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The Delicate Question
Cannibalism in Prehistoric and Historic Times

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Almost certainly in the prehistory of other times and places
over the grand sweep of the human diaspora, other[s] . . .
living on new and unknown landscapes, perhaps in
relatively small, isolated groups, disappeared
without issue or note in marginal environments or
in the face of natural events beyond their capacity to cope.

Karl Butzer
1977

Over the past 150 years, the story of the Donner Party has been told and
retold in so many formats that it has become one of the best-known his-
torical episodes of the nineteenth-century American westward move-
ment. Fame, however, comes with a price. While the Donner Party
exemplifies the strength, spirit, character, and perseverance of early pio-
neers, it is most often associated with its darkest feature—cannibalism.
Ann Gibbons, for example, states that cannibalism occurs with sufficient
frequency in the archaeological record “to imply that extreme hunger
was not the only driving force. Instead of being an aberration, practiced
only by a few prehistoric Donner Parties, killing people for food may
have been standard human behavior—a means of social control.”¹ The
Donner Party is thus so well known that it can be used as shorthand for
cannibalistic behavior without further elaboration.

Despite its synonymy with cannibalism, the Donner Party is but a sin-
gle instance of anthropophagy in the historic and prehistoric records.
Investigations into this behavior have led to heated debates related to identifying or confirming cannibalism in the fossil and bioarchaeological records. Although the Donner Party’s Alder Creek Camp assemblage has, at this point, yielded less physical evidence of cannibalism than the research associated with several dozen reported sites in North America, Europe, and the Pacific, it offers a line of evidence that those prehistoric case studies do not have: an accompanying historical record.

To put Donner Party cannibalism into a larger temporal and spatial context, we review evidence for this behavior in the hominid fossil record and Holocene archaeological sites. We show that as paradigms shift, so do views on human cannibalism. Early-twentieth-century paleoanthropologists were often quick to attribute (with only circumstantial lines of support) broken bone assemblages to cannibalistic feasts. The past forty years have seen workers develop alternative taphonomic models, permitting cannibalism to be distinguished from unusual forms of bone modification associated with secondary burials, predator-scavengers, and postdepositional factors (such as animal trampling, roof fall in caves, and erosional action).

Beyond discussing cannibalism in the remote and recent archaeological records, we review the varying motivations underlying this behavior derived from ethnographic and historic accounts. Contrary to William Arens, who argued that anthropophagy was essentially a myth, there are countless cases that suggest that Donner Party cannibalism was not an aberration but a fully anticipated result of individuals put under dire and life-threatening stress. Given the Alder Creek site’s integrated historical and archaeological records, its bone assemblage has the potential to provide an indisputable instance of survival anthropophagy and related material signatures.

**The Practice of Cannibalism**

Cannibalism is beset by ambivalence. On the one hand, it is considered repulsive, disgusting, and less than human. On the other, it is intriguing, captivating, and a dim and hidden dimension of humanity. Serial killers who are also cannibals are better remembered than are those who simply kill. Historic events characterized by hardship are too numerous to mention, but those that involved cannibalism are the subject of intense research and countless books. Prehistoric hominid fossils are interesting
in their own right, but when interpreted as the end product of a cannibalistic feast, their fascination increases manyfold.

The etymology of cannibalism comes from Christopher Columbus’s reference to the native inhabitants of Haiti and Cuba as *canibales*, a variant of Carib, the name they gave themselves. Whether or not the Caribs were actually cannibals is disputed, but fifteenth-century observers accused them of such behavior, and the name was adopted widely. Most dictionaries define cannibalism as the eating of human flesh by another human. Despite its initial application to humans, the term was co-opted by zoologists and is now defined more broadly as the eating of the flesh of an animal by another of its own kind, or “intraspecific predation.”

In a review of cannibalism in natural populations, forty-eight species of herbivores and eighty-nine species of predators are found to have normally engaged in this behavior, which is more common in freshwater predators (forty-three species) than marine predators (eight species). In addition to birds and mammals, cannibalism has been observed in fish, reptiles, amphibians, insects, snails, and sundry smaller animals. In many instances, cannibalism focuses on eggs, larvae, or newly hatched young, but it can also involve adults preying on juveniles or other adults. In mollusks, arthropods, and insects, adults sometimes cannibalize other adults. In major chordate groups, adults commonly cannibalize juveniles/eggs, while juveniles typically cannibalize eggs. Motivations include food shortages, population stress, the availability of vulnerable victims, and the elimination of competitors.

Instances of cannibalism have been reported for several nonhuman primates, in captive situations as well as natural settings. In apes, the practice has been seen in gorillas and chimpanzees but appears to be more common among chimpanzees. Cannibalism occurs most frequently among chimpanzees when a female moves into a new group with an infant in tow. In such situations, adult males of the new group may grab, kill, and then consume the immigrant’s infant. In one case from Gombe, male chimpanzees exhibited ambivalence toward the infant they killed, alternatively eating the carcass and then playing with it. One of the more dramatic instances of cannibalism at Gombe occurred when a mother chimpanzee named Passion and her daughter Pom were caught up in an infanticidal killing spree that also involved cannibalism. Recently, workers have observed that infanticide by female chimpanzees directed toward young other than their own is more
common than once thought, but this behavior is rarely accompanied by cannibalism.

Among *Homo sapiens*, the motive for (and practice of) cannibalism is especially complex, given the human propensity for symbolic thought and communication. Attempts have been made to establish classifications for different types of cannibalism practiced by humans. Most note the division between exocannibalism and endocannibalism, in which the consumption of human flesh focuses on those outside or inside the group, respectively. Researchers describe this behavior in terms of motivation and effect. Tim White’s classification includes (1) “survival cannibalism” (starvation-induced); (2) “funerary cannibalism” (cannibalism of the deceased, usually with affectionate motivations); and (3) “gastronomic cannibalism” (nonfunerary cannibalism practiced under nonstarvation conditions). Lynn Flinn, Christy G. Turner II, and Alan Brew utilize four adjectives to describe cannibalism: (1) ritual; (2) revenge; (3) gustatory; and (4) survival. Gary Hogg notes four primary motives for cannibalism: (1) famine; (2) dietetic; (3) magical; and (4) pi etistic. Christy G. Turner II and Jacqueline A. Turner describe five underlying reasons for cannibalism: (1) emergency, or starvation; (2) sociobiology, or evolutionary psychology; (3) social control; (4) ritual human sacrifice; and (5) social pathology. They emphasize that the categories are not mutually exclusive.

The classifications of cannibalism do not directly address the fundamental dichotomy of choice and necessity. By necessity, we mean situations in which the alternatives are cannibalism/survival or starvation/death, or at least the perception of such consequences. Instances of necessity would be associated with the survival, starvation, or famine cannibalism noted by other authors. Cannibalism by choice involves a more complex set of motivations than cannibalism by necessity. These choices can be (1) culturally driven or idiosyncratic; (2) centered on a small component of a body, such as a human organ, or on the entire body, including flesh, organs, and even bones; (3) religiously motivated or a pragmatic, secular dietary choice; and (4) driven by reverence, revenge, or neither. Aztecs, for example, engaged in cannibalism on a massive scale that was culturally driven and focused on the entire body; there is some debate as to whether ritual or nutrition (protein deficiency) was the driving force behind the behavior. In the South Pacific, cannibalism was a culturally driven dietary choice that involved the consumption of all body parts
with revenge as a common motive. Cannibalism among the Wari tribe of Amazonia was culturally driven and centered on a small body part/organ; there were both religious motivations and reverence for the deceased. By contrast, Jeffrey Dahmer and others of his ilk engaged in murder followed by idiosyncratic cannibalism that centered on all body parts and represented a dietary choice (albeit sociopathic), lacking the elements of either reverence or revenge. A century earlier, the infamous “Colorado cannibal” Alferd Packer engaged in idiosyncratic cannibalism, although the attribution of choice or necessity in this instance is not entirely clear.

Figure 8.1 provides a model of cannibalism that illustrates how different groups and individuals are classified in terms of anthropophagy. Following the action of cannibalism, the first column shows the dichotomy between choice and necessity. In either instance, a group’s culture may define cannibalism in acceptable terms (culturally prescribed), or it is performed by an individual in a cultural milieu that actively discourages the behavior (idiosyncratic). Then, whether dictated by one’s culture or one’s psyche, the focus of consumption is either on the whole body or limited to certain body parts. Finally, the consumption of human flesh is motivated by either symbolism (in a broad sense, including ritual and revenge) or nutritional need. Examples of various forms of cannibalism are provided in the last column, although the placement of some groups and individuals might be subject to other interpretations. In instances where cannibalism is a choice, some groups widely acknowledged for this behavior (Fijians, New Guineans, Maoris, and Aztecs) are culturally driven, with motives combining elements of nutrition and symbolism (that is, revenge, ritual, or reverence). The European tradition of medicinal cannibalism was a culturally driven choice that focused on specific body parts, depending on the nature of the ailment being “treated.” When the choice is idiosyncratic in nature, most examples involve infamous sociopaths whose aberrant behavior captured the public’s attention (such as Jeffrey Dahmer and Ed Gein). When necessity is the driving force behind cannibalism, the goal is invariably nutritional rather than symbolic (as indicated by the strikeout marking on the word “Symbolic” in this column on the figure).

In *The Man-Eating Myth: Anthropology and Anthropophagy*, Arens is highly critical of most claims of cannibalism, especially the forms of culturally driven examples reported by missionaries, explorers, fieldworkers,
Few books have been rebutted more often or more fiercely than Arens’s slim tome. Most rebuttals focus on two factors: the reality of cannibalism and questionable scholarship. The first critique consists of evidence of cannibalism in prehistoric and historic times.

Figure 8.1. Choice or necessity: a general model of cannibalism, with selected examples from around the world (see Hogg, Cannibalism and Human Sacrifice; Petrinovich, Cannibal Within; Travis-Henikoff, Dinner with a Cannibal). Courtesy of G. Richard Scott.
Prehistory

Fossil Hominids (800,000–35,000 B.P.)

Hallmarks of hominid evolution include the robust and gracile australopithecines that date between 2 million and 4.5 million years ago (mya), followed by the rise of the genus *Homo* shortly after two mya. Between one and two mya, this genus, characterized by increased brain and body size and reduced tooth size, differentiated into several species, including *Homo habilis, H. ergaster, H. rudolfensis,* and *H. erectus.* Following the dispersal out of Africa about two mya, additional species of *Homo* developed in Europe and Asia, including *Homo antecessor, H. heidelbergensis,* and *H. neanderthalensis* in western Europe.

Precisely which hominid first engaged in cannibalistic behavior has not been ascertained. Although cut marks have been reported for a fossil from Sterkfontein, South Africa (Stw 53), that dates before one mya, Travis Pickering, Tim White, and Nicholas Toth consider cannibalism as only one possible explanation, so this may or may not be the earliest evidence of such behavior. The well-preserved fossil from Bodo dating to 600,000 years ago shows clear signs of defleshing on the skull, but White notes that cannibalism is, again, only one of several possible explanations for these cut marks. Many believe that the earliest reported instance of this behavior comes from Atapuerca, a middle Pleistocene site in north-central Spain. This would give cannibalism a time depth of 700,000–800,000 years in the hominid fossil record.

Cannibalism as an interpretive tool for explaining unusual patterns of bone breakage, modification, and distribution has a checkered past in prehistoric studies. The hominid fossil record is replete with fragmentary bones that may or may not indicate the intentional alteration associated with cannibalism; the attribution of cannibalism to specific hominid fossils has been “on again, off again” over the past hundred years. During the first half of the twentieth century, any fossil skull with a missing base was considered a candidate for having been cannibalized. The reasoning was that the foramen magnum provided a starting point from which more bone could be broken and removed to gain access to the brain, a delicacy that chimpanzees fully appreciate when afforded the opportunity. For example, Albert Blanc applied this argument to the Neanderthal cranium from Grotta Guattari (Monte Circeo I), which was missing the base: “[T]his intentional mutilation is identical to the...”
one presently produced by head-hunters of Borneo and Melanesia . . . with the object of extracting the brain and eating it for ritual and social purposes.”

Similarly, Franz Weidenreich invoked cannibalistic events to explain *Homo erectus* fossil calottes and calvaria at Zhoukoudien and Ngandong (Solo) that were missing faces and/or bases. For Zhoukoudien, however, Weidenreich was not concerned solely with broken and incomplete skulls. Given the incomplete and scattered nature of the hominid remains in the cave, in conjunction with their association with nonhuman bone fragments, he felt that cannibalism was the most likely scenario to account for the pattern of bone distribution and breakage. Similar conclusions were reached for Krapina, a Neanderthal site in Croatia. The Neanderthal bones (found in association with nonhuman food refuse at this site) were broken up and burned and showed alleged cut marks: these were the primary criteria used to “identify” cannibalism in the early twentieth century.

Claims of cannibalism in the fossil record were often repeated and sometimes criticized but were rarely tested prior to the 1960s and 1970s. At that time, developments in taphonomy revolutionized the study of human and nonhuman remains in the fossil record. In *The Hunters or the Hunted*, C. K. Brain dismantled the long-held assumption that when hominid fossils were found in association with nonhuman remains, the hominids must have hunted and consumed the animals they were ultimately buried with. In a detailed study of South African cave sites, he convincingly demonstrated that the association was not due to the fact that the hominids were hunters but arose because they, along with other animal species, were hunted by a common set of Pleistocene predators. Thus, all the bones (including the hominids) represented food refuse.

The question of “hunter or hunted” and the rise of taphonomy led other researchers to assess critical claims of cannibalism in the prehistoric record. The criteria that were considered diagnostic of cannibalism in the fossil record included (1) incomplete and scattered skeletal elements; (2) long bones that appeared to have been intentionally broken for marrow extraction; (3) crania missing their bases, leading to the inference of intentional breakage for brain removal; and (4) broken hominid bones found in association with the remains of game animals, presumably indicating similarities in food processing. At Krapina, the fragmentation and dissociation of skeletal elements were what convinced some that
cannibalism had occurred at the site, although burning and alleged cut marks were also mentioned by some workers.

Ethnoarchaeology and experimental archaeology carried out in the 1970s demonstrated that many of the fragmentary bone assemblages in the fossil record were more likely produced by a combination of predator-scavenger activities, geological processes, and climatic factors rather than cannibalistic hominids. When crania are exposed to the elements, for example, they have a natural tendency to lose the face and then the base, resulting in many fossil hominid calvaria (for example, Olduvai Hominid 9; Ngangdong VI, IX; Sinanthropus X, XI, XII; Sangiran 2; and Salé) and calottes (for example, Neander, Trinil, Maba, and Ngangdong IV).

In *Bones*, Lewis R. Binford tried to demonstrate how skeletal remains are incorporated into the archaeological and fossil records. He focused on modern Inuit hunting, butchering, and consumption practices, along with bone discard and its aftermath (such as wolf gnawing). From these observations, Binford and Chuan Kim Ho reassessed the taphonomy of Zhoukoudien and summarized the evidence that had long been used to support the interpretation of cannibalism at the site: (1) long bones split longitudinally; (2) burned bone; (3) mandibular breakage; (4) skulls missing base and face; and (5) the presence of abrasions and/or compressed fractures on some of the skulls. They argued that normal taphonomic factors (including the action of predator-scavengers, weathering, roof fall, and trampling) could account for four out of the five factors noted above. As for burned bone, only two hominid bones were reported to be burned, and one of these was heavily stained rather than burned.

Similarly, when the Neanderthal remains at Krapina were reassessed, bone breakage and alleged cut marks were attributed primarily to geological factors (in particular, roof fall and compression). Mary Russell concedes that some of the linear striations on human bone were made by Neanderthals, but she suggests that such actions were motivated by defleshing and secondary burial rather than cannibalism. Because the site of Krapina was excavated at a time when archaeological methods were less precise, Paola Villa argues that there is insufficient evidence to conclude whether secondary burial or cannibalism took place there. White notes that recent work on the Krapina collection does favor an interpretation of cannibalism.
With a newfound appreciation for taphonomic studies, several researchers have revisited the issue of cannibalism in the hominid fossil record. In horizons dating more than 700,000 years ago, the remains of six hominids (*Homo antecessor*) show perimortem breakage and stone tool cut marks, along with chop marks and percussion marks. Moreover, the hominid bones were mixed in haphazardly with those of other animals. The fossils do not show burning, but this is not surprising, given the likelihood that fire was not yet regularly used by *Homo antecessor*. Because the lines of evidence at Atapuerca are consistent, the argument for 700,000-year-old cannibalism is widely accepted. Castel di Guido, an Acheulean site in Italy, also contains fragmentary human bones that may have been deliberately altered, but the evidence for cannibalism is not as conclusive.

Although early reports of Neanderthal cannibalism from Krapina and Monte Circeo have been reevaluated in other terms, new evidence indicates that Neanderthals did engage in cannibalism. Moula-Guercy, a 100,000-year-old site in southeastern France, has abundant archaeological, paleontological, and paleobotanical remains. The remains of at least six individuals at that site were found in association with butchered animal bones, especially the deer *Cervus elaphus*. The hominid bones, representing two adults, two teenagers, and two children under ten, showed patterns of cut marks and fractures that mirrored almost exactly those observed on the deer remains. Given the richness of the assemblage, the detailed associational data, and the close parallels in intentional hominid and ungulate bone modification, the Moula-Guercy fossils have been called “the best evidence that some Neanderthals practiced cannibalism.”

El Sidrón, a Neanderthal site in northern Spain dating to around 43,000 years ago, also provides evidence of cannibalism during the Middle Paleolithic. Modern taphonomic criteria (the presence of cut marks, percussion pits, conchoidal scars, and adhering flakes) permitted the identification of unmistakable signs of cannibalism on the bones from a sample of at least eight individuals. Most of the bones at the site are from Neanderthals, so parallels between modification to hominid bones and those of game animals cannot be drawn. Despite the absence of this taphonomic criterion, the authors feel that the clear evidence for bone breaking is consistent with nutritional exploitation and cannibalism.
The Recent Archaeological Record (2000 B.C.–A.D. 1700)

Although early claims of anthropophagy in the prehistoric fossil record were often fanciful and far-fetched, more-recent archaeological evidence strongly suggests that cannibalism, though uncommon, was a behavior that came to be practiced more widely in the recent past. In large part because of the efforts of Christy G. Turner II, Tim White, and Paola Villa, scientists have developed criteria that provide a taphonomic signature of cannibalism for archaeologically derived skeletal remains. These authors make an effort to clearly distinguish cannibalistic acts from other behaviors that could result in damaged (perimortem trauma, cut marks, chop marks, gnaw marks, peeling, and so forth) and fragmentary human bone assemblages, especially violence and warfare, preparation for secondary burial, predator-scavenger activity, and normal geological actions.

Villa and colleagues note that cannibalism is indicated when there are (1) similar butchering techniques applied to human and animal remains in terms of frequency, location, and types of cut marks and chop marks; (2) patterns of long bone breakage consistent with the practice of marrow extraction; (3) identical patterns of postprocessing discard of human and animal remains; and (4) indications of cooking that, when present, are comparable for animal and human remains. Villa also stresses the importance of undisturbed context, meticulous excavation procedures, and knowledge of local burial customs.

While Villa’s work focused on cannibalism in Europe, Turner initiated four decades of research on cannibalism in the American Southwest with the publication of “A Massacre at Hopi,” in which Turner and coauthor Nancy Morris evaluated a set of human remains found in 1964 at the site of Polacca Wash, a few miles southeast of the Hopi villages on First Mesa. Initially, the bones were interpreted as a secondary burial. On closer inspection, the highly fragmented set of remains, numbering at least thirty individuals, hinted at something far more ominous than an ordinary secondary burial. Extensive perimortem damage to the bone included anvil abrasions; patterned cut marks on many skeletal elements, including areas close to the joints; burned bone; rib bones cut into small and uniform sizes; and almost no vertebra. The conclusion was that the burial was primary, not secondary, with extensive evidence of violence, butchery, and likely cannibalism.
Following the analysis of the Polacca Wash remains, Turner initiated a long-term project that involved a closer examination of many small, fragmentary, and problematic skeletal series recovered throughout the Four Corners region of the Colorado Plateau. For some of these collections, cannibalism had been forthrightly suggested by the archaeologists who excavated the remains. However, these early observations were either dismissed as fantastic or simply ignored by most Southwestern archaeologists, who had developed a “peaceful corn growers” model for the prehistoric inhabitants of the American Southwest. Recent research, however, suggests normal levels of violence for a preindustrial society, with the added dimension of cannibalism in at least one region of the Southwest.

Two major books have focused on the issue of cannibalism in the prehistoric American Southwest. Together, Tim White’s *Prehistoric Cannibalism at Mancos 5MTUMR-2346* and Christy and Jacqueline Turner’s *Man Corn: Cannibalism and Violence in the Prehistoric American Southwest* provide complementary and compelling cases for cannibalism in this region (map 8.1). White analyzed human skeletal remains from an early-twelfth-century A.D. Anasazi site in southwestern Colorado. The site contained 2,106 bone fragments representing a minimum of twenty-nine individuals. The remains, deposited simultaneously on the floors of several rooms of a small pueblo, show little weathering and no carnivore modification. Following the protocol of a zooarchaeologist, White provides a detailed analysis of bone modification, including cut marks, chop marks, anvil abrasions, percussion scars and pits, peeling, and burning. He was able to conjoin (or retrofit) 25 percent of the bone fragments, including some cases where one part of a bone was burned while the adjoining piece was not and others where conjoined bones were found in different rooms. He also notes a new diagnostic feature of Anasazi cannibalism—pot polish (see chapter 7 of the current volume). Such polish occurs at the ends of fractured bones that are reduced to a size that fits into a cooking pot. When bones are cooked and stirred in such a pot, the abrasive nature of the interior surface changes the form of the bone tip from sharp/pointed to blunt/rounded. Overall, after his meticulous documentation of bone modification at the site of 5MTUMR-2346, White concludes, “These observations support the inference that human cannibalism occurred in the prehistoric Mancos Canyon.”

Turner and Turner’s *Man Corn* provides a synthesis of seventy-six sites across the Southwest that had been interpreted in terms of either
cannibalism or violence. Their evaluation of each site revolved around a minimum signature of cannibalism that included massive perimortem breakage, cut marks, anvil abrasions, burning, many missing vertebrae, and pot polishing (figure 8.2). In the forty-eight sites where cannibalism had been suggested, thirty-five met the taphonomic criteria set forth for cannibalism, six failed to meet the criteria, and seven were questionable. Of the twenty-three sites where violence had been proposed, nineteen met the criteria of violence, while four were questionable. For five problematic sites, one met the criteria for cannibalism, two provided no evidence of cannibalism, and two were questionable.

The case for cannibalism in the American Southwest developed by White and by Turner and Turner has distinct spatial and temporal
Figure 8.2. The taphonomic signatures of cannibalism: A, highly fragmented assemblage of human bones, with some burned, from Peñasco Blanco, Chaco Canyon, New Mexico (cgt Neg. #5-5-94:24); B, cut marks on mandible from Houck NA 8440, Room 2, Arizona (cgt Neg. #8-6-86:8); C, burned and conjoined long bone from Canyon Butte 3, Arizona (cgt Neg. #7-18-89:390); D, pot polishing on three long bones from Peñasco Blanco (cgt Neg. #5-3-94:23); E, cut marks or abrasions on skull from Pueblo Bonito, 327139, Chaco Canyon, New Mexico (cgt Neg. #1-9-89:15A). Courtesy of Christy G. Turner II.
limits. The majority of sites with evidence for cannibalism date between A.D. 900 and 1300, which brackets the Pueblo II and Pueblo III periods of the Anasazi cultural tradition. Almost all instances of cannibalism occurred on the Colorado Plateau or in the Four Corners region, with most cases tied to cultural developments in Chaco Canyon. Some of the great houses in Chaco Canyon (Pueblo Bonito, Peñasco Blanco, and Small House) provide evidence of cannibalism, while other instances are found in Chaco outliers, distinguished by Chacoan masonry and pottery styles that differ significantly from other regional Anasazi styles. The highest concentration of sites showing signs of cannibalism are distributed along the San Juan and La Plata rivers in southwestern Colorado. Ash Creek, a Salado site, is the only case indirectly tied to the Hohokam cultural tradition in southern Arizona. No examples of cannibalism have been found within the Hohokam area along the Salt and Gila River drainages or in areas associated with the Mogollon and Hakataya traditions. Given the spatial and temporal constraints of sites where evidence for cannibalism exists, Turner and Turner argue that the cannibalism complex was introduced into the American Southwest from Mesoamerica, where the practice was well documented by contact-era Spanish chroniclers.

Following Turner’s (1983) methodology later augmented by White, many independent workers have reported sites in the Southwest (see map 8.1) where broken and scattered skeletal assemblages exhibit the taphonomic signatures of cannibalism, including a site in Monument Valley (seven individuals), two sites in the Yellow Jacket Complex (four and ten individuals), and other southwestern Colorado sites dating to around A.D. 1150 (seven fragmented individuals) and 1280 (several human remains). Many individuals showed signs of violence, but some bodies were dismembered with crushed, burned bone, along with instances of reaming and pot polishing, leading the authors to suggest a link between cannibalism and violence during this time period. The geographic range of this behavior has been extended to south-central Utah, where evidence for cannibalism was uncovered at the Fremont site of Backhoe Village.

Despite the fact that cannibalism was institutionalized in Mesoamerica prior to Spanish contact, many researchers have gone to great lengths to deny that this behavior ever occurred in the American Southwest, a region showing numerous imported cultural elements from the south. Peter Bullock, for example, prefers to explain fragmentary and inconsiderately placed human remains as a result of warfare and corpse

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mutilation. J. Andrew Darling and others have suggested that the many bone collections in the Southwest that have been interpreted as representing cannibalism instead reflect the widespread practice of witch execution and burning. Although violence and witch executions are acknowledged to have occurred, distinguishing cannibalism from violence is usually a straightforward procedure. Moreover, the argument regarding witches is based entirely on ethnographic analogy, with no supporting empirical evidence. To date, no one has developed an argument against cannibalism that cannot be countered by the observable and patterned characteristics of the human bones coming out of the ground.

Although the American Southwest has been the primary battle ground for arguing the pros and cons of cannibalism in the prehistoric record, it is not the only region where skeletal evidence for this practice has been amassed. In the Arctic, a region long known for survival cannibalism, the Saunatuk site (Northwest Territories) yielded the remains of thirty-five individuals whose skeletons show evidence of violent death and cannibalism. In a detailed analysis of 134 fragmentary bones from Fontbré-goua Cave in France, dating to the fourth–fifth century B.C., the bones of at least six individuals were discarded in the same pattern as animal bones and also showed the cut marks and signs of butchery that characterized game animals. At a Bronze Age site in Spain, the remains of six individuals showed the characteristic taphonomic signatures of cannibalism. Certain Pacific Island cultures, long associated with cannibalism, have recently yielded skeletal evidence consistent with this behavior on Fiji and the Cook Islands. This physical evidence is consistent with ethnographic observations on cannibalism among Fijians, the Maoris, and New Guineans. Garry Hogg provides numerous and excruciatingly detailed descriptions of cannibalism in the South Pacific, plus additional descriptions for the practice among Amazonian and central African groups. Not all people in these areas engaged in cannibalism, but it was far more than an occasional, aberrant behavior. Although missionaries curtailed cannibalism in many areas, examples of recent man-eating behavior in the Congo Basin and elsewhere have been documented.

Historic Times

Reactions to cannibalism vary widely in Western societies. In survival contexts, most individuals are sympathetic if not empathetic toward
those who break this taboo, yet the survivors are not excused from all public scrutiny. Historic reports of cannibalism, especially those accounts written after the event, thus must be critically assessed. In addition, ethnographic reports of cannibalism should be distinguished from those cases that involve individuals belonging to modern (often colonizing) societies. Numerous cases of cannibalism have been well documented by eyewitness testimony and physical evidence. Most of these accounts, including those of the Donner Party, are of European and European-derived groups, but there are also examples from Asia (map 8.2).

Examples from recent history represent survival, ritualistic, and/or psychotic forms of cannibalism. These types overlap, because survivor cannibalism can have a ritual aspect and psychotics can engage in cannibalism to survive. Survival cannibalism is always associated with extreme food shortages. Instances in which food is naturally in short supply include environmental disasters such as floods and droughts, as well as accidents such as shipwreck and lifeboat disasters, airplane crashes, Arctic explorations, and travelers snowbound in the mountains. Where food resources exist but access to and distribution of those resources are restricted by those in power, “artificial” survival cannibalism can occur. Such examples usually involve powerful, tyrannical forms of political and military control.

Beyond starvation as an obvious driving force, cultural norms and taboos often set the parameters for when cannibalistic behavior occurs, who is eaten, and what parts are consumed. Several common patterns have been noted for individuals facing accident-related food shortages. First, only after all other resources have been exhausted (including livestock and work animals, all animal products, and pets) do people engage in cannibalism. Second, people prefer not to consume close relatives and initially eat individuals of other races and members of outside groups (that is, exocannibalism) when given a choice. Third, the face, fingers, hands, and genitals are not generally consumed, possibly because these body parts are strongly associated with a person’s humanity. Fourth, as preferred portions of meat are exhausted, the other body parts previously considered unfit for consumption are eaten.

In some cases, however, it is considered honorable to consume kin and eat body parts specifically associated with a person’s identity and humanity, such as the head, hands, and feet. Victims facing food shortages repeatedly or for indeterminate and lengthy periods of time (for
example, because of floods, droughts, and military and political control) often incorporate ritual aspects into their survival cannibalism, and other victims forced to cannibalize often comment on the spiritual nature of consuming another human.

The Donner Party was not the only group to engage in cannibalism in historic times, nor was the experience of the entrapped emigrants anomalous. Survivors of sea voyage disasters, those who lived through airplane crashes, victims of extreme food control caused by governments, and other overland travelers have resorted to cannibalistic behavior when facing dire food shortages. Although all of these challenging circumstances fit into the category of cannibalism by necessity, survivors of each situation faced unique difficulties. To understand how the Donner Party fits into a broader pattern of survival cannibalism, it is necessary to analyze each disaster on its own terms.

**Voyages**

Shipwrecks and lifeboat survival form the largest body of historical literature on cannibalism. Shipborne travelers had an established, though despised, plan known as “the delicate question” and “the proper tradition of the sea” to survive if disaster struck. Surviving individuals would customarily eat those who died first. In circumstances where there were no bodies available for consumption, lots were drawn to determine who would be sacrificed to provide food for the others. Such lotteries, in which chance alone dictated who ate whom, were acknowledged to be entirely legal. However, questionable lotteries (if the victim was a foreigner, a slave, or a cabin boy without family) raised issues of fairness and could be considered violations of the law of the sea. The only cases in which survivors were prosecuted for cannibalism occurred when the lotteries were fixed or absent altogether. On the whole, sailors and the general public knew and accepted the protocol of cannibalism to survive ship disasters.

One famous case of cannibalism occurred in June 1816 after the French frigate Méduse left France bound for Senegal. The ship struck reefs along the African coast and became stuck in the sand in water sixteen feet deep. The coast was only forty miles away and there were five lifeboats, but panic ensued and the boats left with few people aboard. A raft had been constructed to be towed behind the lifeboats, but it was left behind with few provisions and about 150 people. Violence onboard
1. Donner Party (overland travelers)
2. Medusa (shipwreck)
3. Nottingham Galley (shipwreck)
4. Peggy (shipwreck)
5. Essex (shipwreck)
6. Francis Mary (shipwreck)
7. Francis Spaight (shipwreck)
8. Euxine (shipwreck)
9. Mignonette (shipwreck)
10. Franklin Expedition (expedition)
11. Greely Expedition (expedition)
12. Alferd Packer (overland expedition)
13. Bergen Belsen Concentration Camp (politics)
14. Treblinka Concentration Camp (politics)
15. Japanese in New Guinea (politics)
16. Volga River, Ukraine (politics)
17. Andean Plane Crash (flights)

Map 8.2. Historic-period sites affiliated with cannibalism throughout the world. Courtesy of Joseph Stoll, Syracuse University Cartographic Laboratory.

Syracuse University Cartographic Laboratory
left numerous people dead, and more were swept overboard. Some of the people on the raft began drying pieces of the dead passengers on the third or fourth day, but conditions continued to worsen. It was decided that the weakest should be thrown overboard to conserve rations. Thirteen people (including the one remaining woman), possibly chosen by lottery, were thrown overboard. A rescue ship reached the raft after seventeen days. Only fifteen men remained, and six died after they were rescued. The tragic event has been immortalized in Théodore Géricault’s famous painting *Le Radeau de la Méduse* (*The Raft of the “Medusa”*), now in the Louvre.81

Cannibalism also occurred among crews and passengers on other ships that faced disasters at sea, including the British-based *Nottingham Galley*, which ran ashore in 1710 and stranded the crew on a barren island off the coast of Maine; the American ship *Peggy*, which became disabled in 1765 and whose crew selected by lottery an Ethiopian slave to consume; the *Essex*, which was sunk by a sperm whale in 1820 (later immortalized by Herman Melville in *Moby Dick*), stranding the crew in whale boats and on an island where they consumed the dead and one individual after a lottery; the *Francis Mary*, which was severely damaged by a gale in 1826 and partially submerged with no ship nearby to provide aid to the stranded passengers until after the survivors, including two women, engaged in cannibalism; the *Francis Spaight*, which sank in 1844 and whose fifteen survivors held a lottery among the four cabin boys and killed and consumed two of them; and the *Euxine*, which sank in 1874, after which the crew held a lottery and consumed a young Italian when their lifeboats capsized in heavy seas and they lost all provisions.82 In these six instances, no individuals were prosecuted for engaging in survival cannibalism, although authorities did later question the fairness of some lotteries and the necessity of killing individuals for food.

In 1884, a British court passed a ruling that changed how the general public viewed survival cannibalism. On July 5, 1884, the *Mignonette*, a British-registered yacht en route from Falmouth to Sydney, Australia, foundered in a storm. The yacht’s four crew members, Captain Tom Dudley, first mate Edwin Stephens, Edmund Brooks, and seventeen-year-old cabin boy Richard Parker, scrambled to a small lifeboat with navigation equipment and two one-pound cans of turnips. They captured a turtle that supplemented their meager provisions, but soon they had neither food nor water. On about July 20, Parker began drinking seawater and...
subsequently became very ill. Believing the boy to be dying, Captain Dudley stabbed him about four days later. Parker’s body provided sustenance for the remaining survivors until they were picked up by a German sailing ship, the *Moctezuma*, twenty-four days after the *Mignonette* sank. When the survivors returned to Falmouth, they faced a criminal trial for Parker’s murder, largely because no lottery had been held. Both Dudley and Stephens were convicted, the first time that shipwreck survivors facing starvation had been prosecuted for their solution to “the delicate question.”

This court ruling demonstrates the Victorian abhorrence of the subject of cannibalism, even when necessary for survival. After 1884, there are few accounts of shipwreck-related cannibalism.

Cannibalism among shipwrecked sailors occurred in diverse locations under many different circumstances. In general, shipwreck-related cannibalism occurred on disabled ships (as in the case of the *Peggy* and the *Francis Mary*), on small boats or rafts away from the ship (for example, after the loss of the *Medusa, Essex, Francis Spaight,* and *Euxine*), or on nearly barren islands (seen after the loss of the *Nottingham Galley*). Survivors on disabled ships may or may not have had access to nonfood supplies (such as cooking implements and clothing). Similarly, the circumstances of the ship’s sinking (and the behavior of the crew) affected the outcome, as did how well the lifeboats, rafts, and survivors who made it to an island were provisioned. When the *Essex* was abandoned, the crew carried navigational equipment and water and food. After the sinking of the *Medusa* and the chaotic rush to other vessels, the survivors on the raft were left with very few supplies. As with the Donner Party, victims of shipwreck disasters struggled to find adequate protection from exposure and lacked knowledge of how to reach safety. Moreover, factors they faced that compounded the suffering felt by extreme hunger included the lack of drinking water, tools to process food, and methods to preserve food.

Several other factors should be considered regarding cannibalism among shipwreck survivors. For example, the amount of time that survivors faced nutritional stress prior to engaging in cannibalism varied. Duration was related to how long a person had spent on land before the voyage, how much stress an individual faced during the voyage, and the person’s economic status. Shipwreck disasters usually happened in remote locations. With no way to contact others or ensure that passing ships would help, a person imperiled at sea had to rely on his or her own
wits to survive and reach safety.85 This independent mindset, a central tenet of the sailor’s code, meant that any one person was not responsible for the lives of others.86 In perilous situations, the captain, officers, and crew had the knowledge necessary to survive. The more expendable survivors (such as slaves, young boys, and passengers) were often the food supply for the knowledgeable. Interestingly, this “every man for himself” mentality extended beyond the crew to include the passengers, and beyond men to include women. Although men represented most of the people involved in maritime disasters in which cannibalism occurred, the case of the Francis Mary demonstrates that women also abided by the law of the sea.

Expeditions

Cannibalism has been documented for two separate Arctic voyages: the Franklin expedition of 1845–48, and the Greely Expedition of 1881–84. Sir John Franklin commanded the first party of explorers as part of the British Northwest Passage Expedition. Upon leaving England in May 1845, his orders were to sail through the Northwest Passage and return to England via Cape Horn. The 134-member crew was distributed between two ships, HMS Erebus and HMS Terror. The ships were provisioned for three years. When they reached Greenland, 5 crew members became invalid and were sent home, leaving 129 on board the two ships.87 As the plans were drawn up, the expedition was expected to winter in the Arctic for at least one season but to make good headway during the Arctic spring, summer, and fall, when the men could hunt and trade with the Inuits.

What actually happened on the Franklin expedition remains something of a mystery because all 129 crew members perished. At some point, the party left the ships and made shelters inland. Numerous search parties, the first one sent out in 1848, found scant traces of the expedition. Inuit groups informed searchers that the Natives had occasionally seen white men during the years that the expedition was missing and reported that cannibalism had occurred among the stranded whites.88 Another problem (which could have resulted in erratic behavior and degraded health) was the lead soldering on the party’s tinned foodstuffs. Archaeological investigations in 1992 of previously unrecorded remains associated with the Franklin expedition corroborated historical accounts. Of the human bones recovered, about one-quarter exhibited
cut marks, particularly on bones close to articular surfaces. Some bone breakage appeared to have been intentional, providing further evidence for cannibalism. Archaeological evidence thus confirms that cannibalism did occur, even though its exact nature may never be known.89

In 1881, Lieutenant Adolphus Greely commanded a U.S. Army party called the Lady Franklin Bay Expedition. The twenty-five-member crew sailed with the goal of mapping the Arctic, taking weather and other scientific readings, and breaking the British record for northernmost exploration. The all-male crew consisted of U.S. Army soldiers and a few civilians, but none (except the two Eskimo guides hired in Greenland) had experience in the Arctic. The party had a relatively successful first year, establishing the post of Fort Conger, laying in supplies of meat and coal, and setting a new northernmost exploration record.

Problems first arose when the ship that was to resupply them in the summer of 1882 could not reach the camp. Although Greely had prepared for this with extra food stores, the situation became desperate when the supply ship was unable to reach the party again the next summer. Following an agreement made before the expedition began, the crew abandoned Fort Conger and sailed south to rendezvous with a relief party. The primary ship in the relief party that carried most of the supplies for Greely’s party, the Proteus, sank on July 23, 1883. Although the crew was able to save and cache a few of the supplies that Greely had expected, the relief party was forced to turn south before meeting up. By this point, Greely’s party was facing its own disastrous voyage. Their journey south took two months, the second of which was spent stranded on an ice flow. On September 30, Greely’s party finally reached land and found a message containing news of the Proteus’s sinking and the location of the cache sites, which were some distance away.

The crew journeyed nearer to the cache sites and eventually found them, but they contained only one-fifth of the expected supplies (a bitter disappointment, considering that those supplies would have to sustain the group through an Arctic winter until the next expected supply ship in the summer of 1884). Numerous men died from starvation, and the situation became desperate. In a pattern very reminiscent of the Donner Party, the Greely party consumed every organic thing available, including leather thongs, boots, belts, and oil-tanned sleeping bag covers. Sometime during the winter, parts of the dead were cannibalized, probably by the expedition’s doctor.90 When rescuers finally reached the party
on June 22, 1884, only seven remained alive, including Greely. One man later died as a result of his injuries, leaving six survivors. The dead crew members were taken back to the United States in closed coffins. Several of the dead who had previously been buried were exhumed and their remains examined for evidence of cannibalism. Both autopsies and physical examinations revealed evidence of cannibalism, but because of the dire situation, no charges were brought.91

The fact that the crews of two Arctic expeditions faced such severe conditions that they resorted to cannibalism is perhaps not surprising, because they were attempting to explore one of the harshest environments on the planet. The situations faced by these desperate men are comparable to what the Donner Party faced in many ways. The exploration members experienced lengthy exposure to extreme temperatures, challenging physical work, and nutritional stress. The dead who were cannibalized had also faced those challenges, causing the meat to be very lean when it was consumed (also true at Donner Lake and Alder Creek). Both Arctic expeditions had prepared for long periods of independence and isolation and were equipped with tools and equipment that helped mitigate the threat of exposure, although frostbite was a problem. Again, the Donner Party’s experiences were similar. Even though they had not prepared for a winter in the Sierra Nevada, they carried camping and cooking equipment and clothes with them. All of these things helped protect them from the effects of cold temperatures. As both a curse and a blessing, the extreme cold also allowed food, including human tissue, to be readily preserved in both cases.

Overland Travelers

In the nineteenth century, there was a significant increase in the number of Euro-Americans who traveled to and through the American West, including emigrant settlers, military expeditions, and those who wanted to exploit the West’s natural resources. All of these travelers faced the very real threat of becoming snowbound in any one of the West’s infamous mountainous regions. While most avoided this outcome, several examples demonstrate the devastation that a winter in the mountains caused. The Donner Party is, of course, one example. Another is the Alferd Packer case.

Alferd Packer was a member of a gold prospecting party that traveled from Utah to southwestern Colorado Territory in the winter of 1873–74.
Despite warnings about the hazards of winter travel, he and five other men attempted to cross the San Juan Mountains in February 1874. Discouraged after about ten days, the group made camp near present-day Lake City. Packer was next seen at the Los Pinos Indian Agency near Saguache in April. He claimed he had been forced to cannibalize his comrades who had died in the mountains to survive, a fact that was never really debated. Packer’s role in the deaths of these individuals was scrutinized, however, especially as his story changed over time. Packer admitted to killing one individual, Shannon Wilson Bell, in self-defense but claimed that he had not killed the other four. Packer’s claim of innocence in these four murders remains contested even today. In 1989, a group consisting of several physical anthropologists and an archaeologist excavated the remains of the five individuals who had traveled with Packer. Perimortem damage indicated evidence of violent murder, although the culprit remained unclear. Cut marks provided evidence for “an ‘as needed’ strategy of removing muscle packages, presumably with some time intervals between episodes of processing.” Packer thus had made use of the dead bodies of his fellow travelers, removing large chunks of meat with his knife when he needed it. However, whether Packer used every other available food resource prior to eating human flesh and how he felt about consuming his fellow travelers remain unclear. The Colorado Supreme Court accused Packer of five counts of manslaughter several years later, and he served eighteen years in prison until he was paroled in 1901. He died in 1907.

The Packer case represents an interesting example of a single individual’s process of engaging in (probable) survival cannibalism. After Bell died, Packer was alone with only himself to feed. He had no one to whom he had to justify his behavior and no one to witness it; perhaps lack of social judgment made it easier for him to engage in cannibalism (see chapter 7). The skeletal remains from individuals that Packer consumed indicate that he did not reach an extreme level of desperation in his quest for food, in that Packer only used the convenient large muscle groups and was not forced to consume less desirable cuts. This could be similar to what happened with the Donner Party: the presence of numerous bodies and the relatively late initial practice of cannibalism probably meant that there were enough bodies with easy-to-obtain, calorically rich parts available.
Throughout history, military upheaval and political control have led to survival cannibalism in response to human-induced food shortages. Literature from ancient times indicates that cannibalistic practices increased during wartime, particularly among people under siege. Accounts of cannibalism are recorded in ancient Greece and Egypt and in western Europe in the sixteenth and seventeenth centuries. More recently, detailed information has emerged about cannibalism among victims of war. Prisoners of war were occasionally driven to cannibalizing fellow prisoners, as demonstrated by the situation at the Bergen-Belsen and Treblinka concentration camps during the last months of World War II. POWs also became food for their captors; for example, Japanese soldiers in New Guinea in 1942–44, cut off from access to supplies, cannibalized Australian Allied soldiers, Asian POWs, native inhabitants of New Guinea, and other Japanese soldiers. The soldiers occasionally removed flesh while victims were still alive, perhaps to maintain a fresh food supply in the moist jungle environment, where decomposition was rapid. These cannibalistic practices required planning and investment and became almost commonplace. Indeed, cannibalism was described as “a systematic and organized military strategy, committed by whole squads or by specific soldiers working within the context of a larger squad. . . . The fact that such activities were committed by whole groups, working within the normal military structures, resulted in a situation in which the act of cannibalism ceased to be horrific and became instead a part of everyday life.”

This desensitization to cannibalistic practices seems to occur among people who face food shortages for indefinite periods of time, as with the survivors of the Andean plane crash discussed below. The members of the Donner Party who engaged in cannibalism are likely to have also found the practice easier to perform as time went on. Some members of the group nevertheless remained repulsed by this behavior, a fact that is not surprising considering that they faced food shortages for a relatively short period of time and knew that they would be able to obtain food (either by gathering it, receiving aid, or hiking out of the mountains) when spring arrived.

The most widespread cannibalism in modern times occurred as a result of politically induced famines in Soviet Russia and China in the twentieth century. Both Russia and China had experienced famines
throughout their histories. In the twentieth century, politicians in both countries attempted to minimize the effects of future famines and protect themselves against peasant revolutions through the deployment of a communist economic model in which peasant agricultural goods were heavily taxed, if not confiscated in their entirety. Several years of less-than-expected harvests caused by environmental stress and a shortage of peasants willing to work the land led to extreme food shortages in both locations.

In Soviet Russia, these shortages reached a breaking point in 1921 under Vladimir Ilyich Lenin’s rule. Though almost the entire country was starving, the situation was the most extreme along the fertile banks of the Volga River in the Ukraine. The Russian government was forced to request international aid that same year. The American Relief Administration along with other international organizations responded and helped feed some 10 million starving people. Accounts of cannibalism during the 1921 famine were much more frequent than accounts from previous food shortages, “perhaps because the Russian people had become desensitized to the practice by 1921.” In any case, cannibalistic behavior, including the selling of human meat in markets and the practice of corpse-eating by entire families, was unquestioningly motivated by food shortage. The Ukraine continued to experience famines under Stalin from 1930 until 1934, particularly in 1932–33, as well as into the 1940s, during which times cannibalism also occurred.

China has experienced periodic food shortages throughout much of its history, and the near-constant threat of famine was one cause of “learned cannibalism” practiced there. During Mao Zedong’s Great Leap Forward in the middle twentieth century, an unprecedented number of Chinese peasants faced starvation, which resulted in cannibalistic behavior at unprecedented levels. Between 1958 and 1962, at least 30 million Chinese people starved to death. Three years of natural disasters, coupled with almost complete confiscation of the peasant food supplies by the state’s military, resulted in such extreme food shortages that entire village populations disappeared. Numerous reports, which only became available after China instituted its open-door policy in 1979, detail cannibalistic behaviors that occurred under these extreme conditions. Children were sometimes killed and consumed by their parents or sold to another family, and human meat was sold in the open market. Many peasants readily admitted to witnessing cannibalism firsthand.
Typically, the human-caused events that stretch and overextend a people's ability to obtain food last for long periods of time. Often cannibalism is a last resort and occurs only after an extended period of food shortage, lasting for months or, in some cases, years for entire families. The Donner Party's situation was shorter in duration and had as a foreseeable end the springtime, when the emigrants knew they would be able to leave the mountains. As in China and Russia, however, men, women, and children alike participated in the acts. During wars and times of despotic political control, people are not only under physical and emotional stress from lack of food but are also strained by fear of violent behavior within and outside their own society. There was less violence in the Donner Party camps, removing one stressor that is faced by victims of politically induced food shortages.

Flights

Some of the most detailed information regarding survival cannibalism comes from victims of airplane disasters. A rich body of historical evidence associated with these disasters, including photographs, detailed eyewitness accounts, physician reports, and personal correspondence, allows in-depth analysis of situations where people were forced to engage in cannibalism.

The most famous account of air disaster–related cannibalism occurred among a Uruguayan rugby team that crashed in the Argentinean Andes in 1972. Of the forty-five people on the plane, sixteen young men survived for seventy-two days, battling subzero temperatures, traumatic injuries, and extreme food shortage. After almost ten weeks in the mountains, two of the survivors managed to hike out and reach help. Throughout the ordeal, the survivors were forced to consume their dead companions. For some survivors who were devout Catholics, the experience of eating friends and relatives was symbolic, likened to consuming the body of Christ. Another ritual aspect in their behavior was that the bodies of the three women who had survived the crash, all of whom were relatives of surviving men, were not consumed, even as the group faced a shortage of food from other bodies. After they were rescued, the boys were subjected to intense scrutiny for engaging in cannibalism, but no formal charges were drawn and most people recognized the behavior as a necessity in a desperate situation.

Similar events occurred in 1972 when a plane with four passengers went...
down in the Northwest Territory of Canada, and in 1979 when another small plane crashed in the Idaho mountains. In both cases, the survivors subsisted for a short period of time on those who were killed on impact or shortly after from their injuries. Cannibalism resulting from airplane crashes differs in several ways from that associated with sea disasters. Airplane passengers involved in crashes often experience traumatic injuries such as broken bones, deep wounds, and internal damage. Unlike sailors who may have experienced dietary stress prior to a crash, airplane passengers experience an instantaneous change in diet. The fact that victims were well fed immediately before the crash also means that people who died soon after the crash had higher levels of body fat than did people who had coped with starvation for any period of time.\textsuperscript{111}

This contrasts with the situation faced by the Donner Party. Exposure was also more of a concern for airplane crash victims because they were not equipped with warm clothing, tents or other shelter besides the plane wreckage, or basic tools such as cooking implements and knives. A lack of basic tools means that human flesh could only be rudimentarily processed.\textsuperscript{112} Similar to the Donner Party’s experiences, however, is that most air disasters with reports of cannibalism occurred in cold, snowy locations, circumstances that would keep food from spoiling (under the snow) and also provide a source of water. Although melting snow into water required effort, the presence of snow curtailed problems of dehydration.

Conclusions

Through some combination of European abhorrence to the notion of eating one’s fellow man and the widespread public attention it received in 1847, the Donner Party has become synonymous with cannibalism in the United States. From a comparative perspective, however, the Donner Party represents merely one case of many that have taken place across a broad temporal and geographical landscape.

Relative to our decision tree on cannibalism, the Donner Party falls first and foremost in the category of idiosyncratic behavior rather than culturally prescribed behavior. Members of the party did everything in their power to extract nutrients from anything that contained calories (for example, wild game, dead draft animals, birds, rodents, and family pets). They boiled hides and bones to squeeze out every last drop of
energy (see chapter 7). The thousands of small, fragmented bones recovered at the Murphy Cabin and Alder Creek sites attest to this level of desperation. When all other resources were exhausted, some members of the party decided that their survival depended on eating the bodies of those who were dead. The consumptive act focused on the whole body and not just body parts, although rescue parties arrived before all of the nutritive potential of the bodies was extracted. The motivation was entirely nutritional rather than symbolic. The driving force was self-preservation and the preservation of close kin, especially children. About half of the party could not overcome their deep-seated feelings against cannibalism, however, and claimed that they never participated in the act.

Women survived the ordeal better than men for several reasons, including having a smaller body size, a slower metabolic rate, and more body fat; expending less energy procuring firewood, primarily a man’s task; and for some, having strong maternal instincts that drove them to keep themselves and their children alive at all costs. Although at the end, half of the party succumbed to extreme hunger and cold, many fewer would have survived had they not chosen to eat their dead comrades.

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Notes

The chapter epigraph is from Butzer, “Environment, Culture.”
5. Fox, “Cannibalism in Natural Populations,” 87.
6. Fox, “Cannibalism in Natural Populations.”
9. Cannibalism has been observed in four prosimian and one marmoset species; see Hiraiwa-Hasegawa, “Cannibalism”; Melo, Mendes Pontes, and Monteiro da Cruz, “Infanticide and Cannibalism”; Bezerra, da Silva Souto, and Schiel, “Infanticide and Cannibalism,” 945. In the wild, it has also been observed in squirrel monkeys (Saimiri sciureus), redtail monkeys (Cercopithecus ascanius), Japanese macaques (Macaca fuscata), savanna baboons (Papio cynocephalus), and snub-nosed monkeys (Rhinopithecus bieti); see Xiang and Grueter, “First Direct Evidence,” 249.
10. Among chimpanzees, cannibalism has been observed at four different study sites: Budongo Forest, Mahale, Gombe, and Zaire. Hiraiwa-Hasegawa, “Cannibalism.”
15. White, Prehistoric Cannibalism, 13.
17. Hogg, Cannibalism and Human Sacrifice.
18. Turner and Turner, Man Corn.
21. Conklin, “‘Thus Are Our Bodies,” 75; Conklin, Consuming Grief.
22. Davis, Jeffrey Dahmer Story.
23. Curry, “Case of the Colorado Cannibal,” 50; Rautman and Fenton, “Case of Historic Cannibalism,” 321. See also chapter 7.
26. See, for example, Abler, “Iroquois Cannibalism,” 309; Riviere, “Man-Eating Myth”; Brady, “Myth-Eating Man,” 595; Spennemann, “Cannibalism in Fiji,” 29; Lestringant, Cannibals; Petrinovich, Cannibal Within; Brantlinger, “Missionaries and Cannibals,” 21; and Travis-Henikoff, Dinner with a Cannibal.
27. See, for example, Vilaça, “Relations,” 83; and Fausto, “Feasting on People,” 497.
31. Teleki, Predatory Behavior.
34. Weidenreich, “Did Sinanthropus pekinensis,” 49.
36. See Brothwell, “Cannibalism in Early Britain,” 204.
38. Binford and Ho, “Taphonomy at a Distance,” 413.
42. White, “Once Were Cannibals,” 86.
44. However, see Wrangham, Catching Fire, for a discussion of the early acquisition of fire and the dispersal of hominids from Africa.
45. Mariani-Costantini et al., “Taphonomy,” 211.
47. Defleur et al., “Neanderthal Cannibalism,” 128.
49. Hall, “Why Did,” 34.
50. Rosas et al., “Paleobiology and Comparative Morphology.”
55. See, for example, Hough, “Ancient Peoples,” 897; Pepper, Pueblo Bonito; Morris, Archeological Studies.
56. Leblanc, Prehistoric Warfare; White, Prehistoric Cannibalism; Turner and Turner, Man Corn.
57. White, Prehistoric Cannibalism, 364.
58. Turner and Turner, Man Corn.
65. For rebuttals of these objections and others, see Hurlbut, “Taphonomy of Cannibalism,” 4; Gould, Disaster Archaeology. See also Turner and Turner, Man Corn.
71. Hogg, Cannibalism and Human Sacrifice.
72. Travis-Henikoff, Dinner with a Cannibal.
73. See Hogg, Cannibalism and Human Sacrifice; Travis-Henikoff, Dinner with a Cannibal.
74. Chong, Cannibalism in China.
75. Petrinovich, Cannibal Within; Read, Alive.
76. Read, Alive; Petrinovich, Cannibal Within.
77. Chong, Cannibalism in China.
78. Petrinovich, Cannibal Within.
79. Petrinovich, Cannibal Within.
80. See also Simpson, Cannibalism; Leslie, Desperate Journeys; and Petrinovich, Cannibal Within.
81. Simpson, Cannibalism, 4; Petrinovich, Cannibal Within.
82. Simpson, Cannibalism; Leslie, Desperate Journeys; Petrinovich, Cannibal Within; Walton, Our Cannibals, Ourselves.
83. Simpson, Cannibalism; Petrinovich, Cannibal Within.
84. Thomas, Interesting and Authentic Narrative; Petrinovich, Cannibal Within.
85. Leslie, Desperate Journeys; Guttridge, Ghosts of Cape Sabine; Petrinovich, Cannibal Within.
86. Petrinovich, Cannibal Within.
87. Klutschak, Overland to Starvation Cove.
88. Klutschak, Overland to Starvation Cove.
90. Petrinovich, Cannibal Within.
91. Guttridge, Ghosts of Cape Sabine; Petrinovich, Cannibal Within.
98. Tanaka, *Hidden Horrors*.
100. Parrado, *Miracle in the Andes*.
103. Patenaude, *Big Show in Bololand*, 263.
Bibliography

Archival Materials

*Bancroft Library, University of California, Berkeley*

Burbank, August Ripley. Diary. MSS P-A 304.

*Beinecke Rare Book and Manuscript Library, Yale University, New Haven, Conn.*

Orvis, Andrew. “Journal of an Overland Trip.”
Van Dorn, Thomas J. Diary of T. J. Van Dorn. Thomas J. Van Dorn Papers, Western Americana Collection, WA MSS S-1319.

*California State Archives, Sacramento*

Breen, Patrick. Personal diary documenting experience at Donner Lake, 1846–47.
List of goods held by graves of Donners. 1847.
List of goods in Jacob and George Donner Estate. 1847.
Sales sheet of the goods of Jacob and George Donner. June 3, 1847.
Woodworth, Captain. Order of inventory of provisions and supplies. February 1847.

*California State Library, Sacramento*

Markle, John A. “A Portion of the John A. Markle Diary Written in 1849 while En Route over the Emigrant Trail to California.” Typescript. cF 593 M25.
Pioneer Manuscript Collection, box 356, fd 63.

*Church History Archive (formerly LDS Library Archives), Church of Jesus Christ of Latter-day Saints, Salt Lake City*

Allred, Redick Newton. “Autobiographical Sketch and Diary, 1898–1903.”
Caldwell, Matthew. “Short Life’s History of Matthew Caldwell.” Typescript, MS 15020.
Johnson, Leroy C., to Emmett Harder, November 17, 2006.
King, John Morris. “Sutter’s Fort to Winter Quarters Diary.” Mormon Overland Companies.
Pace, James. “Autobiographical Sketch,” ca. 1861.
———. Journal.

Hudson’s Bay Company Archives, Archives of Manitoba


Huntington Library, San Marino, Calif.

Donner, Tamzene. Letter to Elizabeth Poor, January 12, 1840. Sherman Otis Houghton Papers, HOU 12.

Lee (Harold B.) Library, Brigham Young University, Salt Lake City, Utah


McGlashan, Charles Fayette, Papers. BANC MSS C-B 570. Bancroft Library, University of California, Berkeley (cited throughout as McGlashan Papers)

App, Leanna C. Donner. Letter to C. F. McGlashan, April 1 and 27, 1879, fd 1.
Babcock, Georgia A. Donner. Letters to C. F. McGlashan, March 27, April 16, and May 2, 1879, fd 2; June 15, 1879, fd 3; February 23, 1880, fd 4.
Breen, James F. Letter to C. F. McGlashan, March 2, 1879, fd 9; May 2, 1879, fd 8.
Graves, William C. Letter to C. F. McGlashan, April 14, 1879.
Houghton, Eliza Donner. Letter to C. F. McGlashan, May 12, 1879, fd 20; November 11, 1884, fd 22; April 17, 1902; December 5, 1905.
McGlashan, C. F. Notebook containing notes of interview with Louis Keseberg, April 4, 1879, fd 103.
Murphy, Virginia Reed. Memoir, 1879, fd 100.
Tucker, Reason P. Letter to C. F. McGlashan, undated, fd 52.
Wilder, Frances E. Donner. Letters to C. F. McGlashan, April 17 and June 22, 1879, fd 54.
Wilder, Georgie E. Letter to “My Dear Auntie” [Eliza P. Donner Houghton], November 30, 1902, fd 57.

328 BIBLIOGRAPHY

Nevada Historical Society, Reno

ITCN History Project, Inter-Tribal Council of Nevada.
Wier, Jeanne Elizabeth, Papers. MS/NC 17.

Oregon-California Trails Association Manuscripts, Merrill J. Mattes Library, National Frontier Trails Center, Independence, Mo.

Oregon Historical Society Museum, Portland
King, Mariah. Letter to “Dear Mother, Brother, and Sisters,” April 1, 1846.
Reed [Lewis], Martha J. (Patty), Material. Sutter’s Fort State Historic Park, California State Parks, Sacramento (cited throughout as Reed Papers)
Donner, George. Note, November 28, 1846, document 64.
Donner, Jacob. Note to Mr. Eliot, undated, document 399.
Hull, J. B. Letter to James F. Reed, February 6, 1847, document 87.
“List of merchandise belonging to the Estate of Jacob Donner Decd. Sold to Sundriee persons on the 2nd day of March 1847, by Hiram O. Miller,” document 103.
Miller, Hiram O., and James F. Reed. Miller-Reed diary, document 51.
Sales sheets, document 122.
———. Letter to John F. Reed, June 23, 1847, document 127.
Stanton, C. T. Note to “Mrs [i.e., Messrs.] Donner,” December 9, 1846, document 72.

Tennessee State Library and Archives, Nashville
Murphy, Mary A.M. Letter to Green T. Lee, May 25, 1847. Ms 72-29.
National Science Foundation. Field Notes. National Science Foundation Graduate Field Training Project in Anthropology Collection, University of Nevada Ethnographic Archive. 92-09.

Utah State Historical Society, Salt Lake City


Newspapers Consulted

Adams Sentinel (Gettysburg, Penn.)
Bristol Mercury
Californian (Monterey)
California Star (San Francisco)
Daily Alta California (San Francisco)
Daily Nevada State Journal (Reno)
Davenport (Iowa) Gazette
Evening Bulletin (San Francisco)
Freeman's Journal and Daily Commercial Advertiser (Dublin)
Fresno Bee
Hayward (Calif.) Daily Review
Illinois Gazette (Lacon)
Latter-day Saints’ Millennial Star
Lloyd's Weekly London Newspaper
London Morning Chronicle
Manchester Times
Milwaukee Journal
Monterey Californian
Mountain Democrat (Placerville, Calif.)
New York Herald
North American and United States Gazette (Philadelphia)
Oakland Tribune
Prairie du Chien (Wisc.) Patriot
Reno Evening Gazette
Sacramento Bee
Sacramento Daily Record-Union
Salt Lake Tribune
San Francisco Call
Sangamo Journal (Springfield, Ill.)


Bagley, Harry P. “Clues to the Lost Donner Camp.” *Sacramento Bee*, September 14, 1940.


Bagley, Harry P. “Clues to the Lost Donner Camp.” *Sacramento Bee*, September 14, 1940.


Davis, J.T. Trade Routes and Economic Exchange among the Indians of California. Ed-


Farnham, Eliza W. “From California, In-Doors and Out.” In Johnson, Unfortunate Emigrants.


Fraser, Nancy. “Rethinking the Public Sphere: A Contribution to the Critique of Ac-

BIBLIOGRAPHY

337


———. “Class, Gender Strategies, and Material Culture in the Mining West.” In *Those


Hiraiwa-Hasegawa, Mariko. “Cannibalism among Non-human Primates.” In Canni-


Johnson, Kristin J. “The Mystery Man on the Mountain.” Crossroads 19, no. 2 (June 2008).

342 BIBLIOGRAPHY


Lightfoot, Kent, and Ann M. Schiff. “Daily Practice and Material Culture in Pluralistic


344 bibliography


**BIBLIOGRAPHY**


Reed, James F. “James Frazier Reed to Gersham Keyes, 2 July 1847.” In Morgan, *Overland in 1846*, 301–305.


BIBLIOGRAPHY  351


Tinkham, George H. *History of San Joaquin County, California . . .* Los Angeles: Historical Record Co., 1923.


Travis-Henikoff, Carole A. *Dinner with a Cannibal.* Santa Monica, Calif.: Santa Monica Press, 2008.


354 BIBLIOGRAPHY


356 BIBLIOGRAPHY


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