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Ancient Ink

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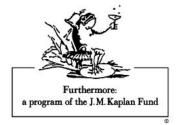
LARS KRUTAK

AND

AARON DETER-WOLF

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Front cover: Egyptian faience figurine with tattoos on truncated legs (ca. 1980–1800 BCE); not to scale. Photograph by Renée Friedman. British Museum, London (EA52863)

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Scratching the Surface

MISTAKEN IDENTIFICATIONS OF TATTOO TOOLS FROM EASTERN NORTH AMERICA

Aaron Deter-Wolf, Benoît Robitaille, and Isaac Walters

RIOR TO ACCULTURATION NATIVE AMERICAN GROUPS THROUGHOUT the Eastern Woodlands of North America engaged in numerous forms of permanent and semipermanent body modification. Specific traditions, their underlying significance, and associated technologies varied widely, but included piercing, ear stretching, dental and cranial remodeling, suspension, scratching, and tattooing. While some of these practices were imposed on individuals as punishment, many were aspired to as marks of social or spiritual achievement and bestowed as part of elaborate public rituals.

Although more than a millennium of Native American body modification is documented in the iconographic, ethnohistorical, and ethnographic record of North America, our understanding of the archaeological footprint of these traditions remains incomplete. Thankfully this pattern has begun to change over the past decade, as objective and informed research has allowed us to reevaluate conventional wisdom and misunderstandings regarding the archaeological record of Indigenous and ancient body modification. Toward that end, archaeological evidence, ethnohistorical and historical data, and use-wear analysis can be combined to reassess archaeological identifications of tattoo tools from North America's Eastern Woodlands. Of specific interest here is the perceived intersection of scratching and tattooing technologies, and a typological dilemma that results from historic misunderstanding of these practices.

Issues in Identifying Tattoo Tools

Successful identification of tattoo tools in archaeological collections from North America or elsewhere requires overcoming issues related to artifact preservation and recovery, culture change, traditional artifact classification systems, and the biases and misunderstandings of previous researchers. Ancient tattoo tools were likely made from a wide variety of resources, including bone, ivory, shell, metal, stone, and botanical materials (Deter-Wolf 2013b). However, many of these materials will not preserve well in the archaeological record. Depending on the site setting and soil chemistry, items including thorns, small bones, and biodegradable elements such as wooden handles, leather wrappings, fiber bindings, and feathers are unlikely to be preserved.

For those tattoo tools and tool elements that do survive, successful archaeological identification may be hindered by recovery and processing techniques. The ¼-inch mesh screens that are standard for North American archaeology may not catch small tools and tool fragments. In addition, overly enthusiastic artifact cleaning and the application of preservatives or chemicals intended to stabilize an artifact can obliterate or mask suggestive use-wear patterns and residues.

Traditional tattoo technology from North America and throughout the Indigenous world changed dramatically beginning in the fifteenth century following the introduction of European trade goods. Steel sewing needles were rapidly and widely adopted following first contact, and in many places they quickly replaced Indigenous tattoo tools (Ibid.:43). This initial culture change was followed by centuries of forced missionization and acculturation, which included the suppression of Indigenous tattoo traditions, resulting in the knowledge of traditional tattoo tools being largely lost. As a result, archaeologists investigating precontact sites in North America do not have reliable documentation of Indigenous tattoo tools to compare with their collections.

Because of this lack of comparative data, many possible tattoo tools have been subsumed into traditional artifact classification schemes (Deter-Wolf 2013a:21; Tassie 2003:86). For example, pointed bone tools will typically be assigned to a functional category such as awls or needles, while stone implements could be catalogued and reported as gravers, points, or blades. Archaeologists may also assume that minimally reworked faunal materials constitute food remains rather than tools, and as a result, specific elements such as fish teeth or spines that could have been used to tattoo may never be individually examined beyond initial species identification.

Finally, archaeological identification of tattoo tools can be hindered by antitattoo bias and scholarly misunderstandings of the practice. Until recently, academic treatment of tattooing and other forms of body modification was filtered through the lens of Western and Judeo-Christian history, in which these traditions were regarded as curiosities or marks of barbarism rather than integral parts of Indigenous cultural expression. These biases were inadvertently reinforced in the 1980s and 1990s by well-intentioned but misinformed studies fixated on body modification as a facet of the



Map 13.1. North America's Eastern Woodlands, identifying historically documented Native American tattoo traditions.

"Modern Primitive" movement (Lodder 2011). The net result of this process has been an academic discourse largely disconnected from any methodological and/or technological understanding of Indigenous tattooing and body modification.

Tattooing in the Eastern Woodlands

The Eastern Woodlands of North America comprise a regional culture area beginning along the coastal margins of the Atlantic seaboard and Gulf of Mexico, spreading north to the subarctic regions of Canada and generally bounded to the west by the Mississippi River (map 13.1). This vast region is home to Indigenous Native American peoples, who over some thirteen millennia prior to European contact left behind an archaeological record indicative of their complex and varied cultures.

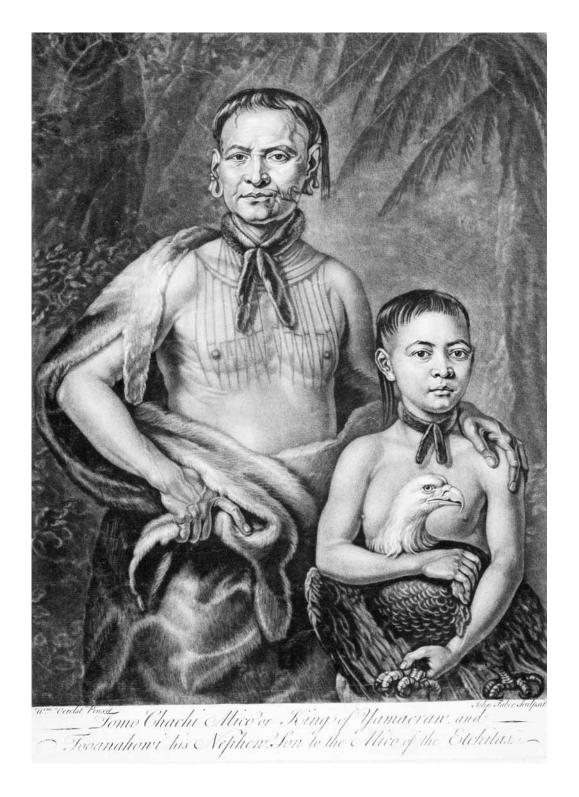


Fig. 13.1. Tattoo marks on the Yamacraw leader Tomochichi. Mezzotint by John Faber the Younger (1739) based on a 1735 painting by William Verelst.

Although the exact antiquity of tattooing in the Eastern Woodlands is unknown, ancient art from the region as well as from the neighboring Great Plains suggests that traditions of permanent body marking may have existed as early as the first centuries CE, during the Woodland period of regional prehistory (ca. 1000 BCE to 900 CE) (e.g., Steere 2013). A rich body of figural art suggests these traditions flourished during the ensuing Mississippian period (ca. 900 to 1600 CE). The ubiquity of pre-contact Native American tattoo traditions is perhaps also reflected in accounts of Europeans and Euro-Americans who traveled through the region beginning in the sixteenth century. Historic accounts from that time document that many, or perhaps most, Native American societies of the Eastern Woodlands practiced tattooing prior to acculturation (see map 13.1), including the Timucua, Chickasaw, Choctaw, Chitimacha, Natchez, Muscogee, Yuchi, Cherokee, Virginia Algonquian, Quapaw, Mohawk, Delaware, Seneca, Illinois, Menominee, and Ojibwe (Deter-Wolf and Diaz-Granados 2013; Krutak 2014a) (fig. 13.1).

The Indigenous tattoo traditions of the Eastern Woodlands were broadly extinct by the mid-nineteenth century as a result of prolonged acculturation and cultural fracturing caused by epidemics, forced removal, and relocation. This process took place prior to any formal study or documentation of tattooing practices, and consequently specifics of tattooing in the region remain poorly understood. To the west on the Great Plains, groups including the Osage, Ioway, Omaha, and Cree did not suffer the impacts of disease and forced relocation to the same extent as groups east of the Mississippi. Consequently the tattoo traditions among these peoples, including their associated rituals and material culture, endured for at least another half century and were documented through ethnographic study. These accounts contain much more specific information about Native American tattooing than exists for the Eastern Woodlands, and so serve as an invaluable comparative data set.

Although limited in scope and specificity, historical accounts and the art historical record have nevertheless allowed us to gain some understanding of Native American tattooing in the Eastern Woodlands during the sixteenth through eighteenth centuries CE, and thereby hypothesize regarding pre-contact traditions. The motivations for tattooing varied somewhat by tribal affiliation and gender (Krutak 2013d, 2014a; Wallace 2013). Tattooing among Native American men in the Eastern Woodlands broadly served to invoke guardian spirits, document war honors, and signal group affiliation. These marks were applied incrementally during an individual's life to commemorate rites of passage and feats of bravery. While documentation of tattooing among Native American women in the Eastern Woodlands is far more meager, the marks likely indicated adulthood, and identified family and/or group membership. Tattoos on both men and women demonstrated elevated social status, and in the Great Lakes region medicinal tattoos were also used to treat specific pains and ailments (Krutak 2014a).

Native American tattoo technology in the Eastern Woodlands varied widely prior to European contact, and included single-point and multipoint tools made from animal bone, fish teeth, stone, and possibly thorns and other botanical material (Deter-Wolf 2013b). These tools were applied directly to the skin through the technique known today as hand-poking. Tattooing mainly employed carbon-based pigments inserted into the skin at the tip of the tattoo implement or introduced by rubbing onto the punctured skin surface.

To date there are three extant, documented examples of historic Native American tattoo toolkits from the Eastern Woodlands. Two kits collected in the early twentieth century among the Menominee in Wisconsin now reside in the collections of the American Museum of Natural History (plate 16) and the Oshkosh Public Museum (fig. 13.2). A third kit collected by American anthropologist and ethnographer Frances Densmore among the Ojibwe (Chippewa) is now in the collection of the State Historical Society of North Dakota (fig. 13.3). Both Menominee kits contain wood or plant charcoal used as a base for tattoo pigment, and all three toolkits include surfaces for mixing and holding ink. The Ojibwe example and that from the American Museum of Natural History both include bark or bentwood containers, while the Menominee kit from the Oshkosh Public Museum includes a pigment-stained ceramic sherd that apparently functioned as a palette. Most importantly, all three kits contain tattoo implements consisting of wooden handles between 120 and 160 mm long with either four (Menominee) or five (Ojibwe) metal needles hafted longitudinally to the end of the handle using thread or cordage. The tines on these tools are set slightly apart from one another at 1- to 2-mm intervals, with the total width of the tips measuring less than 9 mm.



Fig. 13.2. Early twentieth century Menominee tattoo tool, made from metal needles tied to the end of a wooden handle. Image courtesy the Oshkosh Public Museum (Object ID 192.5.14.10).



Plate 16. Early twentieth-century Menominee tattoo toolkit collected by Alanson Skinner in 1912 in Wisconsin for the American Museum of Natural History. The kit contains paper bundles of wood charcoal, a bent birch-bark pigment container, and a four-point tattooing tool comprised of steel needles tied to the end of a wooden handle. Image courtesy of the Division of Anthropology, American Museum of Natural History (Catalog No. 50.1/6643 A-E).





Plate 17. Examples of historic Native American scratchers: (top) turkey bone tines with bent turkey quill frame, collected from the Eastern Band of the Cherokee Indians in 1888 (National Museum of Natural History catalog #E130488-0); (bottom) steel sewing needles set within a hollowed palmetto stem, acquired from the Seminole in 1956 (National Museum of Natural History catalog #E397141-0).

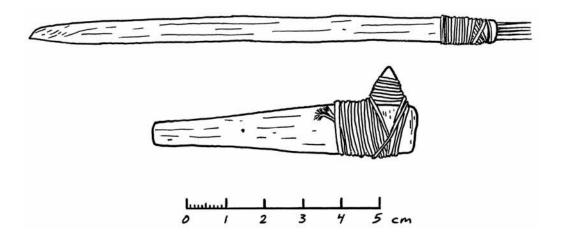


Fig. 13.3. Tattooing (top) and bloodletting (bottom) implements from an early twentieth century Ojibwe tattoo kit. The tattoo tool has metal needles at the tip, while the "lance" has a triangular flint blade. Both feature wooden handles (North Dakota State Historical Society, Catalogue SHSND 694). Drawing by Aaron Deter-Wolf.

In her 1928 report to the Bureau of American Ethnology, Densmore (1928:333, plate 46) references the Ojibwe tattoo tool as a "surgical appliance," and describes its use in inserting medicinal pigment comprised of carbonized plant remains, bear gall, and water beneath the skin. This process was undertaken as a means of treating headaches, rheumatism, and goiters rather than being part of a decorative tattoo tradition. Indeed, by the time Densmore collected this tool, tattooing among the Woodland peoples had been reduced to a strictly curative/therapeutic practice that survived alongside medicinal bloodletting.²

The Ojibwe kit also includes an implement consisting of a small (~10 mm) triangular flint blade set at 90-degrees into the end of a 70-mm-long tapered wooden handle (see fig. 13.3), along with a replacement blade and leather tool cover. Densmore (1928:333, plate 46) identifies this tool as a "lance," and in accompanying text describes that it was "tapped with the thumb and finger of the right hand" to create a gash for letting blood.³ In some cases, an accompanying funnel made from a hollowed-out horn was placed over the incision and the other end sucked on by the practitioner to encourage blood flow.

The coexistence of bloodletting tools and tattooing tools within the same toolkits among both the Ojibwe and Menominee led to some historical misunderstandings about which implements were actually used to tattoo. Ethnographer Huron Smith (1923:350) records that, among the Menominee, "Some of the men have 'tattooing outfits,' which are not really tattooing outfits as we understand the term, but rather blood-letting instruments." Similar cases of misidentification are also well documented in the Oceanian context, where bloodletting instruments have repeatedly been confused with tattooing tools (Robitaille 2007:161).

Scratching

Confusion regarding identification and function of bloodletting and tattooing tools is also present in examinations of ancient Native American culture. Excavations at prehistoric sites throughout the American Southeast and Midcontinent have recovered sets of small, split bone implements which, when found in situ, were often arranged parallel to one another and recovered from burials (fig. 13.4). Most of these tools date to the Mississippian period of regional prehistory, although some examples have also been recovered from the preceding Woodland period.⁴

The Woodland period is marked archaeologically by increased population sedentism corresponding to the spread of horticulture, ceramic production, construction of earthen mounds, increased social stratification, and the appearance of regional ceremonial complexes such as the Adena and Hopewell. The Mississippian period is the final prehistoric stage in the region, and is identified by widespread adoption of maize agriculture, settlement of permanent, sometimes fortified villages, a proliferation of mound sites overseen by complex chiefdoms, and the presence of distinctive art and ritual practices linked to influence from the paramount site of Cahokia along the Mississippi River near St. Louis, Missouri. While some Mississippian chiefdoms began to decline by the late fourteenth century CE because of factors including regional drought and political turmoil, in some areas Mississippian societies persisted until after European contact. Although the introduction of European diseases and armed conflicts caused dramatic upheaval and ultimately brought about the collapse of Mississippian chiefdoms, many precontact cultural elements and ritual practices persevered among subsequent Native American groups.

There is a clear and well-recognized connection between the sets of archaeologically recovered multipoint bone implements and compound tools used historically for scratching rites among various Native American groups including the Cherokee, Muscogee, Yuchi, Catawba, and Seminole (plate 17). During scratching rites, these tools were dragged across a recipient's limbs and torso deeply enough to draw blood. Scratching was performed in conjunction with stickball games and annual community-wide ritual events, where it served to purify and fortify participants. 5 Variations of the practice were also used for therapeutic and punitive purposes (e.g., Buswell 1972:182-87; Mooney 1902:476). In 1902, ethnographer James Mooney described a scratching rite among the Cherokee that was performed as part of instruction in tribal lore: "They sat up all night talking, with only the light of a small fire burning in the middle of the floor. At daybreak the whole party went down to the running stream, where the pupils or hearers of the myths stripped themselves, and were scratched upon their naked skin with a bone-tooth comb in the hands of the priest, after which they waded out, facing the rising sun, and dipped seven times under the water, while the priest recited prayers upon the bank" (Mooney 1902:230).

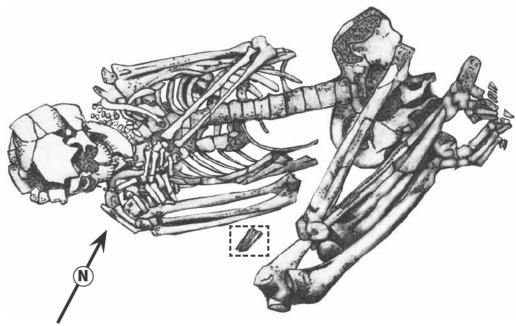


Fig. 13.4. Drawing of Burial 6 from the Town Creek site (31Mg2), Montgomery County, North Carolina, (ca. 1150–1250 CE), and in situ view of the associated turkey bone scratcher. Photograph courtesy of the Research Laboratories of Archaeology, University of North Carolina at Chapel Hill (RLA Neg. No. 141, taken by J. L. Coe, 1937).



Historic examples of scratching tools generally consist of split bone or metal needles set separate from one another within a frame made from a bent feather shaft or wood block. Some Native American groups used other tool types for scratching, including snake teeth, thorns, and garfish jaws. However, this discussion focuses only on the multipoint bone implements, which have been mistaken by some researchers as being tattoo tools.

SCARIFYING AND SCARIFIERS

Modern ethnographic discussions now refer to the ritual activity described previously as "scratching." However, for five centuries many European and Euro-American sources identified the practice as "scarification." This terminology dates back to a 1768 account from among the Muscogee by French captain and explorer Jean Bernard Bossu (Bossu 1768:24–25, as cited by Swanton 1928:365),7 which may also be the first European documentation of Native American scratching. The use of the term *scarification* in this

context is technically correct from a historical European language perspective, since the English word *scarify* is ultimately rooted in the Greek *skariphasthai* (σκαρῖφᾶσθαι, "scratch an outline"), from *skariphos* (σκάρῖφος, "stylus") (Oxford English Dictionary 2016). By the fifteenth century the verb *scarify* was used in both French and English to reference shallow incisions made in the skin, particularly for medical purposes.

Over the past half century the term *scarify* has undergone considerable semantic drift, and is now used primarily to reference the deliberate creation of culturally significant scar tissue (e.g., Demello 2007:235). Traditional scarification practices take on a variety of forms, including the insertion of inert material within a wound to create a raised keloid, cutting or chiseling flesh to create patterns of scar tissue, and the removal of strips of flesh (e.g., Pales 1946). Regardless of the geographic, temporal, or cultural setting of the various forms of scarification, they all share intent: the voluntary intentional creation of visible scar tissue.

A form of scarification was practiced historically on North America's Great Plains, where Native Americans including the Arapaho, Crow, Lakota, Blackfoot, and Hidatsa used metal or flint knives to remove flesh offerings during mourning rituals, rites of passage, and ritual events such as the Sun Dance. In 1896 James Mooney recorded a particularly vivid description of this process and its intent as performed by the Arapaho Chief Black Coyote, or Watonga (fig. 13.5):

In his portrait . . . a number of scars will be noticed on his chest and arms. The full number of these scars is seventy, arranged in various patterns of lines, circles, crosses, etc., with a long figure of the sacred pipe on one arm. According to his own statement they were made in obedience to a dream as a sacrifice to save the lives of his children. Several of his children had died in rapid succession, and in accordance with Indian custom he undertook a fast of four days as an expiation to the overruling spirit. During this time, while lying on his bed, he heard a voice, somewhat resembling the cry of an owl or the subdued bark of a dog. The voice told him that if he wished to save his other children he must cut out seventy pieces of skin and offer them to the sun. He at once cut out seven pieces, held them out to the sun and prayed, and then buried them. But the sun was not satisfied, and soon after he was warned in a vision that the full number of seventy must be sacrificed if he would save his children. He then did as directed, cutting out the pieces of skin in the various patterns indicated, offering each in turn to the sun with a prayer for the health of his family, and then burying them. Since then there has been no death in his family. In cutting out the larger pieces, some of which were several inches long and nearly half an inch wide, the skin was first lifted up with an awl and then sliced away with a knife. This had to be done by an assistant, and Black Coyote was particular to show me by signs, sitting very erect and bracing himself firmly, that he had not flinched during the process. (Mooney 1896:898)

In addition to the scars from his flesh offerings, Black Coyote also owned chest tattoos (Krutak 2014a:162). These marks are visible as nested circles in the portrait that accompanies Mooney's account (see fig. 13.5), and functioned as tribal identifiers. Unlike the flesh offerings described previously, Black Coyote's tattoos were applied to his skin using bundled yucca spines.

Native American scratching did indeed leave behind faint scars. In 1953, author and ethnographer Louis Capron wrote: "You can always tell, for several months thereafter, when a Seminole has been to the Green Corn Dance. The scratch marks will show below his sleeve" (Capron 1953:192). However, unlike the Arapaho flesh offerings, the creation of visible scar tissue was not the principal, intended outcome of scratching rites. Rather, the importance of these rituals lies in the release of blood. Consequently it has been suggested that scholars abandon the term *scarification* when discussing Native American scratching: "For though scarring produces blood and blood-letting may produce scars, ambiguity will be reduced if the intended function of the rite is permitted to dictate the terminology" (Buswell 1972:193–94). Nevertheless, use of the terms *scarification* and *scarifiers* to reference Native American scratching rituals and tools has persevered among some archaeologists and museums.

Within the archaeological literature, individual components of the multipoint bone scratching tools described previously and illustrated in fig. 13.4 have been identified variously as pins, needles, and awls. However, when recognized as the elements of a compound tool, they are typically addressed as *scarifiers* both in typological classifications and in functional descriptions. Because these tools are indeed used to make shallow incisions in the skin, use of the term *scarifier* is—once again—technically correct from a European linguistic perspective. However, employing this terminology ignores modern understandings of both body modification and Native American scratching, and contributes to ongoing confusion regarding Native American body art.

Discussion

Confusion regarding the functional use of the multipoint bone tools is additionally complicated by analyses suggesting the artifacts were used both for scratching and tattooing. Contrary to these interpretations, there are no ethnographic studies documenting Native American use of these distinctive tools for any purpose other than scratching. The proposed dual function of scratchers as tattoo tools is also entirely unsupported in the ethnohistorical and archaeological data. Moreover, in the world sample of tattooing cultures, there are no examples of needle-based tattoo implements also being used for other forms of body art. Even the Maori of New Zealand, whose combination of tattooing and scarification led many observers to believe their facial markings were the result of a dual-function operation, actually employed separate, specific tools for the chiseling and tattooing aspects of *moko* (Te Awekotuku 2007).

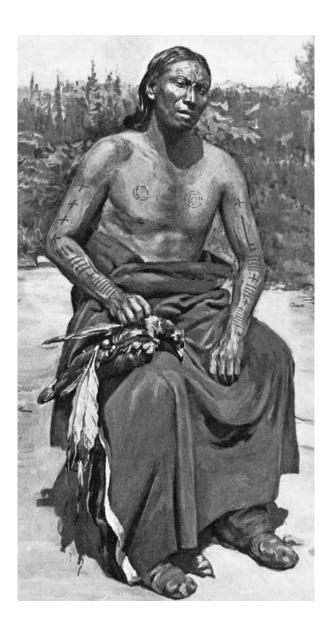


Fig. 13.5. Scars on the arms and tattoos on the chest of the Arapaho man Black Coyote (Watonga) (1896 CE). After Mooney 1896: plate CV.

Instead, the traditional assignment of a joint bloodletting/tattooing function to Native American scratchers appears to be based entirely on secondhand conventional wisdom.

There are only a few European ethnohistorical accounts describing multipoint, compound tattoo implements from the Eastern Woodlands, including five from the eighteenth century CE, and two from the twentieth century. These accounts record tattoo tools consisting of between two and twelve metal needles arranged beside one another on the tip of a handle. In Louisiana, French historian and naturalist Antoine-Simon Le Page du Pratz (1947 [1758]:346) describes "six needles in a piece of wood in two rows, in such a manner that they only stick out about the tenth part of an inch," while in eastern Canada 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" (Raudot 1904 [1709]:64–65). Among the twentieth-century Menominee in Wisconsin, ethnologist Alanson Skinner (1921:134) records a tattoo tool "composed of several [bone] needles set in a handle made of the thick, strong quill of some large bird, from which the covering had been stripped. The upper end had been folded over and thrust into a longitudinal slit made in its own shaft. The needles were fastened in a row in the distal end."

In his seminal work *The Southeastern Indians*, anthropologist and historian Charles Hudson (1976:30) wrote that after European contact, "in some places tattooing was done with five or six needles tied to a small piece of wood in such a way that all the points were aligned like the teeth of a comb." This statement is presumably based on the same ethnohistorical data outlined previously, although no source is provided. Hudson then goes on to note that Southeastern groups used "an instrument like this *not to tattoo*, but to administer ritual scratching" (emphasis ours). As exemplified by the initial passage from Hudson, it is possible to confuse historic Native American tattoo implements with multipoint scratchers based only on ethnohistorical descriptions, since both tool types consist of needles or sharpened bones hafted parallel to one another on a piece of wood or bent feather shaft. This similarity may also explain initial misconceptions of the joint scratching/tattooing function of scratching tools. However, through recent research we can now link ethnohistorical descriptions of tattoo implements from the Eastern Woodlands to actual ethnographic examples of Native American tattoo tools (see plate 16, figs. 13.2–13.3).

While both multipoint scratchers and tattoo implements exhibit sets of parallel tines, there are important technological differences between the tool types with regard to the arrangement of needles and the hafting style. The individual points on scratchers are spaced 5 to 7 mm apart in most historic examples, resulting in a total tool width that typically exceeds 30 mm. This arrangement reflects the intended purpose of the tool, which is to create shallow, parallel cuts.

The 1- to 2-mm tine separation and total tip width of >9 mm exhibited for the Eastern Woodlands tattoo toolkits described previously appear somewhat wider than the needle spacing on comparative historic tattoo tools from the adjacent Great Plains. Multipoint implements from that region, including examples collected from among the Osage, Plains Cree, Ioway, and Missouria (fig. 13.6) exhibit needles typically set more closely adjacent, though with similar total tip widths. Regardless, the needle spacing and tip width of historic tattoo tools from both the Eastern Woodlands and Great Plains present a clear technological benefit over widely spaced scratcher tines, in that they allow a tattooist to more easily create both individual solid lines and solid color infill within discrete areas. The wide tool widths and widely spaced tines found on scratchers would be impractical for tattooing any design other than equally spaced parallel lines and/or dots, and even in this regard would be largely limited to flat areas of the body. There are no credible depictions of historic Native American tattoos that show such patterns.



Fig. 13.6. Osage tattoo tools consisting of metal needles tied to the ends of wooden handles (late nineteenth or early twentieth century). The opposite ends feature folded quill rattles (Manuscript 4558, Box 33, National Anthropological Archives, Smithsonian Institution, Suitland, Maryland).

Finally, the long, narrow handles of historic tattoo tools allow them to be held and manipulated between the thumb and first two fingers like a brush or pencil, providing control over the depth and angle of puncture. These handles also facilitate the attachment of significant ritual paraphernalia such as feathers, bells, and rattles. This hafting technique stands in contrast to the square or rectangular wood and feather-shaft frames of historic scratching implements, which are designed to be held firmly between the thumb and three to four fingers as they are pulled downward or laterally across the flesh of the recipient.

Broadening the comparative scope, Native American scratchers are substantially wider, and most important, their points are much more widely spaced in relation to one another than almost all tools from the worldwide sample of Indigenous tattoo implements. Other examples of wide multipoint tattoo tools do appear historically in far eastern India, Myanmar, and Oceania. However, like the Native American tattoo tools and unlike scratchers, those comparative implements all exhibit closely spaced teeth. In addition, as described and illustrated by Furey (in chapter 11, this volume), the wide tools from these other areas tend to be specialized parts of multi-implement tattoo kits. They were used for creating wide lines and broad fills, and are accompanied by additional significantly narrower implements. No such additional tools are associated ethnographically or archaeologically with Native American scratchers.

Finally, the microscopic use-wear patterns created on bone scratchers clearly indicate these tools were not used to tattoo. Experimental use-wear analysis has demonstrated that tattooing with sharpened bone implements results in overall rounding of the apical tip, flattening of bone fibers, and smoothing of manufacturing patterns along the longitudinal axis within the final 3 mm of the tool tip (Gates St-Pierre 2017; see also Deter-Wolf and Clark, chapter 16, this volume). Overall, these wear patterns are consistent with repeated linear piercing of soft or wet hide to a very shallow depth.

In 2013 the senior author of this essay examined use-wear patterns on two sets of Mississippian multipoint bone artifacts identified as *scarifiers* and housed in the collections of the Illinois State Museums (ISM) at Dickson Mounds Museum in Lewistown, Illinois. These included ten bird bone points from the site of Dickson Mounds and seven split bone implements from the Vandeventer site, both in Illinois. The tools from Dickson Mounds were recovered from Burial 475, the grave of an adult male, where they were arranged parallel to one another above the right shoulder, forming a multipoint implement approximately 70 mm wide (Harn 2013). The individual tines measured between 7.3 and 7.6 cm in length and lay touching or slightly separated from one another, all with their tips oriented toward the feet of the buried individual. No specific provenience or positioning is known for the examples from Vandeventer.

Microscopic use-wear examinations revealed that the tips of the individual bone points varied from slightly rounded to beveled, and in some cases bi-beveled. All seventeen tools exhibited longitudinal striations consistent with manufacture and

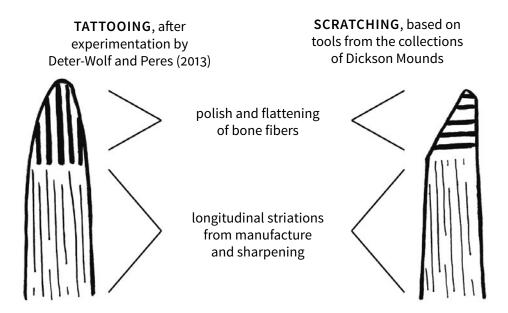


Fig. 13.7. Schematic representation of use-wear analysis on bone tools, comparing the results of experimental tattooing (left) with wear patterns on Mississippian period scratchers (ca. 900 to 1600 CE) from the collections of the Illinois State Museum, Dickson Mounds (right). Drawing by Aaron Deter-Wolf.

sharpening on an abrasive stone surface. However, none exhibited flattening of bone fibers or smoothing of manufacturing patterns at the tips consistent with directly piercing skin or soft hides. Instead, these tools exhibit transverse polish running perpendicular to the tool shaft (fig. 13.7), wear patterns that are consistent with being dragged in a linear fashion through soft hide or skin at a shallow depth, rather than being used in a piercing motion.

Conclusions

Scarification, scratching, and tattooing are not the same. They are fundamentally different forms of body modification, and for their Native American practitioners were associated with distinct rituals, imbued with different meanings and symbolism, and performed with separate tools. While to non-Native observers the tools used for these different activities may share certain general characteristics, they were not the same implements and are not functionally or ritually interchangeable. Although scholars have generally abandoned the term *scarification* to describe Native American scratching rites, the word has persevered as a typological category and descriptor for the unique multipoint compound tools with which the activity was historically performed. Moreover, these tools are often erroneously identified as having been dual function—being used for both scratching and tattooing. These misunderstandings have led archaeologists to misidentify the actual role of these tools, and in doing so, to misinterpret Native American ritual practices and traditions of body alteration. Based on the data presented here, scholars can perhaps now abandon both the scarifier typology and misidentification of a tattooing function for these tools once and for all, and instead discuss the distinctive artifacts of Native American body modification in terms meaningful to their actual use.

Notes

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- 1 See Harrington (1913); La Flesche (1921, 1930); and Skinner (1926).
- 2 Hilger (1992 [1951]:93-95); Landes (1937:138); Skinner (1921:133).
- The resemblance between this instrument and European bloodletting fleams is so striking as to suggest that the form of the Ojibwe tool may have resulted from post-contact Euro-American influence.

- The examples of these tools recovered from Mississippian contexts are too numerous to exhaustively summarize here; see, however, Coe (1952:309, 1995:238–40); Conrad (1991:147, 149); Goodman (1984:14); Harn (1980:16, 26); Jolley (1978:58); Kimball et al. (2010:46); Morse (1960:346); Morse and Morse (1990:58); Morse et al. (1961:126, fig. 75); Perino (1968:61); Santure and Esarey (1990:88, 91, 104); Williams (1954:247); and Winters (1974:38). For a Woodland period example, see Mills (1904:47).
- Gilbert (1943:195); Mooney (1902:230, 476); Speck (1909:115, 121); Sturtevant (1955:177–79).
- 6 See, for example, Howard (1990:137), Lawson (1709:43), and Peres and Deter-Wolf (2016:109, table 10.2).
- 7 "Le harangue finie, le Chef leur fait des scarifications aux cuisses . . ." (Bossu 1768:24–25).
- 8 For example, MacLeod (1938); Voget (1998:43-44); Weitzner (1979:254-55).
- 9 For example, Conrad (1991:147, 149); Goodman (1984:14); Harn (1980:16, 26); Jolley (1978:58); Morse (1960:346); Morse and Morse (1990:58); Morse et al. (1961:126, fig, 75); Perino (1968:61); Polhemus (1998:225); Santure and Esarey (1990:88, 91, 104); and Wilson (2010:574).
- Boudreaux (2005:335); Kimball et al. (2010:46); Santure and Esarey (1990: 89–91); Strezewski (2003:240); Tubbs (2013:195, 197).
- Bonin (1887:218); Dumont de Montigny (1753:140); Hilger (1992 [1951]:94); Le Page du Pratz (1947 [1758]:346); Long (1791:48); Raudot (1904 [1709]:64–65); Skinner (1921:134).
- Although less widespread than the better known Oceanic examples, multi-instrument tool sets featuring wide needle arrays along with narrower combs and suited to a variety of functions are also known to have been used among some Naga groups of far eastern India and northwestern Myanmar. One such set was notably collected by the early twentieth century ethnographer Henry Balfour among the Konyak Naga at Tamlu. These tools are now part of the collection of the Pitt-Rivers Museum at Oxford University, England (Accession numbers: PRM1936.4.11, PRM1936.4.12, PRM1936.4.13, PRM1936.4.14, PRM1936.4.15, PRM1936.4.16, and PRM1936.4.17).