

Ohio Hopewell Depictions of Composite Creatures

Part I—Biological Identification and Ethnohistorical Insights



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Abstract

Hopewellian peoples in southwestern, south-central, and north-central Ohio sculpted, engraved, and cut out six depictions of creatures that combine the bodily elements of different ordinary animals. Detailed zoological identification of the component animals documents that all were associated with the underwater-underground realms of historic Woodland and Plains Indian cosmoses, in contrast to some later Mississippian and Historic period composite creatures with both sky and water-earth associations. However, strong continuities are found in the kinds of underwater-underground creatures known to historic Woodland-Plains and prehistoric Ohio Hopewellian Indians. A survey of historic Woodland and Plains knowledge about underwater-underground creatures sheds light on both their helpful and harmful roles and the very wide spectrum of domains of life they affected, in contrast to some current Woodland ethnographic, ethnohistorical, and archaeological lines of interpretation that caricature the creatures as harmful and gloss over purposes of Ohio and Illinois ceremonialism other than world renewal.

*For Robert L. Hall
with thanks for opening the path.*

We cannot really interpret prehistory without making a conscious attempt to understand the nature of humans as symbol-using social animals affectively involved in a perceived world that they have helped to create.

(Hall 1977:515)

The motivations that led Hopewellian peoples in Ohio to create their awe-inspiring material legacy and richly meaningful cultural lives have fascinated Western minds for centuries. What led Hopewellian peoples to gather by the hundreds to build huge earthen monuments the size of 40 to 100 football

fields and designed to precise solar, lunar, and intersite alignments? To make dangerous, near continental-scale journeys to lands of glistening stones and metals? To risk shaping these powerful materials into elaborate animal and geometric forms and to bury some of their beloved deceased kin in the midst of these potent works and monuments?

Among the striking and, to us, curious creations of Hopewellian peoples in Ohio are the sculptures, cut-outs, and engravings of creatures that are each the composite of multiple, nonhuman animals. There are a total of six currently known from across Ohio. These include, as will be identified biologically in this article, a four-“horned” carnivore-rattlesnake-perhaps- salamander, a six-“horned” rattlesnake, a rattlesnake that possibly had protrusions of a kind on its head, a fish-alligator/caiman, a salamander/fish-rattlesnake, and a crocodile-snake (Figure 1a–f). Although fantasies to us, they seem to have been as real to Ohio Hopewell peoples as other ordinary animals. The artworks are detailed, rendered in styles similar to the ways the Hopewell depicted ordinary animals in two and three dimensions (Figure 2a, b).

What are these enigmatic creatures that Ohio Hopewell peoples knew in such detail? What were their roles in the cosmoses and social lives of the Hopewell? Why were Hopewell peoples motivated to render the creatures materially and employ them in ceremony? And do they offer further insight into the motivations behind any of the other grand material expressions of Ohio Hopewell peoples?

To answer these questions well requires the integration of at least five kinds of analysis and information: (1) the firm biological identification of the animals whose parts comprised each of the depicted composite creatures; (2) an assessment of the archaeological contexts of each depiction; (3) a consideration of the entire excavated corpus of such Ohio Hopewellian creatures as a whole, also providing context for each depiction; (4) systematic inventory of relevant, historic Woodland and Plains Native American narratives about such creatures; and (5) sensitivity to historic Woodland and Plains Indian culture, including notions of personhood and diversity of ceremonies.

This article is the first of two that closely intertwine these five kinds of analysis. In this article, we first make detailed biological identifications of the animal parts that compose each creature, for the entire corpus of six, plus one supporting image that is not a composite representation. Biological alternatives or generality or ambiguity are reported in the same vein as more certain identifications, a practice that seems especially relevant to studying Hopewell artworks, which commonly emphasize fluidity and transforma-

tion (Carr and Case 2005:199–202). All of the animals found to comprise—or possibly comprise—the composite creatures were associated by historic Woodland and Plains Indians with the underwater-underground realms of their cosmoses. The article then presents a fairly wide but not complete survey of historic Woodland and Plains Native American narratives, views, and rites about creatures similar to the Ohio Hopewell ones, describing the cosmological places and social roles of the historic creatures. Substantial continuity between historic and prehistoric Woodland cosmological notions of composite creatures is found. Attention is also given to the reported helpful as well as harmful aspects of the creatures in native view, in contrast to the overwhelmingly negative characterizations of the creatures found in some secondary but influential ethnohistoric literature and ethnographies of contemporary, Christianized native views. The second article continues the study with an interpretation of a subset of four sculptures and cutouts of composite creatures, all from the Turner site in southwestern Ohio, in light of their archaeological contexts and the Woodland and Plains Indian narratives presented here.

In the course of the biological and ethnohistorical analyses presented here, a more general issue is addressed: the overemphasis in some recent archaeological literature on one native concern, “world renewal,” as the primary motivation behind Ohio Hopewellian ceremonialism, earthwork construction, and the emergence of Ohio Hopewell Big House ceremonialism. This issue is raised by the constitution of the composite creatures, which shows a lack of concern for expressing a balancing of Above and Below realms, the wide spectrum of domains of historic Woodland and Plains life beyond world renewal ceremony that composite creatures impacted, and the enormous diversity of goals of historic Woodland and Plains Indians public ceremonies.

Finally, the studies in this article and its complement highlight some of the major contributions of Robert L. Hall in revealing and understanding the philosophical-religious knowledge and ceremonies of historic and prehistoric Woodland Native Americans, as a tribute to his lifelong career. Bob had the courage to explore and express native views and matters of spirit at a time when others would not speak to these vital concerns.

The Corpus

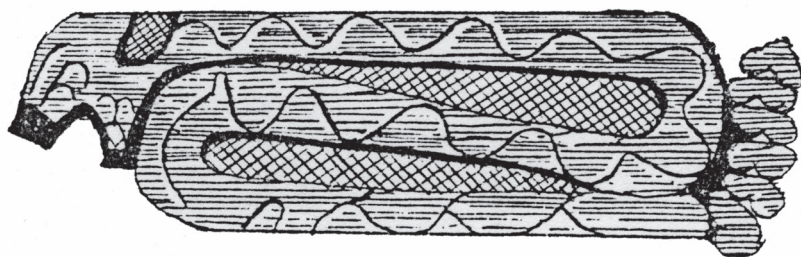
A total of six depictions of creatures that are the composite of multiple, different kinds of ordinary animals are known from Middle Woodland sites in Ohio (Figure 1a–f). The artworks come from three different sites in three



Figure 1. Depictions of composite creatures from Hopewellian ceremonial centers in Ohio. **(a)** Creature 1: a four-“horned” carnivore, massasauga, or copperhead rattlesnake, and possibly larval salamander. **(b)** Creature 2: a primitive fish and alligator/caiman. **(c)** Creature 3: a salamander/primitive fish and rattlesnake. **(d)** Creature 4: a six-“horned” rattlesnake and unknown. **(e)** Creature 5: an eastern diamondback rattlesnake with possible “ornamental” head features. **(f)** Creature 6: crocodile, caiman/alligator, and possibly snake. Credits: **(a)** photo, Townsend and Sharp (2004:21, Figure 9); object, Harvard Peabody Museum 82-35-10/29685. **(b)** Willoughby (1922:71, Figure 33). **(c)** photo, Christopher Carr; object, Harvard Peabody Museum 84-6-10/32434. **(d)** Townshend and Sharp (2004:47, Figure 7); object, Harvard Peabody Museum 82-35-10/29683. **(e)** Moorehead (1922:88, Figure 9; see also Squier and Davis 1848:276, Figure 196); **(f)** photo, Christopher Carr; object, Ohio Historical Society, cat. no. A1176/129.



d



e



f



Figure 2. Smoking pipes carved in a naturalistic, detailed style similar to that of the six composite creatures in Figure 1. (a) Sandhill crane. (b) Black bear. Credits: photos, Mills (1916:304, 336, Figures 21, 53).

different drainages spanning southwest Ohio to northeastern Ohio. Table 1 lists the six creatures studied, where they were found, the materials from which they were manufactured, published descriptions of them, and curatorial information. Also listed and included in this study is another Ohio Hopewell depiction of an animal that is not a composite creature but plays a key supporting role in our analysis and requires biological identification (see Figure 10).

Table 1. Composite Creatures and Constituent Animals Depicted by Ohio Hopewell Peoples.

Creature Number, Figure, Animal in This Study ¹	Identified Components	Archaeological Provenience	Raw Material	Published Reference	Curating Museum	Catalog Number
1. Figure 1a	carnivore, massasauga or possibly pygmy rattlesnake, possibly larval salamander	Turner earthwork, Mound 4, Central Altar	red slate or petrified wood	Willoughby, 1922:70, Plate 19, Figure 32	Peabody Museum, Harvard University	82-35-10/ 29685
2. Figure 1b	primitive fish, alligator/caiman	Turner earthwork, Mound 4, Central Altar	reddish-brown mica schist with gold-colored mica particles	Willoughby 1922:70-71, Plate 19, Figure 33	Peabody Museum Harvard University	82-35-10/ 29684
3. Figure 1c	salamander/primitive fish, rattlesnake	Turner earthwork, Mound 3, Feature 10, Cremation Chamber-Tomb	bone or antler	Willoughby, 1922:35, Plate 6d	Peabody Museum, Harvard University	84-6-10/ 32434
4. Figure 1d	rattlesnake, unknown protrusions at head	Turner earthwork, Mound 4, Central Altar	mica sheet	Willoughby, 1922:67-69, Figures 30, 31	Peabody Museum, Harvard University	82-35-10/ 29683
5. Figure 1e	massasauga or possibly eastern diamondback rattlesnake, "ornamental" head features	Hopewell earthwork, Mound 1	cinnamon-colored sandstone tablet	Squire and Davis, 1848:276, Figure 196	British Museum	S540
6. Figure 1h	crocodile, caiman/alligator, possible snake	Esch Mound Group, Mound 1, Pipe Ceremonial Deposit	red-orange stone smoking pipe	Car 2008c:62, Figure 2.10M	Ohio Historical Society	1176/129
<i>Supplemental Image:</i>						
7. Figure 10	salamander, mirror-reflected upper half	Rutledge Mound, Burial 3	copper sheet	Baby 1961	Ohio Historical Society	3490/1

¹ Creatures 1 through 6 are ordered from southwestern Ohio to northcentral Ohio.

By “composite creature” we mean a single being that combines the parts of two or more distinct kinds of ordinary, nonhuman animals. We exclude human-animal composites. This distinction follows from one made in historic Woodland and Plains Indians narratives, between animal-animal composites that are stable animal forms of the cosmos and human-animal combinations that are phenomenologically different, temporary shaman-like or misfortunate transitions of humans into animals.¹

Biological Identification Procedures

Biological identifications of the animal parts of the seven creatures were made by herpetologist Robert McCord, Ph.D., who has had a lifelong career in the study of living and paleontological reptiles and amphibians and is knowledgeable about the animal kingdom at large and its systematics. McCord’s specialization in herpetology is especially poignant, because all seven of the creatures happen to have reptile and/or amphibian components. McCord identified the components of the creatures using his biological knowledge supported by consultation with relevant biological identification technical literature and guides (e.g., Aldridge and Brown 1995; Conant and Collins 1998; Duellman and Trueb 1986; Gloyd 1940; Gregory 1933; Lee et al. 1980; Neill 1971; Page and Burr 1991; Pentranka 1984; Rose and Armentrout 1976; Schmidt and Davis 1941; Stebbins 1985). All features of the creatures were taken into consideration when making the identifications, rather than only those most diagnostic. Features that characterize a broad category of animals (e.g., the legs of a carnivore) as well as features that typify a particular genera or species (e.g., the head scalation pattern of a *Sistrurus* rattlesnake) were noted and are documented here. Considering biological classification at multiple levels of generality is essential in order to not eliminate some possible animal constituents of some of the creatures. Ambiguities and alternatives as well as defining traits were noted for the same reason. The identifications were made by McCord blind of the archaeological contexts of the depictions, their possible ethnohistorical Woodland-Plains analogs, broader Woodland-Plains Indian religious concepts, and earlier reports of the biological identifications of the creatures. Images of the creatures were sent to McCord by Carr without any accompanying information other than that they were prehistoric Native American renderings from Ohio.

All of these meticulous and cautious elements of our research design are improvements over previous, initial attempts at identification, which have been limited to a few of the most diagnostic characteristics of the creatures, to genera or species-specific levels of classification, and to only

one creature in isolation of the others of the corpus (Romain 2009:61–62, 82–84; Rusnak 2010, 2011; Willoughby 1922:68–69, 70; Zurel 2002). These earlier identifications were also made by other than professionally trained biologists and in knowledge of ethnohistorical Woodland-Plains analogs and religious ideas. The recent study by Rusnak (2010, 2011) has taken the process furthest by including three of the four composite creatures from the Turner site and by seeking consultation from a zoo manager and a zoo animal keeper.

The seven artworks differ from one another somewhat in the detail to which morphological features are rendered, depending on the limitations of their raw material and whether they are two- or three-dimensional. Schematization through some simplifications of line, cultural selection of certain traits over others for rendering, and mild folding in and folding out of features also is evident in the corpus. These matters were taken into account when making the biological identifications (see Layton 1977; 1981:141–142 on the limits of art in imitating nature). We did not place great weight on the absence or distortion of single features. Museum reconstruction of two of the works was also considered (see below).

Biological Identification of the Component Animals

Creature 1: Carnivore, Massasauga or Possibly Pygmy Rattlesnake, and Possibly Larval Salamander (Figure 1a).

Turner Earthwork, Mound 4, Central Altar



Summary: The features of this sculpture suggest a composite creature that combines elements of a massasauga rattlesnake, a stout-legged carnivore, and a larval *Ambystoma* (mole) salamander. Rattlesnake features include the rattle tail, a pattern of gular scales on the ventral side of its head, and a pattern of scales on the dorsal side of its head that specifically recalls the massasauga rattlesnake (*Sistrurus catenatus*). The head scalation also matches that of the copperhead (*Agkistradon contortrix*) and the pygmy rattlesnake (*Sistrurus miliarius*), but the copperhead lacks rattles that this creature has, and the pygmy rattlesnake does not occur in Ohio. Mammalian features include the trunk shape, the four feet with five digits and claws like a carnivore or rodent, and the stout legs and long claws of a bear, badger, or wolverine. External gills of a larval *Ambystoma* salamander are suggested by the creature's "horns," which emerge from the neck rather than head. The creature seems "bullish" in its Gestalt look but not in its details.

Specifics: The rattlesnake components of the creature are easiest to identify. They include foremost its tail rattles and the patterns of scales on the dorsal and ventral sides of its head. The tail has two rattles and a terminal button, suggesting a relatively young individual about two years of age (Aldridge and Brown 1995). The scalation pattern on the dorsal side of the creature's head (Figure 3a) matches very well to that of the massasauga rattlesnake (*Sistrurus catenatus*), the pygmy rattlesnake (*Sistrurus miliarius*), or the copperhead (*Agkistradon contortrix*) (Gloyd 1940). Both the massasauga rattlesnake and the copperhead also are good fits in that they occur in Ohio, but, unlike the creature, the copperhead lacks rattles. The pygmy rattlesnake occurs in the southeastern United States and not Ohio, but cannot be discounted, given Ohio Hopewellian travel to multiple areas in the Southeast. An exception to the similarity of Creature 1's scalation pattern to these three snakes is the missing depiction of the two internasal scales or the missing depiction of the rostral scale and the midline between the two internasal scales. One snake, the Midwestern and Eastern Woodlands worm snake (*Carphophis amoenus helenae*) does have fused internasal scales (Conant and Collins 1998), but the remainder of the pattern of its dorsal scales does not fit well with that of the creature, nor does it have rattles. The timber rattlesnake (*Crotalus horridus*) occurs in Ohio and has rattles like Creature 1, but it has many small head scales instead of the scale pattern of the creature.

The ventral side of the creature's head (Figure 3b) has gular scales with a parallel, ridge-and-groove pattern characteristic of all snakes. There are seven gular scales, and these extend from the tip of the head through the bottom of the neck region. No snake has ventral gular scales that extend as anteriorly as they do on this creature. However, on rattlesnakes, the scales extend a bit farther anteriorly than they do on other snakes, suggesting that this feature of the creature might depict a rattlesnake, like the creature's head scales and rattle tail.

The overall shape of the creature's head (Figure 1a) is broadly snake-like and not a good fit to the vertically elongated head of a bison, despite the horns in the vicinity of the head. The creature's nostrils, however, are more anterior than a snake's and suggest a mammal-like muzzle; likewise the slightly raised circles around the nostrils. The raised nostrils also, however, are characteristic of crocodylians (i.e., alligators, caimans, and crocodiles), which otherwise are not indicated by the creature's features. Two holes drilled upward into each side of the creature's upper jaw could have held fangs of a snake or canines of a mammal. The G-clef shape of the horns (Figure 3) does not recall the crescent shape of a bison's horns, nor the tusks of a javalena, nor the tusks of a mammoth or mastodon, which were known to at least historic Midwestern Indian tribes from the rich fossil deposits at



Figure 3. Creature 1. (a) Pattern of scales on dorsal side of head, resembling that of a massasauga, pygmy, or copperhead rattlesnake. (b) Pattern of scales on ventral side of head similar to that of snakes in general and most similar to that of a rattlesnake. Credits: (a) photo, Christopher Carr; object, Harvard Peabody Museum of Archaeology and Ethnology, cat. no. 82-35-10/29685. (b) photo, Willoughby (1922:Plate 19a); object, Harvard Peabody Museum of Archaeology and Ethnology, cat. no. 82-35-10/29685.



Big Bone Lick, Union County, Kentucky (Connelley 1899:89–91). No mammal has horns that originate from its neck, or more than two horns, as does this creature.

The splaying “horns” might instead reference the wide-splaying, external gills of a larval salamander, which do extend from the neck and do number more than two. In Gestalt view, a larval salamander’s external gills and the creature’s horns do resemble one another (Figure 4a, b) and conceivably could have been equated by Hopewellian and other Woodland Indians.² The metamorphosis of salamanders from aquatic-living creatures of one form to terrestrial creatures of a different form, in addition to some other peculiarities of salamanders, may have intrigued the Indians.³ A larval salamander component to the creature is not unreasonable, given the underwater-underground realm that a larval salamander shares in native Woodland



Figure 4. (a) Creature 1 with four protrusions originating from the neck, similar to (b) the six external gills originating from the neck of a larval salamander, here *Ambystoma*. Credits: (a) photo, Christopher Carr; object, Harvard Peabody Museum of Archaeology and Ethnology, cat. no. 82-35-10/29685.



Indian thought with the other component animals of the creature (snake, and bear or badger), and given the firm place of the salamander in the repertoire of Ohio Hopewell artwork (Creature 7) and the probable incorporation of salamander features in composite Creature 3, which also shares with Creature 1 the rattle tail of a rattlesnake.

Of the various salamanders, *Ambystoma* would be a logical identification, given the large size of their gills—like the creature's horns—and the large size of their bodies. However, the creature has four horns, whereas a larval *Ambystoma* salamander has six gills. Other features of the creature, including its boxy head shape, lateral placement of eyes, very large nostrils, five digits on both front and hind feet, and the bear claw-like shape of its digits, also do not match the features of *Ambystoma*, which has a streamlined head shape, very dorsal placement of eyes, small nasal openings, four digits on its front feet, and digits of a bulbous shape. Finally, *Ambystoma* has costal

grooves that show strongly on its trunk, while the creature has none. The ridge-and-groove pattern of the rattle tail of the creature might alternatively be argued from its shape to represent costal grooves of a salamander, but the body positioning of the pattern is incorrect.

It is possible that the horns of the creature do not make reference to any specific animal but instead signal power. Oral narratives of the historic Woodland and Plains Indians tell of a variety of powerful underwater-underground creatures with horns or antlers, including felines, snakes, dragons, alligators, and fish (see below, Table 2, many references; Perino 1960; Phillips and Brown 1978:140). In Ojibwa art, horns are placed on many different kinds of beings to indicate their power (Smith 1995:104). Leaders of various kinds in historic Woodland Indian societies and in prehistoric Scioto Hopewellian societies, including medicine persons, wore headdresses with antlers (e.g., Howard 1968:49, 59; Mills 1922:452, 544–545, Figure 69, Mound City site, Mound 13, Burial 4; Moorehead 1922:107–108, Figure 11, Plate XLIX, Hopewell site, Mound 25, Burial 248; Moorehead 1922:128, Figure 20, Hopewell site, Mound 25, Burial 278; Smith 1995:103; Trevelyan 2004:105–106). In the Hopewell case, different copper headdresses have antlers with different numbers of tines (two, three, four), possibly indicating the relative amounts of power of the leaders (Mills 1922:452, 544–545, Figure 69; Moorehead 1922:107–108, Figure 11, Plate XLIX; 128, Figure 20). In this light, the two pairs of antlers on Creature 1 could indicate extraordinary power. Their origin on the neck, however, would require additional explanation, such as depiction of a larval salamander's external gills.

The trunk of the creature (Figure 1a) is mammalian in look. The feet with their five digits suggest a carnivore or a rodent of a kind. The long, parallel claws and stout, robust legs recall, more specifically, a bear's legs, or perhaps a badger's or a wolverine's, in contrast to the thinner legs of other carnivores, such as felines and canines, and of rodents. However, no other features of the creature resemble those of a bear, badger, or wolverine. The pattern of striping on the creature's back does not have an analog in bears, badgers, or wolverines. The diamonds within the stripes on the back of the creature are suitable to the scales of a snake rather than the markings of a mammal. Yet the pattern of striping does not fit any particular snake.

The Gestalt look of the creature seems "bullish" with its horns and robust trunk, but this identification is not confirmed by any anatomical details. The creature does not appear to be an *Ukte'na* of historic southeastern Woodland's lore or an animal analogous to it (*contra* Carr 2008a:210; Rusnak 2010:6). An *Ukte'na* is a snake that is not a rattlesnake and that has deer antlers and a brilliant crystal on its forehead (Mooney 1900:297–298). The

crystal, or *Ulúñsú' tĩ*, is triangular with slightly convex sides tapering up to a point (Mooney 1900:460). In contrast, Creature 1 has snake components of a rattlesnake, has four horn-like prominences rather than two, has legs, and has a center scale on its forehead with six rather than three sides and concave rather than convex sides.⁴

Museum Reconstruction: Harvard Peabody Museum of Archaeology and Ethnology glass plate photograph 2004.24.2460 shows the fragmented remains from which Creature 1 was reconstructed to the state shown by Willoughby (1922:70, Figure 32, Plate 19) and in Figure 1a. The overall shape and markings of the reconstruction conform to the original. The top set of horns occur in the original material; the bottom left horn (the side that the plate shows) is missing but for a small circular nub. Willoughby, a very careful and respected lab analyst and artist (Greber and Ruhl 1989:1–2, 4, 9) reported that “two of the horns are carved in relief, and two are made separately, being inserted in holes at the sides” (Willoughby 1922:70). He does not mention the bottom set of horns being missing or reconstructed, which if they were, is curious compared to the detail he provides on reconstructing the mica rattlesnake, Creature 4, a few pages later in the same publication (Willoughby 1922:67–68). No x-radiograph of the lower horns to determine their composition is on file in the Peabody or referred to in its documentation (S. Haskell, S. Fulton, personal communication 2012). Whether the protrusion(s) from the holes of Creature 4’s head were of the length and took the exact form of their reconstruction is unknown. Creature 4, a rattlesnake in part like Creature 1, has a set of three horns that do mimic each other in shape, but differ in length. Given the uncertainty of the biological identification and reconstruction of Creature 1’s “horns,” we conclude only the possibility of larval salamander components to Creature 1; our subsequent cultural interpretations are made accordingly.

Creature 2: Primitive Fish and Alligator/Caiman (Figure 1b).
Turner Earthwork, Mound 4, Central Altar



Summary. The most parsimonious identification of the attributes of this creature is a mix of a kind of primitive fish—most likely a pike or gar rather than a bowfin—and a crocodilian (i.e., alligator, caiman, or crocodile). Primitive fish elements of the creature include its head shape and pelvic “fins” well aft of pectoral “fins.” A crocodilian is suggested by the shape of the creature’s

trunk, its sinuous tail, and the chevrons on its back, while the vertical bands on its side, the horizontal break between the bands and chevrons, and the narrow/long snout suggest more specifically an alligator or caiman.

Specifics: Fish-like elements of the creature include its four lateral appendages and their positions, its snout shape, and more or less its fusiform body shape (Figure 1b). The lateral appendages are very stylized and could be fins. If they are fins, the pelvic fins are displaced far behind the pectoral fins, suggesting a primitive arrangement, such as that found on a pike, gar, or bowfin. Advanced fish have their pelvic fins positioned farther forward. The head-snout shape is roughly right for a pike, and possibly a gar. However, a pike has a shorter, stubbier head and a stronger incurve in the head in front of the eyes than a gar, making the pike a mildly better fit to the creature. The snout is too narrow to be a bowfin's. Of the pikes (*Esocidae*), the grass pickerel, northern pike, and muskie are in geographic range. Of the gars (*Lepisosteidae*), the alligator, shortnose, and longnose gars are in range. The longnose has too long and narrow a nose to be represented by Creature 2. No gar has a pronounced incurve to its snout in front of its eyes as does the creature, but an alligator gar has more of a hint of one than a shortnose gar.

The creature has other traits that are uncharacteristic of fishes, including a tail that is too sinuous, a dorsal eye placement, and the lack of a dorsal fin. All three traits accord with crocodilians, salamanders, and snakes. Other features of the creature also are reminiscent of a crocodilian. The vertical bands on the sides of the creature recall the banded coloration of a juvenile alligator or caiman (i.e., one less than approximately 18" long). The chevrons on the creature's back could depict the somewhat v-shaped arrangement of dorsal scales on the back of a crocodilian. The horizontal break between the creature's dorsal chevrons and lateral bands suggests the horizontal break between the larger dorsal scales and smaller side scales of a juvenile alligator and caiman. The length-width ratio of the creature's snout is closer to that of an alligator or caiman than a crocodile, which has a narrower/longer snout. The trunk of the creature is a little bulgy for an alligator, caiman, or crocodile. However, the sides of these animals do bulge out when they are lying down. It is also possible, as assumed above, that the artist was attempting to render both the dorsal surface and the sides of the animal at once when respectively depicting its chevrons and vertical bands, giving it a wider than expected appearance. The diamond at the rear of the creature is in the correct position for the cloaca of a crocodilian, salamander, or snake, but of the wrong shape. The body's lateral appendages, which lack digits,



Figure 5. Creature 2 design on the stone on which it is rendered. Credits: photo, digital file 60743169; object, cat. no. 82-35-10/29684, Harvard Peabody Museum of Archaeology and Ethnology.

suggest a fish's fins rather than a crocodilian's legs or a salamander's legs, and exclude the possibility of a snake. The creature's eyes have outlines, which could be stylized renditions of the raised eyes of a crocodilian or its bony ridges around its eye sockets, plus the jugal and quadratojugal bones at the posterior of the skull. We note that the spectacled caiman's diagnostic bony ridge running between the eyes at their anterior is missing on the creature (Conant and Collins 1998).

If focus is shifted from the engraving (Figure 1b) to the engraving within the outline of the stone on which it was rendered (Figure 5), the newly defined snout region in front of the eyes is said by Rusnak (2011) to resemble that of an alligator gar. The crosshatched area is said to resemble in shape the raised, bony premaxillary/frontal plates of an alligator gar's snout, including a slight constriction in front of the eyes. However, a pike's premaxillary/frontal plates compare equally as well. Alligator gars do grow larger than pikes and can be more impressive. The remainder of the stone and engraving does not mesh with an alligator gar or a pike: their very noticeable and fearsome teeth are not depicted (cf. Creature 6's crocodile teeth); they do not have ridges around their eyes; the eyes of the creature are too dorsal for an alligator gar or pike; the creature's body viewed from above is too lenticularly fat; the crosshatched areas on the body fit the coloration and scale patterns of a juvenile alligator or caiman but not the scale pattern of an alligator gar or pike; and the sinuous engraving at the end of the stone has no correlate in an alligator gar or pike. All features considered, the engraving, rather than the engraving within the outline of the stone, appears to have been the focus of depiction.⁵

*Creature 3: Salamander/Primitive Fish and Rattlesnake (Figure 1c).
Turner Earthwork, Mound 3, Feature 10 Cremation Chamber-Tomb*



Summary: This creature is probably a composite of the head and body of a salamander, or less probably, a fish, with the rattles of a rattlesnake. The two holes in the side of the creature's trunk could have supported attachments for either the legs of a salamander or the displaced fins of a primitive fish. However, a salamander is recalled by the placement of the eyes and nostrils, and the grooves on the side of the body, as well as the form of the throat.

Specifics: The tail of the creature resembles that of a rattlesnake (Figure 1c). It has four or five segments and possibly a final button. The exact number of segments is unclear because, on a rattlesnake, the segment closest to the body sometimes blends into it. If the tail is that of a rattlesnake and the button is present, the specimen represented would have been about three years old. This is at least a year older than Creature 1.

The head and body of the creature resemble most closely a salamander (*Ambystoma* sp.), with some features suggesting either a salamander or a fish. Both are within the repertoire of Ohio Hopewell artwork (e.g., Creature 7, Moorehead 1922:Plates 69-2, 78-2). The round head shape resembles that of either a salamander or a bowfin fish (a primitive fish). The two holes in the side of the creature's body could have held carved attachments representing the legs of a salamander or fins of a fish. If the attachments were the pectoral and pelvic fins of a fish, they were separated enough from each other to represent a primitive fish, including the bowfin. The dorsal placement of the eyes fits that of a salamander, not a fish. The creature's nares (nostrils) are placed far forward, suitable for a salamander or fish but not a snake, which has nostrils placed somewhat more laterally. The curved, ridge-and-groove pattern on the sides of the creature's trunk are the correct shape for a salamander's costal grooves. The straight ridge-and-groove pattern on the bottom of the trunk (Figures 1c, 6) resemble a fish's myomeres—the muscle masses below the skin—and the scale pattern of a snake (see also Rusnak 2011:8). The myomeres of a fish, however, cannot generally be seen through its scales, which would have to be removed to observe them. The creature's ridge-and-groove pattern does not resemble the myomeres of a terrestrial mammal, which have a more complex configuration. The ridge-and-groove pattern is similar to the body segmentation of members of the diverse Phylum Arthropoda, including insects, crustaceans such as crayfish, and arachnids, but the creature exhibits no other features of this phylum.



Figure 6. Creature 3, ventral side. Credits: photo, Christopher Carr; object, Harvard Peabody Museum of Archaeology and Ethnology, cat. no. 84-6-10/32434.

The ventral side of the creature's head (Figure 6) has two lobes that would indicate the mandible. The depressed area between them would be the gular (throat) region. The gular region is shaped more like that of a salamander than a bowfin. A salamander has a continuous skin over the area, whereas a fish has paired gular scales there that result in a line down the center, which are not depicted on the creature. The two holes in the rattles of the tail (Figure 1c), or any attachments that might have been there, do not have an obvious biological correlate. The holes may have been for suspending the creature as a pendant on a string.⁶

Creature 4: Rattlesnake and Unknown Protrusions (Figure 1d).
Turner Earthwork, Mound 4, Central Altar



Summary: This creature combines the head, body, and tail of a rattlesnake with one pair of long "horns" and two shorter pairs that do not resemble in form or number those of any North American mammal. A reference to the three pairs of external gills of a larval *Ambystoma* salamander may be at play. This artwork has been identified by many archaeologists as depicting the Horned Serpent common in the lore of northern Woodland and Plains Indians (e.g., Willoughby 1922:68; Penney 1985:185).

Specifics: The body of this creature is that of a snake, and the tail is that of a rattlesnake (Figure 1d). The head (Figure 7), however, lacks the pits of a pit viper and the eye lacks the vertical pupil of a pit viper—the family/subfamily that includes rattlesnakes. The eye surround does not resemble the morphology or coloration of any pit viper in the Eastern Woodlands. The marking on the mandible of the creature cannot be identified. It is the wrong shape for a coronoid process. All of these divergences from a pit viper, save the lack of pits, occur on portions of the artifact found intact in the field rather than on pieces of mica reconstructed onto it later by Willoughby (see below).

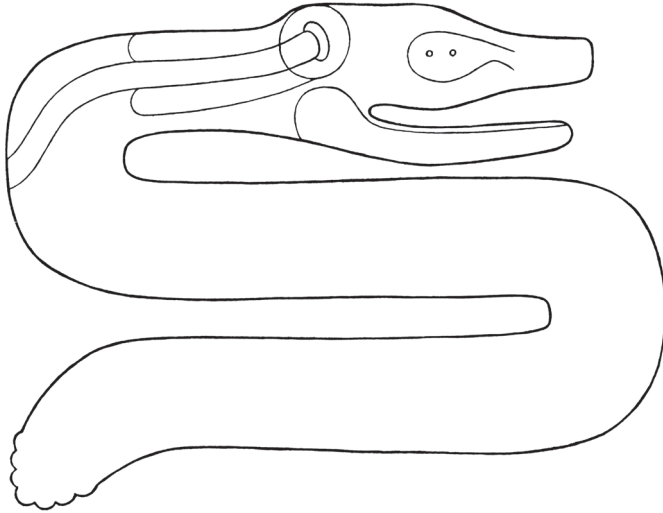


Figure 7. Creature 4, line drawing showing details of line engraving on head not visible in Figure 1D. Body outline smoothed. Credits: Willoughby (1922:69, Figure 31).

The protrusions from the head are not like the horns of any North American mammal in shape or number. They are the right number—six—for the external gills of a larval *Ambystoma* salamander. However, one protrusion is extraordinarily long compared to the other two, which is uncharacteristic of *Ambystoma*. Another possibility for the protrusions' identity is some kind of head markings.

The creature's body is rendered in three sections, positioned in a Z-shape, similar to the lateral movement of a snake on the ground rather than coiling. Creature 5 is depicted in the same position. Creature 4 is made of mica, which shimmers like the scales of a snake.

Museum Reconstruction: Willoughby (1922:70) reported that he “made a careful search among the mica fragments from this altar in hopes of being able to supply at least some of the missing part, with the good results shown in the photograph [Figure 30]. The nose, a part of the upper jaw, the tail with a portion of the rattles, and the lower part of the body were found.” S. Fulton, conservationist for the Peabody Museum (personal communication 2012), found in 1996 through electron microprobe analysis chemical evidence that the mica with a “soil”-like residue comprising the creature's head was not taken from one of the mica bears in the same altar to reconstruct the creature—a possibility that Greber (personal communication 2012) has raised.

Creature 5: Massasauga or Possibly Eastern Diamondback Rattlesnake with Possible "Ornamental" Head Features (Figure 1e).

Hopewell Earthwork, Mound 1



Summary. The known physical attributes of this creature, including its rattles, the diamond pattern on its trunk, the moderate separation between its rattles and the diamond pattern on its trunk, and its eye stripes emerging from the diamond pattern, all conform well with the eastern diamondback rattlesnake (*Crotalus adamanteus*) and the massasauga rattlesnake (*Sistrurus catenatus*).

Specifics. The entirety of this creature has rattlesnake features, excepting the possible "ornamental" features that its finder reported to have surrounded or surmounted its head (not show) (Figure 1e). The rattles and diamond pattern along the body indicate a rattlesnake of a kind. The snake would have been a young adult, about seven years old, given the five rattles and one terminal button (Aldridge and Brown 1995). The diamond pattern runs almost the length of the creature to its rattles, but not all the way. This feature suggests a massasauga rattlesnake (*Sistrurus catenatus*) or eastern diamondback rattlesnake (*Crotalus adamanteus*), in contrast to the pygmy rattlesnake (*Sistrurus miliarius*), which has diamonds running down its entire back to the rattle, and the timber rattlesnake (*Crotalus horridus*), which has a long black tail that separates its diamond-patterned trunk from its rattle. The geographic ranges of the massasauga and timber rattlesnake include Ohio, whereas the pygmy rattlesnake and eastern diamondback are limited to the southeastern United States. Thus, in bodily form and distribution, the creature best fits the massasauga. The eastern diamondback remains a possibility because Ohio Hopewellian peoples traveled to multiple areas in the Southeast.

At the back of the creature's head, extending from the diamond pattern on its body and running toward its eye, is a dark stripe that resembles the eye stripes of *Sistrurus* that emerge from lateral body diamonds and extend to the eye or surround it. This feature, plus geographic distribution, point again to *Sistrurus catenatus*, the massasauga.

On the mandible of the creature is a scale-like pattern that could represent the nose and forked tongue of a snake—an image of the creature's head turned back on itself, which is a stylistic convention in other Ohio Hopewell artworks (e.g., Shetrone and Greenman 1931:443; Willoughby 1922:Plate 2a) (Figure 8). Squier and Davis (1848:277) called these "ornamental figures."

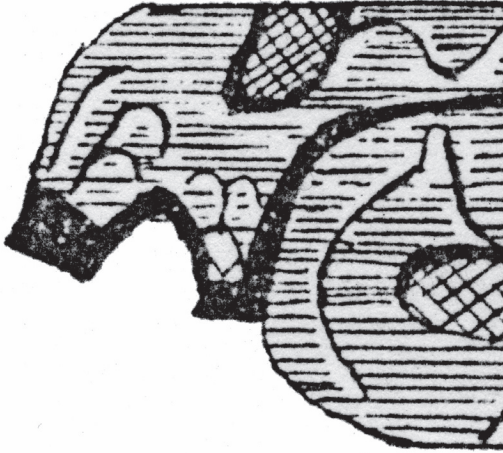


Figure 8. Creature 5, close-up of mandible with a nonrealistic scale-like pattern similar to the nose and forked tongue of a snake. Credits: part of Moorehead (1922:88, Figure 9).

Like Creature 4, this snake's body is depicted in three sections, positioned in a Z-shape, similar to the lateral movement of a snake on the ground rather than coiling.

The sculpture shown here is one of four "identical" tablets taken from Mound 1; this specimen was found and illustrated by Squier and Davis (1848:276–277) and redrawn and republished by Moorehead (1922:88, Figure 9). Another of the four was found by a local landowner, who reported that it had a complete head that was surrounded or surmounted by images of "feathers" or protrusions of some kind. However, the landowner broke the specimen in two to determine its composition, and the portion with the head was subsequently lost. The heads of the other three tablets are broken (Squier and Davis 1848:276) and do not allow verification of the said protrusions or corroboration of the identity of the ornamental, possible snake nose and forked tongue. The interpretation of the protrusions from the head of the creature as specifically feathers must be considered in its historical context. At the time of Squier and Davis' writing, Woodland Moundbuilders were popularly thought to have been Toltecs, Aztecs, or other Mesoamerican peoples (Silverberg 1968:79–82, 155–157, 179–180; Willey and Sabloff 1980:23, 24, 36), who knew the feathered serpent deity, Quetzalcoatl.

There are very slight differences between Moorehead's and Squier and Davis' illustrations of the creature in the renderings of lines. The differences are inconsequential to the identifications made here.

*Creature 6: Crocodile, Caiman/Alligator, and Possibly Snake (Figure 1f).
Esch Mound Group, Mound 1, Pipe Ceremonial Deposit*



Summary: The features of this creature do not derive from one kind of animal, but do resemble a suite of biologically very closely related animals. Almost all of the creature's traits are crocodilian, but some characterize the caiman or alligator while others indicate a crocodile. General crocodilian features include the creature's prominent teeth, plantigrade legs, dorsal ridge-spines or "osteoderms" on its back, and chevrons for tail spines. The U-shaped snout resembles that of a caiman or alligator, and the ridges around the eyes recall specifically those of a spectacled caiman, *Caiman crocodilus*, whereas the prominent teeth suggest a crocodile. The creature's head shape is closer to that of a snake than a crocodilian.

Specifics: The overall shape of the head of this creature could depict either a snake or a crocodilian, although not well (Figure 9). The shortness of the head gives it a closer resemblance to a snake. The snout lacks the pits of a pit viper (rattlesnake, cottonmouth, or water moccasin) between its eyes and nostrils, suggesting that, if the creature is a snake, it is some kind other than a pit viper. The creature's snout ends in a rounded U-shape like that of a caiman or alligator rather than in a pointed V shape that would align it with a crocodile. However, the sides of the jaw are more V-shaped like a crocodile's rather than parallel like a caiman or alligator's.

The creature's nostrils are raised like those of a crocodilian and are placed dorsally as on any reptile or amphibian. The creature's eyes have ridges around them, which could represent the raised eyes of a crocodilian or its bony ridges around its eye sockets. The transverse ridge anterior to the eyes would recall that of a spectacled caiman (Conant and Collins 1998). However, the additional ridge between the creature's eyes, which runs anterior to posterior the full length of the snout, is not found on a caiman. It, together with the ridge anterior to the eyes, form a cross, which may have symbolized the four directions common in Woodland Indian cosmology and may have been irrelevant to the biology of the animal. An analog is the unnatural cross that surrounds the eye of snakes engraved on a shell gorget from the Adena Crab Orchard Spring Mound, Lincoln County, Kentucky (Webb and Baby 1957:94, Figure 45). The very dorsal position of the creature's eyes is most like that of a salamander, but would approximate the dorsal eyes of a crocodilian, much less so a snake.

The creature's teeth, which are visible in the mouth (Figure 1f), suggest those of a crocodilian. The specific dental pattern is closest to that of a



Figure 9. Creature 6, top view. Credits: photo, Christopher Carr; object, Ohio Historical Society, cat. no. A1176/129.

crocodile. A crocodile has, on each side of its lower jaw, a razor-sharp fourth mandibular tooth that points up, juts out, and looks menacing. It is visible when the mouth is closed as well as open. In contrast, the teeth of alligators and caimans are not as visible when their mouths are closed. The dental match to a crocodile is not exact. The creature's large and prominent teeth are its third mandibular teeth, whereas on a crocodile, they are its fourth mandibular teeth. This may suggest an incomplete familiarity of the artist with the crocodile, which extends north only as far as central Florida.

The legs of the creature are plantigrade rather than digitigrade and have a sprawling gait rather than being underneath the body. These features suggest a reptile or amphibian, in contrast to a carnivore. The creature's front feet have three or four digits, whereas the back feet have five. This pattern does not accord with those of a reptile, which has five front and five back digits, or with a salamander or frog, which has four front and four back digits. The front feet of the creature have one digit that is longer than the others, which is characteristic of a reptile or amphibian in general, including salamanders. However, as in Creature 7, the digit that is longer is the first, whereas on reptiles and amphibians it is the second from the outside (see Note 10). The creature's hind legs are more robust than its forelegs, resembling those of a crocodilian and a frog. A frog, however, has no prominent teeth and no tail as does this creature.⁷

On the bowl of the pipe that constitutes the creature (Figure 1f) are pointed features that would agree with the dorsal ridge-spine—osteoderms—on a crocodilian. Each pointed feature is divided into an upper and

lower half, perhaps suggestive of a boney osteoderm covered by a scale. This structure is visible in the skeleton of a dead crocodilian. It may be significant that the copper cutout alligator or possibly caiman effigy from the Middle Woodland site, Bedford Mound 8, Illinois, also has features that are visible on only a dead alligator or caiman's skull (Hall 2006:467). At the same time, the osteoderms that are most prominent on crocodilians, and that resemble the pointed features on the creature, are found on the tails of these animals, whereas the pointed features on the creature are on the middle of its back—the pipe's bowl. The bowl, however, is a more visible surface than that offered by the end of the pipe and, consequently, may have been chosen for displaying the osteoderms diagnostic of a crocodile/alligator/caiman. The points on the pipe's bowl might be taken, instead, to be the feathers of a bird, with their two shown halves being of different coloration. If they are feathers, however, oddly only the upper half of each is depicted; the lower, constricting half is lacking.

Behind the back limbs of the creature—behind the bowl of the pipe—is a band of four chevrons (Figure 9). These are positioned where the tail of a tailed creature would naturally occur. They may depict, in perspective, the spines that stand up on the back part of the tail of a crocodilian. Although snakes can have a chevron scale pattern on their ventral surface and diagonals on their sides, they do not have dorsal scales that form chevrons or diagonals.⁸

*Supplemental Creature 7: Salamander, Double-headed (Figure 10).
Rutledge Mound, Burial 3*

Summary: The features of this creature appear to fit most closely to a salamander. Telling traits include the dorsal eyes, four clawless toes, and lack of external ear openings. The creature is represented in mirror-reflection symmetry—a common stylistic convention in Ohio Hopewell art.

Specifics: The overall shape of the head of this creature resembles that of a salamander or a lizard (Figure 10). The snout is more rounded than pointed, suggesting more likely a salamander. The eyes are dorsal rather than to the side, also suggesting a salamander rather than a lizard. However, it must be remembered that the depiction is flat rather than three dimensional, biasing toward the dorsal appearance of the eyes. The creature lacks external pinnae (ears), indicating it is not mammalian, and lacks external ear openings, which suggest a salamander rather than a lizard. On a salamander, the tympanum is on the surface and visible, whereas a lizard has a tiny ear opening



Figure 10. Creature 7: a salamander, double-headed. Credits: photo, Christopher Carr; object, Ohio Historical Society, cat. no. 3490/1.

in which the tympanum is recessed. However, the depiction is generalized and the lack of external ear openings might not be diagnostic. The front feet more closely resemble those of a salamander than a lizard, in having four toes instead of five and in not having claws.⁹ The first digit of the creature is longer than the others, as is the case with Creature 6. This is not characteristic of either amphibians or reptiles, for which the digit second from the outside is longest.¹⁰

The curved protrusions behind the creature's front legs might be interpreted as costal grooves (Zurel 2002), which are diagnostic of salamanders, in contrast to lizards. However, there is only one protrusion per side, in contrast to the many costal grooves on a salamander. This may well be a stylistic simplification, considering the strikingly similar image of a salamander

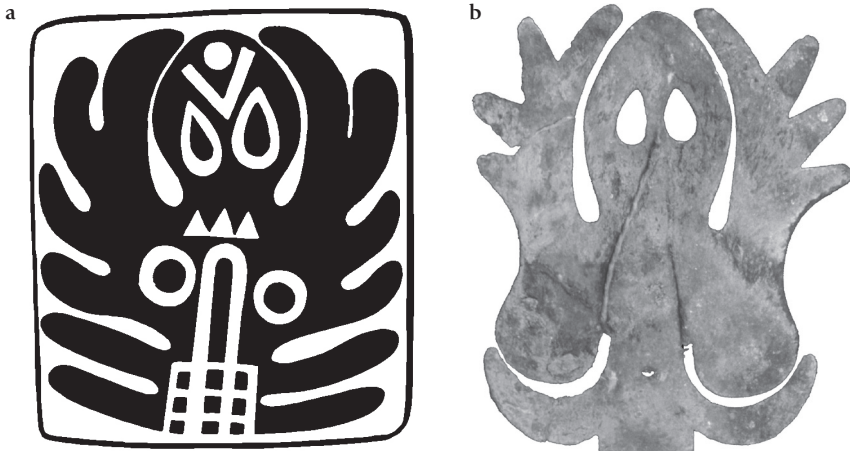


Figure 11. (a) Adena Gaitskill stone tablet, Montgomery County, northeastern Kentucky, compared to (b) Creature 7, one half. Both have a similarly shaped head and eyes, front legs with four clawless toes, and additional apparent costal grooves. Credits: (a) Webb and Baby 1957:82, Figure 32; (b) photo, Christopher Carr; object, Ohio Historical Society, cat. no. 3490/1.

on the Adena Gaitskill stone tablet from Montgomery County, northeastern Kentucky (Figure 11; Skinner 1987:54; Webb and Baby 1957:82, Figure 32; Webb and Funkhouser 1932:299). Like the Rutledge salamander, the Gaitskill specimen has four clawless toes followed in line by only two apparent costal grooves.

An alternative and perhaps complementary interpretation of the protrusions on the Rutledge creature is to be found in their close match with features incised on a copper breastplate from the Mound City site, Mound 7, Burial 9 (Mills 1922:489–491, 534, Figure 62) (Figure 12). In both instances, there are four protrusions, they are curved, the direction of curving is away from one another, and they attachment to a central “stem.” The meaning of the protrusions is unclear. The breastplate depicts four raptors, opening the possibility for both it and the Rutledge creature that the protrusions represent raptor talons. However, the bulbous proximal portion of the pedaling phalanx (interior bulb) diagnostic of a raptor talon is lacking.

The salamander image on the Adena Gaitskill tablet has additional features that allow more specific identification, which may or may not be relevant to the Rutledge case. On the body are two circles and two parallel lines that can be likened to the blotches and lateral lines on the broken-striped variant of the eastern newt (*Norophthalmus viridescens dorsalis*) and the striped newt (*Norophthalmus perstriatus*), both being kinds of salamanders. The former occurs across much of eastern North America, including Ohio; the later

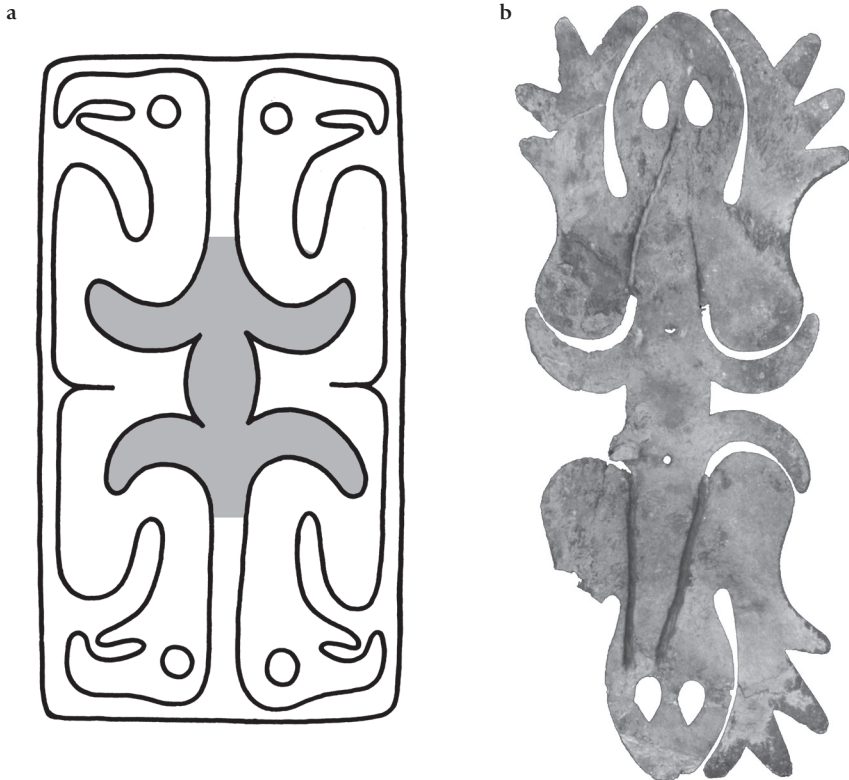


Figure 12. Comparison of the protrusions and body below the forelegs of Creature 7 to a like configuration on a copper breastplate from the Mound City site, Mound 7, Burial 9 (Mills 1922:489–491, 534, Figure 62). Credits: (a) adapted from Webb and Baby (1957:101, Figure 49); (b) photo, Christopher Carr; object, Ohio Historical Society, cat. no. 3490/1.

is restricted to southern Georgia and central Florida, but within the range of Ohio Hopewellian interaction. The Rutledge creature, however, lacks any depiction of blotches and lateral lines to allow an analogous identification.

Zurel (2002) identified Creature 7 as the red eft, terrestrial juvenile stage of the eastern newt, based on its red-orange color, which might have been mimicked by the orange color of the copper from which Creature 7 was made. He also considered the suite of species of salamanders that naturally inhabit southern Ohio; of these only the red eft is bright red-orange. This identification is intriguing but overly specific. Not only does Creature 7 lack the diagnostic darker red spots outlined in black that occur on the skin of a red eft, but copper may appear in its red-orange cuprite state or green oxidized, corroded state. If Creature 7 was intended to depict an eastern newt,

perhaps the transformation of copper from red-orange to green with corrosion signified the transformation of the newt from its red eft, terrestrial juvenile stage to its olive green, aquatic adult stage.¹¹

This is the only firm depiction of an ordinary salamander in Ohio Hopewell artwork of which we are aware. It supports the identification of probable salamander elements in Creature 3 and possible ones in Creature 1.

Ohio-Wide Patterning in the Composite Creatures and Implications for Cultural Interpretation

Considering the whole corpus of six composite creatures and one supplemental creature together for the biological identities of their component animals reveals patterns and raises questions and interpretations that have not been found in previous studies that have examined the creatures individually in isolation (Romain 2009:61–62, 82–84; Rusnak 2010, 2011; Wiloughby 1922:68–69, 70; Zurel 2002).

Interestingly, a restricted range of kinds of animals were joined together by Ohio Hopewell artists-religious specialists to create the six composite creatures, and some of the kinds of animals repeat among creatures. The constituent animals identified with certainty include a rattlesnake, a primitive fish, an alligator/caiman, a crocodile, a salamander, and a carnivore. The two crocodylians—alligator/caiman and crocodile—are both represented, but may have been equated in the mind of the Ohio Hopewell artist who sculpted Creature 6. The precise identity of the one carnivore depiction is not known, but is likely a bear, badger, or wolverine. Mature salamanders are a certainty, and a larval salamander is a reasonable possibility. The 6 firmly identified kinds of constituent animals just listed are small in number compared to the 14 actual constituents in the corpus. Ohio Hopewell artists had ample opportunity in the corpus to render additional kinds of animals had they chosen to, but they did not, and instead repeated only certain kinds of animals.¹²

Almost all of the constituent animals, except the carnivore, are under-water-underground dwelling for all or part of their life cycle. In the eyes of historic Woodland and Plains Native Americans, the animals are associated with the Below—water-earth realms—in contrast to the Above—sky realms—(e.g., Mann 2003:176–180). The one carnivore, if a bear or badger, also is tied to the Below realms by their habit of digging for their food (e.g., Overholt and Callicott 1982:76), and if a bear, also by its hibernation, residence, or council congregations underground in caves (e.g., Blakeslee 2003:100; Mooney 1900:250, 264, 328, 426; Skinner and Satterlee 1915:250, 252,

381), by its residence in water (Overholt and Callicott 1982:60), or by its origin in the water (Radin 1970:177). If the carnivore is a wolverine, then it pertains to the earth disk, which was commonly envisioned as the surface of the underwater-underground realms and categorized with them (e.g., Bailey 1995:31, 33, 36–43; J. E. Brown 1971:6, note 7; Mann 2003:176–180; Paper 1987:301; Radin 1970:137, 140; Swanton 1931:201; 1942:211–212; Thomas et al. 2005:350–351, Table 8.3; but see Mooney 1900:431). No bird imagery or other references to the Above realms is incorporated in the corpus, save the unlikely “feather”-like protrusions on the pipe bowl of Creature 6, which have a more parsimonious identity as osteoderms of a crocodylian.

The uniformity of water-earth imagery and lack of sky imagery in all or almost all of the corpus does not show a concern for “balancing opposites” of the Above and Below realms—a major worldview theme inferred by Hudson (1976:128, 136, 138, 148, 156, 159, 336) for historic southeastern Woodland Indians and by Penney (1985:180, 183–184, 192; 1989:232, 235, 245–246) for prehistoric Northeastern Indians. Absent are the piasas of Mississippian peoples that combine animals of multiple realms: bird, snake, fish, deer, and/or raccoon parts with core feline elements (Perino 1960; Phillips and Brown 1978:140–142). Also absent are the dragons of the Huron-Wyandot and Iroquois that similarly joined bird, serpent, and feline elements and that flew through the night skies as flames and lived in the waters (Curtin and Hewitt 1918:797; Hamell 1998; Hewitt 1891:384; Luckhurst 1916:25–26; Thwaites 1896–1901, vol. 51:181–183). Also missing are the dragons of the Menomini (Skinner 1913b:82) that had bird and serpent elements in addition to horns and traveled the air and waters. The corpus of six creatures, in their singular or near-singular focus on water-earth referents, is also distinct from other Ohio Hopewellian works of iconography and architecture that come from other ceremonial contexts and that do balance Above and Below realm imagery, as well as other dimensions. For example, in two of the crematory basins under Mound 2 at the Mound City site were found two Hopewell ware vessels, one engraved with four raptors referencing the sky realms, the other with four shoveler ducks referencing the water-earth realms (Mills 1922:442, 443, 510, 511, Figures 39, 40; Squier and Davis 1848:190, Plate 46). In addition, both vessels have a squarish circumference with rounded corners, such that the raptors and ducks were observable from four different directions. Further, the raptors all face one direction whereas the ducks face the opposite direction. Together, the pair of vessels express balancing of the Above, the Below, the four directions, and, apparently, the opposite spins of the Above and Below realms. A second example of Ohio Hopewellian peoples having balanced the Above and Below

realms in their material creations is the layered construction of the Seip-Pricer mound below and above the Great Multiple Burial (Carr 2008b:54, Figure 2.8). Below it was a layer of water-washed sand underlain by up to six layers of muck soil, each separated by vegetable matter, together possibly representing six realms below the waters. Above the burial were multiple soil layers and a gravel mantel, possibly indicating multiple Above realms and the stony sky vault of some historic Woodland Indian cosmologies, as well as five effigy pipes, which to historic Woodland Indians imply rising smoke and communication with beings of the Above realms. The burials themselves were placed on a rectangular platform with sides oriented to the four cardinal directions. Again, Above and Below realms and the directions are all referenced and balanced relative to one another.¹³

The lack, or near lack, of attention given to balancing the Above and Below realms in the corpus of composite creatures repeats in the artifacts with which the creatures were buried and associated. All of these artifacts for which cosmological meanings are known or likely known reference underwater-underground realms: shell and pearl beads and a shell vessel, all from water, and cannel coal from within the earth (Case and Carr 2008:Appendix 6.2). These artifacts occur in the Central Altar of Mound 4 at the Turner site and Feature 10 cremation chamber-tomb in Mound 3 at Turner. In none of the proveniences of the composite creatures were found artifacts that reference the Above sky realm, to the extent that their cosmological meanings are known.¹⁴ The stratigraphic contexts of the four composite creatures from the Turner site are shown in our next article to have represented only Below realms of the cosmos, and in multiple ways. (Stratigraphic positioning for the creatures from Hopewell Mound 1 and Esch Mound 1 is unknown.) The implication of the Below realm focus of the forms and depositional contexts of the six composite creatures is that the ceremonies in which the items were used were oriented in their purposes to the Below realms rather than to a concern for balancing the Above and Below realms.

Creatures 1 through 4 from the Turner site were found in two features that both evidenced *in situ* burning: Creatures 2 and 4 were burned; and Creatures 2, 3, and 4 were laid in deposits of ash and cremated bone. The fire used in the ceremonies with the four creatures might be hypothesized to have referenced the Above realms, by analogy to historic southeastern Indian thought and practices (e.g., Hudson 1976:126, 128, 172, 208) and Mississippian iconography (Fundaburk and Foreman 1957:58; Lankford 2007a:20–22, Figure 2.5; Waring and Holder 1945:3–4) and, therefore, to have brought balance between the Above and Below in the ceremonies. However, matters of southeastern Indian cultural logic, the differing meanings of fire in the historic

northern Woodlands compared to the southeastern Woodlands, the lack of fire-sun symbols in Ohio Hopewell iconography, and the stratigraphic contexts of the four creatures do not support the hypothesis.¹⁵

Significance and Implications for Interpretation. The paucity of evidence of a concern for balance in the corpus of the six creatures, the items with which they were buried, and the rites of which they were a part run counter to the currently popular trend of interpreting Ohio Hopewell art and architecture as mediating world renewal within ceremonies. Renewal, from a historic Woodland native perspective, has as one of its essences the return of *balance* to what is being renewed, be it a person, a community, or the cosmos at large. In this regard, renewal is closely linked to the concept and process of healing at each of these scales, and is understood in relation to it in Woodland thought (e.g., J. E. Brown 1971:31–36, 40; Chaudhuri and Chaudhuri 2001:26; 28–30; Hudson 1976:157–159, 336; Mails 1991:104–105; Paper 1987:297, 301). In the case of renewal of the world, among the important categories that must be brought into balance are the different world realms and things associated with them. Yet the six Ohio Hopewell composite creatures and their associated artifacts do not express a balancing of realms.

This finding causes pause in the reading of recent archaeological literature that interprets the symbolism and meanings of Ohio and Illinois Hopewell mortuary ceremony, mound construction, and earthen enclosure construction. These activities and their material products have been tied with much emphasis over the past decade and more to the purpose of “world renewal” (Buikstra and Charles 1999; Byers 1996, 2004; Giles 2010; Romain 1994, 1996a:207–208; 2000:200, 218–226). For example, Byers (1996:186; see also 183–184; 2004:79, 139; 2010:295) posited that the emergence of Ohio Hopewell Big House ceremonialism, earthwork design, and mortuary practices was founded in the rise of a “society-wide world renewal cult.” Although his thoughts also embrace funerary, mourning, spirit-release, and spirit adoption rituals (Byers 2004:181, 325–326), his predominant focus is world renewal, explicitly (Byers 2004:329), and is seen in his characterization of Newark and other Ohio Hopewell earthworks singularly as “world renewal ritual centers” (Byers 2004:77–123, 325), Ohio Hopewellian Big Houses as “world renewal lodges” (Byers 2004:343–344, 362–367, 565), and occasionally log or stone-lined crypt tombs as “world renewal crypts (Byers 2004:489; Byers 2010:240). In Byers’ eyes, Ohio Hopewell mortuary rites were “exploiting the dead as symbolic capital by which to sustain postmortem sacrificial offerings in the performance of world renewal rites” (2010:242). Romain (1994:2; 1996a:207) tied the circle-and-square geometries and orientations of Ohio

Hopewell earthworks to “imitating” the universe and thus the rebuilding of the earthworks to renewing the universe. He also, however, saw the geometry and locations of earthworks as facilitating their use for other purposes, as portals to “the Otherworld” (Romain 1992:41; 2000:203–218). Buikstra and Charles (1999:204–205, 215) applied the distinction between rites of ancestor worship and grave-side rites of passage to Illinois Middle Archaic and Middle Woodland bluff-top and flood-plain mound sites to account for their material differences but, in the end (1999:214–216), attributed the internal structure and locations of the Middle Woodland mounds to rituals that “recreated the ternary Middle Woodland cosmos” (1999:214) and “placed disposal of the dead within a larger context of world renewal” (1999:215). Their emphasis on world renewal is announced clearly in the title of their book, *Recreating Hopewell*, although only a small minority of the book pertains to this subject.¹⁶

Such interpretations have their inspiration largely in Robert Hall’s (1979) well-known and empirically sound insight into the correspondence between Woodland mud diver, world-recreation mythology and the dark muck placed around Middle Woodland skeletons and deposited as layers within Middle Woodland mounds. However, in the grand attention that recent studies give to world renewal, they overgeneralize Hall’s findings and intention. Hall was calling to our attention that prehistoric Woodland burial mounds served *many* cultural purposes beyond the staging of funerary and burial rites, *one* of which was enacting world renewal, fertility, and creation drama, and that Woodland archaeologists should search out these additional purposes in historic Woodland Indian ritual (Hall 1979:265). The sparse evidence for a concern for balance and world renewal in the six creatures reiterates Hall’s call.¹⁷

If not renewal and balance, what were the purposes of the ceremonies in which the six renderings of composite creatures were used within Ohio Hopewell mound sites? To understand the Ohio Hopewell-wide patterning in the constitution of the composite animals and, I would add, to understand the Ohio Hopewell ceremonial record better in general, it is necessary to think beyond world renewal and consider, as Hall suggested, the very many other ceremonies of other primary purposes that historic Woodland Indians performed and Ohio Hopewell peoples likely performed. Humans have many needs and desires in diverse domains of life, and religions usually have many aspects that address those needs and desires. Most are not encompassed or met by world renewal, as important a part of the picture as it may be.

In a casual survey of literature on large public ceremonies of historic Woodland and Plains Indians, Carr (2008a:259–261) found more than 50 different cited purposes of the ceremonies. A small sample of the purposes

that are distinct from world renewal include: offering thanks to and communing with important spiritual beings and ancestors who fulfill needs; curing one or a few individuals; removing disease or misfortune from an entire town; purifying a community by medicine, bathing, or fasting; beseeching ancestors for a long and happy life or for reincarnation; wiping the social slate clean of social wrongdoings and pardoning crimes; settling serious crimes; instructing youths and community members in moral behavior and traditional culture; naming children and titling adults; marking passage to adulthood; marrying couples; initiating sodality members; initiating leaders; demonstrating by deed the power of a person; separating the dying or newly dead from the living, and mourners from nonmourners; guiding the deceased to a land of the dead or other liminal activities; reincorporating mourners with non-mourners and the deceased with ancestors; spirit adoption; asking for rain and protection of crops; preparing for the hunt or war; greeting a returning war party; celebrating a successful hunt or war; torturing prisoners; welcoming visitors; meeting of a council or sodality; socializing, dancing, and playing games; and having a fair or market. World renewal is but a piece of rich Woodland-Plains Indian ceremonial life.

In light of the diversity of goals of historic Woodland and Plains Indian ceremonies and the little archaeological evidence that the six Ohio Hopewell depictions of composite creatures expressed concern for balancing opposites and renewal, additional ethnohistorical information on the creatures is needed to determine their likely native meanings and uses in ceremony. Thus, a large but not complete survey was made of literature on historic Woodland and Plains Indian narratives, views, and rites involving underwater-underground creatures similar to the Ohio Hopewell ones and their constituent parts. Descriptions of analogous creatures and their roles in the cosmoses and social lives of the historic Woodland and Plains Indians were located.

Both helpful and harmful aspects of the creatures in native view were recorded—that is, the human needs that the creatures met and those that they caused. The neutral eye taken here to the sociability of the creatures contrasts with the overwhelmingly negative characterizations of the creatures found in some secondary but influential ethnohistoric literature (e.g., Hudson 1976; see also Feest 1986:7; Ritzenthaler and Ritzenthaler 1970:139) and contemporary, Christianized native views (e.g., Dewdney 1975; Smith 1995)—characterizations that also have made their way into some archaeological writings (e.g., Bacon 1993:265; Buikstra et al. 1998:88; Dye 1989:322; Penney 1985:185; Romain 1988:35; 1991:33, Table 1; 1996b:41; Steponaitis and Knight 2004:180; Townsend 2004:20, 22; Walker 2004:221; but see Emerson 1989:59, 76; Lankford 2004:214).

Survey of Historic Woodland and Plains Native American Narratives, Views, and Rites Involving Creatures Similar to the Six Ohio Hopewell Composite Creatures

The underwater-underground inhabitants of Woodland and Plains Indian cosmoses were diverse, varying among tribes and being of multiple kinds within some tribes. The beings include:

- felines (panthers, cougars, lions, tigers, lynxes) with a characteristic long tail and often with horns
- serpents with horns
- *Ukte'nas*, that is, snakes with deer antlers and a light-emitting crystal on the forehead
- alligator with horns
- dragons with the head, shoulders, and breast of a feline, the body and tail of a serpent, and the wings and claws of a raptor
- dragons with the body of a serpent, horns, and wings
- piasas with feline elements augmented by snake, bird, deer, fish, and/or racoon parts
- snakes/serpents without horns
- giant worms
- great fish, sometimes rendered in English as sharks or whales; one kind with horns
- bulls
- bears
- occasionally dogs, deer, serpents with fish tails, mermaids, mermen
- water spirits of unspecified forms

Felines, dragons with wings and sometimes feline elements, piasas with feline elements, giant worms, dogs, deer, mermaids, mermen, and water spirits all differ enough formally from the six Ohio Hopewell composite creatures and their constituent animals that they are not considered further here.¹⁸

For each of the other underwater-underground creatures, their physical descriptions and the tribes who told of them are briefly summarized below. The creatures' roles in the cosmoses and social lives of the historic Woodland and Plains Indians, including both helpful and harmful aspects, are inventoried in Table 2 on pages 40–43. A more detailed reporting of the creatures and their behaviors is presented elsewhere (Carr n.d.).

Horned Serpents. Serpents with horns, in contrast to those without (see below), were well known among Algonquian- and Iroquoian-speaking tribes of the northern Woodlands (Curtin and Hewitt 1918:797; Mooney 1900:459) as well as the Muskogean Creek and Alabama (Swanton 1928:494) (Figures 13, 14). The Menomini provide a common physical description of the creatures: "The great horned serpents, or as they are more often called, *Misikinū'bukuk*, 'hairy snakes,' are gigantic reptiles with bodies of the usual form, but covered with black or golden scales, while on their hairy heads grow stag-like horns" (Skinner 1913b:81). Contemporary Ojibwa add that one sighting involved a creature about 40 feet long with a triangular back (Smith 1995:96) and webbed feet for swimming (Redsky 1972:120–121). The Chippewa historically said that between the horns of the serpent is a red, flowery growth that yields vermilion-like powder that can be gathered by a person and serves as a vehicle for access to the serpent's power (Kohl 1860:424).

Tribes across the Woodlands and Plains historically varied in their views about how helpful or harmful the horned serpent is. In general, in the northern Woodlands, horned serpents were seen as less helpful to humans than were underwater-underground felines. In the Menomini tradition and the Ojibwa *Mide'wiwin*, humans were said to be protected from horned serpents by felines (Figure 13) (Landes 1968:94, 102, 120, 151, 201; Skinner and Satterlee 1915:483–485). Horned serpents were thought less predictable than felines in their intentions (Smith 1995:100, 146), pulling boats and people under (Smith 1995:116) or stealing a human being (Skinner and Satterlee 1915:490–493; Smith 1995:120) without provocation.

The Menomini, like many northeastern tribes, spoke of the extraordinary power of the horned serpents and the help they could bring to those who dared to seek a relationship with them, but also the great personal cost of the relationship and the chances that it would go awry and turn the beneficiary to antisocial, in-group sorcery. A horned serpent who appeared to a vision quester would allow the visionary to cut off pieces of its horn or flesh or to remove scales, warts, or blood as vehicles for transferring power to him, with the kind of body part varying by Woodland tribe (Barnouw 1977:134–136; Jenness 1935:259; Kohl 1860:424; Landes 1968:88; Skinner 1913b:82). In return for enhanced power, typically the person would have to give back to the serpent one or more members of his family, who were taken to the serpent's underwater den (Barnouw 1977:184; Curtin and Hewitt 1918:268–270; Kohl 1860:425; Skinner 1915:184). A. Skinner provided a particularly dark report of the horned serpent and relationships with him: "The great horned serpents . . . seek to destroy man, and come above

(continued on page 44)

Table 2. The Nature of Underwater-Underground Creatures in Historic Woodland and Plains Native American Thought That Are Similar to the Six Ohio Hopewell Composite Creatures or Their Component Animals.¹

<i>Helpful Deeds and Aspects</i>	<i>Harmful Deeds and Aspects</i>
Serpents with Horns	
offer powerful pieces of themselves, bringing success in hunting ²	pull boats and people under water ³
offer powerful pieces of themselves, bringing success in warfare ⁴	create whirlpools, rapids, stormy waves, floods ⁵
offer powerful pieces of themselves, bringing success in courtship ⁶	provide power with a heavy price—in exchange for family members ⁷
offer powerful pieces of themselves, useful for healing ⁸	steal human beings ⁹
offer powerful pieces of themselves useful for killing an enemy within one's own group ¹⁰	attract and marry humans, breeding serpents within them ¹¹
transports mythological heroes across a river ¹³	move a person to sorcery ¹²
transport ordinary person across water ¹⁵	obstruct entrances of the <i>Mide'wiwin</i> lodge ¹⁴
transport innocent people across a stream away from dangers while drowning malevolent people ¹⁶	
fed and sheltered those who fell through the winter ice ¹⁷	
serves as a bridge over a dangerous river for deceased persons to reach a land of the dead ¹⁸	
<i>Ukte'nas</i> (Horned Serpents with a Crystal in the Forehead)	
tried to help humans kill the Sun when she sent a sickness to destroy them ¹⁹	attempts to kill humans whenever they approach ²⁰

¹ Excluded from this inventory are felines; dragons, which have wings and sometimes feline elements; piasas, which have feline elements accompanied by bird, snake, fish, deer, and/or raccoon parts; giant worms; dogs; deer; mermaids; mermen; and morphologically undefined waterspirits. These creatures differ significantly from the six Ohio Hopewell composite creatures and their component animals.

² Jenness 1935:259; Skinner 1915:183; Swanton 1928:494.

³ Smith 1995:116.

^{4, 6, 8, 10} Jenness 1935:259; Skinner 1915:183.

⁵ Barnouw 1977:38, 137; Curtin and Hewitt 1918:269; Kohl 1860:390, 423; Skinner 1915:185–186; Skinner and Satterlee 1915:490–492, 492–493; Smith 1995:100, 102, 158; Tanner 1830 [1956]:185.

⁷ Barnouw 1977:184; Curtin and Hewitt 1918:268–270; Kohl 1860:425; Skinner 1915:184.

⁹ Skinner and Satterlee 1915:490–493; Smith 1995:120.

¹¹ Curtin and Hewitt 1918:86–90, 268–270, 797; Skinner and Satterlee 1915:490–492.

¹² Skinner 1913b:81; 1915:183; Skinner and Satterlee 1915:483–485.

¹³ Bowers 1950:263; Lankford 2007b:246.

¹⁴ Dewdney 1975.

¹⁵ Skinner 1911:171.

¹⁶ Barnouw 1977:136.

¹⁷ Vecsey 1983:74.

¹⁸ Barnouw 1977:18; Hilger 1992:78; Kohl 1860:218–219; Skinner 1913b: 86; Warren 1885:72; Yarrow 1881:199.

¹⁹ Mooney 1900:297.

²⁰ Mooney 1900:297–298.

crystal in forehead brings success in hunting to its owner²¹
 crystal in forehead brings success in love to its owner²²
 crystal in forehead brings success in rain making to its owner²³
 crystal in forehead brings success in divining to its owner²⁴

Snakes and Serpents without Horns: Nonrattlers

provide influence over rain, thunder beings ²⁵	block doors and progress through the <i>Mide'wiwin</i> lodge ²⁶
controlled the warm winds ²⁷	encircle the <i>Mide'wiwin</i> lodge ²⁸
provide some influence over tribes of other animals and plants ²⁹	attack human beings in the woods and abduct them to their underwater den ³⁰
provide longevity ³¹	strike anything along its path with lightning when migrating during a rain ³²
comprise the framework of the <i>Mide'wiwin</i> lodge ³³	create rapids in rivers ³⁴
bring the Medicine Lodge to a culture hero and the Indians ³⁵	cause thunder ³⁶
pin down the Earth, keeping it from spinning ³⁷	cause whirlwind ³⁸

Snakes and Serpents without Horns: Rattlers

saved the human race from a sickness sent by the Sun ³⁹	attract any living creature into its jaws with its changing colors ⁴⁰
welcome and treat kindly visitors to their underground community ⁴¹	
gives individuals notice of impending danger by rattling ⁴²	
protect families of traders away on travels ⁴³	
opens the heart of enemies being negotiated with ⁴⁴	
saved travelers from drowning ⁴⁵	
comprise the framework of the <i>Mide'wiwin</i> lodge ⁴⁶	

²¹⁻²⁴ Mooney 1900:460–461.

²⁵ Mooney 1900:294, 296.

²⁶ Hoffman 1891:168.

²⁷ Skinner 1925:35.

²⁸ Landes 1968:82–83, 94, 102, 120, 145.

²⁹ Mooney 1900:294, 296.

³⁰ Swanton 1928:492; Swanton 1946:773; Urban and Jackson 2004:714–715.

³¹ Hudson 1976:172–173.

³² Swanton 1928:493; 1946:773.

³³ Radin 1923:350–359; 1945, 1950:19–62.

³⁴ Swanton 1928:495.

³⁵ Skinner 1923:38–39.

³⁶ Swanton 1928:494.

³⁷ Radin 1970:120, 164.

³⁸ Swanton 1928:494.

³⁹ Hudson 1976:166.

⁴⁰ Mooney 1900:457.

⁴¹ Curtin and Hewitt 1918:539–543.

⁴² Mooney 1900:458.

⁴³⁻⁴⁵ Mooney 1900:457–458.

⁴⁶ Radin 1923:350–359; 1945; 1950:44.

Table 2. The Nature of Underwater-Underground Creatures in Historic Woodland and Plains Native American Thought That Are Similar to the Six Ohio Hopewell Composite Creatures or Their Component Animals. (cont'd.)

<i>Helpful Deeds and Aspects</i>	<i>Harmful Deeds and Aspects</i>
Alligators with Horns	
provides medicine to a boy who sought it ⁴⁷	
Alligators without Horns	
	eats the souls of bad persons who slip off a log bridge on their journey to a land of the dead ⁴⁸
Fishes with Horns	
	turns into a large lizard that sucks peoples blood ⁴⁹
Fishes without Horns	
bring well-being to the whole tribe ⁵⁰	block doors and progress through the <i>Mde'wiwin</i> lodge ⁵¹
like the first humans, fish have scales that protect fish against disease ⁵²	create whirlpools that suck in canoeists ⁵³
taught humanity the Medicine Rite ⁵⁴	swallows a culture hero and humans whole ⁵⁵
brought well-being to the Earth by making peace with the first man, Mighty One, who had initiated slaying the fish's family ⁵⁶	associated with wildness and harm ⁵⁷
upon death, turned into medicine paint for use by all humans ⁵⁸	eats the souls of bad persons who slip off a log bridge on their journey to a land of the dead ⁵⁹
Serpent-Fish	
helps warriors ⁶⁰	

⁴⁷ Mooney 1905:442. A related being may have been a horned caiman rendered by Illinois Hopewell peoples as a copper cutout and decoded by Hall (2006).

⁴⁸ Skinner 1913a:73.

⁴⁹ Mooney 1900:306–307.

⁵⁰ Howard 1960:218–219.

⁵¹ Dewdney 1975:102, figure 93.

⁵² Dewdney 1975:40–41; Kohl 1860:199; Landes 1968:93; Smith 1995:183–184; see also Barnouw 1977:43–44.

⁵³ Mooney 1900:347.

⁵⁴ Jones 1919:559–609.

⁵⁵ Mooney 1900:321; Schoolcraft 1839:145–146.

⁵⁶ Jones 1919:559–609.

⁵⁷ Barbeau 1915:293.

⁵⁸ Jones 1919:559–609.

⁵⁹ Skinner 1913a:73

⁶⁰ Eyman 1963:3233.

Bulls

- embodiment of power, supplying all human needs⁶¹
- provisioned humans with buffalo meat⁶³
- became the medicinal grasses and shrubs on the earth's surface⁶⁵
- hears the Indians' prayers for help⁶⁷
- called forth the mud-divers, blew the earth island and all animals into existence⁶⁸
- instructed Indians in their festivals and the Medicine Rite⁶⁹
- guarded one of the doors of the Medicine Lodge to keep away bad spirits⁷⁰
- helped a girl and infant cross a river and escape a cannibal woman and drowned the cannibal woman⁷¹
- married a girl, provided her a fine, dry, under-river lodge, and kept her happy and playful⁷²
- cause eddies⁶²
- cause inward corruption of the liver⁶⁴
- prohibited humans and animals from drinking and making salt at a spring⁶⁶

Bears

- aid and marry humans⁷³
- initiated planning of the *Mide'wiwin*, carried the *mide'* pack from the bottom of the Earth to the surface and westward⁷⁵
- helps the *Mide'wiwin* initiate by compelling serpents, other bears, and panthers to not obstruct the lodge's entrance and the initiate's progression⁷⁶
- provided own hide to make the sweat lodge of the *Mide'wiwin*⁷⁷
- a clan traces its origin to the white bear that guards copper deposits⁷⁸
- unfriendly to humans who ventured to copper mines⁷⁴

⁶¹ Kehoe 1992:211.

⁶² Mooney 1900:405, 410.

⁶³ Wissler and Duvall 1908:128–129.

⁶⁴ Swanton 1928:645.

⁶⁵ Skinner 1920:273–278, 339 note 44, see also 238, 267.

⁶⁶ Connelley 1899:90.

⁶⁷ Skinner 1920:273–278, 339 note 44, see also 238, 267.

⁶⁸ Skinner 1920:273–278, 339 note 44, see also 238, 267.

⁶⁹ Skinner 1920:273–278, 339 note 44, see also 238, 267.

⁷⁰ Radin 1923:57.

⁷¹ Grinnell 1972:50–60; see also Wissler and Duvall 1908:138.

⁷² Wissler and Duvall 1908:128–129.

⁷³ Skinner and Satterlee 1915:381–382.

⁷⁴ Mallorie 1893:481; Schoolcraft 1851–1857, vol. 1:352, plate 49; see also Brown 1939:39; Gill and Sullivan 1992:23.

⁷⁵ Dewdney 1975:57–59; Landes 1968:96–112; see also Barnouw 1977:41–45; Dewdney 1975:33, 60–80.

⁷⁶ Dewdney 1975:89–102; Hoffman 1891:167, 168, plate 3; Landes 1968:27, 102.

⁷⁷ Landes 1968:118–119, 122.

⁷⁸ Skinner and Satterlee 1915:381.

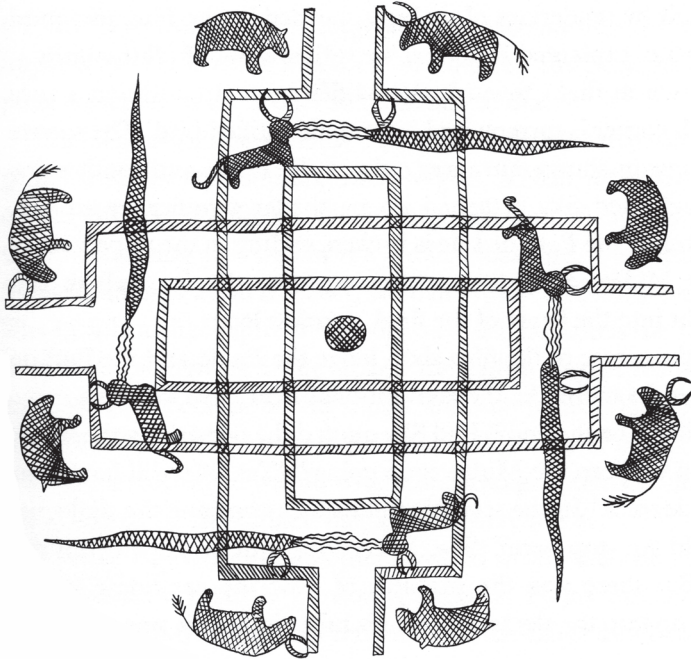


Figure 13. Historic Ojibwa *Mide'wiwin* birch-bark scroll for ghost lodge mortuary rites. Felines face off with horned and unhorned serpents who block entrances to the lodge. Bears and bulls protect entrances to the lodge. Note that horned and unhorned serpents are distinguished. Nett Lake Reservation, Minnesota. Credits: Dewdney 1975:111, Figure 110.

the ground to search for him wherever they dare, but in this effort they are rarely successful, owing to their relentless enemies, the thunderbirds. For a Menomini to see one of these snakes in his waking hours is a bad sign, perhaps foretelling death in his family; to see one in a dream is an evil omen and the dreamer, if he has been fasting for a vision, should at once break his fast and start it a second time. Should he accept the vision, he becomes possessed of the malign powers of sorcery and witchcraft" (Skinner 1913b:81; 1915:183; see also Skinner and Satterlee 1915:483–485).

Whereas Algonquian and Iroquoian speakers generally saw the horned serpent and those who sought his aid with an overtone of harm, some other tribes emphasized his benefits and sociableness. According to the Creek informant, Jackson Lewis, the snake with stag horns was "held in highest esteem . . . on account of the value placed on its horns as hunting charms . . . It is not a bad snake . . . It does not harm human beings but seems to have a magnetic power over game, [which it can draw] irresistibly into the water and

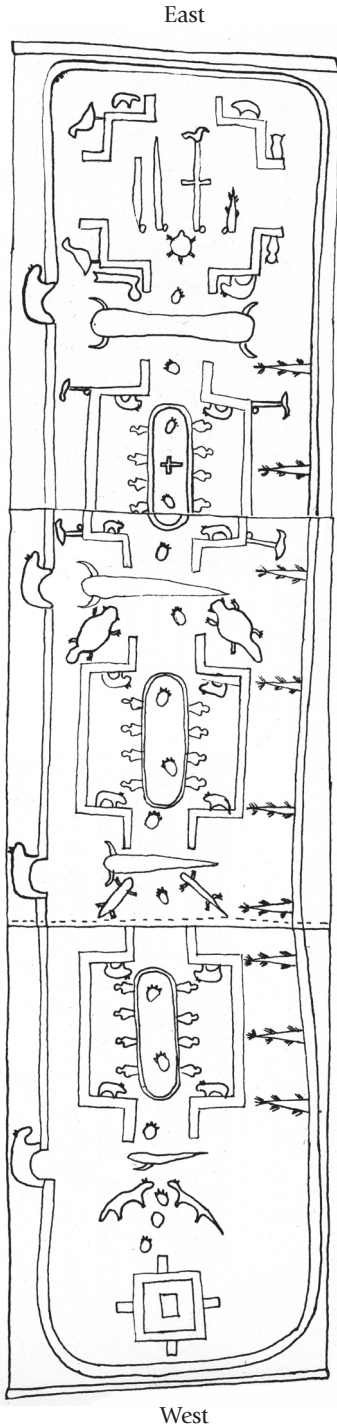


Figure 14. Historic Ojibwa *Mude'wiwin* birch-bark scroll. Horned serpents block entrances to the lodge. Bears guard the east entrance and west exit of each of the lodge's four rooms, but also oversee the guarding of all doors of all four rooms, as shown by four bears on the north, at the left of the picture. Credits: Dewdney 1975:91, Figure 72.

destroy... A Creek hunter is always exceedingly anxious to obtain even the most minute fragment of the [snake's] horn, because it is said to give luck and success in hunting and killing deer" (Swanton 1928:494). The Chipewewa knew the horned serpent to sometimes "play a beneficent role... transport[ing] innocent people across a stream away from dangers, while malevolent people are drowned" (Barnouw 1977:136).

Horned serpents were masters of waters, but usually not of the creatures of the waters (Hultkrantz 1983:5, 14; but see Smith 1995:97; Vecsey 1983:74,76). The serpents could create whirlpools, rapids, or stormy waves by whipping their long tails, or cause great floods (Table 2). They demanded offerings of tobacco, dogs, and/or cloth or other valuables for safe passage (Hilger 1992:62; Hultkrantz 1983:5; Jenness 1935:45; Kinitz 1947:160ff; Skinner 1920:278; see also Mooney 1900:458; Skinner 1913b:82).

Like many animals told of by Woodland and Plains Indians (Curtin and Hewitt 1918:98-104; Harrod 2000; Overholt and Callicott 1982), horned serpents were thought by the Seneca and other Iroquoian tribes to be capable of assuming human form, and sometimes even to attract and marry humans. For a human to live with a horned serpent and eat its food was thought harmful to the human (Table 2).

Ukte'nas. The *Ukte'nas* of the Cherokee and Yuchi take the stag-horned serpents one step farther by adding a brilliant crystal on the forehead.¹⁹ The Cherokee knew the *Ukte'na* to be “a great snake, as large around as a tree trunk, with horns on its head, and a bright, blazing crest like a diamond upon its forehead and scales glittering like sparks of fire. It has rings or spots of color along its whole length, and cannot be wounded except by shooting it in the seventh spot from the head, because under this spot are its heart and its life. The blazing diamond is called *Ulu'nsu'ti*, ‘Transparent,’ and he who can win it may become the greatest wonder worker of the tribe, but it is worth a man’s life to attempt it, for whoever is seen by the *Ukte'na* is so dazed by the bright light that he runs toward the snake instead of trying to escape. Even to see the *Ukte'na* asleep is death, not [only] to the hunter himself, but to his family” (italics removed; Mooney 1900:297–298). The name, *Ukte'na*, is derived from the Cherokee word, *aktã*, which means “eye” and can be rendered as “strong looker” or “keen eyed” (Mooney 1900:459). The *Ukte'nas* were said to “hide in deep pools in the river and about lonely passes in the high mountains” (Mooney 1900:297; see also p. 299).

The destructiveness of the *Ukte'nas* toward humans is a constant and inherent to their nature, in contrast to the culture-specific renderings and context-specific intentions of the underwater-underground felines and horned serpents. The ill-natured ways of the *Ukte'nas* is understandable. The original *Ukte'na* was a man who was changed by the Little People to kill the Sun when she “became angry at the people on earth and sent a sickness to destroy them. [The *Ukte'na*] failed to do the work, and the Rattlesnake had to be sent instead, which made the *Ukte'na* so jealous and angry that the people were afraid of him and had him taken up to the Upper World, to stay with the other dangerous things. He left others behind, though, nearly as large and dangerous as himself” (Mooney 1900:297).

The *Ulu'nsu'ti* from an *Ukte'na*'s head was the most powerful of crystals. It was used for success in hunting, love, rainmaking, divining whether a person would live, and any other endeavor (Table 2; Mooney 1900:460–461). It had “a blood-red streak running through the center from top to bottom” (Mooney 1900:298), analogous to the red, power-giving substance between the horns of the horned serpent (see above, Horned Serpents). The *Ulu'nsu'ti* was said to have to be fed the blood of an animal each time it was used and periodically in between (Mooney 1900:298). Other crystals of a variety of colors and shapes were thought to be the iridescent scales of the *Ukte'na* and of lesser quality (Mooney 1900:459, 460).

Snakes and Serpents without Horns: Nonrattlesnakes. Snakes and serpents without horns (Figures 15; see also Figures 13 above, 17 below) were distinct from

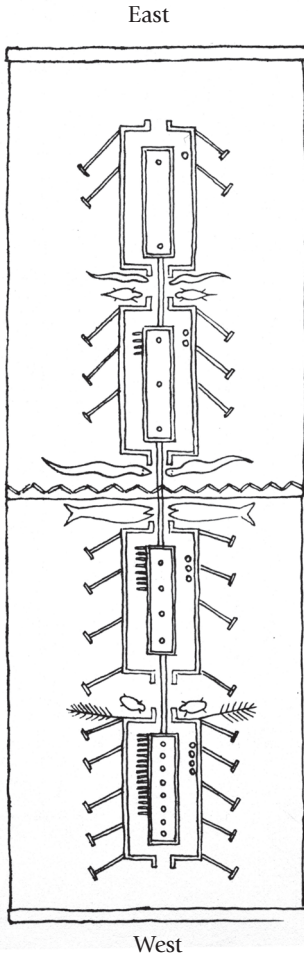


Figure 15. Historic Ojibwa *Mide'wiwin* birch-bark scroll. Two unhorned snakes obstruct the west exits of the first- and second-degree lodges, on top and second from the top. Two giant fish obstruct the east door of the third-degree lodge, third from the top. The candidate is stopped from progressing through the ceremony. Credits: Dewdney (1975:102, Figure 93).

horned serpents and *Ukte'nas* in the minds of tribes of the northern and southern Woodlands. Their powers as well as their physical forms were commonly distinguished (Table 2). The Ojibwa *Mide'wiwin* varied from reservation to reservation in whether it involved water snakes/serpents lacking horns or horned serpents (contrast Hoffman 1891:168 and Landes 1968:94, 102, 120, 145 with Dewdney 1975). The two kinds of creatures were distinguished from one another and both were a part of *Mide'wiwin* rites on some reservations (Dewdney 1975:94, 96, 97, 110, Figures 77, 80, 81, 82, 111). In Seneca thought, snakes and underwater serpents were distinguished not only from horned serpents but also from each other. A Seneca legend tells of the battle between them (Curtin and Hewitt 1918:111–112).

Views on the helpfulness and harmfulness of snakes varied according to their form and by tribe (Table 2). The Creek knew a great variety of snakes of different forms and behaviors. The “tie snake” was a long, thin snake that moved forward by a succession of powerful thrusts. “It lives in deep water... holes from which it makes excursions into the woods, [capturing small to very large prey and], drawing its prey down into the water to its den” (Swanton 1928:492). Similar stories about tie snakes were told by the Hitchiti, Natchez, and Cherokee (Urban and Jackson 2004:714–715; see also Swanton 1946:773). Snakes as large around as a stovepipe were said by the Creek to be the chiefs of all underwater beings. Several of these would gather together to weave and raise themselves up above the water and then fall over with a splash (Swanton 1928:495). They also would join together to form a bow across a river, over which the waters would roar. The “long snake,” which

lives in the water and could coil itself to a height of three feet, may have been thought to be the source of thunder (Swanton 1928:494). The “sharp-breasted snake was very long and a full foot and a half in diameter, with a sharp breast of scales by which it would plow a furrow in earth or stones or across tree roots, striking all along its path (Swanton 1928:493; see also Swanton 1946:773). The Celestial One or Good Snake “consists principally of a head and lacks a body . . . It emerges sometimes from the ground with a great noise and leaves a large hole in the earth where it came out . . . It swirls round [like a] whirlwind” (Swanton 1928:494; see also Swanton 1946:773).

Serpents also varied across the Woodlands in their sociableness. The Seneca told of a hornless serpent who was the owner of a lake and killed, cooked, and ate a man who fished in the serpent’s lake and tried to trick him that he had not taken any catch (Curtin and Hewitt 1918:296–297). The Huron and Wyandot felt themselves “plagued and tormented . . . for ages” by Great Serpents who had their origin in either the destructive Twin, *Tah’-weh-skah’-reh*, or the cannibalistic *hoo’h’-keh* Giants (Connelley 1899:86); that is, the serpents were intrinsically antisocial/evil. In contrast, the Sauk saw serpents in a more a more neutral and compassionate light: as creatures who were badly beaten up by their culture hero *Wi’sakä*, who appeal to Grandmother earth and then to Great Spirit for help, and who end up bringing the Medicine Lodge to *Wi’sakä* and the Indians out of fear of *Wi’sakä’s* retaliation (Skinner 1925:38–39).

Snakes and Serpents without Horns: Rattlesnakes. Rattlesnakes were held both in high regard and with fear across the Woodlands universally (Skinner 1923:456), with the Cherokee knowing them to be the chiefs of all snakes comprising the snake tribe (Mooney 1900:295, 457). To kill a rattlesnake was to ensure being bitten and killed by one of its relatives in the Cherokee and broader Woodland ethics of reciprocity and reprisal (Mooney 1900:294–295, 457–458). The rattlesnake was typically seen as helpful to humans in a wide variety of ways (Table 2), in contrast to the *Ukte’nas*, which systematically killed humans, and the underwater-underground felines and horned serpents, which were both helpful and harmful and unpredictable in their behaviors. An exception was harm brought to the Cherokee by certain gigantic rattlesnakes that changed colors and, through their “great power of fascination, . . . drew into their jaws any living creatures coming within their vision” (Mooney 1900:457), not unlike the fascinating diamond atop the *Ukte’na’s* head.

Horned alligators. The horned alligator was another creature that paralleled the horned serpents of the Algonkians and the *Ukte’nas* of some southeast-

ern tribes. The Kiowa called the great horned alligator *Zemo'gu'ani* (Mooney 1900:459). A related being may have been a horned caiman, rendered by Illinois Hopewell peoples as a copper cutout and decoded by Hall (2006).

Fishes. A great fish, sometimes translated in English as a shark or whale, was known by the Ojibwa of Minnesota and Ontario (Landes 1968:28, 31). It, as well as a whale-like fish with a human head, called *Mi shee nah may gway*, are shown very occasionally on *Mide'wiwin* scrolls, where they block an entrance to the Medicine Lodge (Figure 15; Blessing 1963). The Ojibwa culture hero *Manabozho* was swallowed by a great fish and managed to escape by striking its heart with his war club (Schoolcraft 1839:145–146), much as a Cherokee man who was swallowed by the huge fish, *Dăkwâ'* (trans. “whale”) cut his way out with a mussel shell (Mooney 1900:321). The Cherokee also told of a great fish that sucked canoeists into a whirlpool (Mooney 1900:347). Another, *ugûñste'li*, which means “having horns,” was said to appear only in the spring and then transform into the very large *gigă-tsuha'li* (“bloody mouth”)—a lizard that was thought to suck blood from people it approached, indicated by the puffing out of its throat, its head turning red, and red coloration at the corners of its mouth (Mooney 1900:306–307). A fish with antlers (Figure 16) was rendered by earlier Mississippian peoples (Spiro site, Oklahoma, Craig B style; Phillips and Brown 1984:Plate 234). The Menomini spoke of a great fish that devoured many of the first people before it was destroyed by their culture hero (Ritzenthaler and Ritzenthaler 1970:139). The Huron and Wyandot saw fish and fish scales as associated with wildness and harm: “The Good [Twin] had brought forth gentle game animals for the people, and large fishes without scales; but his wretched brother covered the fish with hard scales and imprisoned the animals in a cave, frightening them and making them wild. Besides, he made fierce animals that were to be the enemies of mankind, and monsters of all kinds with which the earth has ever after been infested” (Barbeau 1915:293).

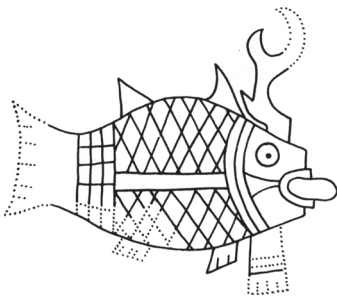


Figure 16. Depiction of a fish with deer antlers, one of five incised on a whelk shell and interred in the Craig mound mortuary at the Spiro site, Oklahoma. Braden B style. Credits: Phillips and Brown (1984:part of plate 234).

In contrast to these menacing fish, the Ojibwa also held that the first Indians were created with brilliant silvery scales like those of a fish that covered their entire body, protecting them from disease and giving them immortality (Dewdney 1975:40–41; Kohl 1860:199; Landes 1968:93; Smith 1995:183–184; see also Barnouw 1977:43–44). The primaeval manitou of the Ojibwa Below realm, Black-Tail-of-a-Fish, taught humanity the Medicine Rite and brought well-being to the earth by making peace with the first man, Mighty One, who had initiated slaying the fish's family; upon the fish's death, he turned into medicine paint for use by all humans (Jones 1919:559–609). The Prairie Potawatomi celebrated a fish along with the underwater panther in their annual Underwater Panther rite, to ensure the well-being of the tribe as a whole (Howard 1960:218–219). The Mohawk told of a giant fish who was master of the fish and could take on human forms at will, but its intentions are not reported (Converse 1908:114, 116).

Serpent-fish. This underwater-underground creature is rarely mentioned in literature on the historic Woodland and Plains Indians. A Winnebago drawing of a giant serpent with a fish-like tail is preserved on a war club (Eyman 1963:32–33). Serpent-fish are also depicted occasionally on Ojibwa *Mide'wiwin* birch-bark scrolls, where they circle the Medicine Lodge (Figure 17). Whether they are protective or intend harm is not reported.

Bulls. Underwater bulls were known widely among Algonquian-, Iroquoian-, Muskogean-, and Siouan-speaking tribes across the Woodlands and Plains. Respectively, these tribes include the Ojibwa, Blackfoot, and Cheyenne; the Eastern Cherokee, Oklahoma Wyandot; the Naudowessee (Santee) and Wahpeton Dakota; and the Creek. Underground, rather than underwater, buffalos were experienced by the Seneca. In some tribes, the underwater bull was known as a composite of the forms of multiple creatures; in other tribes, it was seen as a normal-looking bison. The Naudowessee Dakota of Minnesota described the underwater buffalo, which they called Tautongo Omlishco, or buffalo snake, as “a serpent of a monstrous shape and size . . . it having horns . . . four feet and claws like a bear . . . [and being] three fathoms long near as big round as a buffaloe with a black head and tail; the middle from neck to tail is red having some fins on the back” (Figure 18; Carver 1976 [1766–1770]:98–99). The buffalo snake has several characteristics like those of Creature 1, the carnivore-snake composite. The Wahpeton Dakota knew of several kinds of *unktehi*, or water spirits, one of which was “a four-footed, long-tailed monster with shiny horns, somewhat resembling a buffalo. Neither this monster nor its mate were buffalo color . . . their heads were white like snow” (Skin-

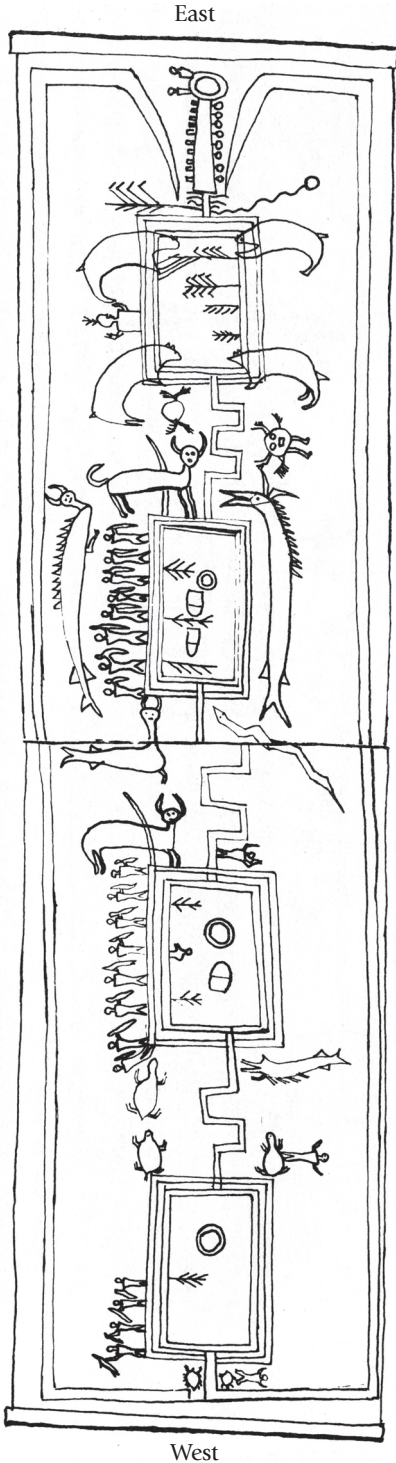


Figure 17. Historic Ojibwa *Mude'wiwin* birch-bark scroll. Horned serpents with fish tails encircle the second-degree lodge, second from the top. Bear guards the east entrance and west exit of the first-degree lodge on the top. Credits: Dewdney (1975:90, Figure 71).

ner 1920:339 note 44). There are no reports that the underwater bulls and buffalo of the Blackfoot, Cheyenne, Eastern Cherokee, Oklahoma Wyandot, or Creek, or the bulls or underwater bulls of the Ojibwa *Mude'wiwin*, had forms other than that of a natural buffalo (Figure 13); likewise for the Seneca's underground buffalo. The Oklahoma Wyandot told of Witch Buffaloes who lived in ancient times at Big Bone Licks Spring, Kentucky (Connelley 1899:89–91). They were said to be “as tall as a tree, with horns as long as a man is high. Their horns stood straight out from their foreheads. They are always spoken of in the feminine gender” (Connelley 1899:90). They treated the Wyandots and other animals poorly. Seneca lore also spoke of underground buffalo that were harmful to humans. The buffalo chief of one underground village had but one large rib on each side, making him hard to kill (Curtin and Hewitt 1918:98–102). The Cherokee's underwater buffalo is known from two place names; one translated as “where it eddies.” The

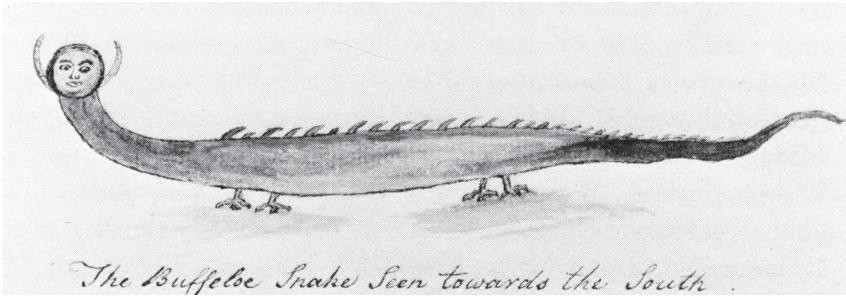


Figure 18. Depiction of the "buffalo snake" of the Naudowessie (Santee) Dakota of Minnesota. The creature has a serpent-like body, fins on its back, horns, and four feet with "claws like a bear" (Carver 1976 [1766–1770]:98). It is possible that the fins instead represent the dorsal scales of an alligator/caiman/crocodile, making the creature related to the Kiowa's great horned alligator, *Zemo'gu'ani*. Credits: Carver 1976 [1766–1770]:98–99.

Creek call him *wi yanasa* (Swanton 1928:645) and the Cheyenne, *ahke* (Hall 2006:469). The Ojibwa depicted bulls on their birch-bark scrolls; these creatures may or may not have lived under the water/ground (Figure 13). In more Woodland and Plains tribes than not, underwater-underground bulls were experienced as helpful (Table 2).

Bears. Underwater-underground bears, or close associations of the bear with underwater beings, are recorded historically for Iroquoian, Muskogean, Algonquian, and Siouan speakers (Figures 13, 14, 17, 19). The Cherokee knew of a family of water bears that lived in a deep hole at the bottom of the Oconaluftee River (Mooney 1900:411). The Creek also knew of a water bear (Swanton 1928:495), and the Blackfoot's name for the water bull also translates as water bear (Kehoe 1995:119). The historic Menomini, and Chippewa or Cree, each told of an underground dwelling bear with a long tail of copper or other bright metal, copper deriving from within the earth and occurring on the beaches and islands of Lake Superior. The bear was said to live near copper deposits and/or to guard them. Menomini legends and drawings further elaborate that the bear's tail was long enough for him to wrap it around his entire body and that he had silvery hair, leading to his name, White Bear Spirit (Figure 19) (Mallorie 1893:481; Schoolcraft 1851–1857, Vol. 1:352, Plate 49; see also C. E. Brown 1939:39; Gill and Sullivan 1992:23). The Menomini Bear Clan traced their origin to this creature. The Menomini also spoke of "underneath bears" of normal form (Skinner and Satterlee 1915:381). The Naskapi and Montagnais knew of a great white bear, but whether it lived underground is unclear (Speck 1935:160). The Santee Dakota's water buffalo snake had four feet and claws like a bear's (Carver 1976 [1766–1770]). In variants of

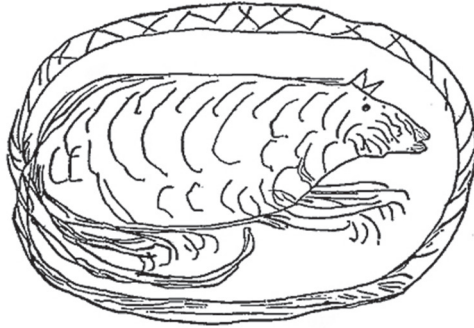


Figure 19. Depiction of the Menomini's underground-dwelling White Bear *Ma'nidō*, with its characteristic very long tail wrapped around its entire body. Credits: Mallorie (1893:481, Figure 669).

the Winnebago creation story, bears, water spirits, and snakes are used interchangeably, linking them logically. Creator stopped the world from spinning, so that it could be covered by stone and inhabited by animals, by securing its four corners with either bears, water spirits, or snakes (Birmingham 2010:31; see Radin 1923:350 for one variant).

Underwater-underground bears were experienced as both beneficial and harmful to humans (Table 2), the view varying only in part by tribe. In Blackfoot, Menomini, Winnebago, or Ojibwa narratives and rituals, underwater-underground bears were essential to the creation of the world (Birmingham 2010:31; Radin 1923:350) in their planning, distributing, and roles in the functioning of the Medicine Rite (Figures 13, 14, 17; Barnouw 1977:41–45; Dewdney 1975:33, 57–59, 60–80; Hoffman 1891:167, 168; Landes 1968:96–112). They were also critical in everyday life situations (Skinner and Satterlee 1915:381–382). In contrast, the long, copper-tailed underground bears of the Chippewa, Menomini, and possibly Cree were unfriendly to humans who ventured to mine copper from their abodes (Mallorie 1893:481; Schoolcraft 1851–1857, Vol. 1:352, Plate 49; see also C. E. Brown 1939:39; Gill and Sullivan 1992:23), and the Ojibwa occasionally told of dangerous water bears (Landes 1968:31). The variety of helpful and harmful behaviors of underwater-underground bears toward historic Woodland and Plains peoples mirrors the range of interactions of earthly bears with them (Berres 2004:8). In no cases known to us are underwater-underground bears contrasted with the Celestial Bear constellation, which was recognized by the Musee-Mahican, Delaware, Iroquois, Wabanaki, and Micmac as enacting a bear hunt and the reincarnation of bears after they are killed (Speck and Moses 1945:56).

Survey Findings

A survey of literature on historic Woodland and Plains Indian narratives, views, and rites involving underwater-underground creatures reveals patterns that are useful for interpreting the nature, cosmological positions, and social roles of the composite creatures that Ohio Hopewell peoples depicted.

First, there is continuity between the Middle Woodland and Historic periods, with quite a bit of overlap between the creatures or components of creatures that Ohio Hopewell peoples knew and those that Historic Woodland and Plains Indians experienced. Shared are extraordinary rattlesnakes, horned snakes, fish, and crocodylians, and possibly bears (depending on the identity of the carnivore component of Creature 1). Historic underwater-underground creatures do not include enormous salamanders or salamander composites like those found in the Ohio Hopewell corpus.²⁰ Reciprocally, the Ohio Hopewell creatures do not include the feline composites (including piasas and dragons) known to Historic Woodland and Plains Indians.²¹ Bulls of the Historic period might or might not find company in the Ohio Hopewell corpus, depending on whether the Gestalt look of Creature 1 is considered bullish. Thus, in moderation, and always accompanied by archaeological contextual information, historic Woodland and Plains Native American knowledge about underwater-underground creatures is relevant to interpreting the six Ohio Hopewell composite creatures.²²

Second, the underwater-underground creatures of Historic Woodland and Plains Indian cosmoses were both helpful and harmful in their relationships to humans. A spectrum of helpfulness and harmfulness of the creatures—their degree of moral sociability—can be defined, based on the information above and summarized in Table 2. The group most consistently seen as helpful were rattlesnakes, although they were also very powerful and required respect. Underwater bulls and bears were close seconds. Like the rattlesnake, the bull and bear each helped humanity in key ways as the cosmos was being set up and continued to meet human needs. Less reliable, and equally mixed in their helpful and harmful ways, were nonrattlesnakes, serpents without horns, and great fish. More harmful yet were horned serpents, who were known to do many destructive things to humans, unpredictably and without due cause. Their powers could be harnessed for human benefit by the courageous, but could not be counted on and could lead a person to sorcery and misfortune. Uniformly dangerous to humans were the *Ukte'nas* and apparently hornless alligators.

This spectrum of helpful-to-harmful underwater-underground creatures, as well as the situational-specific nature of the relationships of all of the creatures toward humans (save the *Ukte'nas*), deviates considerably from

the fully harmful quality by which Hudson (1976), Smith (1995), Dewdney (1975), and Landes (1968) characterized the creatures and their Lower World residence. Woodland archaeological studies that have drawn inspiration from the influential work of Hudson, in particular, reiterate his biases (e.g., Bacon 1993:265; Buikstra et al. 1998:88; Dye 1989:322; Penney 1985:185; Romain 1988:35; 1991:33, Table 1; 1996b:41; Steponaitis and Knight 2004:180; Townsend 2004:20, 22; Walker 2004:221; but see Emerson 1989:59, 76; Lankford 2004:214). Based on our survey, moderation of these interpretive frameworks is in order and is pertinent to understanding the nature of the six Ohio Hopewell composite creatures. Recent critical anthropological and ethnohistorical studies of the misinterpretations of Woodland Indian worldviews made by earlier Western observers and subsequent anthropologists also accord with this conclusion (e.g., Churchill 2000; Pomedli 1987:284; Vecsey 1983:74, 82; Waters 2004:97–104; see also Diamond et al. 1994:29–30; Mann 2003:176–180; McLachlan 1999; Roe 1995:61–70).

Specifically, Hudson, generalizing for the southeastern Indians, called the composite creatures of the underwater-underground realms “abominations” (Hudson 1976:139, 144), i.e., detestable, loathsome, repugnantly hateful, and very bad (Webster 1997). “The Under World . . . was a world of monsters and a source of danger . . .” (Hudson 1976:166), “of complete chaos” (Hudson 1976:125), which he drew in black-and-white contrast to the order, stability, and perfection of the Upper World (Hudson 1976:123, 125). Hudson (2000:495–496) now openly acknowledges that he borrowed the term “abominations” from the biblical book of Leviticus and formed his interpretive framework from Mary Douglas’ (1966) influential etic model of the structure of folk classification systems and the negative meanings universally assigned to anomalies—concepts which she now rejects as Judeo-Christian biased (Douglas 1991 [1975]:258–259, 260, 280; see Churchill 2000:223) and founded on a mistranslation of a biblical term (Douglas 1994:20–21). On the Ojibwa, Smith (1995:106, 112, 129), Dewdney (1975:94, 96, 104), and Landes (1968:102, 108, 120, 121, 129, 144, 153, 201) each consistently labeled the underwater-underground creatures “evil,” entailing both an intrinsic and absolute quality of being, when their informants Hole-in-the-Sky, James Red Sky, and several Manitoulin Island Ojibwa did not use the term. Landes (1968:102, 108) inserted the term “evil” as a descriptor of the Snake and Great Lion in two places in the narrations of Hole-in-the-Sky, despite her observation that “his tales dispensed entirely with Christian terms and allusion” (1968:94). Dewdney (1975) further caricatured the underwater-underground beings as “malevolent” (p.

110), "sinister" (p. 122), and "malignant" (pp. 95, 97), while Smith (1995) added that they are "entirely frightening" (p. 96), "a dark power" (p. 109), and "monsters" (p. 138) rather than "persons" in the way psychologically-trained ethnographer Irving Hallowell (1960) did. Feest (1986:7), in his synthesis of Northeastern Woodland Indian religions, characterized their cosmology as having a dichotomous division between Above and Below realms inhabited respectively by "benevolent" and "malevolent" beings. He also characterized the underwater beings as "evil" (1986:8), although he expressed doubt that reports of beliefs in an evil supreme being were anything more but misunderstandings by Christian observers (1986:7). Likewise, Ritzenthaler and Ritzenthaler (1970:139), in their textbook summary of Woodland Indians of the western Great Lakes, labeled "evil" the water monster of the eastern Cree and the snakes and frogs of the Chippewa. Reasonable interpretation of the six Ohio Hopewell composite creatures requires greater openness to the diverse ways—both helpful and harmful—in which historic Woodland and Plains Indians saw themselves affected by underwater-underground creatures.

Third, the animals that comprise the Ohio Hopewell composite creatures (Table 1) run nearly the spectrum of the helpful to harmful animals known by historic Woodland and Plains Native Americans; they are not all or predominately harmful. Of the creatures' 15 identified and possible animal constituents, two are rattlesnakes without horns, one is a carnivore that is perhaps a bear, and one is possibly a bull in Gestalt view—all much more helpful than not in historic Woodland and Plains Indian views. Two are a fish and a possible fish, to which historic Woodland and Plains Indians attributed a more even mix of helpful and harmful qualities. Two rattlesnakes have horns and one possibly has horns and would have been seen as more harmful than not by historic Woodland and Plains Indians, as would the three crocodilians. No *Ukte'nas*, which were fully hateful of humans, are in the corpus. The sociability of the salamander, possible salamander, and possible larval salamander, which comprise the three remaining constituents of the creatures, was not revealed by the survey.

Finally, the sectors of historic Woodland and Plains Indian life that the historic underwater-underground creatures affected or could help humans affect were very diverse and did not center on world renewal. The human needs and desires that the creatures affected include hunting, warfare, safety in travel in life and death, courtship, marriage, healing, longevity, divining, and moral-spiritual development through the *Mide'wiwin*. Matters concerned with world renewal are but few: calling forth the mud divers and blowing the earth island and all animals into existence at the time of origin,

and influence in the present over plants, animals, warm winds, and rain. Thus, an unbiased reconstruction of the cosmological and social roles of the six Ohio Hopewell composite creatures requires considering the wider range of purposes of ceremonies that historic Woodland Indians performed and Ohio Hopewell peoples likely performed than has been emphasized over the past decade in Woodland archaeology, with its attention on world renewal.

Conclusion

Ohio Hopewell peoples expressed materially and apparently knew the morphology of the six composite creatures described here in as great detail as the forms of animals of our ordinary world. This detail begs us to ask what the creatures specifically meant to Ohio Hopewell peoples, including the particular roles they played in the cosmoses and lives of Ohio Hopewell peoples, and the particular uses of and motivations for the depictions in Ohio Hopewell ceremonies. Biological identification of the animal constituents of the creatures, along with a survey of Woodland and Plains ethnohistorical literature on related creatures, helps to narrow the possibilities from the very broad range of kinds and functions of public ceremonies found historically in these regions (Carr 2008a:259–261) to a more limited, yet still diverse set (Table 2). More specific interpretation requires moving analysis from the forms alone of the six creatures to the particulars of cultural and archaeological contexts. This we do in an upcoming, sequel article in this journal for four of the composite creatures—Creatures 1 through 4 from the Turner site in southwestern Ohio.

The major findings and implications of the biological and ethohistorical studies presented in this article are as follows.

(1) Substantial continuities were found between the composite creatures, or components of composite creatures, that Ohio Hopewell peoples knew and those that historic Woodland and Plains Native Americans experienced. Known to both, despite their 1500 years of separation in time, were extraordinary underwater-underground rattlesnakes, horned snakes, fish, and crocodilians, and possibly bears. Thus, historic Woodland and Plains understandings about underwater-underground creatures are relevant to interpreting the Ohio Hopewell record.

At the same time, historic groups did not speak of extraordinary salamanders or salamander composites, or precisely of a rattlesnake-carnivore composite or a fish-crocodilian composite, which Ohio Hopewell peoples sculpted. Nor did Ohio Hopewell peoples depict felines composited with

bird, serpent, or deer elements as did historic and Mississippian Indians. When interpreting Ohio Hopewell composite creatures and assemblages with them, historic ethnographic analogies must be tested and refined by multiple lines of contextual-archaeological evidence.

(2) Ohio Hopewell peoples were distinct from later Mississippian and Historic Woodland tribes in knowing composite creatures comprised of animals associated with only the Below realms. Mississippian and Historic Woodland Indians drew and told of piasas and dragons that were composed of animals from both Above and Below realms. This distinction was part of a long-term trajectory of change in cosmology in the Woodlands, and hints at a more basic, long-term shift in worldview. Prior to the Middle Woodland, no composite animal-animal creatures are known to have been depicted in iconography of the Woodlands. Only human-animal transformations associated with shamanism are evident in the record (e.g., Converse 1979:31–35; Webb and Baby 1957:61–71, 82, 85–87, 90, 93; Carr and Case 2005:194–195). The development of Hopewellian thought and ritual involved the creation and addition of the first animal-animal composite creatures. These were made up of animals linked to only the Below realms.²³ Later Woodland peoples came to also combine animals of the Below and Above realms into single beings in their thought and iconography (e.g., Perino 1960; Phillips and Brown 1978:140–142; 1984: Plates 227–229; Townsend and Sharp 2004:20, 166, 173, 177). The total trajectory over 1500 years was one of increasing interconnections in the minds of Woodlanders between animals of different categories and between different cosmological realms, implicating changes in basic worldview assumptions.

These fundamental changes in animal associations were not the only major cosmological changes that occurred in the Woodlands. Two others that have been documented empirically also involved increasing kinds and complexity of relationships among beings of the universe. First, from the Early Woodland through Middle Woodland periods, peoples in the Scioto valley, Ohio, broadened their focus from the vertical relationships of humans with beings in the Above and Below realms via the axis mundi to also horizontal relationships among the living, the dead, and spirits on the earth-disk (Carr 2008c:294–309). Significantly, the newly emphasized horizontal associations drawn among beings on the earth-disk preceded and was paralleled by new interconnections drawn among animals of the Below realms, as expressed in composite creatures. Second, much later, close to the Historic period, an equally fundamental evolution occurred in the directional system of Woodland Indians, from directions undifferentiated by animal and color associations to directions distinguished in animal and colors associations and in abstract meanings (Carr 1997, 2000, 2007).

(3) The underwater-underground creatures known by historic Woodland and Plains Indians are reported in primary ethnographic literature to have varied in how helpful or harmful they were to humans (Table 2). They were not uniformly harmful, in contrast to the caricatures of them drawn in influential secondary literature by Hudson (1976), Feest (1986), and Ritzenthaler and Ritzenthaler (1970) and the renderings of them in the cultural knowledge of contemporary, heavily Christianized native communities (Dewdney 1975; Smith 1995).

(4) The underwater-underground creatures experienced by historic Woodland and Plains Native Americans affected, or could help humans affect, a very wide spectrum of domains of life: hunting, warfare, safety in travel in life and death, courtship, marriage, healing, longevity, divining, and moral-spiritual development through the *Mide'wiwin*. The creatures also affected some aspects of the creation of the world and world renewal, but these were few.

(5) The forms, alone, of the individual Ohio Hopewellian composite creatures, in not combining animals of the Above realms with those of the Below realms, do not demonstrate the balancing of beings, substances, powers, and worlds essential to much of historic Woodland-Plains thought and ceremonies of healing and world renewal. However, to infer and test the particular meanings and roles of the composite creatures requires further study, situating each of them in their own archaeological contexts.

(6) Historic Woodland and Plains Indians ceremonies were very diverse in their purposes, corresponding to the many needs and desires that these peoples had, and that humans and societies have in general, in the diverse domains of life. Survey of historic ethnographic documents revealed more than 50 different cited purposes of large public ceremonies of historic Woodland and Plains Indians. One can expect to find material evidence of a wide diversity of public ceremonies in the archaeological records of Ohio Hopewell peoples, as well. This complexity is glossed over in some recent archaeological literature on the symbolism and meanings of Ohio and Illinois Hopewell mortuary ceremony, mound construction, and earthen enclosure construction, which has emphasized the one purpose of world renewal.

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cal and critical analytical tools for sharpening sensitivity, and, specifically, his pointing out cultural biases embedded in works of Charles Hudson, Selwyn Dewdney, some earlier Woodland ethnohistorians, and some archaeologists who have used their works uncritically. I thank Bob Hall for instilling in me, as an undergraduate and throughout my career, that an archaeology of religion is methodologically and empirically possible and anthropologically essential.

Notes

1. Excluded from the corpus is the human-bug copper cutout from the Hopewell site (Shetrone 1926:214, Figure 150), the human-bear sculpture from the Newark earthwork (Dragoo and Wray 1964), the human skull-deer-spoonbill duck-nonhuman eared engraving from the Hopewell site (Moorehead 1922:128, Figure 20), and the many instances of human remains with animal headdresses. Also excluded is a possible but not secure depiction of a horned serpent created by layering black earth (1/4 inch to 2 feet in thickness) on the floor of Mound 23 at the Hopewell site (Moorehead 1897:209; 1922:97).
2. Western biology distinguishes horns (e.g., on bison, bighorn sheep, mountain goat, pronghorn antelope) antlers (on deer, elk), tusks (on extinct mammoth, mastodon), and the external gills of salamanders, all of which protrude from the general head region of the animal. Perhaps Hopewellian Indians, in perceiving and classifying their world, equated some or all of these kinds of protrusions. Native Indian words for horn, antler, tusk, and salamander's gill, and their possible equivalence or relationships, would be worth investigating. An analog would be Westerners perceiving the voice of a *Necturus* salamander to resemble a dog's bark, leading to its popular names, "waterdog" and "mudpuppy," or perceiving the head of *Hippocampus* sp. to resemble a horse's head, leading to it being called a "sea horse."
3. Within locales in the eastern Plains and midwestern Prairies and Woodlands, impressively large numbers of tiger salamanders, *Ambystoma tigrinum*, migrate simultaneously to vernal pools to breed in the early spring (Job 2009:78; see also Petrauka 1984).

Ambystoma larval salamanders also are curious in having two different head shapes—rounded and blocky (Rose and Armentrout 1976)—that result from population density-dependent gene expression (Pierce et al. 1981). When the larva are dense, blocky heads appear in up to 30 percent of the population and are associated with cannibalism (Loeb et al. 1994).

In addition, individuals inhabiting large, stable bodies of water are bigger and do not metamorphose as adulthood is approached. *Ambystoma mexicanum*, or axolotl, has this additional peculiarity. It remains in larval form (neoteny) in the water throughout its life of 10 to 15 years, retaining its external gills. Axolotl is native to only the high altitude lakes of central Mexico (Lake Xochimilco and Lake Chalco). One might speculate whether *Ambystoma* gill-like “horns” on the creature from the Turner site indicate Hopewellian interaction with Mesoamerica, as Hall (2006) has suggested for an Illinois Hopewellian copper cutout with some caiman features.

4. Romain (2009:83–84) identified Creature 1 as “a chimera kind of monster with features derived from the rattlesnake, the copperhead or black rat snake, possibly the alligator, and an unidentified creature having forward-pointing horns or stinger devices.” The copperhead or black rat snake identifications he based on the size and pattern of the scales on the head of Creature 1. The copperhead scalation pattern is a good fit, whereas that of the rat snake, *Elaphe*, is not because its frontal scale is not the large element of its scalation pattern, as it is for Creature 1. The massasauga and pygmy rattlesnakes, *Sistrurus catenatus* and *Sistrurus miliarius*, are yet more parsimonious morphological fits than the copperhead because they have rattles as does Creature 1, whereas a copperhead does not.

Romain does not say which features of Creature 1 he thinks are alligator-like. The only trait of the creature that we recognize as alligator-like are the raised nostrils. They, however, are also found on all crocodylians (alligators, caimans, and crocodiles), and also on mammals. The mammalian identity of the nostrils is suggested by their position more anterior on the creature than those of a crocodylian, and the creature’s muzzle, which is mammalian-like in shape rather than crocodylian.

Rusnak (2010:5) posited that the legs of Creature 1 are “short and stubby . . . much like several aquatic animals, including the river otter.” However, otters and beavers do not have the very long claws of the creature; they have long digits with short nails. In addition, the toes of an otter and beaver splay out widely and are webbed, while Creature 1’s claws parallel one another like a bear’s. Rusnak went on instead to favor the identification of the legs, overall body shape, and head shape as those of a snapping turtle. A snapping turtle does have long claws, but those on the front legs are significantly longer than those on the back, which is not true of Creature 1. A snapping turtle also has an oval shell that does not resemble the oblong shape of Creature 1’s

body and has a diagnostic sharp, bird-like beak that Creature 1 does not have.

5. Romain (2009:84) identified Creature 2 as the American alligator, *Alligator mississippiensis*, but provides no anatomical reasons. This interpretation is too specific because the creature has many characteristics fitting of either an alligator or a caiman, and other traits that are found across crocodylians in general (see text). Romain's interpretation of the creature as an American alligator is parsimonious, given the geographic distribution of alligators in the southeastern United States compared to the more distant distribution of caimans in Central and South America, but Hopewellian travel, exchange, and communication was anything but parsimonious and expectable; a caiman cannot be ruled out (e.g. Hall 2006). Romain also did not recognize the fish-like attributes of Creature 2 (see text).
6. Rusnak (2011:8) suggested that the engraved curved lines on the sides of Creature 3 are gills. However, there are multiple lines on each side, and these run most of the length of the body to aft of where the back fin or leg attachments occur. The gills of North American freshwater fish are covered by an operculum, with a singular opening on the fish's side, and this is positioned above the pectoral fins.
7. Most frogs have tiny teeth (volmers) on the upper jaw and palate and none on the lower jaw and palate. Toads have no teeth.
8. Lepper (2005:114) described Creature 6 as "an alligator, frog, or an unknown mythological being." Romain (2009:138) labeled Creature 6 an "alligator" and refuted its frog identity based on its "rather formidable teeth, including teeth in its lower jaw," in contrast to frogs, which "have only weak maxillary teeth used to grind food; they do not have teeth in their lower jaw." Because the creature mixes features of a caiman, alligator, and crocodile, it is better identified more generally as a crocodylian than an alligator. It has no characteristics that are specific to frogs and not crocodylians. Neither researcher noticed the resemblance of the creature's head shape to that of some snake.
9. Here a claw refers to a terminal phalanges covered with a keratin sheath of pointed shape. Salamanders do not have claws in this sense, but some do have small, pointy toes that can dig into relatively soft substances.
10. The characteristic that the digit second from the outside is longest holds for both amphibians and reptiles, despite the different numbers of digits

on their feet. The foot of an amphibian has four or fewer digits whereas the foot of a reptile has five.

11. Romain (2009:61), following Skinner (1987:54), identified Creature 7 as a salamander. However, he misidentified the curved protrusions behind the creature's front legs as the "external gills found on certain salamander species." The external gills of a salamander emerge, instead, from the neck, anterior to the legs. Romain went on to identify Creature 7 more specifically as a mudpuppy, which "have four toes on their front feet." This identification is both overly specific and misbased. Most salamanders, not just mudpuppies, have four toes or fewer on their front feet. Moreover, it is the four toes on the hind leg of a mudpuppy, not its front leg, that distinguish it from other salamanders, most of which have five toes on the hind leg. Creature 7's hind legs are not rendered. Further, mudpuppies (genus *Necturus*) have external gills that are bushy in form whereas the protrusions on Creature 7 are singular, c-shaped curves.
12. Excluded from this summation of the corpus are the protrusions from the head of Creature 5, which cannot be verified for their occurrence beyond hearsay about a lost section of sculpture, and the ornamental features on its mandible, which cannot be identified securely (see text, Creature 5).
13. Farther afield, a Hopewell artist in the central Illinois river valley incorporated and balanced animals of the Above and Below realms within a copper cutout that portrays a caiman when held one way and a double-headed bird when rotated 180 degrees (Hall 2006). A Kentucky Adena artist (Webb and Baby 1957:94, Figure 45) or possibly a late Middle Woodland artist (Phillips and Brown 1978:159–160, Figure 214) depicted a double-headed raptor, possibly with snake heads on its wings.
14. A meteoric iron nugget was found in the Central Altar of Mound 4 at the Turner site. Meteoric iron referenced both Above and Below realms in Woodland and Plains Indian beliefs (Blakeslee 2003:100). Copper items occurred in Feature 10 of Mound 3 and the Central Altar of Mound 4 at the Turner site, and chlorite disks were found in the Central Cache of Mound 1 at the Hopewell site. These materials, and many other Ohio Hopewell ones from which ceremonial paraphernalia were made, reference transformation of light/shiny into dark/dull and vice versa, rather than any one of these poles or the Above or Below realms (Carr and Case 2005:199–208).

The pattern of apparent unconcern for balancing Above and Below realms in the six depictions of composite creatures gains additional significance in their contrast with at least five other, seemingly similar, Hopewell artworks that include images of different animals, or parts of different animals, associated by historic Woodland Indians with only the Below, water-earth realms. The artworks include a platform pipe carved in the form of a fish and roseate spoonbill duck (Hopewell site, Mound 25, Altar 2; Moorehead 1922:140–141, Plate 78-2; see also Greber and Ruhl 1989:213–215, Figures 6.30, 6.31); an antler carved with bear claws and a generalized, long-billed water bird (Hopewell site, Mound 25, internal provenience unknown; Moorehead 1922:158, 160, Figure 59; see also Greber and Ruhl 1989:247–248, Figure 6.63); a boatstone carved into an otter and a duck (Hopewell site, Mound 25, Burial 281; Moorehead 1922:112–113, Plate 83-2; Shetrone 1926:77, 201, Figure 135); a human or bear femur carved with a bear claw and two apparent serpents and/or horns of horned serpents (Moorehead 1922:112; Shetrone 1926:77, 212, Figure 149; Willoughby 1922:48; see also Greber and Ruhl 1989:243, 246, Figures 6.59, 6.61); and a copper cutout of a snake's head embedded with images of two ducks, a generalized omnivore associated with the underground and/or night (badger, raccoon, or opossum), two possible owl's faces and owl claws (again nocturnal), and a generalized carnivore associated with the underground or surface of the water-earth realms (bear, wolverine, or cat) (Hopewell site, Mound 25, Copper Deposit; Moorehead 1922:124–125, plate 68-4; see also Greber and Ruhl 1989:280–282, Figure 7.2).

In contrast to the six composite creatures upon which this study focuses, each of the listed five artworks depicts multiple animals that do not merge to form a single being; the associated animals remain separate. In addition, in four of the five cases where the provenience of the artwork is known to the level of the grave, altar, or artifact deposit, the feature also contains an image of a bird, referencing the Above realms and suggesting attention to balancing the Below with the Above in the course of ceremony. The unusual, imbalanced focus on only the Below realms in the case of the six composite creatures and their contexts is highlighted by their difference from the five listed artworks.

15. The Cherokee creation story links fire to the Above, telling that the Thunderers sent fire to the earth with their lightning (Mooney 1900:240–242), while the Natchez creation story relates how the first male of the Sun social class descended from above and brought with him fire from the Sun (Hudson 1976:208). More generally in the

historic southeastern Woodlands, fire was known to be the earthly representation of the Sun, a deity (Hudson 1976:126, 172), and the Cherokee, Creek, and Choctaw thought fire to have a constant connection with the Sun (Hudson 1976:126; Swanton 1928:484; 1931:195). An exception to the Southeastern linkage of fire with the Above is the underwater-underground *Ukte'na*, whose "scales glitter like sparks of fire" in Cherokee lore (Mooney 1900:297).

In southeastern Indian logic, fire and water, from Above and Below, were always to be kept separate lest disease or misfortune fall upon one (Hudson 1976:126, 128, 317)—a principle that was violated in the Hopewell Indian's placing of the water-earth Creatures 1–4 in fire and/or ash, suggesting the inapplicability of the southeastern Indian equation of fire with the Above to the Turner case. More logically concordant ethnohistorical analogies for the meaning of fire in the Turner case are found among the historic Northeastern Woodland Indian tribes, who are also geographically closer. Feest (1986:10) generalizes that in the Northeast, "underworld beings are often seen as being in charge of fire." A Mohawk narrative of the origin of fire relates how a bear (associated with the Below) came to a vision quester in a cave and showed him how to rub two balsam sticks together to make fire. The Algonquian-speaking, historic Menomini, Ojibwa, and Algonquin told how the culture hero Manabush, in rabbit form, stole fire from an old man far away or on an island (Alexander 1916; Hoffman 1890:254–255). For these northern Algonkian speakers, Manabush was associated with the earth in contrast to the sky (Mann 2003:178, 396 note 28). An earth-associated derivation of fire was also taught among the historic Dakota: First Ancestor obtained fire from the sparks that a friendly panther struck from rocks as it scampered up a stony hill (Brinton 1868:151), and the Santee culture hero, Flint Chief, learned how to make fire by accident (Carlson 1939).

Other reasons for questioning the hypothesis that Hopewell peoples at the Turner site associated fire with the Above realms are the lack, at Turner, of iconographic fire-Sun symbols analogous to those of Mississippian and historic Woodland peoples, which do express the connection of fire and the Above (Fundaburk and Foreman 1957:58; Lankford 2007a:20–22, Figure 2.5; Waring and Holder 1945:3–4); the clear staging of the ritual dramas at the Central Altar and Feature 10 tomb in the Below water realms, considering the water symbolism of the materials from which the two features were made; the complete encompassing of the Central Altar by strata of materials with water

associations; the composite animal shape of the mound complex that had the features; and the low elevation of the section of the Turner earthwork in which the features were situated (see sequel to this article in this journal).

16. A much broader understanding of the possible functions of Ohio Hopewell earthworks than Byers and Romain offered is given by DeBoer (1997). He envisioned the earthworks as analogous to those of the Chachi in Ecuador, which were “multifunctional installations that served as church, capitol, court, cemetery, as well as territorial marker,” including the locations' holiday celebrations, weddings, funerals, feasts, and games (DeBoer 1997:225, 232).
17. Sound, continued application of Hall's (1979) interpretation of mound construction using water-logged soils as a re-enactment of the Woodland mud diver myth and as world recreation is found in geological studies by Van Nest (2006) and Sunderhaus and Blosser (2006:143–145). Sunderhaus and Blosser (2006:141) also tied earthwork construction at Fort Ancient to Woodland Native American notions beyond world renewal, including perhaps migration mythology, ritual purification, representation of the multitiered universe, and the axis mundi as a means of communication between tiers. Likewise, Birmingham, who credits Hall with the inspiration of his interpretation of the effigy mounds of Wisconsin as places where world renewal rites were enacted (Birmingham 2010:xxi), attributed effigy mound construction to a much wider range of religious-ideological and other causes: the expression of clan totems and membership; burial of the dead; tying the group to the land and marking the group's territory by their burying their ancestors in that place; expressing a dual kinship system and a dual cosmic organization that mirrored each other; expressing the creation of the cosmos; and recreating the world periodically by duplicating in earthen form both its cosmological and social structure; social feasting; and creating a shared, regional ethnic identity (Birmingham 2010:11, 17, 21, 31, 34–35, 201, 202).
18. It is sometimes stated in secondary sources by ethnohistorians and archaeologists (e.g., Hamell 1998:265, 281; Howard 1960:217; Hudson 1976:145–146; Lankford 2007b:243; 2007c:116–117, Figure 5.3; Rusnak 2010:12, Figure 19) that certain of these creatures were fluid in their physical and behavioral characteristics in the eyes of Woodland and Plains Indians and formed a continuum of loosely defined creatures rather than categorically distinct beings. This situation would make

more complex the drawing of insights about the six Ohio Hopewell composite creatures from their historic analogs. However, in no cases of published historic Woodland and Plains myths, tales, legends, or other narratives of which I am aware does one form of underwater-underground being *turn into* another (e.g., an underwater panther into a horned serpent, a fire-dragon into an underwater panther, or an *Ukte'na* into a water cougar). Nor do ordinary snakes turn into birds or felines. Transformation of forms is limited to human into nonhuman animal form and vice versa, such as a sorcerer into a bear walker or owl (e.g., Dewdney 1975:116–118; Howard 1984:97; Tantaquidgeon 1942:38, 41), or a game animal or a Thunderer into a human (Curtin and Hewitt 1918:361–365; Harrod 2000; Leland 1884:263 in Smith 1995:77–78; Overholt and Callicott 1982; Wissler and Duvall 1908:123–124; Urban and Jackson 2004:714).

19. Hudson (1976:144–145) describes and illustrates the *Ukte'na* as having bird wings in addition to a serpent body and deer antlers. Mooney (1900) does not mention the bird wings.
20. The Wahpeton Dakota envisioned the tent pins that held down the covering of their Medicine Lodges to be the tiger salamander, *Ambystoma tigrinum*. However, qualifying Hall (1979:260), these do not appear to have been extraordinary salamanders, as they are spoken of hand-in-hand with the ordinary land tortoise, which is envisioned to be the poles of the Medicine Lodge. “These poles represent the land tortoise, because of all animals the land tortoise has the strongest paws and is consequently fitted to hold up the lodge” (Skinner 1920:281). In addition, the salamander tent pins do not seem to be analogous to the four powerful “water spirits” and “enormous snakes” with which Creator, in Winnebago lore, pierced the newly formed Earth to stop it from spinning (Radin 1945:18; 1970:120, 164). In the Wahpeton Dakota origin myth, the newly created Earth does not spin and nothing is used to pin it down (Skinner 1920:273–278). The Winnebago water spirits seem somewhat analogous, instead, to the Wahpeton Dakota *unktehi*, who are water creatures that commanded four mud divers to get earth from under the primal waters, took mud clenched in the paw of the muskrat mud diver, and blew it to create land. The *unktehi* have several forms, including horned snakes and a four-footed creature that resembles a buffalo; salamanders are not listed (Skinner 1920:339, note 44).

No salamanders are referenced in Weeks' (2009) comprehensive review of imagery of the *Mide'wiwin* and Medicine Rites. The Miami held that a

lizard-man was among seven animal-men transformers and the culture hero who taught the *Mude'wiwin* to a Miami man (Week (2009:188–90)—the only association of a lizard with a Woodland or Plains Medicine Rite. The Miami distinguished salamanders (*wiinihka*) and lizards (*saahsantia*) linguistically; whether the translation of “lizard” rather than “salamander” is correct in the case of the “lizard-man” is unknown to us.

21. Feline iconography is known from one Ohio Hopewell site. An image of an ocelot, incised on an eagle's humerus, was recovered from the Hopewell site, possibly Mound 25, Burials 260–261 (Greber and Ruhl 1989:241–243, 268; Moorehead 1922:159–160,165, Figure 64). Two boulder mosaics in the form of the felidae were reported by Warren Moorehead's field assistant, Dr. Hilborn T. Cresson, to have been uncovered in the upper layers of the northeast end of Mound 25 at the Hopewell site (Moorehead 1891a:21–23; 1891b:43, 54; 1897:236, 237; see also Dorsey 1891:26–27). In addition, a feline was engraved on a shell gorget found with burials probably dating to the Middle Woodland–Early Late Woodland transition at the Firehouse site in Hamilton County, southwestern Ohio, 33HA419 (Genheimer 1981).
22. For other, related continuities between historic and prehistoric Woodland peoples in their cosmology and art, see Penney (1985:180,198).
23. There are at least two and possibly four Hopewellian artworks that depict parts of multiple kinds of animals from the Above and Below realms that are interwoven into one complex design, but not so as to form a single being—a “composite creature”—as are Creatures 1 through 6. A copper cutout from the Copper Deposit in Mound 25 of the Hopewell site has the overall shape and interior features of a pit viper snake head. Within it is a mosaic of images of two raptor talons, two duck heads, and the eared head of a bear and/or feline (Moorehead 1922:Plate 68-4). A copper cutout from the Hopewellian Bedford Mound 8 in Illinois depicts the head of a caiman or alligator when held one way and much of two birds when inverted 180 degrees (Hall 2006). This is not a case of a single composite animal but of transformation of one animal into another depicted through rotation and inversion—a convention common in Adena and Hopewell art. Two human parietals from the Central Altar of Mound 3 at the Turner site (Willoughby 1922:57, 58, Figures 23, 24) are each carved with a turtle (elements of a map/sawback turtle and/or a snapping turtle) indicating the earth-turtle island. The carina on the turtle's back may double for bird feathers, indicating an Above realm, while the turtle's legs may double for those of a feline and

indicate an underwater panther (Carr 2008b:55, 59, Figure 2.9a, b), but these equivalencies cannot be substantiated.

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