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DRAWING WITH
GREAT NEEDLES

Ancient Tattoo Traditions of North America

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EDITED BY AARON DETER-WOLF
AND CAROL DIAZ-GRANADOS



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Needle in a Haystack

Examining the Archaeological Evidence for Prehistoric Tattooing

Aaron Deter-Wolf

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European explorers and settlers who traveled throughout the Eastern Woodlands and Great Plains beginning in the sixteenth century left behind both textual and visual documentation of their journeys and of the people they encountered. The specific geographic areas and indigenous groups documented in the ethnohistorical record vary widely. However, one consistent aspect of these accounts is the description of permanent patterns and colors inscribed on the flesh of various Native American groups who interacted with the European chroniclers.

It is unlikely that the indigenous tattoo traditions documented throughout the Great Plains and Eastern Woodlands beginning in the sixteenth century were recent cultural innovations. However, after more than a century of scientific archaeology very little is known about the origins or material culture of prehistoric tattooing in the study area. The introduction of European metal needles as trade items quickly replaced indigenous technology and thereby permanently altered traditional tattooing practices. To date archaeologists have seldom attempted to identify the artifact remains of prehistoric Native American tattooing, and the actual antiquity of the practice both in the study area and in the continental United States remains unclear.

In this chapter I combine ethnohistorical sources and archaeological evidence to examine the material culture of prehistoric tattooing in the Great Plains and Eastern Woodlands. I begin with a discussion of the antiquity of tattooing in the region. Next, ethnohistorical and ethnographic sources are examined to identify descriptions of indigenous tattoo pigments and tools. That textual evidence is then compared to archaeological data from the region, including rare formal identifications of prehistoric tattoo needles, in

an effort to recognize potential correlates. Finally, I discuss associations and context useful for identifying tattoo implements in the archaeological record.

/ The Antiquity of Native American Tattooing /

Archaeological evidence for the antiquity of tattooing has been recovered from several locations throughout the Western Hemisphere. The oldest direct evidence for tattooing anywhere in the world consists of human remains from the Chinchorro culture of South America, where a mummy with an upper lip tattoo has been dated to ca. 6000 BC (Allison 1996). Pre-historic tattoo traditions were widespread throughout South America, where tattooed mummies have also been recovered from the Chimú, Moche, and Tiwanaku cultures (Allison 1996; Krutak 2008b; Williams 2006). Tattooed remains from Saint Lawrence Island, Alaska, reveal that the tattooing was practiced in the Arctic by AD 380 (Zimmerman 1998).

At present there is no direct evidence in the form of ancient tattooed human remains to conclusively establish the antiquity of tattooing in sub-arctic North America. A number of desiccated, naturally preserved corpses were recovered from limestone caves in the Southeast during the nineteenth and early twentieth centuries, and although some of these remains have been discussed by modern scholars (e.g., Boedy et al. 2010; El-Najjar et al. 1998; Tankersley et al. 1994; Watson and Yarnell 1986), none have been carefully inspected for the presence of tattoos. It is unlikely that these markings were ignored (if present), but rather that darkening of the epidermis during the natural mummification obscured any tattoos from view.

Most of the naturally preserved human remains from the region are no longer extant. The single surviving curated example may be the “Rock Creek Mummy” from McCreary County, Kentucky, which is housed at the William S. Webb Museum of Anthropology at the University of Kentucky in Lexington. Unfortunately the Webb Museum and the United States Forest Service have both rejected proposals to conduct nondestructive, near-infrared digital examinations for tattooing on the McCreary County remains, and at best there will be limited future opportunities to establish direct proof of the antiquity of North American tattoo traditions.

There is sufficient, albeit indirect, evidence within the corpus of prehistoric iconography to suggest tattooing was practiced in the Eastern Woodlands and Great Plains by at least the first century AD. Lines and patterns inscribed on human figural representations in ancient art of the region had been tentatively identified as tattoos by the late nineteenth century

(Buckland 1888; Holmes 1883; Thruston 1890) (Figure 2.1), and the practice is now regularly mentioned in discussions of both Mississippian and Woodland art and iconography (e.g., Brown 2007a, 2007b; Diaz-Granados 2004; Giles 2010; Duncan 2011; Reilly and Garber 2011; Swartz 2001; Steponaitis et al. 2011; Walker 2004). General acceptance of the presence of tattooing among ancient Native Americans is perhaps best illustrated at the recently renovated Jones Archaeological Museum at the Mississippian site of Moundville, Alabama, where displays of life-size figures prominently exhibit an assortment of tattooed patterns on their faces and bodies (Figure 2.2).

The available archaeological and iconographic evidence, combined with the presence of geographically widespread and culturally distinct tattoo traditions throughout the entire Western Hemisphere at the time of initial European exploration, leads to two possible conclusions regarding the



FIGURE 2.1. *Mississippian Marine Shell Masks* (after Holmes 1883: plate 66). Holmes (1883:295) writes: “These lines may . . . represent the characteristic lines of the painting or tattooing of the clan or tribe.”



FIGURE 2.2. Tattooing displayed on the torso, biceps, and thighs of a life-size figure at the Jones Archaeological Museum, Moundville, Alabama.

origins of tattooing in the Americas. The first is that tattooing, like ceramics and agriculture, evolved spontaneously and independently in both North and South America, as well as at numerous other locations throughout the world. The second conclusion is that tattooing is one of the “symbolically mediated behaviors” that coincide with the appearance of modern human cognition (Powell et al. 2009). The identification of possible tattoo implements from Magdalenian-era France (Péquart and Péquart 1962) and the Middle Stone Age in South Africa (Deter-Wolf 2013) suggests that the practice existed by at least the Upper Paleolithic, and possibly as early as 84 KYA. If this second hypothesis is correct, tattooing belongs among the essential suite of behaviorally modern adaptations that diffused throughout

the Western Hemisphere at the end of the Pleistocene along with the earliest human inhabitants.

Regardless of its specific evolution, the presence of diverse, well-established tattooing practices throughout the entire Western Hemisphere in the sixteenth century AD implies sufficient antiquity for the formation of distinct regional traditions. Although the specific time depth for the development of tattooing in the Eastern Woodlands and Great Plains cannot be conclusively determined, analysis of comparative data from throughout the Western Hemisphere seems to suggest the practice extends at least as far back as the Late Archaic.

/ Existing Archaeological Identifications of Tattoo Implements /

It would be far easier to discuss both the antiquity and material culture of indigenous tattooing practices in the Eastern Woodlands and Great Plains with the support of chronologically sensitive archaeological data. Given the millions of prehistoric artifacts recovered from the region, the ubiquity of early historic tattoo traditions, and the likely temporal depth of Native American tattooing practices, one might expect the existence of a corpus of positively identified tattoo implements in archaeological collections. However, despite thousands of archaeological investigations over the last century and a propensity of archaeologists to pigeonhole all manner of tools into descriptive categories (e.g., awls, projectile points, etc.), only a handful of instances exist from either the study region or North America as a whole where prehistoric artifacts have been identified as potential tattooing tools or tattoo paraphernalia. Those identifications that do exist include both academic and informal sources and span the entire prehistoric sequence, from the Paleoindian through late prehistoric.

Paleoindian assemblages throughout North America regularly produce both single- and multi-spur chert gravers, the function of which remains elusive. Researchers have variously suggested that these tools served to pierce hides, engrave or cut circular patterns in durable materials such as bone, antler, or wood, and most importantly to the present study, to tattoo human flesh (Maika 2010; Tomenchuk and Storck 1997; Weedman 2002). The identification of Paleoindian gravers as possible tattoo implements appears to originate in early reports from the Lindenmeier site in Colorado (Roberts 1936). This interpretation was revisited and substantially expanded by Painter (1977, 1985), who suggested that the presence of gravers at some Paleoindian habitation sites in conjunction with natural pigments such as

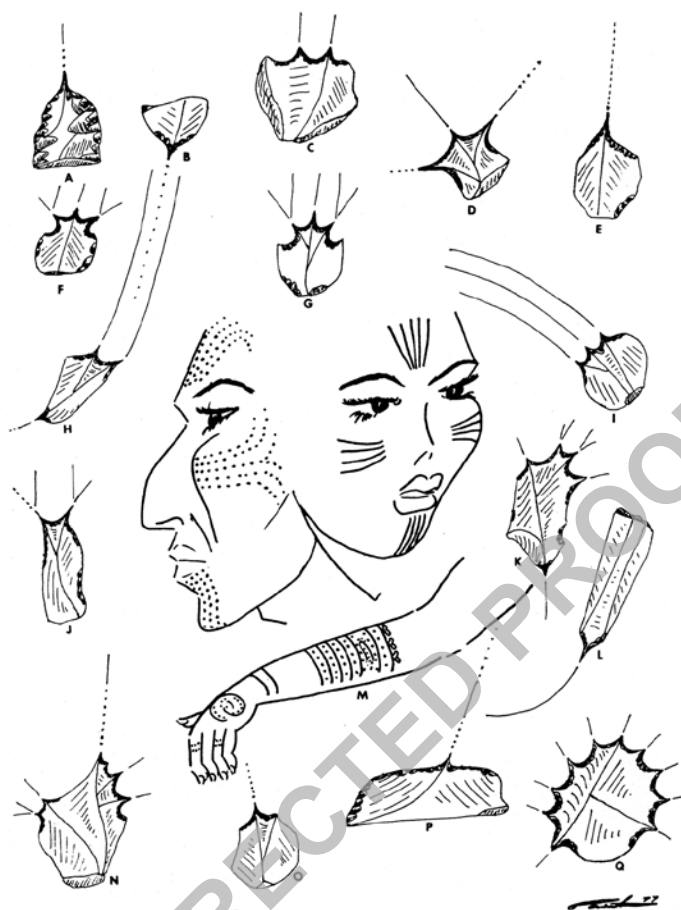


FIGURE 2.3. Illustration by Floyd Painter showing Paleolithic graters and their possible function as tattoo implements (after Painter 1985: fig. 1). Reproduced courtesy of Rodney M. Peck.

ochre was indicative of their use in tattooing. To illustrate his hypothesis, Painter presented an image of flake graters surrounding tattoo patterns found on naturally mummified remains from St. Lawrence Island, Alaska (Figure 2.3). Subsequent to the discussion by Painter, the identification of Paleolithic graters as possible tattoo implements appears to have entered the conventional wisdom of North American Paleolithic scholarship (e.g., Collins 2004; Stafford et al. 2003).

During a 2009 interview with the PBS program *Time Team America*, Goodyear (2009a) exhibited a “bend break tool” from the Topper site in South Carolina that features a grater spur (Figure 2.4) and that he identifies

as a possible tattoo implement. That artifact was recovered from the upper portion of the Pleistocene terrace, which has been dated to at least 18,000 BC (Goodyear 2009b; Waters et al. 2009). The graver from the Topper site therefore stands out as the oldest potential tattoo implement identified in the Western Hemisphere to date.

Excavations of late Pleistocene through early Holocene deposits at Hinds Cave, Texas, in the late 1970s resulted in the recovery of various perishable and organic materials, including examples of woven fiber and cordage. In their examination of perishable materials from the site, Andrews and Adovasio (1980) illustrate and describe a 34.5-mm-long sharpened antler tine wrapped in a coiled basket weave (Figure 2.5). The tine is set within the basket weave using resin or sap, and the weave itself shows indications of extensive wear, presumably from being tightly grasped between the fingertips of its user(s). The small (less than 8 mm) sharpened tip of the tine that extends beyond the basket weave exhibits heavy polish. Andrews and Adovasio (1980:61) refer to this implement as a “scarifier or incising tool” and note that it appears to be a unique specimen, unduplicated either within the site assemblage or in the surrounding region. This same tool was illustrated again in a 2000 *National Geographic* article on Paleoindian settlement of the Americas, where it was identified in a photo caption as a “tattooing tool” (Parfit 2000:62). A news

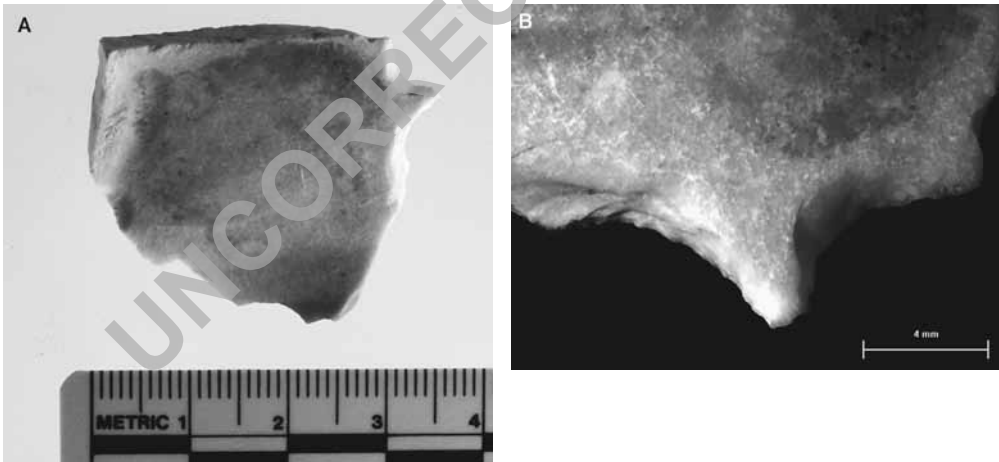


FIGURE 2.4. Chert graver from the Topper site, South Carolina (A, photo by Daryl P. Miller, South Carolina Institute of Archaeology and Anthropology; B, photo by Jim Weiderhold, Texas A&M Digital Imaging Center). Images courtesy of Albert C. Goodyear.



FIGURE 2.5. Antler tine “scarifier” from Hinds Cave, Texas. Photograph courtesy of Mercyhurst Archaeological Institute.

release from Mercyhurst College (2006) later identified this same implement as a “10,000-year-old tattoo needle.”

Between 2004 and 2006, the cultural resources firm of Cumberland Research Associates conducted excavations at the Hermitage Springs site near Nashville, Tennessee, to identify and remove prehistoric and historic graves within a planned development footprint. One loosely flexed Late Archaic internment of a pregnant adult female from that site (Burial 263a) contained a cache of artifacts including various faunal and lithic tools, a gorget made from a human cranium, and a set of four turkey metatarsal awls (Figure 2.6). Allen (2006) tentatively identified these awls as tattoo implements based on their extreme sharpness and the presence of dark discoloration and/or staining at their apical tips. The awls were grouped tightly together and apparently deposited within the grave inside a bundle or bag. All mortuary artifacts from the site were reburied along with the associated human remains shortly after exhumation according to state cemetery laws, and the full results of the burial removal project at Hermitage Springs have not been published to date.

In 1966, Carl F. Miller reported in the Current Research section of *American Antiquity* that work by the Smithsonian Institution–sponsored River Basin Survey in the Smith Mountain Reservoir of Virginia had recovered a “series of bone tattooing needles which corroborates the drawings John



FIGURE 2.6. Turkey metatarsal awl with stained tip, recovered from Burial 263a at the Hermitage Springs site, Nashville, Tennessee. Photograph courtesy of Dan S. Allen.

White made during the early portion of the seventeenth century” (Davis 1966:903). The results of the Smith Mountain project were never published, and materials from the survey are curated at the Smithsonian and with the Archaeological Society of Virginia.

In February 2011, archaeologist Thomas Klatka of the Virginia Department of Historic Resources identified a photograph from Miller’s personal papers (now in the collection of the Archaeological Society of Virginia) labeled “Tattooing needles / Smith Mountain Reservoir / 1965” (Figure 2.7). The photo displays six sharpened bone tools, all measuring between 3 and 5 cm long. It is not known what evidence prompted Miller to identify these particular implements as tattoo needles.

The artifacts are labeled with site numbers Miller assigned to the Booth Farm (44FR2) and the Fitzhugh M. Chewing’s Farm (44FR3) sites. According to the Smithsonian collections database, that institution curates only two artifacts from Chewing’s Farm, neither of which is among the bone needles documented in Miller’s personal papers. The Smithsonian holds more than 1,500 artifacts from Booth Farm, including a single bone implement identified in the catalog as a “tattooing needle” (Smithsonian Catalog Number A485093-0; illustrated in the center-left of Figure 2.7). Miller’s papers also included a proposed reconstruction drawing of a tattoo implement



FIGURE 2.7. Photograph of sharpened bone implements from the personal papers of Carl Miller. The photo is labeled on the reverse as "Tattooing needles / Smith Mountain Reservoir / 1965." Image courtesy the Archaeological Society of Virginia's Archaeological Resource Center Library, Charles City, Virginia, and the Department of Anthropology, Smithsonian Institution, Suitland, Maryland.

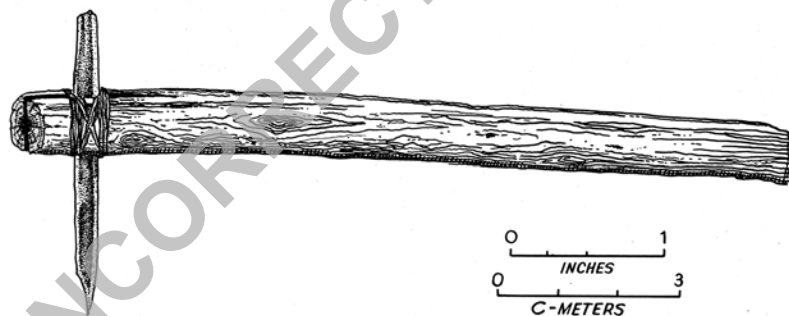


FIGURE 2.8. Drawing from the personal papers of Carl Miller showing proposed perpendicular hafting of a bone tattoo needle from the Smith Mountain Reservoir. Image courtesy of the Archaeological Society of Virginia's Archaeological Resource Center, Charles City, Virginia, and the Department of Anthropology, Smithsonian Institution, Suitland, Maryland.

incorporating that artifact hafted perpendicularly on a wooden handle (Figure 2.8).

A 1975 article by Martha Otto in *Ohio Archaeologist* describes the Low Tablet, a sandstone artifact featuring incised Adena-like designs that was reportedly collected from a mound near Parkersburg, West Virginia. In her report, Otto describes a series of grooves worn into the reverse face of both the Low Tablet and an associated whetstone. Similar grooves appear on the reverse faces of numerous other whetstones and at least three other Adena tablets (the Berlin, Cincinnati, and Wilmington Tablets) (Otto 1975; Webb and Baby 1957; Webb and Snow 1974 [1945]).

Grooved Adena tablets and whetstones are sometimes associated with bone needles, as evidenced by a burial assemblage from the Adena Mound that included a tabular whetstone along with a series of eleven elk and twelve deer bone awls (Mills 1902:471). Finds of hematite and ochre embedded in the grooves of some Adena whetstones (e.g., Dragoo 1963; Solecki 1953) suggest these artifacts also served in manufacturing pigment. Webb and Baby (1957) further postulate that the Adena tablets functioned as stamps with which to mark clothing and/or skin on ritual occasions. Based on these various interpretations, Otto (1975:33) proposes that the grooves that appear on Adena tablets and whetstones are the result of sharpening bone needles used for tattooing. This conclusion also suggests that finds of hematite and ochre embedded in whetstones are the result of manufacturing tattoo pigment.

A final identification of possible tattoo implements in the archaeological record of the region comes from the Mississippian site of Moundville in northern Alabama. Excavations at Moundville's Mound Q between 1989 and 1994 resulted in the recovery of a suite of artifacts that Knight (2004:309) identifies as a "pigment complex." In addition to ceramic pigment containers, stone mixing pallets, painted artifacts, and raw pigments, the pigment complex from Mound Q includes three fish spines that exhibit sharpening and polish on their tips (Figure 2.9A), and three others that appear "suspiciously sharp" (Knight 2004:310). The three sharpened fish spines from Mound Q come from blue catfish, drum, and an unknown perciform, and were initially identified as possible tattoo implements in an unpublished manuscript by Jackson and Scott (1998, as cited in Knight 2004). The spines were included within the formally defined pigment complex from Mound Q because of the possible association of those materials with body decoration. According to Knight (2004:313), "some part of the pigment complex may have been devoted to body paint and tattooing."

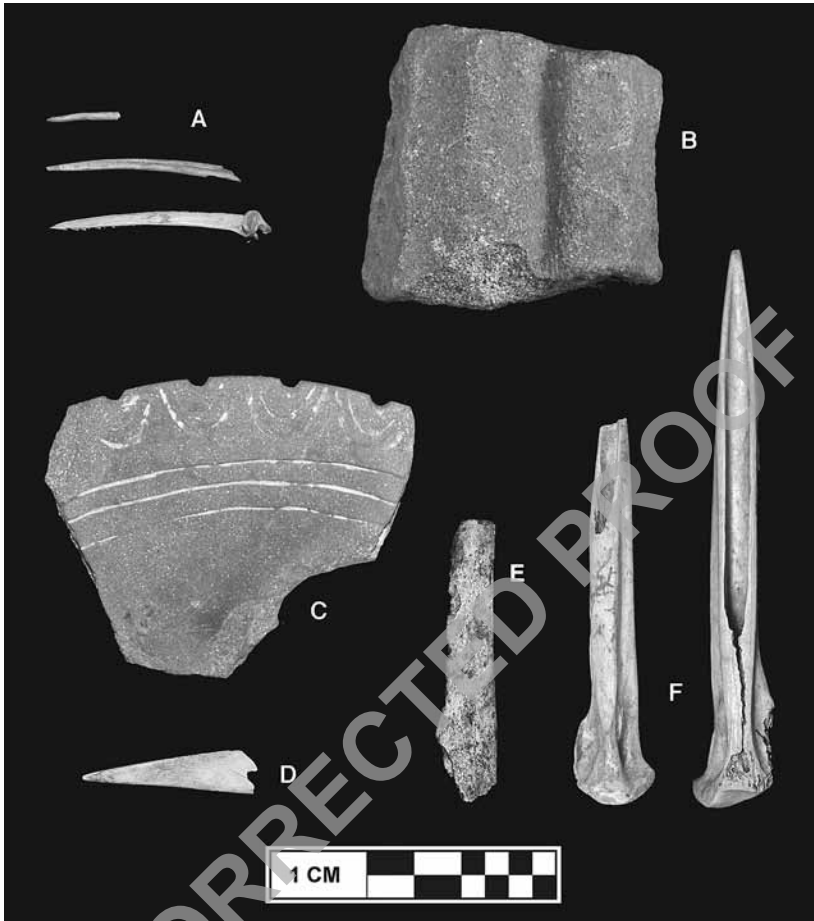


FIGURE 2.9. Selected artifacts recovered from Mound Q at Moundville. Courtesy of the University of Alabama Museums, Tuscaloosa, Alabama.

/ Ethnohistorical and Ethnographic Descriptions of Tattoo Materials /

In lieu of a broad or well-accepted corpus of archaeological identifications it is necessary to consider alternative lines of evidence when discussing the material remains of tattooing in the prehistoric Eastern Woodlands and Great Plains. The specific ethnohistorical evidence for indigenous Native American tattooing has been compiled by several researchers, most notably Sinclair (1909), Swanton (1946), Wallace (1993), and contributors to the present volume. In an effort to identify descriptions of indigenous tattooing technology

in the region, research by these scholars was supplemented by searches of additional ethnographies and ethnohistories from the fifteenth through early twentieth centuries. Some early English editions of foreign-language sources provide literal translations that better illuminate the material culture of tattooing and so were employed in lieu of more modern versions (e.g., Bossu 1771 [1768]). Finally, various Native American narratives were also examined for references to tattooing in an effort to provide an emic perspective on indigenous material culture.

Many accounts of Native American tattooing in the Eastern Woodlands and Great Plains document the existence of the practice, but include little expository information. For example, Marquette (1900 [1681]:149) simply notes in passing that the Mosopelea “tattoo their bodies after the Iroquois fashion.” John Smith (2007 [1624]:283) records that native Virginians “embroidered” their bodies with images, but makes no mention of the actual items used to achieve this effect. Other sources discuss the social context in which tattooing functioned, but include no information regarding materials or methods of the practice (e.g., Dorsey 1889; Henry 1988).

Fortunately, those sources that do describe the material culture of indigenous tattooing generally include some description of both the tattoo implements and pigments used to create the final image. Ultimately this research identified descriptions of indigenous Native American tattooing technology in thirty-five sources. These accounts are summarized in Table 2.1 and include forty-eight separate identifications of tattoo implements and thirty-seven descriptions of tattoo pigments.

The influx of European trade goods into North America had a dramatic effect on the material culture of indigenous tattoo practices. Following initial contact, Native Americans rapidly abandoned precontact tattoo implements in favor of metal needles, which were “more effective and less painful” (Mallery 1886:49) than indigenous technologies. The exchange of European items also resulted in changes to the composition of tattoo pigments in the region. Several sources identify gunpowder as the postcontact pigment of choice (Filson 2006 [1784]:75; Loskiel 1794 [1789]:50), while others record the use of vermilion (Long 1791:48; Raudot 1904 [1709]:64–65).

Descriptions of Native American tattoo technology are sometimes vague as to whether the author is describing pre- or postcontact materials. All sources containing unclear identifications of tattooing tools and/or pigments were examined for additional contextual clues as to whether the materials represented indigenous or foreign technologies. In one case, an origin narrative for the Iowa Buffalo Clan recounts that a split eagle feather

TABLE 2.1. Indigenous tattoo technology identified in ethnohistorical and ethnographic accounts, alphabetically by source.

SOURCE	TOOL	PIGMENT	PEOPLE/ LOCATION
Adair 2005 [1775]:384	Garfish teeth	Soot of pitch-pine	Chickasaw/ MidSouth
Anonymous (Swanton 1946:535)	Needle A little bone	–	Natchez
Bartram 1996 [1791]:400	Needle	Bluish tinct	Creek or Cherokee
Bossu 1771 [1768]:107	Great needles	Ashes from burnt straw	Quapaw
Bossu 1771 [1768]:163	One or more needles	Black	Osage
Bossu 1771 [1768]:235	Needles	–	Alabama territory
Bressani 1899:251	Awls Needles Thorns	Powdered charcoal Black coloring matter	Huron
Bushnell 1909:10	Needle	Yellow pine soot	Choctaw
Curtis 1907–1930:4:175	Four or five porcupine quills	Powdered red willow Pine charcoal	Apsaroke
Curtis 1907–1930:5:143	Porcupine quills	Charcoal	Mandan
Curtis 1907–1930:19:156	Porcupine quill Turkey bone	–	Otoe
Dièreville 1933 [1708]:169	Needle	Vermilion	Acadia
Dorsey 1890:78	Three or four needles	Charred box elder wood	Omaha
Dumont de Montigny 1753:140	–	Pine charcoal Red cinnabar or vermilion	Louisiana
Fletcher and La Flesche 1911:503	Flint points	Charcoal	Omaha
Gatschet 1882:153	Jaw of a small species of garfish	Pulverized charcoal	Chitimacha
Goodtracks 2002a:8	Split eagle feather	Willow charcoal	Iowa
Harrington (Skinner 1926:266)	Bone points	Willow charcoal	Iowa
Heckewelder 1876 [1818]:206	Sharp flint stones Sharp teeth of a fish	Burned poplar bark	Tuscarora

TABLE 2.I. *Continued*

SOURCE	TOOL	PIGMENT	PEOPLE/ LOCATION
Isham 1949:102	Needle	Coal beat fine	Hudson Bay
James 1905 [1823]:74	Three or four needles	Pulverized charcoal	Omaha
Joutel 1906 [1714]:143	Needles	Charcoal	Texas
Jouveney 1896:279	Awls Spear points Thorns	Pulverized charcoal	Acadia
Lafitau 1977 [1724]:33	Needles Little bones	Red lead Crushed charcoal	Iroquois
La Flesche 1914:68–69	Pelican wing bones	Charcoal mixed with kettle black	Osage
Le Page du Pratz 1947 [1758]:346	Six needles	Charcoal dust	Louisiana
Long 1791:48	Ten needles Gun flint	Vermilion	Ojibway
Loskiel 1794:50	Needle	–	Northeast (?)
Mallery 1886:49	Splinter of bone	–	Hidatsa
Mallery 1893:395	Spicules of bone	–	Ojibwa
Marest 1931:124	Little sharp bones	Wet charcoal dust	Hudson Bay
Pénicaud 1953 [1883]: 110	Needles	Crushed willow charcoal	Natchitoches
Raudot 1904 [1709]:64–65	Fish bones Animal bones	Soft wood charcoal Vermilion Red earth	Eastern Canada
Sagard 1866 [1636]:347	Bone of bird Bone of fish	Black powder	Eastern Canada
Sparke (Payne 1907:56)	Thorn	–	Florida
Talon and Talon (Bell 1987:238)	Thorns	Crushed walnut wood charcoal	Cenis
Garcilaso de la Vega 1993 [1605]:413	Points of flint	–	Caddo
Von Reck (Hvidt 1980:45–46)	Needle	Charcoal dust	Yuchi
Whitman 1938:200	–	Willow charcoal	Otoe

originally used for tattooing was replaced following European contact by a “tied bunch of needles” (Goodtracks 2002a:8). The juxtaposition of materials in this account suggests the adopted needles were metal trade goods rather than indigenous technology. Those accounts that describe tattoo tools only as “needles” but provide no additional clues as to their material type or origin were nevertheless included in Table 2.1.

While sources describing only postcontact tools and/or European pigments were omitted from the table, accounts describing combinations of pre- and postcontact materials were selectively included. In the case of pigments, naturally occurring precontact colors continued to be used alongside European-introduced materials through at least the early twentieth century. Furthermore, European terms for red pigments used by Native Americans were to some extent interchangeable and independent of actual raw material type. Ethnohistorical identifications of vermilion and cinnabar-based tattoo ink may well be misnomers for locally procured, traditional pigment, and so were included in the analysis.

A number of sources specifically reference the technological shift from indigenous to European tattoo materials. When describing metal needles from a late nineteenth–early twentieth-century Iowa tattoo bundle, Harrington (Skinner 1926:266) writes that “in former times the points were made of bone.” Similar juxtapositions of pre- and postcontact technologies also appear in Heckewelder, Mallery, La Flesche, and Fletcher and La Flesche (see Table 2.1). In these instances explanations of precontact technologies were included, while references to postcontact adaptations were omitted. The accounts identified in Table 2.1 inform a clearer understanding of indigenous tattooing in the region, including the methods of application as well as the pigments and tattoo implements employed prior to the arrival of European technologies.

< Pigments >

At its fundamental level, tattoo ink consists of pigment suspended in a liquid, which is mixed to form a solution of slurry-like consistency. The liquid functions as a carrier, intended to evenly distribute the pigment and prevent it from clumping. Modern tattoo inks vary widely in composition according to manufacturing company and the recipes of individual artists, and include a variety of metal, salts, and vegetable dyes as pigment bases (De Cuyper and D’hollander 2010). A number of materials identified in Table 2.1 are still incorporated in modern tattoo inks, including soot, iron oxide/ochre, and (although highly toxic) cinnabar.

A basic carbon and water mixture appears to have been the pigment recipe of choice for tattooing throughout North America at the time of European contact. Twenty-seven of the thirty-seven pigment descriptions identified in Table 2.1 specifically reference the use of charcoal, ash, or soot. This material was ground or pounded into dust and then mixed with water to create the final tattoo ink. Several sources indicate a preference for particular species of wood for creating carbon-based pigments. These include box elder (Fam. Aceraceae-Sapindaceae), poplar (Fam. Salicaceae), walnut (Fam. Juglandaceae), pine (Fam. Pinaceae), and willow (Fam. Salicaceae), with the last two being the most frequently identified (see Table 2.1).

The preference for carbon-based pigment in the study area corresponds to comparative data from tattooing cultures around the world (e.g., Hose and Shelford 1906; Mathur 1954; Sapir 1907; Schneider 1973; Smeaton 1937), as well as information from recent examinations of preserved ancient tattoos in both Europe and South America. Electron microscopy of preserved tattoo pigment from the so-called Tyrolean Iceman (Pabst et al. 2009) and of remains from Chiribaya Alta in Peru (Pabst et al. 2010) revealed that the lines inked on these individuals contained concentrations of round carbon particles consistent with soot. Examinations of the Peruvian mummy also identified tattoo pigments comprised of plant-based ash (Pabst et al. 2010).

Despite an apparent preference for carbon-based ink, there is some indication that precontact Native Americans were not monochromatic in their choice of tattoo pigments. Lafitau (1977 [1724]:33) identifies the use of “red led” and states that the Iroquois would tattoo with “whatever other colour they wish to apply.” Dièreville (1933 [1708]), Dumont de Montigny (1753), Long (1791), and Raudot (1904 [1709]) all record the use of red tattoo ink containing vermilion and/or cinnabar (see Table 2.1). Archaeological evidence suggests that red pigments employed prior to European arrival in the Eastern Woodlands and Great Plains relied primarily on a base of iron oxide (ochre), although Lederer (1902 [1672]:19) presents a convincing account of indigenous cinnabar mining. Support for the use of blue tattoo pigment comes from Bartram (1996 [1791]), as well as historic examples such as the “Blue Spot” women among the Omaha (see Chapters 5 and 8 of this volume).

< Tattoo Implements >

Tattoo implements from throughout the world can be separated into three major groups, consisting of perpendicularly hafted instruments, skin-stitching

tools, and in-line needles (Robitaille 2007). Perpendicularly hafted tools incorporate indirect percussion applied with a striker or mallet and are widely recognized by the general public as ancient and/or indigenous tattoo tools (see Figure 2.8). However, perpendicularly hafted tattooing technology is geographically unique, with distribution limited to portions of India, Southeast Asia, and the southwestern Pacific Rim. Skin stitching employs a small needle and pigment-infused thread to “sew” tattoo designs into the skin and was traditionally limited to the Arctic Circle and parts of South America (Krutak 2008b; Robitaille 2007).

The final category of tattooing technology is in-line needles, which include both single and grouped longitudinally hafted needles and unhafted linear implements. Ethnographic evidence from the contact-period Eastern Woodlands and Great Plains clearly indicates that indigenous tattooists in these regions were using in-line needles, as opposed to either perpendicularly hafted tools or the skin-stitching method. No examples of perpendicularly hafted or needle-and-thread tattoo implements appear in ethnohistorical accounts or historic ethnographies from the study area.

A number of ethnohistorical accounts (e.g., Bartram 1996 [1791]; Loskiel 1794 [1789]) document the use of simple, unhafted in-line needles for tattooing. However, the single-needle tattoo instrument does not appear to be a universal adaptation in the Eastern Woodlands and Great Plains. In his letters from eastern Canada, Raudot (1904 [1709]:64–65) writes that tattoos were given using “two or three well-sharpened fish or animal bones, which they bind separate from each other to the end of a piece of wood.” The longitudinally hafted, in-line tattoo implement described by Raudot is strikingly similar to tools recorded by Curtis (1907–1930:4:175), Dorsey (1890), Le Page du Pratz (1947 [1758]), James (1905 [1823]), and Long (1791) (see Table 2.1). Le Page du Pratz (1947 [1758]:346) writes that hafting was done “in such a manner that [the needles] only stick out about the tenth part of an inch.” Postcontact tools employing grouped metal needles in this same general configuration are identified by Dumont de Montigny (1753) and are documented historically in the Great Plains by Fletcher and La Flesche and Goodtracks (see Table 2.1; see also the discussion of Eastern Plains tattoo kits by Krutak in Chapter 5 of this volume).

Twenty of the ethnohistorical identifications included in Table 2.1 describe tattoo implements only as needles or awls. Thankfully, other sources provide more specific descriptions, including further identification of material type. These sources allow for the identification of three broad categories of tattoo implements employed in the study area prior to the introduction of European metal needles: faunal remains, botanical materials, and stone tools. The

following discussion of these categories includes ethnohistorical data from Table 2.1, as well as information from the archaeological record, the natural environment, and the handful of formal and informal archaeological identifications discussed previously to provide more insight into the material culture of prehistoric tattooing in the region (Figure 2.10).

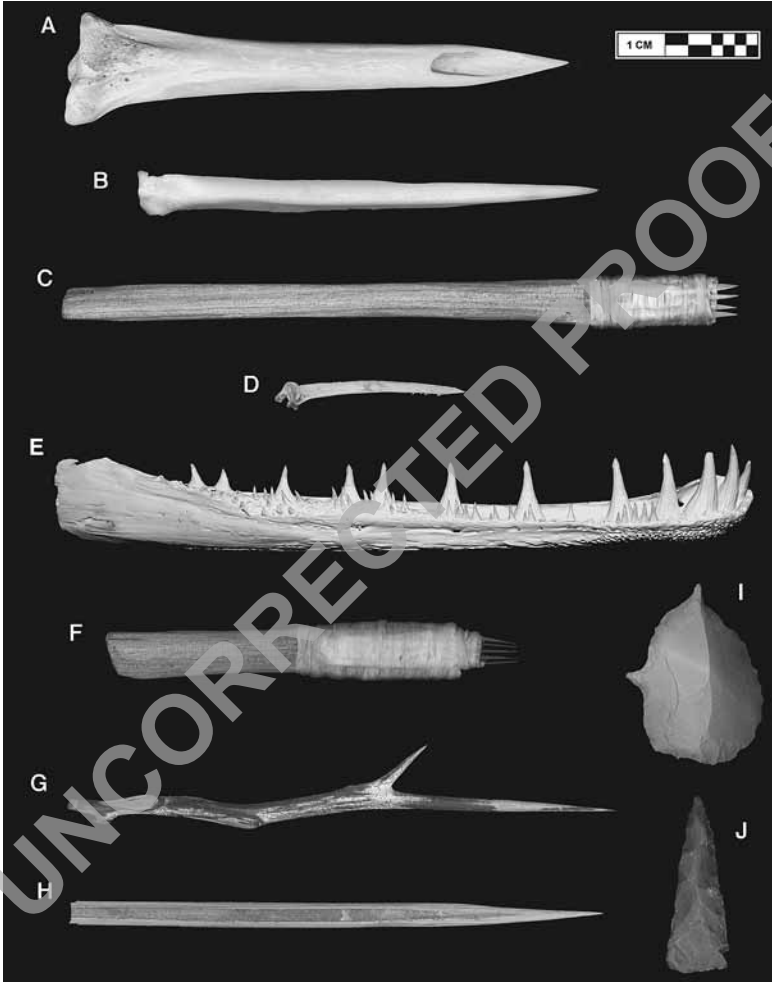


FIGURE 2.10. Reproductions of possible tattoo implements based on ethnohistorical and ethnographic sources: (A) turkey metatarsal awl, (B) deer metapodial awl, (C) hafted splintered deer bone needles, (D) sharpened catfish pectoral spine, (E) alligator gar mandible with partially intact dentition, (F) hafted porcupine quills, (G) honey locust spine, (H) sharpened river cane splinter, (I) chert graver, (J) lithic biface.

— FAUNAL REMAINS —

Nineteen of the ethnohistorical identifications recorded in Table 2.1 specify the use of faunal remains as indigenous tattoo implements. In addition to Lafitau (1977 [1724]:33), who describes tattooing among the Iroquois in eastern Canada with “needles or little bones,” six other sources identify the use of faunal material consisting of small bones, sharpened bones, or bone points, albeit without specifying the specific bone employed or the animal of origin. Two other chroniclers (Raudot 1904 [1709]; Sagard 1886 [1636]) identify fish and animal bones used for tattoo implements, while Curtis (1907–1930:19:156) records that the Otoe tattooed with a “turkey bone containing a rattle.” Finally, La Flesche (1914:68) notes that although the Osage used metal needles during the early twentieth century, certain portions of the tattooing ceremony suggest the tools were originally made from pelican wing bones, which were “used for doctoring as well as for tattooing.”

The obvious candidates for these tools as well as the generalized “needles” identified by Bossu and others are the numerous sharpened bone implements recovered from prehistoric sites throughout the region. These bone tools have generally been classified by archaeologists as needles, awls, or points, and appear throughout the archaeological record, including as mortuary offerings, in residential deposits, and in general midden contexts. In addition to the turkey bone identified by Curtis (Figure 2.10A), raw materials for these tools were procured from a variety of animals including other birds, deer (Figure 2.10B and 2.10C), and fish (Figure 2.10D). Sharpened bones comprise the vast majority of the existing archaeological identifications of tattoo implements from the study area, including those by Allen (2006; see Figure 2.6), Miller (Davis 1966; see Figure 2.7), and Otto (1975). Finally, the fish bones described by Sagard-Théodat (1866 [1636]) and Raudot (1904 [1709]) recall the sharpened spines recovered from Mound Q at Moundville (Jackson and Scott 2002; Knight 2004, 2010; see Figure 2.9A).

Three of the accounts identified in Table 2.1 record that fish teeth were used for administering tattoos, and both Adair (2005 [1775]) and Gatschet (1882) specify the use of garfish dentition. In addition to the family Lepisosteidae (including the longnose, alligator, spotted, shortnose, and Florida gar), there are few other fish from the study area with teeth sizable enough for use as tattoo implements. Exceptions include the bowfin (*Amia calva*) and the northern pike and muskellunge, both members of the family Esocidae. These various species were present throughout much of the prehistoric Eastern Woodlands and to a lesser extent the Great Plains, with one

or more species present in Florida and throughout the Gulf Coast, in Texas and Oklahoma, along the Tennessee, Mississippi, Ohio, Missouri, and St. Lawrence Rivers, and throughout eastern Canada (McClane 1978; Tomelleri and Eberle 1990).

The relatively small size of fish teeth suggests they would not have been extracted from the mandible and hafted prior to use for tattooing, but instead were left set in the jaw, which then served as a handle (Figure 2.10E). According to recent ethnographic research by Jesse Dalton (personal communication, June 2011), both longnose and alligator gar jaws with attached teeth continue to be used for scratching rituals at Hitchiti-Creek busks.

Additional faunal materials from Table 2.1 include split eagle feathers (Goodtracks 2002a) and porcupine quills (Curtis 1907–1930) (Figure 2.10F). Contact-period Native American groups throughout North America used both porcupine quills and eagle feathers for a variety of ritual, decorative, and functional purposes, such as needles for both sewing and surgery (e.g., Fortuine 1985). While use of these materials undoubtedly extended to the prehistoric period as well, their biodegradable nature has largely prevented archaeological identification or recovery.

– BOTANICAL MATERIAL –

Four of the sources identified in Table 2.1 record the use of thorns as tattoo implements. Along the Florida coast, Sparke (Payne 1907:56) records that “they use with a thorn to prick their flesh,” while the Talon brothers (Bell 1987:238) describe the use of “strong, sharp thorns.” Two accounts from eastern Canada identify the use of thorns alongside other tattoo implements. Bressani (1899:251) records that the Huron used “needles, sharp awls, or piercing thorns,” and Jouveney (1896:279) describes tattooing with “awls, spear-points, or thorns.”

The utility of thorns as tattoo implements is supported by comparative anthropological data from a number of indigenous cultures, including examples from the southwestern United States (Russell 1908), Mexico (Pennington 1963), the western and southwestern Pacific (Ambrose 2012; Krutak 2010), South America (Becher and Schütze 1960; Krutak 2006b, 2008b), and China (Krutak 2006a). The thorns employed for tattooing among these comparative groups were used singly or bundled together and could be either held in the hand or hafted to a wooden handle.

There are a number of thorny trees native to the Eastern Woodlands and Great Plains that may have provided the tools for indigenous tattooing.

These include the honey locust (Figure 2.10G) and other members of the genus *Gleditsia*, black locust (*Robinia pseudoacacia*), Osage orange (*Maclura pomifera*), Washington hawthorn (*Crataegus phaenopyrum*), and possibly some species of native buckthorns (*Rhamnus* spp.). While there are also a number of native vines and bushes with thorns, spines, or prickles, comparative data suggest these smaller and less durable examples were not used for purposes of tattooing.

Another botanical material that may have been used for tattooing is sharpened river cane (*Arundinaria gigantea*) (Figure 2.10H). This species grows along the entire eastern seaboard and west through Kansas and Oklahoma (USDA, NRCS 2011). At least one ethnohistorical source from outside the region cites the use of split or sharpened reeds to tattoo (Major 1870:37), while Adair (2005 [1775]:100) records that sharpened cane was used for ritual scratching and cutting. Sharpened cane slivers could easily be the tools that European chroniclers simply described as “needles” in the ethnohistorical record.

Any of the botanical materials described above would have been readily available to prehistoric inhabitants of both the Eastern Woodlands and Great Plains. However, all of these items are biodegradable and are rarely preserved intact in the archaeological record. Instead, their presence in the prehistoric artifact assemblage is typically limited to the recovery of burned or fragmentary materials from feature and midden contexts throughout the region.

— LITHIC TOOLS —

Including the “spear points” (presumably chert projectile points) mentioned by Jouveny (1896:279), this research identified only five examples of lithic tools being used to tattoo. In southern Arkansas, Garcilaso de la Vega (1993 [1605]:413) records that Caddoan peoples used “points of flint” to tattoo their faces. Among the Tuscarora, Heckewelder (1876 [1818]:206) identifies the use of “sharp flint stones.” Long (1791:48) writes that during his own tattooing by the Ojibwa, “where the bolder outlines occur, [the tattooist] incises the flesh with a gun flint.” Finally, Fletcher and La Flesche (1911:503) record that “flint points” were employed by the Omaha prior to the introduction of metal needles.

The prehistoric artifact record of the region is replete with chipped stone tools and the debitage resulting from their manufacture, most of which exhibit at least one sharp point that could have been used to tattoo. Comparative examples of lithic tattoo implements are limited, but include flint

or obsidian points once used by the Ainu in Japan (Van Gulik 1982) and obsidian blades from Melanesia (Ambrose 2012; Kononenko 2012).

The points described by Garcilaso de la Vega (1993 [1605]:413) and Fletcher and La Flesche (1911:503) almost certainly refer to bifacially flaked projectile points or knives (Figure 2.10J). Other formal stone tools that may have functioned as tattoo implements include the Paleoindian graters identified by Painter (1977) and Goodyear (2009a) (Figure 2.10I), and bladelets from Woodland assemblages (see Chapter 3).

Prehistoric lithic debitage also provides numerous potential tattoo implements, and the tools Heckewelder (1876 [1818]:206) described as “sharp flint stones” could be either flakes or flake fragments. Experimental tattooing using lithic flakes has shown that sharp flake edges are better suited for linear cutting (such as butchering or food processing) than for tattooing (Deter-Wolf and Peres 2013). Conversely, the sharp corners and distal tips of flakes performed adequately during experimental analysis.

/ Archaeological Associations and Context for Tattoo Artifacts /

Any of the faunal, botanical, or lithic objects described above are capable of piercing human skin and thereby administering a tattoo, although experimental testing has revealed that these items exhibit varying degrees of relative sharpness and ease of manipulation that could impact their actual utility for that purpose (Deter-Wolf and Peres 2013). Unfortunately, simply recognizing the potential effectiveness of these various tools does not permit conclusive identification of tattoo implements in an archaeological setting. Without additional corroborating data, it would be both unreasonable and irresponsible to suggest that (for example) all sharpened bone awls or lithic graters contained in the archaeological record functioned as tattoo needles.

At the present time there is not a sufficient library of use-wear data with which to distinguish patterns left on stone or bone tools by tattooing human skin from those created by processing other soft hides (Deter-Wolf and Peres 2013). While use-wear analysis may imply that an item was used for tattooing, such a claim must still be supported by supplementary data. For example, protein residue analysis could determine if an implement with appropriate wear patterns also bore traces of human hemoglobin. These overlapping layers of data might allow researchers to present convincing identifications of tattoo needles, albeit on an artifact-specific basis. Unfortunately such examinations are outside the budget and scope of technology for many

archaeological investigations. In the absence of these analyses, convincingly identifying tattoo tools in the archaeological record requires their association with additional tattoo-related artifacts and settings within specific archaeological contexts.

Comparative ethnographic data from tattooing cultures throughout the world reveal that tattoo needles typically exist as part of a larger toolkit that is stored in a specialized context and only handled or deployed by specific individuals (Deter-Wolf 2013). The practice of assembling tattoo equipment and associated ritual paraphernalia within a discrete, culturally identifiable package is also documented historically in the Great Plains, where groups including the Osage, Iowa, Omaha, and Missouri stored their tattoo needles within clan-specific tattoo bundles. These toolkits held significance equivalent to that of war and medicine bundles, and were believed to have been created by the founding ancestors or totemic spirits of the clan (Goodtracks 2002b:1, 2009:18; Skinner 1915b:753). Lars Krutak provides a significant and detailed assessment of traditional tattoo bundles from the Great Plains in Chapter 5 of this volume, and readers should refer to that research for additional information on these items.

Some variation exists among the specific contents of comparative toolkits and Plains tattoo bundles (Bailey 1995; Foster 1994, 2007; Skinner 1926). However, a combination of historic examples from the Great Plains and cross-cultural data allows for the identification of a basic prehistoric Native American tattoo toolkit for the study area. The principal component of the kit consists of one or more in-line implements used to administer tattoos. These might consist of individual devices such as sharpened bones or compound tools comprised of multiple small needles affixed to the tip of a wooden handle. Ethnohistorical sources and the data presented by Krutak in Chapter 5 suggest that Native American tattoo toolkits typically contained multiple tattoo implements, either to provide redundancy in case of a tool failure or to address specific stylistic needs. Along with the needle(s), the proposed toolkit would also likely include items such as stone abraders, lithic tools, or sinew for resharpening and repairing tattoo implements.

The second most essential part of the proposed tattoo toolkit consists of raw materials for creating one or more pigments. These items might include lump charcoal, ochre, and preferred wood, straw, or grasses that could be burned to produce ash. The toolkit would also include utensils for mixing the base material with a liquid to create ink and for applying the pigment to the skin.

Applicators would have consisted of various faunal materials such as bone spatulas and fur, hide, or feathers, while tools for processing and holding the pigment might include a mortar or grindstone, bivalve shells, and ceramic vessels.

The toolkit might also include a variety of medicinal materials and/or ritual accoutrements. Descriptions of historic Plains bundles by Foster (1994, 2007), La Flesche (Bailey 1995), and Skinner (1926) note the inclusion of rattles and feathers used to decorate the tattoo implements, personal adornment worn by the tattooist, incense, numbing agents, bird-bone whistles, and in the case of one Osage bundle, rabbit paws used to brush the irritated skin of the subject (Bailey 1995:55).

The final component of the proposed tattoo toolkit is the storage device itself. Historic tattoo toolkits from the Great Plains were stored inside bundles comprised of one or more wrappings made from woven fiber or the hide or skin of a symbolically important animal. These wrappings were sometimes decorated with designs that mirrored tattoo patterns (see Figures 5.5 and 5.6).

From the hypothetical tattoo toolkit described above, only certain items are likely to survive in the archaeological record. Except under unique circumstances any bundle wrappings, wooden handles, plant-based medicines, and fur, hide, or feather pigment applicators are unlikely to endure in an archaeological setting. Of the entire toolkit, only the actual needles and pigment containers (depending on material type), some vestige of the pigments themselves, and bone or stone materials used for pigment processing, tool repair, or as ritual accoutrements may survive and eventually be recovered through excavation.

The basic materials of the tattoo toolkit that are likely to survive in the archaeological record consist entirely of items that on their own can be assigned a variety of functional interpretations. Therefore, successful identification of tattoo implements within the archaeological record should at a minimum incorporate the presence of one or more potential tattoo tools alongside evidence of raw pigments and pigment storage or processing. Although other elements from the proposed toolkit are not essential to successful identification, they would greatly strengthen any argument for proposed evidence of prehistoric tattooing.

Attempts to successfully identify tattoo implements in the archaeological record must also consider the context from which any potential tools are recovered. Ethnohistorical accounts, ethnographic studies (e.g., Fletcher

and La Flesche 1911; La Flesche 1921a; Skinner 1926), and evidence compiled by other authors in this volume reveal that Native American tattooing was a highly structured event that accompanied profound changes in the social and/or spiritual status of the marked individual. Tattooing took place within consecrated spaces; incorporated highly symbolic, ritually prescribed actions; employed powerful ancestral toolkits; and was performed only by specific, elevated-status individuals.

Although many ethnohistorical sources record the presence of body decoration, few chroniclers were witness to the actual act of tattooing. Two notable exceptions are the accounts of Bossu (1962 [1768]:65–66) and Long (1791:47–49), both of whom describe events surrounding their own body marking and tribal adoption (see Chapters 1 and 4). Both authors relate that their tattooing took place within restricted or consecrated space. Bossu recounts being seated on a wildcat pelt and having the floor prepared with animal skins, while Long describes the construction and use of a dedicated sweat lodge followed by tattooing within the chief's hut. Ritual actions accompanying the tattooing of both men included smoking tobacco and the performance of songs and music. While neither Bossu nor Long were privy to the specific symbolism underlying the tattoo rites, their experiences recall ethnographic descriptions of complex tattooing rituals such as the *Hon'hewachi* ceremony, recorded a century later in the Great Plains and discussed in Chapters 5 and 8 of this volume (see also Fletcher and La Flesche 1911:503–509).

Native American tattooing was performed exclusively by ritual specialists who enjoyed elevated social status and were responsible for curation and deployment of the tattoo bundle (e.g., Bailey 1995:22; Long 1791:48). Bundle keepers passed the toolkit on to the next generation once they had become “incapacitated for tattooing work by old age or loss of eyesight” (La Flesche 1921a:73), although La Flesche (1921a:73) records at least one instance of a tattoo bundle being buried with its keeper. As described by Krutak in Chapter 5, bundles that were not in use were stored in specific locations within the lodge of the bundle keeper or within corporate ritual spaces.

The ritual aspects of the tattooing ceremony, importance of the tattoo bundle, and status of the bundle keeper/tattooist described in ethnohistorical and ethnographic sources provide a significant contextual framework for evaluating identifications of possible tattoo implements from archaeological deposits. Specifically, this evidence reveals that tattoo artifacts are most likely to be successfully recovered and identified from within elite or restricted spaces such as mound summits and ritual structures, or as clustered offerings within the grave of an elite-status individual.

/ Discussion /

Several of the existing archaeological identifications of possible tattoo implements approach the above criteria with varying degrees of success. Painter (1977:30) notes that the presence of ochre and graphite pigments at Paleoindian sites is “of equal value or in fact of most importance” in making an association between graves and tattooing. However, Paleoindian graves are not universally associated with pigments, and in the absence of specific supporting evidence any discussion of these tools should continue to be circumspect regarding a tattooing function.

The bone awls identified by Allen (2006) at Hermitage Springs were recovered from within a Late Archaic mortuary offering and exhibit discoloration on their tips. These artifacts therefore meet the basic criteria of both association and context necessary for identifying potential tattoo implements. Unfortunately, the differential coloring on the bone awls is not conclusively pigment related, and the cache of burial items did not include any additional materials that could be associated with a tattoo toolkit.

In her discussion of the Low Tablet, Otto (1975) makes a case for Adena tablets and whetstones being used to process pigment and sharpen bone needles for tattooing. As part of her argument, Otto cites a burial excavated by Mills (1902) at the base of Adena Mound. That grave contained multiple bone awls, a grooved whetstone, and extensive pigment remains.

The grave from Adena Mound included substantial amounts of ochre around the bones of both lower legs, to the extent that Mills described the area below the knees as “painted red” (1902:469). A grooved whetstone was situated between the shins of the individual, along with three beaver incisors, chert knives and scrapers, and a multi-toothed rib-bone “comb.” Eleven elk-bone awls and a drilled bone needle were deposited beside the exterior of the left shin (Mills 1902:471). This burial from Adena Mound meets all the criteria for archaeological identification of possible tattoo implements, including the presence of sharpened bone tools, pigments, and materials for tool repair and pigment processing, all clustered within an elite mortuary context.

Evidence from Mound Q at Moundville provides the best example to date of possible tattoo implements recovered from a restricted ritual space and associated with both pigments and potentially tattoo-related paraphernalia. In addition to the sharpened fish spines reported by Jackson and Scott (1998), the artifacts of the “pigment complex” include raw coloring material, fragments of stone pallets used to process pigments (see Figure 2.9C), ochre-stained bone implements, and ceramic sherds with pigment on their

interior surface suggesting they were used to hold inks or stains (Knight 2010).

The Mound Q excavations also produced a series of materials that were not included in the formally defined pigment complex, but that are significant in light of the present research. These include a series of sandstone abraders with distinctive U-shaped grooves (see Figure 2.9B), sharpened turkey metatarsals and splintered bone implements (see Figure 2.9D, 2.9F), two spatulate bone tools made from a deer ulna and a deer rib (see Figure 2.9E), and the remains of large specimens of bowfin, alligator gar, and shortnose gar (Jackson and Scott 2002, Knight 2010).

These additional materials from Mound Q stand out because of their correspondence with ethnohistorical data and items proposed for a tattoo toolkit. As discussed previously, several ethnohistorical accounts from the region identify the use of fish teeth, and specifically gar dentition, as tattoo needles. Gar and bowfin are among the few fish from the region with teeth suitable for use in tattooing, and comprise approximately 20 percent of the relatively small sample of fish remains recovered from Mound Q (Jackson and Scott 2003). No faunal inventory has been published for Mound Q and it is unknown what skeletal elements were represented. Regardless, based on the ethnohistorical data, the small number of identifiable specimens (Knight 2010), and the presence of the pigment complex, it is reasonable to assume that the gar and bowfin remains from Mound Q at Moundville were associated with body decoration (tattooing or scratching) rather than feasting or provisioning of the site's elite residents.

When evaluated in regard to a proposed tattoo toolkit, the sharpened bone implements and bowfin and gar remains recovered from Mound Q suggest the presence of multiple in-line tattoo needles. Sandstone abraders with U-shaped grooves provide tools for needle manufacture and resharpening. Finally, the spatulate deer bone implements are strongly suggestive of horn and bone spatulas, or "rubbing sticks," used by the Iowa and Missouriia for applying pigment to the skin during tattooing (Harrington 1913:III, 113; Skinner 1926:265–267). See Figure 5.6 for an illustration of a tattoo bundle that includes these bone tools.

It is important to note that neither the materials of the pigment complex nor the additional artifacts from Mound Q described above originate within a single, discrete context. Instead, proveniences for these materials include summit fill, multiple features, and general midden associations along the mound flanks (Knight 2010). This suggests the finds from Mound Q do not represent a single tattooing event, but rather a long-running association

between the mound summit and permanent body decoration. Instead of a cache or bundle of tattoo artifacts, the finds from Mound Q appear indicative of a fully fledged tattoo workshop.

/ Conclusions /

Prehistoric iconography and the widespread indigenous traditions documented throughout North America at initial European contact suggest that Native American groups throughout the Great Plains and Eastern Woodlands practiced tattooing beginning by at least the first century AD, and possibly much earlier. However, there have been few identifications of tattoo implements from the archaeological record of the region to date.

Ethnohistorical and ethnographic accounts reveal that indigenous Native American tattoo technology consisted of both individual in-line implements and longitudinally hafted compound needles. Tattoo ink was created principally from bases of carbon and ochre prior to the introduction of European trade goods. The materials used to manufacture tattoo needles, tool configurations, and specific pigment ingredients likely varied by region, and possibly by lineage or clan, although there is not sufficient data to identify those variations at this time.

Comparative evidence suggests that ancient Native American tattoo needles are unlikely to have traveled as individual items, but instead functioned as part of larger toolkits associated with both the functional and symbolic aspects of the tattooing process. The intricacies of differential preservation dictate that only a fraction of the overall tattoo toolkit is likely to survive within the archaeological record and be available for modern identification. To successfully identify a tattoo needle in the archaeological record therefore requires at a minimum the convincing association of that artifact with pigment remains, and if possible with an assortment of supporting materials such as implements for pigment processing and application, artifacts for tool repair and maintenance, and varied ritual accoutrements. This identification can be further strengthened by the context of the find, and specifically the deposition of those materials within a ritual or elite setting.

Ethnohistorical accounts of Native American tattooing beginning in the sixteenth century describe a varied, widespread, and ancient tradition, the material culture of which was rapidly replaced by introduced European technologies. The present research has attempted to use ethnohistorical and ethnographic accounts, and the few existing identifications of potential tattoo implements from the Eastern Woodlands and Great Plains to provide

a window into the archaeological footprint of prehistoric tattooing in the region. Careful examination of both existing collections and new archaeological data using the criteria described in this chapter allows us to begin creating a corpus of well-reasoned identifications of potential prehistoric tattoo implements and, in doing so, to acknowledge the material remains of this significant and overlooked aspect of ancient Native American life.

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