

# Ritualised craft production at the Hopewell periphery: new evidence from the Appalachian Summit

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*Ritual items made of thin mica sheet are among the most spectacular of the special objects from the Hopewell sites of the Ohio Valley. Hitherto it has generally been believed that the mica was imported in raw material form from sources in the Appalachian Summit and cut into shape in the Hopewell core. Recent excavations at Garden Creek, a ritual enclosure on the margin of the source area, throws doubt on this model through extensive evidence for mica-working at this site. The Garden Creek community may have been drawn into the Hopewell sphere through its proximity to the mica sources, and the people of Garden Creek*

*may have carried cut mica and crystal quartz as offerings to the major Hopewell centres in the course of pilgrimage.*

**Keywords:** Ohio Hopewell, Appalachian Summit, Garden Creek, Middle Woodland period, mica, crystal quartz, geometric enclosures, prehistoric pilgrimage

## Introduction

Between 100 BC and AD 400, a ceremonial complex called Hopewell flourished in the greater Ohio River Valley and extended to varying degrees across broad swathes of the American Eastern Woodlands. The subject of more than a century of research, Hopewell appears to have involved three related spheres of ceremonial practice: 1) the construction of massive earthen monuments; 2) the prescribed burial of the dead in these monumental contexts; and 3) the accumulation of diverse, iconographic sacred objects. The cumulative nature of the archaeological record means that archaeologists must infer the complex suites of activities that comprised Hopewell ceremonialism from their end results: in other words, from completed mounds and earthworks, sealed graves and finished artefacts.

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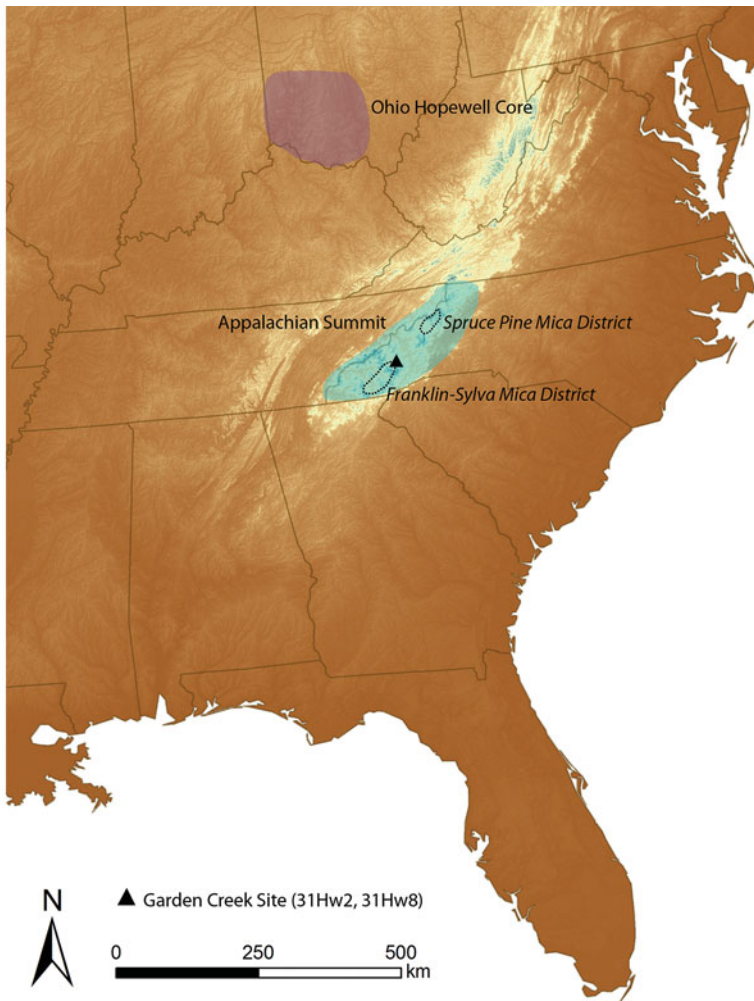


Figure 1. The Eastern Woodlands, highlighting the Ohio Hopewell core, the Appalachian Summit and Blue Ridge mica/quartz deposits. State base map from US Census Bureau; DEM from US Geological Survey.

This challenge is especially apparent in studies of Hopewellian sacred objects. From the finished artefacts themselves, we know that many of these items were made from raw materials that originated far from the Ohio Hopewell core (Figure 1), and that their manufacture often required remarkable technical expertise. Moreover, their distinctive iconography and depositional contexts suggest that they were ideologically significant, perhaps referencing shamanic or shaman-like belief systems (Carr & Case 2006). These patterns have been cited as indirect evidence of specialised, ritualised craft production (e.g. Spielmann 2002, 2008, 2009; Spielmann & Livingood 2005) and of a variety of scenarios for raw material procurement and exchange (summarised in Carr 2006). Meanwhile, direct evidence of Hopewellian craft production—the associated “raw materials, debris, tools, and facilities” (Costin 1991: 19)—is rather limited and sometimes overstated. At best, these data include intriguing but anecdotal finds, such as copper nodules at the GE Mound in

Indiana (Seeman 1995) or partially worked copper and copper-working tools in graves at the Hopewell site (Schroeder & Ruhl 1968). Just as often, however, seemingly direct evidence of Hopewell craft production does not stand up to critical scrutiny. For example, the cache of obsidian flakes below Mound 11 at the Hopewell site has been shown to lack the sort of debitage that would have resulted from biface production (Coon 2009: 57), and the oft-cited remains of craft workshops excavated in the 1970s at Seip have been invalidated through a reanalysis of the field notes and materials (Greber 2009).

One of the only artefact categories for which archaeologists seem to have considerable direct *and* indirect evidence of craft production is mica. Originating in the southern Appalachian Mountains, roughly 300km from the Ohio Hopewell core as the crow flies (Figure 1), this delicate raw material was cut into a variety of shapes and interred in Ohio Hopewell ritual deposits. Small pieces of mica were also used to decorate the clothing of Hopewell ritual practitioners (Greber & Ruhl 1989), and mica discs were probably an essential component of these practitioners' shamanic tool kits (Carr & Case 2006). Unlike other exotic raw materials that comprise Hopewellian assemblages, fragments of mica are regularly encountered at earthwork and non-earthwork sites in Ohio, so its manufacture has been interpreted as minimally challenging and diffusely distributed across ritual and domestic contexts (Spielmann 2009). As such, mica is the only material dimension of Hopewell ceremonialism that appears to have crossed into the realm of everyday life. Mica is also unique among Hopewell raw materials in that evidence for its crafting has been identified outside the greater Ohio Valley (e.g. Jones *et al.* 1998; Keith 2010). To date, this pattern has bolstered the idea that mica-crafting was widely dispersed and, by extension, less restricted to ceremonial contexts or ritual specialists than the production of other Hopewell sacred objects.

We will here interrogate this logic in light of recent findings from the Garden Creek site in western North Carolina. There, direct evidence of mica-crafting has been recovered in association with not only the debris from knapping crystal quartz, but also a small geometric enclosure that bears striking resemblance to contemporaneous monuments from the Hopewell core area. After describing the site's excavated contexts and the artefactual data, we propose, in contrast to extant views, that mica-crafting was in fact highly ritualised under certain conditions—i.e. when it was conducted near the sources of that raw material. This argument also seems to apply to evidence for crystal quartz knapping at the site. Together, these interpretations challenge existing scenarios for mica-crafting specifically, and for craft production and raw material procurement at the Hopewell periphery in general. On the basis of these findings, we argue that Hopewellian ceremonialism and interactions were mutually constituted through the contributions of diverse, far-flung communities, creating a mosaic of related ritual practice across eastern North America during the Middle Woodland period. In this regard, the present study contributes to a burgeoning discourse in the archaeology of small-scale societies that recognises the dynamic complexity of long distance exchange and ritual interaction.

## Appalachian Summit Hopewell: raw materials and ceremonial sites

Since the late nineteenth century, archaeologists have cited the Appalachian Summit as the source of sheet mica artefacts recovered in the Ohio Hopewell core. Mica outcrops in the

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Appalachian Summit are accessible at or near the ground surface and, compared with other mica-producing localities, they are the closest to southern Ohio (Margolin 2000: 51–52). Two areas in western North Carolina—the Spruce Pine and Franklin-Sylva districts—are particularly well known for the richness of their micaceous pegmatite deposits and their surface or near-surface veins of high-quality muscovite crystals (Olson 1944; Chapman & Keel 1979). Evidence of prehistoric mining has been documented in both areas (Sterrett 1923; Ferguson 1974; Margolin 2000), including vertical tunnels that ran “as if the miner had been seeking in various directions for pay streaks of the mica-bearing vein” (Holmes 1919: 246); surface ‘pittings’ surrounded by massive spoils heaps; and associated chipped-and-ground-stone tools that were presumably used to extract mica (Holmes 1919: 243–49).

The metamorphic geology responsible for the formation and accessibility of mica crystals in western North Carolina also produces large deposits of vein quartz and quartz crystals (Mertie 1959), both of which have been found in Ohio Hopewell ritual assemblages (Carr *et al.* 2008). The Appalachian Summit has long been considered a candidate source area for quartz recovered in Hopewellian contexts (Griffin 1967: 184). Such inferences are supported by recent findings at the Stubbs Earthwork in Ohio, where a large cache of vein and crystal quartz flaking debris was found alongside mica and Knox chert, the latter of which also originated in the Southern Appalachians (Cowan 2005). The crystal quartz assemblage from Garden Creek, discussed below, provides additional circumstantial evidence for Hopewellian quartz procurement in the region.

Evidence for a connection between the Appalachian Summit and the Hopewell core is not limited to logical deductions about these raw materials’ availability and inter-regional distribution. Several sites in and around the region have yielded material signatures of Hopewellian ceremonial practices. For example, the Biltmore Mound (31Bn174) in Asheville, North Carolina, was the site of intensive ritual activities from around AD 300–600, including the construction of a multi-stage platform mound, communal feasting and the use of diagnostically Hopewellian ritual artefacts, such as copper, mica, bladelets made of Ohio Flint Ridge chalcedony, and cut carnivore jaws (Kimball *et al.* 2013). A similar record has been documented at the Garden Creek site (31Hw2, 31Hw8; Figure 2), located about 30km west of Biltmore. In the 1960s, salvage excavations of a low platform mound at the site yielded evidence for communal ceremonialism during the late Middle Woodland Connestee phase (*c.* AD 200–600), as well as exotic artefacts suggestive of involvement with the Hopewell Interaction Sphere, a network of social, material and ideological exchange centred in southern Ohio during the Middle Woodland period (Keel 1976). More recent geophysical survey and ground-truthing at the site has documented additional monumental contexts and material culture assemblages that point towards a connection to the Ohio Valley Hopewell core.

## **Crafting mica and quartz at Garden Creek**

The Middle Woodland (*c.* 300 BC–AD 600) component of the Garden Creek site (Figure 2) occupies an intermontane terrace along the Pigeon River in western North Carolina, at the northern edge of the Franklin-Sylva mica district. The most intensively documented portion of the site is Garden Creek Mound No. 2, the platform mound described above (Keel 1976).

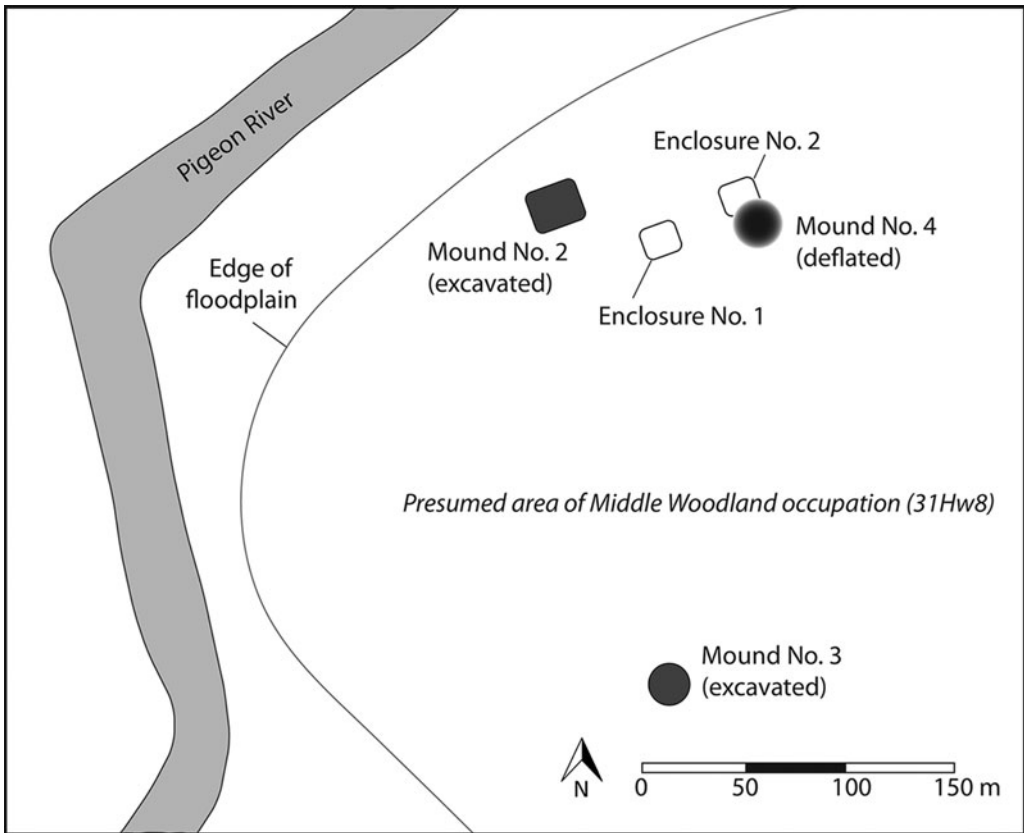


Figure 2. The Middle Woodland component of the Garden Creek site.

Other mounds at the site include Mound No. 3, which was excavated in 1915 (Heye 1919), and Mound No. 4, a low rise that was recently identified as an anthropogenic feature through geophysical survey, although it has not yet been ground-truthed. Neither of these two mounds has been conclusively dated, but certain characteristics of Mound No. 3 suggest that it may date to the Middle Woodland period (Dickens 1976).

Around these monuments and underneath Mound No. 2, there is evidence of non-monumental Middle Woodland occupation at Garden Creek, including numerous pits and basins probably used for food storage, food processing and refuse disposal; hearths constructed directly on the ground surface or lined with cobbles; and scatters of several hundred postholes. In areas of extensive horizontal exposure (i.e. under Mound No. 2), some of these postholes have been shown to represent several overlapping structures or houses, suggesting the presence of a domestic occupation (Wright 2013). The evidence from portions of the site that were not capped by mound fill, recovered during recent fieldwork in 2011–2012, are more equivocal, since two centuries of ploughing and a modern-day neighbourhood on the site have dramatically affected the preservation of non-monumental features. Nevertheless, numerous features were mapped in these areas (Horsley *et al.* 2014): those that have been excavated represent activities that are similar to those documented below Mound No. 2. At present, without high-quality faunal and palaeobotanical data

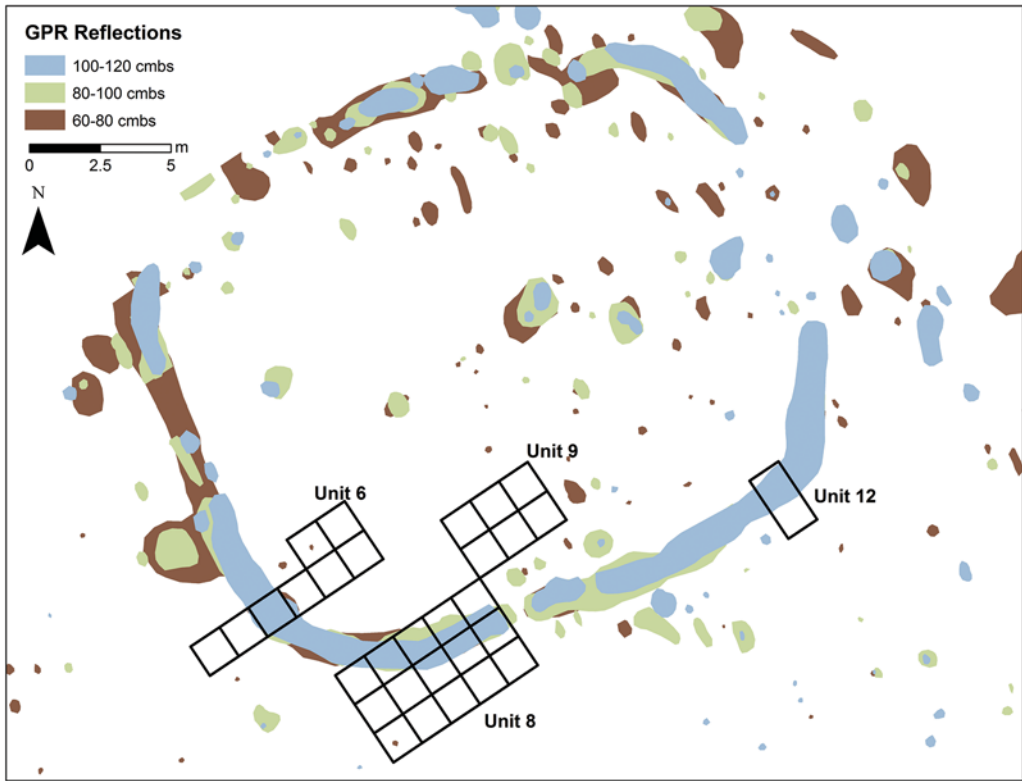


Figure 3. 2011–2012 excavation units over and inside the Enclosure No. 1 ditch. Additional off-monument units were excavated east of the enclosure.

owing to the site's highly acidic soils, it is difficult to determine the seasonality of site use and, in turn, whether or not it constitutes a permanent 'village'. Given what is known about Middle Woodland settlement strategies in the Appalachian Summit, however, it is plausible that this site may have been used for some sort of habitation on a seasonal basis.

Recent fieldwork at Garden Creek (see Horsley *et al.* 2014 for a summary) also revealed additional, previously unidentified Middle Woodland monuments: two earthwork enclosures that bear a strong resemblance to small geometric enclosures associated with the Adena and Hopewell complexes of the Ohio Valley (e.g. Burks & Cook 2011; Jefferies *et al.* 2013). The Garden Creek enclosures are square-shaped with rounded corners, measure about 18m × 16m, and are orientated with the centres of their northernmost walls about 20° west of magnetic north. Both enclosures are broken by 4m-wide 'gateways', which approximately face each other. Partial excavation of the western enclosure, dubbed Garden Creek Enclosure No. 1, has shed light on its architectural design and on activities that were associated with it.

In 2011 and 2012, two 1m-wide trenches and one 5m × 3m horizontal unit were opened over Enclosure No. 1 (Figure 3). These efforts revealed the earthwork to be a flat-bottomed ditch with nearly vertical walls, dug into the sandy clay subsoil 1.0–1.2m below the original ground surface (Figure 4). This ditch was filled in with three



Figure 4. Enclosure No. 1 ditch in horizontal and vertical exposure. Top: Unit 8 excavated to subsoil, looking west. Bottom: Unit 12 profile of ditch.

distinctive zones of anthropogenic fill. The earliest, lowermost zone consisted of relatively non-compacted, clayey soil, in bands of strong brown and dark grey. The next episode of infilling was represented by a homogeneous layer of re-deposited subsoil that appeared bright yellow in contrast with the zone of fill above it. This last, uppermost zone of fill consisted of dark brown, organically rich sediment with relatively high densities of charcoal.

The fill of the ditch yielded three significant types of material culture. First, much of the pottery from these contexts conformed to the technological and stylistic attributes of the Pigeon series, which dates to *c.* 300 BC–AD 200 (Keel 1976). This relative chronology is bolstered by radiocarbon dates that place the ditch's infilling in the first century AD (Wright 2014). As such, the use of Enclosure No. 1 overlapped with early Hopewellian expression in southern Ohio: interestingly, the popularity of mica artefacts for Hopewellian ceremonies in Ohio also seems to have peaked around this time (e.g. at Mound City; see Brown 2012). Second, sheet mica fragments were ubiquitous in the ditch's uppermost zone of fill. Third and finally, the majority of the chipped stone assemblage from the ditch was made of locally available, potentially ritually salient, crystal quartz. As we explain below, these latter assemblages are arguably the by-products of the production of mica and crystal quartz objects

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Figure 5. Mica fragment recovered from Enclosure No. 1 with cut, curved edge (top of artefact). Inset shows the sharpness of the cut edge.

for Hopewellian ceremonial activities. Specifically, these data fulfil the criteria outlined by Raymond Baby and Suzanne Langlois (1979: 18) for Hopewell craft workshops, including: 1) the localised presence of certain raw materials; 2) a distinctive lithic assemblage, with a high percentage of modified flakes and bladelets; 3) unique arrangements of associated features and their contents; and 4) a spatial relationship between the crafting area and a ceremonial precinct.

### *Sheet mica artefacts*

Throughout the upper zones of ditch fill, we encountered small- to medium-sized pieces of sheet mica that generally measured 10–20mm thick. Many of these sheets were orientated with their flat sides parallel to the surface of the zones of fill, suggesting that the mica was placed or tossed into the ditch as it was being filled. Its fragmentary form does not appear to be the result of post-depositional breakage, but rather its condition upon entering the archaeological record. Moreover, the relatively large size of many of these fragments, some of which measure 80–110mm long, is a strong indication that this is the primary context of mica deposition. If these materials were originally discarded elsewhere and redeposited to provide ditch fill, one might expect a lower incidence of large mica sheets. It thus follows that the activities that produced these mica fragments took place in the immediate vicinity of the enclosure.

No sheet of mica recovered from the ditch exhibited a complete geometric, zoomorphic or anthropomorphic shape resembling those known from Ohio Hopewell assemblages. However, macroscopic and low-magnification observations indicated that several fragments had cut edges (Figures 5 & 6). Although mica's crystalline structure lends itself to relatively





Figure 6. Mica fragment recovered from Enclosure No. 1, with cut, curved edge (bottom of the artefact) and scoring on its horizontal surface (inset), possibly representing an early stage of mica cut-out production.

linear breakage patterns, naturally occurring edges tend to be fairly ragged. Perfectly straight, curved or bevelled edges are better explained as a result of human manipulation, and are especially visible using fairly low ( $10\times$ ) magnification, as shown in Figure 5. Figure 6 shows additional evidence of human modification: this piece of mica includes not only a crisp, curved edge, but also a curved, scored incision on its horizontal face. This artefact may have been discarded during an early stage of the mica-working *chaîne opératoire*, in which shapes were traced out before they were completely shaped in three dimensions. Although additional experimental research is needed before undertaking a systematic assessment of the microscopic traces of mica-working, the pieces of sheet mica found in the ditch probably represent the by-products of mica cut-out production—in other words, the excess material removed from a larger sheet for the creation of a geometric shape or effigy.

Given the extremely friable nature of this material, it is difficult to quantify meaningfully the total amount of mica recovered from the excavated portion of Enclosure No. 1 (which amounted to approximately 12 per cent of the full extent of the ditch). In terms of surface area, we estimate that at least  $10\,000\text{mm}^2$  of sheet mica were recovered from each  $1\text{m} \times 1\text{m}$  gridded unit of the topmost zones of fill. When all zones of ditch fill are included, a total of 66.8g of mica were recovered from the excavated portions of the ditch, amounting to 9.19mg of mica per litre of fill. These values dwarf the amount of mica recovered from most other contexts recently excavated at Garden Creek (Table 1 & Figure 7). With the exception of Features 1 and 25, none of the Middle Woodland features recently excavated away from the monumental areas of the site yielded mica artefacts. Furthermore, the majority of mica recovered from the ploughzone originated in Units 6 and 8, over the ditch. Interestingly, a notable quantity of mica was present in Feature 25, a tiny pit identified inside Enclosure

Table 1. Weight of mica recovered from the ploughzone, non-monumental Middle Woodland features and the Enclosure No. 1 ditch (Feature 6) during 2011–2012 excavations at Garden Creek.

	Feature no.	Context description	Mica weight
<b>Ploughzone</b>	n/a	across all units excavated in 2011–2012	9.4g
<b>Non-monumental features</b>	Feature 1	pit	0.6g
	Feature 3	hearth	0.0g
	Feature 5	basin	0.0g
	Feature 8	hearth	0.0g
	Feature 24	basin	0.0g
	Feature 25	pit	11.0g
	Feature 26	pit	0.0g
	Feature 27	pit	0.0g
<b>Monumental feature</b>	Feature 28	pit	0.0g
	Feature 6	excavated portion of Enclosure No. 1 (approx. 12 per cent of entire ditch)	66.8g

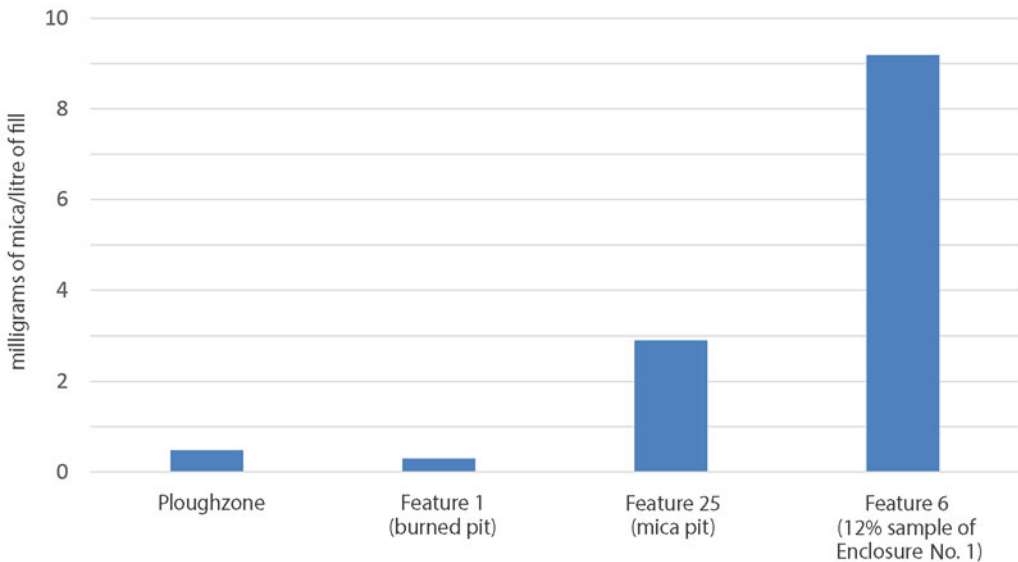


Figure 7. The density of mica (mg/L) in different classes of feature at Garden Creek.

No. 1. Measuring 340mm long, 120mm wide and 120mm deep below the ploughzone, it contained 11.0g of vertically orientated sheet mica fragments, yielding a density of 2.9mg of mica per litre of pit fill. This density and arrangement suggests that Feature 25 may represent cached or stored mica. If these were pieces awaiting further processing by craft producers, the resulting cut-outs must have been fairly small, perhaps for use as clothing decoration rather than effigy cut-outs.

### *Crystal quartz debitage*

Whereas most of the interpretations of the mica assemblage described above relied on qualitative observations and summary measurements, the chipped-stone debitage assemblage could be analysed more systematically using extant methods and functional typologies. Flake length, width and thickness were measured and recorded for each piece of debitage recovered in 2011 and 2012. Flake termination, striking platform type, amount of cortex and number of dorsal flake scars were assessed macroscopically, using Andrefsky (2005) for comparison. To assess lithic reduction activities, each piece of debitage was assigned to a flake category based on the presence of clear ventral/dorsal surfaces and a bulb of percussion. Relative frequencies of flake types were then compared with relative frequencies of different reduction activities described by Sullivan and Rozen (1985: 763), including non-intensive core reduction, intensive core reduction and tool manufacture. Differences in colour, texture and sheen were used to preliminarily distinguish among raw materials.

Recently excavated feature contexts, totalling nearly 11 m<sup>3</sup> of feature fill and encompassing portions of the ditch as well as features in the presumed occupation area, yielded 223 pieces of chipped-stone debitage. Generally speaking, the relative proportions of complete and broken flakes, flake fragments and debris are consistent with those identified by Sullivan and Rozen (1985: 763) for intensive core reduction activities. The low amount of cortex observed on debitage pieces supports this inference (less than 4 per cent of the total assemblage had >50 per cent dorsal cortex). This pattern is replicated in all feature classes, indicating that lithic reduction activities were fairly similar across the site. In light of the low frequency of stone tools and retouched flakes at the site, this pattern suggests that, on the whole, lithic production at Garden Creek involved bringing raw material to the site, using these materials exhaustively and carrying off any resulting tools.

With regard to raw materials, there are some important differences between feature classes (Figure 8). On the one hand, fired pits, refuse pits and midden deposits all had similar distributions of raw material types, with the majority of each assemblage consisting of chert (mostly black or grey Knox chert from Tennessee). Depending on the category of feature in question, chert comprised 61–83 per cent of the total debitage assemblages, whereas the amounts of crystal quartz were negligible, ranging from 0–9 per cent of the assemblages. The debitage recovered from the fill of the Enclosure No. 1 ditch was quite different: out of 118 pieces of debitage, 45 pieces were made of crystal quartz (38 per cent of the assemblage), while 40 were made of chert (34 per cent of the assemblage) (Figure 9). This striking pattern suggests that the flint-knapping activities that contributed to the ditch fill were distinct from those carried out elsewhere at the site, insofar as they involved a particular kind of raw material, possibly related to the production of crystal quartz bifaces.

## **Discussion and implications**

Taken together, the sheet mica and crystal quartz assemblages from Enclosure No. 1 at Garden Creek meet the criteria for the remains of Hopewellian craft production as outlined

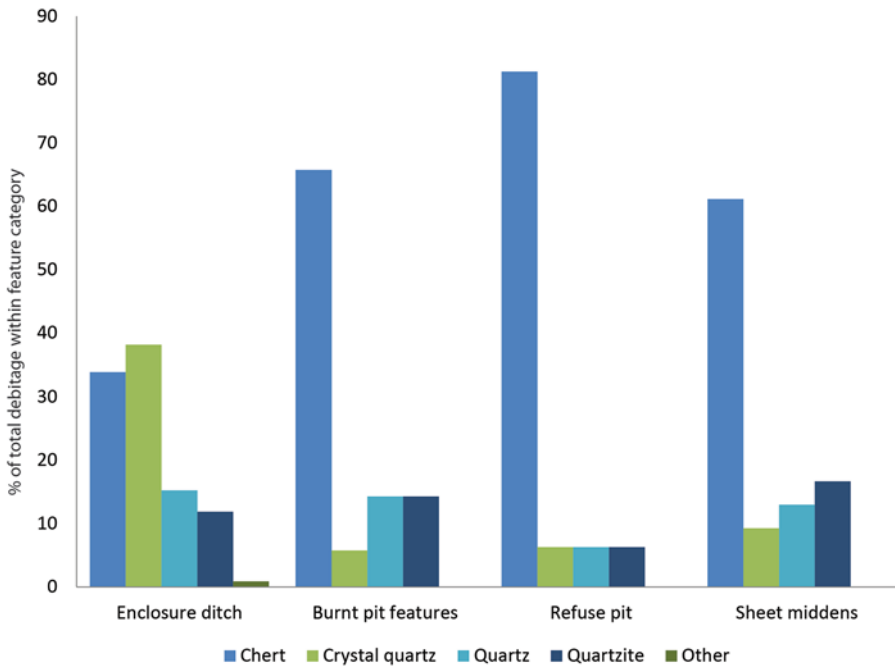


Figure 8. Lithic raw materials in different classes of feature at Garden Creek.

by Baby and Langlois (1979; see above). Relative to the rest of the site, both mica and crystal quartz are highly localised in the fill of the ditch. The ditch fill itself constitutes a ‘unique arrangement’ of deposits that appear to derive from activities that took place inside or immediately adjacent to the enclosure. Finally, there is a direct spatial relationship between the locus of craft activities and a Hopewellian ceremonial precinct—in this case, a small geometric enclosure. Given the early Middle Woodland date of this monument, its similarity to contemporaneous structures in the Ohio Valley, and the presence of raw materials known to have been circulated through the Hopewell Interaction Sphere, the data from Garden Creek comprise strong evidence for ritualised craft production and for Hopewellian ritual contexts.

These findings complement and contrast two aspects of our current understanding of Hopewellian craft production, in particular mica-crafting. First, the large assemblage of mica debitage at Garden Creek resembles the pattern of large-scale mica cut-out production observed at several earthwork sites in Ohio (summarised in Spielmann 2009: 184–85): they do *not* conform to expectations for the comparatively unrestricted, household-based mica-crafting documented at Middle Woodland hamlets. Second, the entire record of Hopewellian ceremonialism at Garden Creek—including the enclosures themselves and the debris of mica and crystal quartz artefact manufacture—is unequivocally located far outside the Hopewell core area. This directly contradicts the prevailing perspectives on the organisation of Hopewellian craft production. Based on “the large quantities of exotic materials found at Ohio Hopewell sites, the scarcity of population in many of the source areas, and the lack of

evidence for down-the-line exchange between the sources and southern Ohio” (Spielmann 2009: 181), this view maintains that raw materials necessary for Hopewell crafting were directly procured by Ohio Hopewell people, and that these materials were fashioned into sacred objects exclusively in the Ohio Hopewell core (almost exclusively at earthwork sites). Moreover, the Garden Creek data are at odds with most extant explanations for Hopewell material culture in the greater Southeast, which have tended to characterise the presence of Hopewellian artefacts in the region as a ‘thin veneer’ of materiality overlaying local cultural traditions (Chapman & Keel 1979).



Figure 9. Sample of crystal quartz debitage from Enclosure No. 1 ditch. Left column: flakes; middle column: angular shatter; right column: blade fragments.

How, then, can we account for not only the existence of Hopewellian craft production at the Appalachian Summit periphery, but also the explicit ritualisation of mica craft production, that elsewhere appears to have been “available to the ‘general public’” (Spielmann 2009: 185)? We propose that both of these issues relate to Garden Creek’s proximity to natural outcrops of both mica and crystal quartz. Building on arguments set forth by Mary Helms (1988, 1993), most Hopewell scholars agree that much of the social value attributed to Hopewellian craft objects derived from the exotic provenance of their raw materials. By this logic, certain places are viewed (from an emic perspective attempting to understand local viewpoints) as uniquely powerful or cosmologically significant—“home to powerful supernatural beings or, more generally . . . full with energy” (Carr 2006:

582). In turn, materials or objects acquired in these locations are thought to be similarly imbued with power (Bradley 2000), not to mention other spiritually salient qualities suggestive of transformation (i.e. light/dark, shiny/dull) or a shaman’s ability “to see within, through, and beyond” the visible world (Carr & Case 2006: 201; see also Gell 1992).

To date, this line of reasoning has found support in diverse exotic artefact assemblages in the Hopewell core. The Garden Creek data provide a compelling complement to this record: if tokens from distant places received ritual treatment (i.e. masterful crafting, ceremonial deposition, etc.), then it stands to reason that these far-flung source regions may have been the site of additional ritual elaboration, the organisation of which is imperfectly understood. One possibility derives from the existing notion that Ohio Hopewell ritual practitioners moved widely to obtain exotic raw materials in the course of vision quests, pilgrimages or other inter-regional travels (Carr 2006). In this case, they may have encountered local communities from whom they required permission to obtain potent raw materials. In return, the visitors from Ohio may have shared the ritual knowledge necessary to erect Hopewellian

earthwork enclosures and to manufacture mica cut-outs and crystal quartz objects according to Hopewellian ritual prescriptions, so that activities could be carried out largely—if not entirely—by a local population. This latter inference is based on the fact that Garden Creek was occupied by local people before it became a locus of Hopewellian activities (Keel 1976): the early Middle Woodland ceramic assemblage from the site consists almost exclusively of local wares, presumably made and used by local people. In fact, the production of these mica and crystal quartz craft items in the Appalachian Summit proper may have lent them even more ritual power than that afforded by the exoticness of the raw material alone, imbuing them “with the extraordinary or cosmological powers of the . . . peoples whence they are derived” (Helms 1992: 188).

Alternatively, it is possible that Appalachian Summit people produced cut mica and crystal quartz objects as offerings to be made during a pilgrimage to a major ceremonial earthwork centre in the Hopewell core. A pilgrimage scenario is not without precedent in the Hopewell record (e.g. Lepper 2004, 2006). The Pinson site in Tennessee, for example, has yielded ceramic artefacts made of local clays but exhibiting non-local styles, suggesting the periodic assembly of non-local peoples (Mainfort 1996), while the Mann site in Indiana included a large assemblage of Connestee pottery from the Appalachian Summit, presumably transported there by pilgrims from that region (Ruby & Shriner 2006). Admittedly, this scenario lacks a clear vision of how Appalachian Summit communities would have become intensively involved in Ohio Hopewell ceremonialism, which was concentrated hundreds of kilometres to the north. In a general sense, like the networks of ritual practice that extended from Chaco Canyon in the American Southwest around the turn of the first millennium AD, inter-regional Hopewell may encompass a “common ideational bond among what may be ethnically, linguistically, or culturally diverse populations” (Stein & Lekson 1992: 87). However, the on-the-ground mechanisms that contributed to the transmission and adoption of such a bond between diverse, geographically far-flung groups require further examination.

Whichever of these (or other) scenarios withstand empirical scrutiny, it is important to acknowledge that, at least at Garden Creek, craft production was explicitly ritualised, even in the case of mica. Although the mechanics of mica cut-out manufacture appear to have been relatively simple, these activities were carried out and deposited in a ceremonial context. Furthermore, whether mica cut-out production is attributable to the movement of Ohio Hopewell travellers or Appalachian Summit pilgrims, it is unlikely that it constituted an everyday household activity. Rather, the symbolic potency of this raw material probably demanded ritual knowledge to manipulate, and this was probably limited to certain individuals. Under these circumstances, it would appear that Appalachian Summit people were more intimately involved with Hopewell ceremonialism than has previously been acknowledged by scholars working in Ohio and the greater Southeast. These new findings from Garden Creek thus demand that we confront our colloquial and theoretical reliance on concepts such as the Hopewell core and periphery, and begin to explore more mosaic-like models for inter-regional ritual interaction among small-scale societies.

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