CHAPTER EIGHT

Examining the Roles of Ritual Specialists in the Lower Mississippi Valley During the Late Woodland Period Through Animal and Plant Remains

ASHLEY PELES, MEGAN C. KASSABAUM, AND VINCAS P. STEPONAITIS

The Late Woodland period in the Lower Mississippi Valley (LMV) is particularly well known for mound sites. Communities throughout the region gathered at these special locations and participated in world-renewal ceremonies, public feasts, and mound building. Though we still have many questions about the structure of Late Woodland societies and the degree to which any particular person or group of people could have exerted control over such gatherings, it is clear that these events must have been mediated by ritual specialists. These specialists would have played important parts in organizing specific religious rituals at gatherings, procuring ritual items, and perhaps even planning periodic events. That said, the roles of such ritual specialists are usually assumed rather than explicitly examined. Here we focus on the potential roles of ritual specialists within Coles Creek societies. Through an examination of two sites, Feltus (22Je500) and Smith Creek (22Wk526), we analyze how ritual specialists materially enacted their roles within ritually charged events and locations. We highlight well-preserved zooarchaeological remains as the cornerstone of our argument, but supplement that with additional evidence from archaeobotanical remains, smoking pipes, post-setting rituals, and other special finds. We argue that there is ample evidence for a suite of activities associated with ritual specialists at both locales, including healing, divining, between-world communication, and soul guidance.

RITUAL SPECIALISTS AND SHAMANS

Ritual specialist is a term not well defined in the archaeological literature, and it can be applied to a broad range of religious practitioners. We believe that the ritual specialists at Late Woodland sites in the LMV were neither priests nor simple healers but more akin to shamans. The appropriateness of applying the term *shaman* within North American Native groups is debated because it may be overextending a concept that should remain restricted to northern and circumpolar regions (Brown 2006; Kehoe 2000), and it implies a unity of ideology and continuity of religion that does not actually exist (Emerson 2003; Kehoe 1996, 2000). Further, it imposes a specific label onto a diverse set of practitioners (Kehoe 2000; Van Pool 2009). Despite this, archaeologists have found utility in the shaman concept, especially via the connections between shamanistic behaviors and practices and their associated material culture (Brown 2006; Carr 2021b, 2021d; Carr and Novotny 2021; Emerson 2003; Van Pool 2009). Within this classification scheme, priests are defined as full-time religious specialists who perform standardized liturgies (Van Pool 2009:178), while shamans are more varied and individualistic, seeking altered states of consciousness in order to communicate with and/or travel to the spirit world(s). Healers limit themselves to addressing physical ailments and specifically do not attempt to communicate with other worlds. Emerson (2003) and Van Pool (2009) both note, however, that in reality these categories are not so easily separated. Emerson (2003:137) in particular recognizes a blended category of shaman/healers that participate in ritual behavior, animal ritualism, and communal performances as part of formally organized public group rituals.

The act of communicating with the spirit world, and of inducing altered states of consciousness, leaves a number of material traces that can potentially be identified by archaeologists. Commonly recognized indicators include imagery (particularly that seen on pipes and pottery), noisemakers and musical instruments, and psychoactive plants and chemicals (Brown 2006; Van Pool 2009). Less commonly cited are altars and activity areas (Van Pool 2009) and unique grave goods (Brown 2006). However, with regard to identifying the presence of shamans and interpreting their religious activity, many of these archaeological examples consist of unique and/or unusual artifacts and contexts. While these represent particularly straightforward contexts for analysis, they do not represent the majority of archaeological deposits or necessarily help interpret the presence and activities of shamans

on most sites. As a result, we worry that archaeologists may be missing evidence for the interconnection between artifacts recovered in archaeological assemblages and activities undertaken by ritual specialists at ritually important sites. We utilize previous frameworks that define shamans and shamanic activity to delineate a number of specific activities that may leave archaeological signatures and thus have potential correlates to a wider range of animal and plant assemblages, as well as to other material classes, recovered at mound sites.

In a recent book edited by Carr (2021a), he and his coauthors review an extensive literature to identify common themes in the activities of shamans worldwide and in the ethnohistoric literature from the Eastern Woodlands more specifically. In so doing, Carr and Novotny provide a particularly useful outline of the roles a shaman may fill:

> The classic shaman can be defined as a magico-religious practitioner who performs a very wide range of tasks for his community, including healing, divining, settling interpersonal and inter-community disputes, communicating the needs of the living to the dead or other spirits and vice versa, and guiding souls of newly deceased persons to a land of the dead and unborn souls into this world. Significantly, these tasks are accomplished by him taking soul or mind journeys outside of the body to alternate realities while in an altered state of consciousness, and by using powers and information in nature contacted through such altered states [Carr and Novotny 2021:530].

Within this context, certain animals, plants, and other materials have characteristics that shamans can use to derive powers greater than their own. Carr (2021b, 2021d) also distinguishes a number of animals that many Eastern Woodlands Native groups connect to death, the afterlife, and soul-flight journeys.

While we do not mean to imply that there is a strict division between animals that are food and those that are ritually important, some animals are both unlikely to be consumed as food and have important cosmological significance, making it likely that their presence in the archaeological record is related to shamanic practice. Further, the cleansing and ecstatic states involved in healing and communicating with other realms also have implications for plant use, and we have thus chosen to include them in our discussion. While many plants have potential healing qualities, certain plants stand out for their uses as medicines, purgatives, and hallucinogens. Finally, certain

nonorganic materials were particularly important for facilitating cross-realm engagements between humans and nonhumans. In general, finding one or a few of these animals, plants, or materials may not make a strong case for the presence of shamans within an archaeological context that combines multiple activities; however, the confluence of multiple such species and substances can strongly suggest the presence of shamans and highlight the importance of shamanic activities within large community gatherings. This has certainly been suggested for other regions and cultures, for instance at the Washausen site in Illinois (Barrier 2019) and at Hopewell (Emerson 2003). Here we make a similar argument for the Coles Creek culture in the LMV.

COLES CREEK MOUND SITES

Coles Creek refers to both a period and a culture, though the boundaries of both are somewhat fluid. Within the LMV, and particularly in the Natchez Bluffs region of southwestern Mississippi, the Coles Creek period is typically defined as between 700 and 1200 CE. The two particularly distinctive characteristics used to identify Coles Creek culture are pottery traditions, especially the eponymous Coles Creek Incised type, and the construction of sites with two to four flat-topped mounds arranged around a central plaza (Kidder 2002; Steponaitis et al. 2015b). Excavation of Coles Creek sites has occurred primarily at mound centers. Limited data from early Coles Creek domestic sites (700–1000 CE) suggests a population that was dispersed across the landscape within small hamlets (Hunter et al. 1995; Wells 1998). These dispersed groups periodically came together at mound centers. Kidder (2002:89) suggests that there was an increase in population and settlement aggregation in the Late Coles Creek period (1000–1200 CE), but the evidence for this is varied and of course complicated by the lack of excavation at domestic sites. Excavations at Feltus (Kassabaum 2014; Steponaitis et al. 2015b) and Smith Creek (Graham 2023; Mitchem and Kassabaum 2024) have found little evidence of permanent residents, which would argue that the dispersed settlement pattern still held for most of the Coles Creek period (cf. LaDu 2016). With the lack of domestic data, evidence for Coles Creek sociopolitical organization is limited and tends to be extracted from shifts in mound construction and site architecture. Kassabaum's (2011) analysis of mound-related mortuary data is a more direct evaluation, though it can only confirm that Coles Creek mortuary practices did not reflect institutionalized, ascribed status of individuals but instead focused on communal identities.

However, as she points out, these mortuary practices may be an attempt to mask in death the differences that were present in life (Kassabaum 2011:222).

What excavations at Coles Creek mound centers *can* tell us is that these were important sites focused around mound building and other landscape modification, feasting and other communal gatherings, post setting and removal, human burial, and a presumably rich series of attendant rituals to bind all this activity together. The nature and pace of construction and uses of platforms varied between mounds and among sites, but they were all carefully planned and constructed for purposes specific to the people gathering at each site (Kassabaum 2021:166–174; Kidder and Fritz 1993; Kidder and Sherwood 2018; Roe 2010; Steponaitis 1986). Further, Coles Creek sites have communal plazas in the center that were filled or leveled as needed and consistently appear to have been kept clear of structures, presumably an indication of their function as community gathering spaces (Barrier and Kassabaum 2018; Kassabaum et al. 2024; Kidder 2004).

Many analyses focus on the tempo of mound construction, the nature and use of restricted platform spaces and communal plaza spaces, and the delineation and interpretation of large-scale feasting events (Kassabaum 2018, 2019a, 2019b; Kassabaum et al. 2014; Roe 2010; Steponaitis et al. 2015a; Weinstein 2005; Woodiel 1993). While these authors acknowledge the ritual nature of these practices, they generally do not focus on the ritual specialists who not only must have been present but also would have been orchestrating and directing many of these activities. Given some of the unusual animals and plants identified at Coles Creek sites, the focus of this chapter is to take a closer look at the evidence for ritual specialists and whether that evidence might provide more specific indications of the roles they played and the activities in which they were involved. In particular, we focus on two Coles Creek sites in the Natchez Bluffs: Feltus and Smith Creek.

The Feltus and Smith Creek sites are located 35 miles (56 km) apart, both situated on the edge of the bluffs overlooking the Mississippi Valley (Figure 8.1). They have similar layouts consisting of three or four platform mounds surrounding an open plaza. A moat around the burial mounds, terraforming of the surrounding landscape, and similarities in the collections from the two sites indicate a repeated pattern of activities occurring at platform mound centers in the region (Graham 2023; Kassabaum 2014, 2018, 2019a, 2021:169–174; Kassabaum and Terry 2020; Mitchem and Kassabaum 2024; Peles 2022; Steponaitis et al. 2015b). Since 2006, Vincas Steponaitis, John O'Hear, and Megan Kassabaum have directed multiple excavation seasons

on and around the mounds at these sites. Although Smith Creek has a longer history than Feltus, our primary focus is on activities that took place during Coles Creek times, when both sites were occupied from roughly 750 to 1100 CE. We know that before, during, and after mound construction took place, sizable groups of people gathered at Feltus and Smith Creek in events that revolved around large amounts of food (Kassabaum 2018, 2019b). Activities at Feltus also involved setting and removing freestanding posts, many with special and purposeful inclusions of ash, clean loess and clay; unusual artifactual materials; and sometimes human remains (Kassabaum and Nelson 2016; Nelson and Kassabaum 2014). We know that Coles Creek people also buried some of their dead at these sites, sometimes within specific burial mounds and at other times within the last phase of construction in mounds that served other functions, perhaps representing a closing rite for that site feature (Kassabaum 2014; Kassabaum et al. 2014; Kassabaum and Terry 2020; Steponaitis et al. 2015a). Within this overall context, we focus on data from one completely analyzed Coles Creek context at Feltus and three partially analyzed Coles Creek contexts at Smith Creek.

Feltus consists of a central plaza surrounded by four mounds; the smallest of these mounds, Mound D, was originally located on the southern edge of the site. While only a small remnant of the mound remains hidden underneath the soil today, we know the original location and size of the mound based on measurements recorded by B. L. C. Wailes in 1852 (Steponaitis et al. 2012). Just northeast of the former location of Mound D is a series of three extremely large and deep pits containing many fill strata and overlain by a thick, extremely rich midden. Radiocarbon dates on nutshell and deer bone from the top midden zone date to 948–1035 CE. In situ pot breaks and well-preserved faunal materials suggest that this deposit is the direct result of large-scale communal activities (Graham et al. 2019; Kassabaum 2018). Based on the location of this feature complex on the edge of the plaza, everyone at the site may have had access to the area, and the midden may therefore blend evidence from multiple types of activities.

The extensive faunal remains from the excavated portion of this sheet midden were analyzed by Peles (2022). They consist of more than 11,000 fragments of animal bone weighing more than 10,600 grams (Peles 2022:Table 5.4). This represents 38 different taxa, a minimum of 78 individual animals, and more than 123 kilograms of biomass. A minimum of 10 deer are represented, primarily by high-utility fore- and hindleg parts, suggesting that one focus of this gathering was the consumption of large amounts of meat. Large

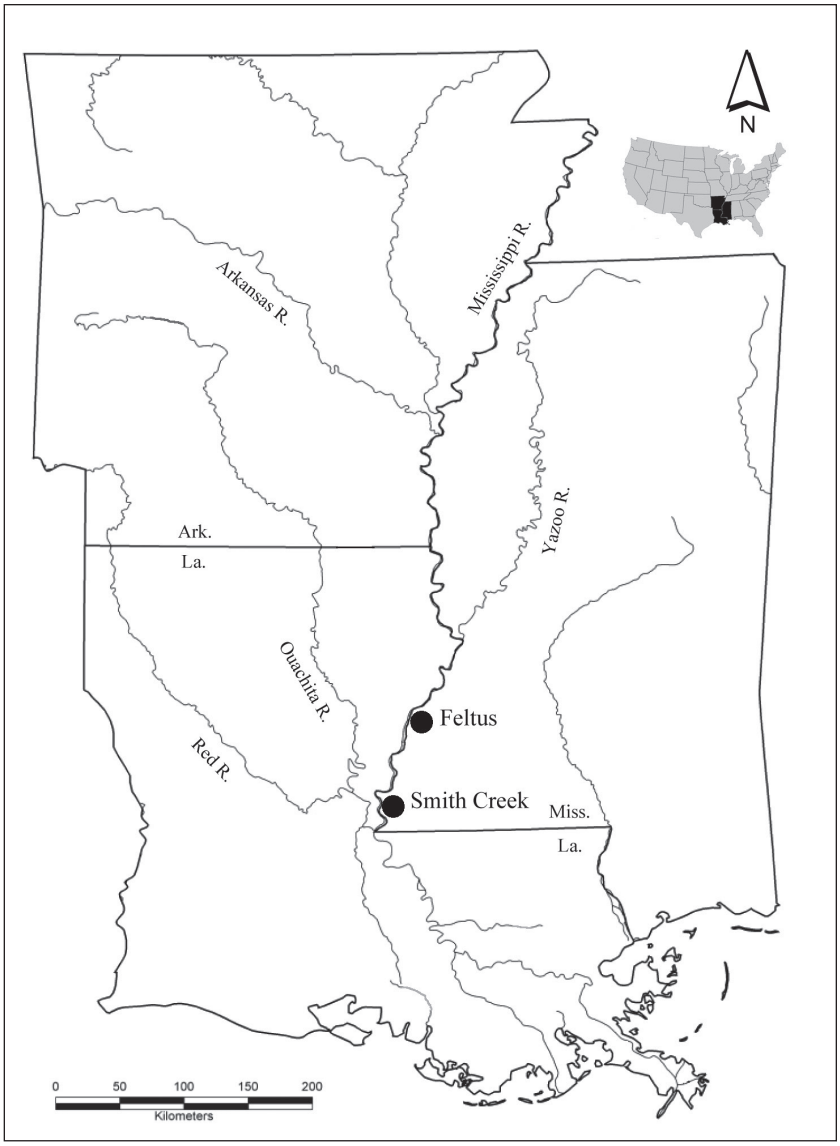

FIGURE 8.1. Locations of Feltus (22Je500) and Smith Creek (22Wk526) in the Lower Mississippi Valley.

amounts of fish were also gathered, along with smaller amounts of turtle, turkey, rabbit, and squirrel. Two fawns and migratory bird species indicate that this large gathering took place in the fall, probably around October. Additional taxa identified include a number of rare and unusual species that point toward ceremonial and ritual activities. Bear, cougar, bobcat, gray fox, a barred owl, and a large raptor were probably all special inclusions, implying that ritual specialists such as priests or shamans played an important role in the activities that took place during large gatherings.

Smith Creek also consists of a central plaza, surrounded by three mounds, all of which exist today in full or in part. Coles Creek contexts at Smith Creek include a flank midden within Mound A dated to 780–990 CE, a midden deposit and small votive pit in the South Plaza dated to 780–985 CE, and a midden deposit in the Northeast Plaza dated to 820–992 CE. However, the plaza midden deposits include both Coles Creek and later Plaquemine material that was impossible to distinguish stratigraphically; therefore for our purposes here, the combined datasets are examined. Some 3,500 fragments of bone from Coles Creek contexts at Smith Creek have been analyzed, representing 32 taxa (Aguila 2020; Terry 2017). As at Feltus, deer were clearly a major food source, as were fish, while rare and unusual species including bear, cougar, bobcat, gray fox, and red fox provide evidence of the ceremonial and ritual use of animals.

UNUSUAL FAUNA

All the contexts at Feltus and Smith Creek contain a particularly high amount of black bear (*Ursus americanus*) remains. The South Plaza midden at Feltus contains 66 fragments representing at least three bears: two adults and one juvenile. Elements from all parts of the skeletons are present, though paws are somewhat underrepresented, suggesting they were either removed and used or disposed of elsewhere. The Smith Creek contexts produced 48 bear fragments, many of which came from paws, though vertebral and mandibular fragments were also present. Ethnographic accounts from the Southeast indicate widespread consumption of bear meat, particularly at feasts, and rendering of bear fat into oil, which had myriad uses in foods, as medicine, and even in funeral rites (Peles and Kassabaum 2020; Waselkov 2020). Bears were considered other-than-human kin by many southeastern tribes and played important roles in communicating between worlds, such that shamans

were sometimes thought to transform into bears during trances (Kassabaum and Peles 2020).

At Feltus, cultural modification of an upper jawbone fragment provides further evidence of the special treatment of bears. A section of the right maxilla, extending to just in front of the posterior end of the zygomatic arch, appears to have been cut or chopped and then abraded and smoothed (Figure 8.2a). This is inconsistent with brain consumption, for which purpose a hole was made in the parietal or temporal area (Berres et al. 2014). Instead, the location of the break and smoothing of the bone demonstrate similarities with cut animal jaws from Hopewell contexts and the use of mandibles and maxillae in headdresses and masks (Carr 2021c:1431–1432; Carr and Novotny 2021; Farnsworth et al. 2015), suggesting that the Feltus bear maxilla is a ritual object and may have been purposely disposed of within the South Plaza midden (Figure 8.3).

Remains of cougar (*Puma concolor*) and bobcat (*Lynx rufus*) also stood out as special in the Feltus and Smith Creek assemblages. At Feltus, two cougar leg bones (a distal shaft of a carbonized right femur and a complete right radial-intermediate carpal) and one bobcat claw (third phalanx) were identified (Figure 8.2b, *c*). The cougar femur shaft was particularly interesting as it showed mottled blackening on the exterior and blackening throughout the interior. This bone seems to have been intentionally burned; the shaft of a bear radius from the same feature was carbonized in a very similar way. The fact that the other cougar bone was from a front paw and the bobcat bone was a claw suggests these bones may represent power parts with particular symbolic potency (Carr 2021c). At Smith Creek, three of the seven identified felid bones came from paws, three from limbs, and one from the maxilla, again suggesting a focus on potential power parts of the animal and perhaps even their use as additions to other ritual or shamanic objects.

While there is less documentation of the specific meanings that cougars and bobcats may have held for Native peoples in the Southeast, there is wide agreement that both animals were important ritually and cosmologically and were not typically consumed. Cougars appear in Seminole creation stories and Cherokee religious accounts, and were generally portrayed as dangerous creatures that had the ability to heal as well as special powers of knowledge that could sometimes be transmitted to humans (Billie 1994:7–9; Gunnerson 1998:234; Wheeler 2011:147, 148, 150). Carr (2021c:1425, 1436) notes Adena use of cougar maxilla masks as a connection between cougars and shamans, while there are other examples of cut maxillae and mandibles from Key Marco

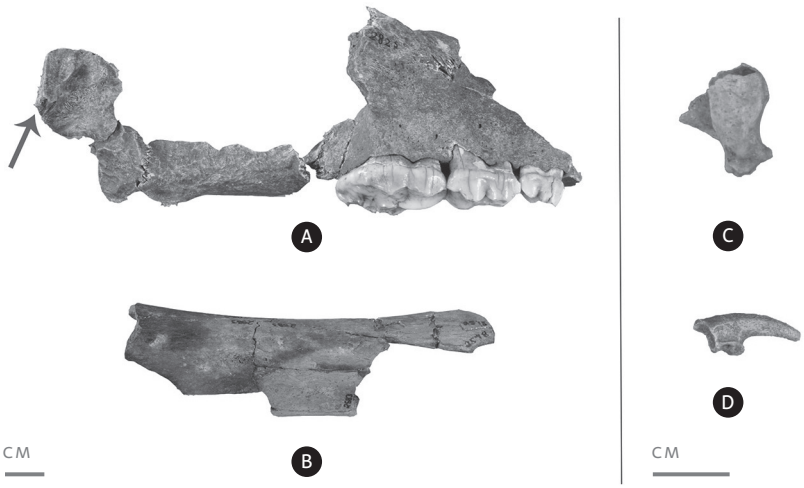

FIGURE 8.2. Unusual animal bones from the Feltus South Plaza midden that suggest ritual deposition: (*a*) bear maxilla, with arrow indicating the area that has been cut and abraded; (*b*) cougar right femur shaft; (*c*) bobcat third phalanx; (*d*) barred owl terminal phalanx.

FIGURE 8.3. Edward S. Curtis photograph of Arikara medicine ceremony, showing bearskin regalia (from Curtis 1908:74). The staging and dramatic lighting highlight animal symbolism in ceremonial regalia, captured through Curtis's ethnographic but highly aestheticized lens.

and Hopewell contexts (Bell 2021:45–46; Farnsworth et al. 2015:6–9, 11, 18, 35–48). Components of many animals were also cross-culturally important in medicine bundles and within healing activities, and both ethnographic and potential archaeological examples of medicine bundles include cougar and bobcat body parts (Carr 2021c; Kuehn 2016). Neither animal is a common component of archaeological assemblages, though they have been identified in low numbers at other mound sites in the LMV (Brown 2015; Coxe and Kelley 2004; Futch 1980; Jackson 2016; Kelley 1990; Mariaca 1985; Springer 1980). Jackson and Scott (2003) group cougar and bobcat (as well as bear) within the category of dangerous taxa and suggest that their identification in elite Mississippian contexts indicates symbolic connotations with power. While this specific symbolism may have been a later association, the presence of both animals at Feltus and Smith Creek is certainly special.

Gray fox (*Urocyon cinereoargenteus*) is represented in the Feltus assemblage by three bones, with an additional bone that could not be identified to either gray or red fox (*Vulpes vulpes*) more specifically (a right proximal tibia). The three gray fox bones originate from at least two paws and consist of a left third and fifth metacarpal and a left metatarsal. At Smith Creek, an intact red fox humerus and gray fox cranial fragment were recovered from the Mound A midden. While fox certainly can be consumed, there has been some suggestion that they may be ritually important in southeastern assemblages due to their potential supernatural connotations (Jackson et al. 2016; Jackson and Scott 2003). The inclusion of at least two gray fox paws within the Feltus assemblage may again represent a focus on ritually potent parts of the animal.

Two unusual birds were also identified from the Feltus midden that likely represent special or ritualized activities. One shaft fragment of a right radius comes from a member of the Accipitriformes order. The fragment is too large for any hawk species, but it could not be identified to a specific eagle, vulture, or osprey. Two species of eagles are present in the Southeast: bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*). Bald eagles would have been more common in the area around Feltus, living year-round along the Mississippi River, while golden eagles would have been a rarer sight due to their more restricted ranges and lower population sizes. Eagles in general were highly symbolic, with connections to chiefly authority, power, peace, ceremonies, and the healing of pain (Krech 2009:111–113, 126, 161). Eagles were also associated with Woodland and Plains Indian narratives about the journey to reach the afterlife (Carr and Caseldine 2021:274, 283,

285, 290, 315; Caseldine et al. 2021:239, 241–242, 252–253), and eagle parts were used in Huron medicine rites and within medicine bags and bundles used by historic Minnesota Ojibwa (Carr 2021b:458, 484). Two species of vultures are present in the Southeast: turkey vultures (*Cathartes aura*) and black vultures (*Coragyps atratus*). Like eagles, vultures also play an important role for many Native groups and have a common connection with death and mortuaries, particularly in their association with the men and women who defleshed the bones of the deceased, who were sometimes called "buzzards" or "turkey-vulture men" (Carr 2021b:481–482; Krech 2009:136–137). In his ethnohistoric review, Carr (2021b:475) notes that there was more emphasis on turkey vultures within historic southeastern tribes than among Native groups elsewhere. Like eagle feathers, great importance was placed on the power of vulture feathers, which played key roles in warfare, hunting, healing, and protection. In many stories the vulture was a doctor and immune from sickness, thus connecting vulture parts to medicine and healing (Carr 2021b:475, 480; Krech 2009:138–139). Osprey (*Pandion haliaetus*) would have been a relatively common sight near Feltus, as the site is within this bird's breeding range. Osprey are mentioned only rarely in ethnohistorical accounts of Woodland or Plains Indians, but they are associated with healing and eliminating pain (Krech 2009:161). If we take the commonalities within all the possible species, regardless of which animal the fragment came from, it seems likely that it was connected to healing, protection, and potentially the afterlife.

The other unusual bird from Feltus is a barred owl (*Strix varia*), represented by a terminal phalanx, or talon (Figure 8.2d). Barred owls are widespread and reside in wooded areas, favoring dense and thick woods with scattered clearings, particularly in low-lying or swampy areas. These large owls roost in trees during the day and most often nest in natural tree hollows. Among southeastern groups, owls are particularly associated with death; they were seen as ambivalent animals, harboring both good and ill qualities (Carr 2021b:464–473; Krech 2009:145–148; Lankford 2016:86–91). Among their bad qualities, owls were seen as ill omens, witches, and spirits bent on malevolence, often being linked with impending death or dire misfortune. However, the nighttime quality that connected them to witches, ghosts, and souls also made them powerful sources of wisdom and divination for priests with the ability to marshal their powers. Carr (2021c:1420) points out that among the Scioto Hopewell, the talon of a raptor was understood to represent the whole raptor and its relationship to humans; perhaps Coles Creek peoples

held similar ideas about the connection of animal power parts to the animal itself and/or to clan affiliation (Carr 2021c:1490).

SPECIAL PLANTS

While the abovementioned animal species are particularly striking examples, connections to ritual at Feltus and Smith Creek extend beyond the faunal assemblages. Archaeobotanical assemblages from both sites include a number of interesting taxa that were not used as staple foods, or as food at all. At Feltus, such plants include bedstraw (*Galium* sp.), bindweed (*Convolvulus* sp.), geranium (*Geranium* sp.), pokeweed (*Phytolacca americana*), purslane (*Portulaca* sp.), and smartweed (*Polygonum* sp.; Peles 2022:Table 4.3). If strata from within the pits underlying the midden are included as well, morning glory (*Ipomoea* sp.), nightshade (*Solanum* sp.), and poison ivy (*Toxicodendron radicans*) can be added to the list (Peles 2022:Table 4.4). At Smith Creek, plants in this category include aster (Asteraceae), black gum (*Nyssa* sp.), cane (*Arundinaria gigantea*), copperleaf (*Acalypha* sp.), greenbriar (*Smilax* sp.), morning glory (*Ipomoea* sp.), nightshade (*Solanum* sp.), spurge (*Euphorbia* sp.), verbena (*Vervain* sp.), and yellow stargrass (*Hypoxis hirsuta;* Graham 2023:Tables 4.4 and 4.18). Many of these taxa could be considered weedy inclusions, though most researchers now also recognize many medicinal uses of such plants that are recorded ethnographically. The presence of a number of unusual taxa at Feltus and Smith Creek, however, strongly suggests the gathering of these plants for specific medicinal or ceremonial purposes. Utilizing information from the Native American Ethnobotany Database (Moerman 2003) and Williams's (2000) dissertation about medicinal plant use in the eastern United States, it became obvious that a general medicinal use was not the only thing these taxa shared in common (Graham 2023:81–87; Moerman 2003; Peles 2022:107–112; Williams 2000). Rather, of 21 taxa tracked here, more than half (n = 13) were specifically noted as emetics, laxatives, cathartics, or diuretics (Table 8.1). Thus, they may very well have been associated with healing, whether directly or indirectly. From an ethnohistoric perspective, many ceremonies involve ritual purification of participants (Dorland 2017; Hrynick and Betts 2014; Mehta 2007); the collection, preparation, and use of plants with properties that "cleansed" people may therefore have been important components of preparation for ceremony. An almost equal number of taxa (n = 12) in the miscellaneous category have antidiarrheal, antiemetic, and stimulating uses, which may have been important to finishing a ritual

cleansing (Table 8.1). Of course, beyond the use of plants for specific medical uses and purification, spiritual well-being was also an important component of healing, and could have been addressed at both an individual and a group level (Hayden 2014).

Two plants deserve additional mention. A particularly large number of seeds from the daisy or sunflower family (Asteraceae) were identified at Smith Creek (n = 430); although they could not be more specifically identified, Graham (2023:81) notes that all seeds present appeared to be from the same species. Given the profusion of plants in this family, it is no surprise that many medicinal and drug-related uses were recorded ethnographically. However, relevant to our purposes, there are a number of Asteraceae taxa present in Mississippi that not only have ceremonial uses but were recorded as being mixed with tobacco and smoked, such as ragweed, sagewort, and fleabane (Moerman 2003). Sumac, which was identified at Feltus, also has a wide array of medicinal and drug-related uses. The four species of sumac found in Mississippi (*Rhus aromatica, R. copallinum, R. glabra,* and *R. trilobata*) had a variety of ceremonial uses, and their dried leaves were sometimes mixed with tobacco for smoking (Moerman 2003).

In addition to the plants listed above, significant amounts of sweetgum were identified at both Feltus and Smith Creek (Mitchem and Kassabaum 2024). Sweetgum was identified macroscopically during excavations into the western flank of Mound B at Feltus, where the third mound construction episode contained a small votive pit filled with burned sweetgum balls. Sweetgum was also the primary fill in a pit of similar size and shape in the South Plaza at Smith Creek and was present in significant amounts in the overlying midden. The presence of whole pods, pod fragments, and both fertile and infertile seeds suggests that the whole fruits were being deposited, likely while still green. Sweetgum is not a subsistence plant, but the sap could be hardened and used as a chewing gum. More importantly, the plant had medicinal uses in many Native communities, including for treating skin rashes and abrasions, digestive issues, fevers, and nervous conditions (see summary in Mitchem and Kassabaum 2024:101–103). Groups such as the Choctaw dried sweetgum leaves and mixed them with tobacco for smoking (Romans 1999 [1775]). Important for our argument here, Swanton (1931) recorded a story in which a sweetgum tree was cut down and stripped of its bark to create a bridge that the souls of the dead had to cross to reach the land of immortality. Similarly, the Muskogee Creek see the sweetgum as a tree that carries people's burdens, allowing them to experience inner peace and listen

TABLE 8.1. Drug-related uses of miscellaneous taxa

Taxon	*Emetic*	*Laxative*	*Cathartic*	*Diuretic*	*Medicinal*	*Notes*
Aster family (Asteraceae)[b]	●	●	●	●	●	Many species used for protection; smoked with tobacco; ceremonial activities and medicine; antidiarrheal, antiemetic, stimulant
Sumac (*Rhus* sp.)[a]	●	●	●	●	●	Smoked with tobacco; ceremonial medicine; antiemetic, antidiarrheal
Pokeweed (*Phytolacca americana*) [a]	●	●	●		●	Antidiarrheal, stimulant
Geranium (*Geranium* sp.)[a]	●	●			●	Antidiarrheal
Nightshade (*Solanum* sp.)	●	●			●	Antiemetic, antidiarrheal
Morning glory (*Ipomoea* sp.)		●		●	●	Stimulant
Spurge family (Euphorbiaceae)	●		●		●	
Bedstraw (*Galium* sp.)	●			●	●	
Blackgum (*Nyssa* sp.)[b]	●				●	Antidiarrheal
Mallow family (Malvaceae)[b]	●				●	Stimulant, antiemetic
Poison ivy (*Toxicodendron radicans*)	●				●	
Sedge family (Cyperaceae)[b]	●				●	Used in Sun Dance and Massaum ceremonies; antidiarrheal
Vetch/wild pea (*Vicia* sp./*Lathyrus* sp.)	●				●	Stimulant
Barnyard grass (*Echinochloa* sp.)[b]	●					
Greenbriar (*Smilax* sp.)[b]					●	Associated with malicious magic and witchcraft medicine
Purslane (*Portulaca* sp.)[a]					●	Antidiarrheal
Smartweed (*Polygonum* sp.)					●	Hunting medicine; antidiarrheal
Verbena (*Vervain* sp.)[b]					●	Stimulant
Bindweed (*Convolvulus* sp.)					●	
Copperleaf (*Acalypha* sp.)					●	
Yellow stargrass (*Hypoxis hirsuta*)[b]					●	

Notes: All references derived from Moerman 2003 and Williams 2000. Medical terms are defined as follows: an *emetic* causes nausea and vomiting; a *laxative* causes the bowels to move and aids in digestion; a *cathartic* accelerates defecation; a *diuretic* removes water and sodium; *medicinal* means the taxon has a recorded use for a physiological illness.

[a] Taxon only identified at Feltus.

[b] Taxon only identified at Smith Creek.

to the teachings of supernatural beings, with the tree itself providing a path for those supernaturals to travel from the Milky Way to earth (Bloch 2018).

Finally, morning glory and nightshade species were identified in Coles Creek period contexts at both Feltus and Smith Creek (Table 8.1). Tobacco (*Nicotiana* sp.) and jimson weed (*Datura stramonium*) were also identified from later Plaquemine contexts (1200–1500 CE) at Smith Creek, finds we highlight here despite the later context because their archaeological recovery is so rare. These plants all contain psychoactive compounds, meaning that preparations can be used to induce hallucinations and other psychological effects. They are associated in the ethnographic literature with ritual activities and the inducement of trancelike states (Williams 2000). Tobacco is widely recognized as being associated with shamans and hallucinogenic experiences during the Middle and Late Woodland. While jimson weed has been identified in far fewer contexts in the Midwest and Southeast, it is recognized as a particularly dangerous and potent hallucinogen (Brown 2006; Emerson 2003). Combined, these potential uses of the conspicuously wide variety of miscellaneous plant taxa at Feltus and Smith Creek suggest that they, like their animal counterparts, were likely incorporated into these middens as a result of ritual activities that were taking place at the mound centers.

TOBACCO AND SMOKING RITUALS

Nearly all discussions of North American shamans include a consideration of smoking pipes, psychoactive plant species, and associated pipe ceremonialism. Brown (2006) and Emerson (2003) provide extensive discussions of pipes associated with Hopewell and Cahokia, emphasizing how their iconographic elements and construction work together to create and extend the ritual connections between other worlds, tutelary spirits, and transformation. Based on multiple lines of evidence, pipes recovered from both regions are understood to have been used to induce hallucinogenic experiences. These altered states of consciousness provided the liminal state so important for making connections to other worlds. Both authors also note archaeological findings of tobacco seeds, with tobacco being the primary but not the only plant smoked in pipes. Native forms of tobacco (*Nicotiana rustica* and *N. quadrivalis*) contain relatively high levels of nicotine, such that their use would have resulted in hallucinations. Other psychoactive plants recovered from archaeological contexts around Hopewell and Cahokia include jimson weed and morning glory; these could have been used separately or in com-

bination with tobacco (Emerson 2003). So could many of the other plants discussed previously, including sumac, sweetgum, and some members of the Asteraceae family.

Ceramic pipe fragments have been excavated from multiple contexts at Feltus (n = 7) and Smith Creek (n = 15). Six fragments from Feltus, including two from the South Plaza midden and pits, were analyzed using gas chromatography–mass spectrometry (GC-MS) to determine the chemical makeup of their organic residues. Despite the low recovery of tobacco in LMV paleobotanical assemblages more generally, the GC-MS analysis showed that all six pipe fragments contained nicotine (Carmody et al. 2018). Further, small numbers of morning glory and nightshade seeds were recovered from both Feltus and Smith Creek, as were tobacco and jimson weed from later contexts at Smith Creek. The recovery of an array of psychotropic plants, pipe fragments, and nicotine residues clearly shows that ritual practitioners at both sites were utilizing hallucinogenic substances in smoking rituals that would have enabled them to attain altered states of consciousness and communicate with spirits from other worlds.

FIGURE 8.4. Effigy pipes from Feltus: (*a*) human effigy pipe showing the pot-bearer theme (courtesy of the Penn Museum, object #14328, image #237711); (*b*) "alligator gar" effigy pipe (from Brown 1926:Figure 232). Both are carefully carved, with incised detailing on mouths and fins, illustrating how pipes combined functionality with symbolic forms.

Two stone pipes were also collected at Feltus during the nineteenth century (Figure 8.4). One is a human effigy depicting a sitting person holding a pot that doubles as the pipe's bowl (Brown 1926:Figure 227; Culin 1900:Plate 12). It is a classic example of the Bellaire style, dating early in the second millennium CE. Steponaitis et al. (2019) have argued that such pipes were made by master carvers and were likely used by shamans in divination or healing. The second was originally called an "alligator gar" effigy, consisting of the elongated head of a reptilian creature with eyes on top, a pointed snout, and many teeth (Brown 1926:Figure 232). The pipe has a cylindrical bowl behind the head that resembles those found on Middle Woodland platform pipes. Whether the pipe depicts a gar or some supernatural being is debatable. Whatever it may represent, the depiction is unique and the style seems a bit earlier, but the function of the pipe was likely the same.

It should be noted that nicotine can induce the effect of the shaman appearing to "die" and subsequently return to life (Brown 2006:487). Six taxa identified from Feltus and Smith Creek were utilized as stimulants (i.e., asters, pokeweed, morning glory, mallow, wild pea, and verbena), some of which were noted as specifically for use with people who were unconscious (Moerman 2003).

POST-SETTING RITUALS

The above interpretations of the animal, plant, and other material assemblages recovered from Feltus and Smith Creek integrate well with previous interpretations of large post features that formed an important aspect of the ritual cycle at Feltus (Kassabaum and Nelson 2016; Nelson and Kassabaum 2014). Adjacent to the midden deposit from which we recovered the animal and plant assemblages discussed above, we uncovered a total of 24 large post features that were remarkably similar to one another in their structure, depositional sequence, and contents. The lack of a structural pattern among these posts, along with significant variation in size, depth, and age, as well as the fact that only some were repeatedly reset allowed us to conclude that they were freestanding. Some were set prior to mound construction at Feltus, while others were likely placed on top of a low platform that extended out from the now-missing Mound D. An additional example was uncovered under the first stage of Mound A, having been pulled immediately before mound building began.

The consistency of the basic depositional sequence suggests that the pro-

cess of post-setting at Feltus was culturally determined and ritually important (see also Pauketat and Alt 2005). First, Coles Creek people dug a large hole and lined it with specially procured sediments (often clay-rich soils and/or ash). Contained within these linings were ceramics (including pipes); faunal remains (including bear); and more unusual materials such an egg-shaped concretion; a fragment of a container holding a distinct, clean fill; a crawfish claw; clamshells; river-worn pebbles; and even human remains. After placing the lining, they quickly inserted a large wooden post. Once the post was set, some form of post ritual, which will be discussed in more detail below, presumably took place. At the conclusion of these rituals, the posts were not left to rot but rather were purposefully pulled, after which Coles Creek people promptly filled the void with a deposit of clean, clayey soil such that no weathering of the lining occurred and a crisp line was visible between the fills. Some of these postholes were subsequently reset with new posts whereas others were not.

In this context, it is interesting to take note of a nineteenth-century find at Feltus: a human figurine made of pottery and broken in half, with only the head and upper part of the torso remaining (Figure 8.5a–a'). The effigy has suspension holes through the upper part of its chest. It also has a cavity in its back, possibly for holding tobacco or other medicine. There is considerable abrasion on the back of the head, as if the figure were suspended, perhaps from a post, and rubbed against it. Although we cannot be sure that the effigy was used in exactly this way, it may represent a local version of the roughly contemporary practice at Weeden Island sites in Florida and Georgia, where ceramic effigies of animals and humanlike beings were placed atop poles on or near mounds (e.g., Milanich et al. 1984). And even though the connection is much more distant, the image of a human figure suspended from a pole with ropes affixed to the chest also brings to mind the Sun Dance ceremonies practiced historically by Native groups in the Great Plains, where actual human participants were suspended in this way (Catlin 1867:25–29; Dorsey 1894:465–466; Fletcher 1882:584). We are not suggesting that ceremonies in the ancient LMV and the more recent Great Plains were the same, but it is not beyond the realm of possibility that there may have been a historical connection in the beliefs and stories that underlay both rituals, despite their separation in space and time.

We see the evidence of shamanism as being linked to other activities occurring at Feltus through a ritual sequence that involved the setting and pulling of posts, communal feasting, mound building, and burial of the dead (Kassabaum and Nelson 2016; Nelson and Kassabaum 2014). The specific

FIGURE 8.5. Ceramic and stone figures from Feltus: (*a*–*a'*) ceramic human figurine with suspension holes, front and back views (courtesy of the Penn Museum, object #14522, image #298880); (*b*) ceramic rim adorno depicting the head of an Underwater Panther (courtesy of the Penn Museum, object #14128, image #298492); (*c*) boatstone carved in the form of an Underwater Panther (courtesy of the Penn Museum, object #14716, image #253005). The grouping demonstrates material expressions of cosmology in both clay and stone media.

materials found within the post features allow us to better understand their role in that ritual cycle, and the Feltus assemblages overall allow us to better imagine the overall goal of the events that occurred there. We argue that the inclusions in the post deposits and other items uncovered during historical excavations at Feltus made present members of the social group and supernatural beings who were not able to be physically present at the ritual events. The bear and human remains integrated an extended kin network, including both nonhuman fictive kin and nonliving human kin (Kassabaum and Nelson 2016; Kassabaum and Peles 2020; Nelson and Kassabaum 2014; Peles and Kassabaum 2020), while other items were imbued with cosmological significance aimed at connecting humans with the other worlds and the supernatural beings that inhabit them. Pipes as well as the ash used in the

fill of the postholes provided symbolic connections to the Above World while the watery substances found within the posts (e.g., clay, shells, pebbles, and crawfish) provided access to the Beneath World. Such Beneath World connections are further evidenced through two representations of the Underwater Panther recovered from Feltus in the late nineteenth century: one ceramic adorno and an expertly carved boatstone (Figure 8.5b, c). The Underwater Panther, one of the more powerful Beneath World beings, regularly appears in stories as a challenger faced by humans on journeys of conquest and exploration and as a protector reached only through dreams and vision quests (Carr 2021b, 2021d; Lankford 2007), offering a particularly strong connection to shamanic traditions. Finally, the posts themselves, as well as bears, pipes, and other material correlates of fire, had connective properties that could have facilitated this communication, particularly when used by ritual specialists during the communal ritual events that took place.

CONCLUSION

Late Woodland mound sites in the Lower Mississippi Valley have long been recognized as important loci for ritual events. Feltus and Smith Creek are no exception, showing ample evidence of community gatherings presumably focused around ritual schedules that involved public feasting and mound building. Previous analyses have focused on delineating the nature, scale, and tempo of these ritual activities. Key to the successful undertaking of these events would have been ritual specialists, though their roles and activities have been little explored. Here, we chose to highlight the evidence for shamanic activities through two types of archaeological evidence that have been underutilized for such purposes: animal and plant assemblages. Unusual animals and plants identified from Feltus and Smith Creek, when considered in concert with each other, strongly support the presence of shamans at both sites. A modified bear maxilla provides a particularly direct connection to ritual activity, but the bear, barred owl, bobcat, cougar, fox, and large raptor remains suggest appeals to tutelary spirits connected with knowledge, the afterlife, and divination. Miscellaneous plant taxa at Feltus and Smith Creek consist of a preponderance of species that can be connected with not only healing but potentially also with ritual cleansing and purification. A smaller number of plant taxa are particularly notable for their connections with ritual and shamanic activities due to their psychoactive effects; these taxa include sweetgum, Asteraceae, morning glory, and nightshade. Supporting

evidence for shamanic activities includes pipe fragments, evidence of tobacco residues in pipes from Feltus, effigy pipes, and post-setting rituals. All of these suggest pathways to other worlds that practitioners would have sought during out-of-body experiences. Evidence for an LMV effigy-pipe complex connected to shamanic practices has been previously described by Steponaitis and colleagues (2019). With this case study of Feltus and Smith Creek, we show that evidence for shamans and shamanic practice can be found in a close analysis of other sources of archaeological evidence as well.

REFERENCES

Aguila, Oscar Leonardo

2020 Zooarchaeological Analysis of the Northeast Plaza at the Smith Creek Mound Site (22WK526), Wilkinson County, Mississippi. Honors thesis, Department of Anthropology, University of Pennsylvania, Philadelphia.

Barrier, Casey

2019 Psychotropic Plants and Sacred Animals at the Washausen Mound-Town: Religious Ritual and the Early Mississippian Era. In *Shaman, Priest, Practice, Belief: Materials of Ritual and Religion in Eastern North America,* edited by Stephen B. Carmody and Casey R. Barrier, pp. 147–165. University of Alabama Press, Tuscaloosa.

Barrier, Casey R., and Megan C. Kassabaum

2018 Gathering in the Late Woodland: A Look at Plazas and Gathering Spaces at Two Sites from the Greater Southeastern US, A.D. 750–1000. In *Investigating the Ordinary: Everyday Matters in Southeast Archaeology,* edited by Sarah E. Price and Philip J. Carr, pp. 168–184. University Press of Florida, Gainesville.

Bell, Austin J.

2021 *The Nine Lives of Florida's Famous Key Marco Cat.* University Press of Florida, Gainesville.

Berres, Thomas E., David M. Stothers, and David Mather

2014 Bear Imagery and Ritual in Northeast North America: An Update and Assessment of A. Irving Hallowell's Work. *Midcontinental Journal of Archaeology* 29(1):5–42.

Billie, James E.

1994 Introduction to *Legends of the Seminoles,* by Bettie Mae Jumper, pp. 7–9. Pineapple Press, Sarasota, Florida.

Bloch, L. June [as Lee Bloch]

2018 Sweetgum's Amber: Animate Mound Landscapes and the Nonlinear Longue Duree in the Native South. PhD dissertation, Department of Anthropology, University of Virginia, Charlottesville.

Brown, Calvin S.

1926 *Archeology of Mississippi.* University Press of Mississippi, Oxford.

Brown, Ian

2015 *The Petite Anse Project: Archaeological Investigations Along the West-Central Coast of Louisiana, 1978–1979.* Borgo, Tuscaloosa, Alabama.

Brown, James A.
2006 The Shamanic Element in Hopewellian Period Ritual. In *Recreating Hopewell,* edited by Douglas K. Charles and Jane E. Buikstra, pp. 475–488. University Press of Florida, Gainesville.
Carmody, Stephen B., Megan C. Kassabaum, Ryan K. Hunt, Natalie Prodanovich, Hope Elliott, and Jon Russ
2018 Residue Analysis of Smoking Pipe Fragments from the Feltus Archaeological Site, Southeastern North America. *Journal of Archaeological Science: Reports* 17:640–649.
Carr, Christopher (editor)
2021a *Being Scioto Hopewell: Ritual Drama and Personhood in Cross-Cultural Perspective.* 2 vols. Springer, Cham, Switzerland.
Carr, Christopher
2021b The Ferocious Dog, Brain-Taker, the Keen-Eyed Owl, and Other Persons in the Cosmologies of Postcontact Eastern Woodland and Plains Indians as Told in Oral Narratives. In *Being Scioto Hopewell: Ritual Drama and Personhood in Cross-Cultural Perspective,* Vol. 1, edited by Christopher Carr, pp. 451–490. Springer, Cham, Switzerland.
2021c Nested Personhood, Masking, and the Question of Personages in Scioto Hopewell, Adena, and Glacial Kame Societies. In *Being Scioto Hopewell: Ritual Drama and Personhood in Cross-Cultural Perspective,* Vol. 2, edited by Christopher Carr, pp. 1409–1512. Springer, Cham, Switzerland.
2021d Underwater-Underground Creatures in the Cosmologies of Postcontact Eastern Woodland and Plains Indians as Told in Oral Narratives. In *Being Scioto Hopewell: Ritual Drama and Personhood in Cross-Cultural Perspective,* Vol. 1, edited by Christopher Carr, pp. 333–449. Springer, Cham, Switzerland.
Carr, Christopher, and Christopher R. Caseldine
2021 Journeys to Afterlives in the Cosmologies of Postcontact Eastern Woodland and Plains Indians: Interwoven Elements, Their Regional Distinctions, and Meta-Narratives. In *Being Scioto Hopewell: Ritual Drama and Personhood in Cross-Cultural Perspective,* Vol. 1, edited by Christopher Carr, pp. 267–332. Springer, Cham, Switzerland.
Carr, Christopher, and Anna C. Novotny
2021 Souls in Flight: Ritual Dramas of Death Journeys Through the Above Realm(s) of Scioto Hopewell Societies. In *Being Scioto Hopewell: Ritual Drama and Personhood in Cross-Cultural Perspective,* Vol. 1, edited by Christopher Carr, pp. 493–592. Springer, Cham, Switzerland.
Caseldine, Christopher R., Christopher Carr, and Samantha R. Feinberg
2021 Journeys to Afterlives in the Cosmologies of Postcontact Eastern Woodland and Plains Indians: Inventory, Frequencies, and Geographic Distributions of Elements in Oral Narratives. In *Being Scioto Hopewell: Ritual Drama and Personhood in Cross-Cultural Perspective,* Vol. 1, edited by Christopher Carr, pp. 195–266. Springer, Cham, Switzerland.
Catlin, George
1867 *O-Kee-Pa: A Religious Ceremony; and Other Customs of the Mandans.* J. B. Lippincott, Philadelphia.
Coxe, Carey, and David B. Kelley
2004 Vertebrate Fauna and Freshwater Mussels. In *Data Recovery Excavations at the Hed-*

geland Site (16CT19), Catahoula Parish, Louisiana, edited by Joanne Ryan, pp. 227–239. Report submitted to the US Army Corps of Engineers, Vicksburg District. Coastal Environments, Baton Rouge, Louisiana.

Culin, Stuart

1900 The Dickeson Collection of American Antiquities. *Bulletin of the Free Museum of Science and Art of the University of Pennsylvania* 2(3):113–168.

Curtis, Edward S.

1908 *The North American Indian.* Vol. 5, *The Mandan, the Arikara, the Atsina.* University Press, Cambridge, Massachusetts.

Dorland, Steven

2017 Sensoriality and Wendat Steams: The Analysis of Fifteenth- to Seventeenth-Century Wendat Steam Lodge Rituals in Southern Ontario. *American Indian Quarterly* 41(1):1–30.

Dorsey, James Owen

1894 A Study of Siouan Cults. In *Eleventh Annual Report of the Bureau of Ethnology, 1889–1890,* pp. 351–544. Government Printing Office, Washington, DC.

Emerson, Thomas E.

2003 Materializing Cahokia Shamans. *Southeastern Archaeology* 22(2):135–154.

Farnsworth, Kenneth B., Terrance J. Martin, and Angela R. Perri

2015 *Modified Predator Mandible and Maxilla Artifacts and Predator Symbolism in Illinois Hopewell.* Illinois State Archaeological Survey. Prairie Research Institute, University of Illinois at Urbana-Champaign.

Fletcher, Alice C.

1882 The Sun Dance of the Oglala Sioux. *Proceedings of the American Academy for the Advancement of Science* 31(2):580–584.

Futch, Robin S.

1980 Human Ecology at the Morton Shell Mound Site (16IB3), Iberia Parish, Louisiana. *Louisiana Archaeology* 7:31–51.

Graham, Anna Fuller

2023 Natchez Bluffs Cuisine and the Transition to Maize Agriculture (AD 750–1500). PhD dissertation, Department of Anthropology, University of North Carolina, Chapel Hill.

Graham, Anna F., Ashley A. Peles, Vincas P. Steponaitis, and John W. O'Hear

2019 Exploring Coles Creek Mound Site Activities Through Pit and Midden Features. Paper presented at the Southeastern Archaeological Conference, Jackson, Mississippi.

Gunnerson, James H.

1998 Mountain Lions and Pueblo Shrines in the American Southwest. In *Icons of Power: Feline Symbolism in the Americas,* edited by Nicholas J. Saunders, pp. 228–257. Routledge, New York.

Hayden, Brian

2014 *The Power of Feasts: From Prehistory to the Present.* Cambridge University Press, Cambridge.

Hrynick, M. Gabriel, and Matthew W. Betts

2014 Identifying Ritual Structures in the Archaeological Record: A Maritime Woodland Period Sweathouse from Nova Scotia, Canada. *Journal of Anthropological Archaeology* 35:92–105.

Hunter, Donald G., Gayle J. Fritz, Whitney J. Autin, and Kam-biu Liu
1995 *Manifest East: Cultural Resources Investigations Along Portions of Louisiana Highway 8, Catahoula Parish, Louisiana.* Report submitted to the Louisiana Department of Transportation and Development. Coastal Environments, Baton Rouge, Louisiana.

Jackson, H. Edwin
2016 Faunal Remains from Feltus and Aden: New Evidence for Coles Creek Animal Use. Paper presented at the Southeastern Archaeological Conference, Athens, Georgia.

Jackson, H. Edwin, C. Margaret Scarry, and Susan Scott
2016 Domestic and Ritual Meals in the Moundville Chiefdom. In *Rethinking Moundville and Its Hinterland,* edited by Vincas P. Steponaitis and C. Margaret Scarry, pp. 187–233. University Press of Florida, Gainesville.

Jackson, H. Edwin, and Susan L. Scott
2003 Patterns of Elite Faunal Utilization at Moundville, Alabama. *American Antiquity* 68(3):552–572.

Kassabaum, Megan C.
2011 Looking Beyond the Obvious: Identifying Patterns in Coles Creek Mortuary Data. *Southeastern Archaeology* 30(2):215–225.
2014 Feasting and Communal Ritual in the Lower Mississippi Valley, AD 700–1000. PhD dissertation, Department of Anthropology, University of North Carolina, Chapel Hill.
2018 Social Subsistence: Integrating Analyses of Ceramic, Plant, and Animal Remains from Feltus. In *Baking, Bourbon, and Black Drink: Foodways Archaeology in the American Southeast,* edited by Tanya M. Peres and Aaron Deter-Wolf, pp. 11–29. University of Alabama Press, Tuscaloosa.
2019a Early Platforms, Early Plazas: Exploring the Precursors to Mississippian Mound-and-Plaza Centers. *Journal of Archaeological Research* 27(2):187–247.
2019b A Method for Conceptualizing and Classifying Feasting: Interpreting Communal Consumption in the Archaeological Record. *American Antiquity* 84(4):610–631.
2021 *A History of Platform Mound Ceremonialism: Finding Meaning in Elevated Ground.* University Press of Florida, Gainesville.

Kassabaum, Megan C., Edward R. Henry, Vincas P. Steponaitis, and John W. O'Hear
2014 Between Surface and Summit: The Process of Mound Construction at Feltus. *Archaeological Prospection* 21(1):27–37.

Kassabaum, Megan C., and Erin Stevens Nelson
2016 Standing Posts and Special Substances: Gathering and Ritual Deposition at Feltus (22Je500), Jefferson County, Mississippi. *Southeastern Archaeology* 35(2):134–154.

Kassabaum, Megan C., and Ashley A. Peles
2020 Bears as Both Family and Food: Tracing the Changing Contexts of Bear Ceremonialism at the Feltus Mounds. In *Shaman, Priest, Practice, Belief: Materials of Ritual and Religion in Eastern North America,* edited by Stephen B. Carmody and Casey R. Barrier, pp. 108–126. University of Alabama Press, Tuscaloosa.

Kassabaum, Megan C., Vincas P. Steponaitis, and John W. O'Hear
2024 Investigating the "Ring Midden" Phenomenon in the Lower Mississippi Valley: An Examination of Evidence from Feltus and Beyond. In *Arcuate Communities of the Eastern*

Woodlands, edited by Martin Menz, Analise Hollingshead, and Haley Messer, pp.74–89. University of Alabama Press, Tuscaloosa.

Kassabaum, Megan C., and Ashley Terry

2020 J. Ashley Sibley, Jr., and the Junior Archeological Society: Assessing Avocational Archaeology at the Smith Creek Site (22Wk526). *Louisiana Archaeology* 45:13–40.

Kehoe, Alice B.

1996 Eliade and Hultkrantz: The European Primitivism Tradition. *American Indian Quarterly* 20(3–4):377–392.

2000 *Shamans and Religion: An Anthropological Exploration in Critical Thinking.* Waveland Press, London.

Kelley, David B.

1990 Coles Creek Period Faunal Exploitation in the Ouachita River Valley of Southern Arkansas: The Evidence from the Paw Paw Site. PhD dissertation, Department of Anthropology, Tulane University, New Orleans, Louisiana.

Kidder, Tristram R.

2002 Woodland Period Archaeology of the Lower Mississippi Valley. In *The Woodland Southeast,* edited by David G. Anderson and Robert C. Mainfort Jr., pp. 66–90. University of Alabama Press, Tuscaloosa.

2004 Plazas as Architecture: An Example from the Raffman Site, Northeast Louisiana. *American Antiquity* 69(3):514–532.

Kidder, Tristram R., and Gayle J. Fritz

1993 Subsistence and Social Change in the Lower Mississippi Valley: The Reno Brake and Osceola Sites, Louisiana. *Journal of Field Archaeology* 20:281–297.

Kidder, Tristram R., and Sarah C. Sherwood

2018 Mound Building as Daily Practice. In *Investigating the Ordinary: Everyday Matters in Southeast Archaeology,* edited by Sarah E. Price and Philip J. Carr, pp.154–163. University Press of Florida, Gainesville.

Krech, Shepard, III

2009 *Spirits of the Air: Birds and American Indians in the South.* University of Georgia Press, Athens.

Kuehn, Steven R.

2016 Beyond Diet: Faunal Remains and Ritual During the Late Woodland Through Mississippian Periods in the American Bottom Region. *Illinois Archaeology* 28:533–566.

LaDu, Daniel A.

2016 The View from Mazique (22AD502): The Coles Creek/Plaquemine Cultural Transition from the Perspective of the Natchez Bluffs Region in the Lower Mississippi Valley. PhD dissertation, Department of Anthropology, University of Alabama, Tuscaloosa.

Lankford, George E.

2007 The Great Serpent in Eastern North America. In *Ancient Objects and Sacred Realms: Interpretations of Mississippian Iconography,* edited by F. Kent Reilly III and James H. Garber, pp. 107–135. University of Texas Press, Austin.

2016 Was There a Moundville Medicine Society? In *Rethinking Moundville and Its Hinterland,* edited by Vincas P. Steponaitis and C. Margaret Scarry, pp. 74–98. University Press of Florida, Gainesville.

Mariaca, Maria Teresa
1985 Late Marksville/Early Baytown Period Subsistence Economy: Analysis of Three Faunal Assemblages from Northeastern Louisiana. Master's thesis, Department of Anthropology, Boston University, Boston.
Mehta, Jayur M.
2007 A Study of Sweat Lodges in the Southeastern United States. Master's thesis, Department of Anthropology, University of Alabama, Tuscaloosa.
Milanich, Jerald T., Ann S. Cordell, Vernon J. Knight, Timothy A. Kohler, and Brenda J. Sigler-Lavelle
1984 *McKeithen Weeden Island: The Culture of Northern Florida, A.D. 200–900*. Academic Press, Orlando, Florida.
Mitchem, Alexandria, and Megan Kassabaum
2024 Odd Deposits: Interpreting Sweetgum Use at Coles Creek Mound Centers. *Southeastern Archaeology* 43(2):89–109.
Moerman, Daniel
2003 Native American Ethnobotany Database: BRIT. Electronic document, http://naeb.brit.org/, accessed August 8, 2024.
Nelson, Erin Stevens, and Megan C. Kassabaum
2014 Expanding Social Networks Through Ritual Deposition: A Case Study from the Lower Mississippi Valley. *Archaeological Review from Cambridge* 29(1):103–128.
Pauketat, Timothy R., and Susan M. Alt
2005 Mounds, Memory, and Contested Mississippian History. In *Archaeologies of Memory,* edited by Ruth Van Dyke and Susan Alcock, pp. 151–179. Blackwell, Oxford.
Peles, Ashley A.
2022 How to Make a Meal: Late Woodland Gathering at the Feltus Mounds Site, AD 700–1100. PhD dissertation, Department of Anthropology, University of North Carolina, Chapel Hill.
Peles, Ashley A., and Megan C. Kassabaum
2020 Reexamining the Evidence for Bear Ceremonialism in the Lower Mississippi Valley. In *Bears: Archaeological and Ethnohistorical Perspectives in Native Eastern North America,* edited by Heather A. Lapham and Gregory A. Waselkov, pp. 235–255. University Press of Florida, Gainesville.
Roe, Lori M.
2010 Social Complexity and Mound Ceremony in the Coles Creek Culture: Research at the Raffman Mound Center in Madison Parish, Louisiana. PhD dissertation, Department of Anthropology, Tulane University, New Orleans.
Romans, Bernard
1999 [1775] *A Concise History of East and West Florida.* Edited by Kathryn E. Holland Braund. University of Alabama Press, Tuscaloosa.
Springer, James Warren
1980 An Analysis of Prehistoric Food Remains from the Bruly St. Martin Site, Louisiana, with a Comparative Discussion of Mississippi Valley Faunal Studies. *Midcontinental Journal of Archaeology* 5(2):193–223.

Steponaitis, Vincas P.
1986 Prehistoric Archaeology in the Southeastern United States, 1970–1985. *Annual Review of Anthropology* 15:363–404.
Steponaitis, Vincas P., Megan C. Kassabaum, and John W. O'Hear
2012 Coles Creek Earthworks and Ritual at the Felts Mounds in Southwest Mississippi, AD 700–1100. Poster presented at the Society for American Archaeology, Memphis, Tennessee.
2015a Cahokia's Coles Creek Predecessors. In *Medieval Mississippians: The Cahokian World,* edited by Timothy R. Pauketat and Susan M. Alt, pp. 13–19. School for Advanced Research Press, Santa Fe, New Mexico.
2015b The Uses of Platform-Mound Summits at a Coles Creek Site in Southwest Mississippi. Poster presented at the Society for American Archaeology, San Francisco, California.
Steponaitis, Vincas P., Vernon J. Knight Jr., and George E. Lankford
2019 Effigy Pipes of the Lower Mississippi Valley: Iconography, Style, and Function. *Journal of Anthropological Archaeology* 55. https://doi.org/10.1016/j.jaa.2019.101070.
Swanton, John R.
1931 *Source Material for the Social Ceremonial Life of the Choctaw Indians.* Bureau of American Ethnology Bulletin 103. Smithsonian Institution, Washington, DC.
Terry, Ashley L.
2017 Zooarchaeological Analysis of a Coles Creek Flank Midden at Smith Creek, Wilkinson County, Mississippi (22Wk526). Master's thesis, Department of Anthropology, University of Pennsylvania, Philadelphia.
Van Pool, Christine S.
2009 The Signs of the Sacred: Identifying Shamans Using Archaeological Evidence. *Journal of Anthropological Archaeology* 28:177–190.
Wailes, Benjamin L. C.
1852 Notes on the Aboriginal Monuments and Remains of Mississippi. Manuscript (field notebook), Mississippi Department of Archives and History, Archives and Library, Wailes Papers, Z/0076.000/S, Box 3, Folder 2.
Waselkov, Gregory A.
2020 Ethnohistorical and Ethnographic Sources on Bear-Human Relationship in Native Eastern North America. In *Bears: Archaeological and Ethnohistorical Perspectives in Native Eastern North America,* edited by Heather A. Lapham and Gregory A. Waselkov, pp. 16–47. University Press of Florida, Gainesville.
Weinstein, Richard A.
2005 *Lake Providence: A Terminal Coles Creek Culture Mound Center, East Carroll Parish, Louisiana.* Report submitted to the US Army Corps of Engineers, Vicksburg District. Coastal Environments, Baton Rouge, Louisiana.
Wells, Douglas C.
1998 The Early Coles Creek Period and the Evolution of Social Inequality in the Lower Mississippi Valley. PhD dissertation, Department of Anthropology, Tulane University, New Orleans, Louisiana.
Wheeler, Ryan J.
2011 On the Trail of the Panther in Ancient Florida. *Florida Anthropologist* 63(3–4):139–162.

Williams, Michele
2000 Evidence for Medicinal Plants in the Paleoethnobotanical Record of the Eastern United States During the Late Woodland Through Mississippian Periods. PhD dissertation, Department of Anthropology, Washington University, St. Louis.
Woodiel, Deborah Kay
1993 The St. Gabriel Site: Prehistoric Life on the Mississippi. *Louisiana Archaeology* 20:1–136.