), avoid the site. If the site cannot be avoided, it should be evaluated so that the amount of impact a site receives is minimized. If a site is deemed significant, it is still possible to recover the significant values that will be damaged by the project (i.e., mitigate), through professional archaeological procedures.

Costs to conduct an archaeological survey and possibly mitigate an archaeological site vary depending on the size and type of site and the size of the area to be impacted. Small sites with a few flakes and tools and a shallow subsurface component will cost less than a larger, more complex site with features and lots of organic preservation.

Why Should Archaeological Sites Be Preserved?

For thousands of years our cultural resources have fallen victim to time, nature and the ever-increasing pressures of population growth and economic development. As a result, only a small percentage of archaeological sites survive today. In order to interpret the history of these sites, archaeologists rely on being able to study the internal patterns (i.e., the position and arrangement of artifacts and features) of a site as a means to understanding the past. Unfortunately, these patterns are very fragile and can be easily destroyed. Every archaeological site is unique and contains a distinct record of a specific set of events. These events have occurred at a specific place and at a specific point in time, and are separate from all other events.

Archaeological sites that are ‘prehistoric’ are the only record we have of cultural groups that no longer exist and who never maintained a written record to document their way of life. A study of these sites can help us to reconstruct past lifeways, economic strategies, trade networks and political processes. They give the past a “voice” and demonstrate the ways cultural groups adapted to the environment over time. The study of ancient cultures also shows us how over time, use and abuse of the land and natural resources can destroy a culture’s support system leading to its eventual collapse.

Archaeological sites have scientific significance because they help us understand who, what, when, where, how, and why of history. Each site has the ability to add information to our knowledge regarding previous culture processes, climate change, and

human ecology. Archaeological sites also make contributions to the growth and development of other scientific disciplines including history, geology, hydrology, meteorology, zoology, botany, forensic medicine, environmental history, and ecology.

Prehistoric and historic sites have public significance for interpretation, education, recreation and tourism, as well as help enrich a sense of ethnic identity for cultural groups who have played a role in Oregon's cultural heritage (e.g., Basque, Chinese). These cultural groups and their descendants continue to enrich Oregon's cultural heritage today. To provide these descendants with knowledge of their ancestors' role in Oregon's past may help to provide them with a sense of place and community, bounded by social and religious values. Oregon's prehistory and history is rich in cultural diversity, as represented by its archaeological record, and constitutes a unique and irreplaceable resource.

However, continued pressures from vandalism and looting, population and urban growth, and natural forces threaten the knowledge and understanding of Oregon's past. It is increasingly important that each of us assume the proactive role of stewards of Oregon's cultural heritage. Archaeological sites contribute to the quality of life, recreation and understanding of human history for Oregonians and visitors alike. Oregon's archaeological past is a fragile, non-renewable resource. Once it is gone, it is gone forever.

Where Can I Find Out More About Oregon Archaeology?

The State Historic Preservation Office: www.hcd.state.or.us

The National Parks Service: www.nps.gov

Association of Oregon Archaeology: <http://oregon.uoregon.edu/%7Eosma/aoa.htm>.

Univ. of Oregon Dept. of Anthropology: <http://darkwing.uoregon.edu/~anthro/>

Museum of Natural and Cultural History: <http://oregon.uoregon.edu/~osma/sma.html>

Oregon State Univ. Dept. of Anthropology: <http://oregonstate.edu/dept/anthropology/>