

Food Gathering and Stone Technology

Stone toolmaking, the first recognizable cultural activity, first appeared around 2 million years ago. The **Stone Age**, which lasted from then until around 4,000 years ago, can be a misleading label. Stone tools abound at archaeological sites, but not all tools were of stone. They were made as well of bone, skin, and wood, materials that survive poorly. In addition, this period encompasses many cultures and subperiods. Among the major subdivisions, the **Paleolithic**° (Old Stone Age) lasted until 10,000 years ago, about 3,000 years after the end of the last Ice Age, long periods when glaciers covered much of North America, Europe, and Asia. The **Neolithic**° (New Stone Age), which is associated with the origins of agriculture, followed.

Fossilized animal bones bearing the marks of butchering tools testify to the scavenging and hunting activities of Stone Age peoples, but anthropologists do not believe that early humans lived primarily on meat. Modern **foragers** (hunting and food-gathering peoples) in the Kalahari Desert of southern Africa and Ituri Forest of central Africa derive the bulk of their day-to-day nourishment from wild vegetable foods. They eat meat at feasts. Stone Age peoples probably did the same, even though the tools and equipment for gathering and processing vegetable foods have left few archaeological traces.

Like modern foragers, ancient humans would have used skins and mats woven from leaves for collecting fruits, berries, and wild seeds, and they would have dug up edible roots with wooden sticks. Archaeologists suspect that the doughnut-shaped stones often found at Stone Age sites served as weights to make wooden digging sticks more effective.

Cooking makes both meat and vegetables tastier and easier to digest, something early humans may have discovered inadvertently after wildfires. Humans may have begun setting fires deliberately 1 million to 1.5 million years ago, but proof of cooking does not appear until some 12,500 years ago, when clay cooking pots came into use in East Asia.

Studies of present-day foragers also indicate that Ice Age women probably did most of the gathering and cooking, which they could do while caring for small children. Women past child-bearing age would have been the most knowledgeable and productive food gatherers. Men, with stronger arms and shoulders, would have been better suited for hunting, particularly for large animals. Some early cave art suggests male hunting activities.

The same studies, along with archaeological evidence from Ice Age campsites, indicate that early foragers lived in groups that were big enough to defend themselves from predators and divide responsibility for food collection and preparation, but small enough not to exhaust the food resources within walking distance. Even bands of around fifty men, women, and children would have moved regularly to follow migrating animals or collect seasonally ripening plants in different places.

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In regions with severe climates or lacking in natural shelters like caves, people built huts of branches, stones, bones, skins, and leaves as seasonal camps. Animal skins served as clothing, with the earliest evidence of woven cloth appearing about 26,000 years ago. Groups living in the African grasslands and other game-rich areas probably spent only three to five hours a day securing food, clothing, and shelter. This would have left a great deal of time for artistic endeavors, tool-making, and social life.

The foundations of what later ages called science, art, and religion also date to the Stone Age. Gatherers learned which local plants were edible and when they ripened, as well as which natural substances were effective for medicine, consciousness altering, dyeing, and other purposes. Hunters learned the habits of game animals. People experimented with techniques of using plant and animal materials for clothing, twine, and construction. Knowledge of the environment included identifying which minerals made good paints and which stones made good tools. All of these aspects of culture were passed orally from generation to generation.

Early music and dance have left no traces, but visual artwork has survived abundantly. Cave paintings appear as early as 32,000 years ago in Europe and North Africa and somewhat later in other parts of the world. Because many feature food animals like wild oxen, reindeer, and horses, some scholars believe the art records hunting scenes or played a magical and religious role in hunting. A newly discovered cave at Vallon Pont-d'Arc° in southern France, however, features rhinoceros, panthers, bears, owls, and a hyena, which probably were not hunted for food. Other drawings include people dressed in animal skins and smeared with paint and stencils of human hands. Some scholars suspect that other marks in cave paintings and on bones may represent efforts at counting or writing.

Some cave art suggests that Stone Age people had well-developed religions, but without written texts, it is hard to know what they believed. Some graves from about 100,000 years ago contain stone implements, food, clothing, and red-ochre powder, indicating that early people revered their leaders enough to honor them in death and may have believed in an afterlife.

1. What is the evidence that explains the earliest history of humans and the planet? How is this evidence interpreted? Provide three examples.