Chapter 8

Definition of Variables and Variable States

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This chapter continues from the previous in familiarizing the reader with the observations and variables – the rows and columns – in the HOPEBIOARCH data base. Here, we consider the 545 qualitative and quantitative variables used to describe the burials and ceremonial deposits within the ceremonial sites described by the data base.

The variables in the data base are of roughly six kinds (Table 8.1). The first 13 define the provenience and context of each observation: the site, mound, burial or ceremonial deposit designation, the primary source of information about the provenience, whether it is a burial or deposit, whether human remains in burial contexts were cremated, inhumed, or burned, the spatial cluster of graves in which it occurs within the mound, and associations among individuals within graves that contain multiple persons. The next 12 variables provide the best estimates of the age and sex of each individual in a burial, drawing upon evaluations made in Chapter 9. The physical anthropologists responsible for the estimates are also listed. The subsequent 13 variables describe, for burials, the materials used to wrap the remains, if any, various aspects of the form of the tomb, and its area and orientation. These variables are followed by 507 that either record qualitative and quantitative characteristics of the artifacts and raw materials put in each grave with the deceased or in each ceremonial deposit, or summarize information about groups of artifacts (e.g. number of species represented by power parts per provenience). The 507 variables are arranged by the artifacts' general social functions to the extent known (e.g., shaman-like paraphernalia, markers of other kinds of leadership, sodality markers, clan markers, personal items), similarity in forms (e.g., panpipes, flutes), and raw materials (e.g., quartz items, animal teeth). Of the 507 variables, 125 describe various artifact formal-material classes, 88 code the counts of these formal-material classes in individual graves or ceremonial deposits, for those classes having more than one item in some graves or deposits, and 297 variables, in triplets, describe the positions of artifacts within individual graves. Table 8.1 lists the first four kinds of variables concerned with provenience, age and sex estimates, tomb form, and artifact formal-material classes.

Table 8.1. List of Variables and the Number of Entries in Each

Variable Name	Unabbreviated Name	Number of Entries[1]	Percentage of Proveniences[2]
	Provenience Information		
Site	Site	1143	100.0%
Mound	Mound	1143	100.0%
Proven	Provenience	1143	100.0%
PrimSource	Primary Source	1143	100.0%
Cluster1	Cluster 1	281	24.5%
Cluster2	Cluster 2	21	1.8%
Cluster3	Cluster 3	2	0.2%
	Overview Information		
BurialDep	Burial/Ceremonial Deposit	1143	100.0%
Treatment	Body Treatment	1065	93.0%
ArtifAccum	Artifact Accumulation	1143	100.0%
MNI	Minimum Number of Individuals	1101	96.3%
IndAssoc	Individuals Associated	223	19.5%
ArtPresAbs	Artifacts Present or Absent	1143	100.0%
	Demographic Information		
AgeCode	Age Code	1057	92.5%
SexCode	Sex Code	1059	92.7%
Age1	Age 1	160	14.0%
Age2	Age 2	57	5.0%
Age3	Age 3	31	2.7%
PhysAnthAge	Physical Anthropologist, Age	437	38.2%
Sex1	Sex 1	86	7.5%
Sex2	Sex 2	76	6.6%
Sex3	Sex 3	73	6.4%
PhysAnthSex	Physical Anthropologist, Sex	234	20.5%
PAagree	Physical Anthropologists Who Agree	54	4.7%
PAdisagree	Physical Anthropologists Who Disagree	16	1.4%
	Body Treatment, Tomb Form and Size		
FloorPrep	Floor Preparation	311	27.2%
WallPrep	Wall Preparation	396	34.6%
CoverPrep	Cover Preparation	316	27.6%
BodyWrap	Body Wrapping	172	15.0%
Platform	Platform	212	18.5%
Water	Water Barrier	180	15.7%
WatPosit	Water Position	180	15.7%
WatShape	Water Shape	180	15.7%
GraveAreaQL	Grave Area Qualitative	244	21.3%
GraveAreaQT	Grave Area Quantitative	257	22.5%
GraveLength	Grave Length	270	23.6%
GraveWidth	Grave Width	285	24.9%
GraveOrien	Grave Orientation	500	43.7%
	Shaman-like Practitioner's Paraphernalia, Probable or Possible		
QuartzCryst	Quartz Crystals	7	0.6%
MicaSheet	Mica Sheets	58	5.1%
QuartzDisc	Quartz Discoids	1	0.1%
QuartzCone	Quartz Cones	2	0.2%
ConeHemi	Cones/Hemispheres	11	1.0%
QuartzBoat	Quartz Boatstones	2	0.2%
Boat	Boatstone, Non-Quartz	9	0.8%
QuartzCup	Quartz Cups	1	0.1%
QuarColorPeb	Quartz or Colored Pebbles	4	0.3%

(*Continued*)

Table 8.1. (*continued*)

Variable Name	Unabbreviated Name	Number of Entries[1]	Percentage of Proveniences[2]
Marble	Marbles	1	0.1 %
CopperBall	Copper Balls	4	0.3 %
Plummet	Plummets	5	0.4 %
FossilConc	Fossils/Concretions	6	0.5 %
TubeFuncUnk	Tubes, Function Unknown	9	0.8 %
Barracud	Barracuda Jaws	3	0.3 %
SharkTeeth	Shark Teeth	19	1.7 %
AlligTeeth	Alligator Teeth	4	0.3 %
Rattle	Rattlers/Tinklers	2	0.2 %
Fan	Fan Effigies	2	0.2 %
CPNose	Copper Nostril Inserts	3	0.3 %
Mushroom	Mushroom-Shaped Objects	2	0.2 %
FlyHuman	Flying Human	1	0.1 %
Owl	Owl Effigies	4	0.3 %
Supernat	Supernatural Effigies	2	0.2 %
GoatHorn	Goat Horn	1	0.1 %
Awl	Awls, Bone/Antler	44	3.8 %
QuartzBiface	Quartz Bifaces	14	1.2 %
GemBiface	Gem Bifaces	9	0.8 %
OtherTransBiface	Other Translucent Bifaces	4	0.3 %
ObsidBiface	Obsidian Bifaces	20	1.7 %
FancyPt	Fancy Points	5	0.4 %
Weapon	Weapon Effigies	2	0.2 %
FancyPrismBlade	Fancy Prismatic Blades	10	0.9 %
QuartzNum	Number of Quartz Object Types	41	3.6 %
	Other Ceremonial Paraphernalia		
BigPipe	Big Smoking Pipes	2	0.2 %
SmallPipe	Small Smoking Pipes	44	3.8 %
Panpipe	Panpipes	14	1.2 %
Flute	Flutes/Whistles	3	0.3 %
PaintEquip	Painting Equipment	4	0.3 %
OchrePaint	Ochre or Paint	19	1.7 %
StoneTablet	Stone Tablets	14	1.2 %
FancyPot	Fancy Pottery Vessels	17	1.5 %
TortShellOrn	Tortoise Shell Ornaments	9	0.8 %
TrophSkJw	Trophy Skulls/Jaws	30	2.6 %
TrophFg	Trophy Fingers	2	0.2 %
TrophEar	Trophy Ears	1	0.1 %
TrophHn	Trophy Hands	2	0.2 %
HumanM	Human Figures, Male	1	0.1 %
HumanF	Human Figures, Female	2	0.2 %
HumanUk	Human Figures, Unknown Sex	9	0.8 %
AnimImage	Animal Images	16	1.4 %
CarveBone	Carved Bone	5	0.4 %
	Paraphernalia and Role Markers of Nonshaman-like Leaders, Sodality Leaders and Members, and Other Important Persons		
Headplate	Headplates	34	3.0 %
CeltCopp	Celt, Copper	60	5.2 %
CeltAreaKnown	Celt Area, Known	10	0.9 %
CeltAreaAll	Celt Area, All	10	0.9 %
CeltAreaLgst	Celt Area, Largest	10	0.9 %
CeltAreaCode	Celt Area Code	10	0.9 %
TotCeltWeight	Total Celt Weight	29	2.5 %
CeltWtKnown	Celt Weight, Known	29	2.5 %

(*Continued*)

Table 8.1. (*continued*)

Variable Name	Unabbreviated Name	Number of Entries[1]	Percentage of Proveniences[2]
HeavyCelt	Heaviest Celt	29	2.5 %
LightCelt	Lightest Celt	29	2.5 %
LongCelt	Longest Celt	29	2.5 %
ShortCelt	Shortest Celt	29	2.5 %
CeltIron	Celt, Meteoric Iron	4	0.3 %
CeltCoal	Celt, Cannel Coal	3	0.3 %
CeltStone	Celt, Stone	31	2.7 %
Conch	Conch Shell Vessel	65	5.7 %
ShellSpoon	Shell Spoons	11	1.0 %
WandBaton	Wands/Batons	10	0.9 %
Breastplate	Breastplates	107	9.4 %
BPTotalArea	Breastplate Total Area	47	4.1 %
BPTotalNum	Breastplates, Total Number	47	4.1 %
BPLongest	Longest Breastplate	47	4.1 %
BPShortest	Shortest Breastplate	47	4.1 %
BPThickThin	Breastplate, Thick or Thin	28	2.4 %
Earspool	Earspools	150	13.1 %
CPCutout	Copper Cutouts	23	2.0 %
MicaCutout	Mica Cutouts	29	2.5 %
ShellCutout	Shell Cutouts	4	0.3 %
Crescent	Crescents	10	0.9 %
PendantGorg	Pendants/Gorgets	51	4.5 %
Button	Buttons	29	2.5 %
	Animal Power Parts that Mark Clans		
RaptorPP	Raptor Power Parts	6	0.5 %
WolfDogPP	Wolf/Dog Power Parts	22	1.9 %
BigCatPP	Big Cat Power Parts	19	1.7 %
FoxPP	Fox Power Parts	4	0.3 %
ElkPP	Elk Power Parts	8	0.7 %
DeerPP	Deer Power Parts	3	0.3 %
RaccoonPP	Raccoon Power Parts	11	1.0 %
OpossumPP	Opossum power Parts	2	0.2 %
BadgerPP	Badger Power Parts	1	0.1 %
MarmotPP	Marmot Power Parts	2	0.2 %
GroundhogPP	Groundhog Power Parts	1	0.1 %
SmMamPP	Small Mammal Power Parts	6	0.5 %
BeaverPP	Beaver Power Parts	5	0.4 %
BearPP	Bear Power Parts	86	7.5 %
KnSpeciesPPNum	Known Species Power Part Number	120	10.5 %
SpeciesUnkPP	Species Unknown Power Parts	12	1.0 %
	Personal Decoration and Wealth		
Bead	Beads	177	15.5 %
BeadNeck	Bead Necklaces	33	2.9 %
BraceAnklet	Bracelets/Anklets	20	1.7 %
BeadString	Bead Strings	12	1.0 %
HairSkew	Hair Skewers	3	0.3 %
	Utilitarian Objects Not Obviously Ceremonial		
Container	Containers	85	7.4 %
NeedleBodkin	Needles or Bodkins	25	2.2 %
BoneAntPointKnife	Bone/Antler Points/Knives	5	0.4 %
CopperRod	Copper Rods	3	0.3 %

(*Continued*)

Table 8.1. (***continued***)

Variable Name	Unabbreviated Name	Number of Entries[1]	Percentage of Proveniences[2]
HornBiface	Hornstone Bifaces	1	0.1 %
OtherFlintBiface	Other Flint Bifaces	77	6.7 %
OtherFlintPrisBlad	Other Flint Prismatic Blades	72	6.3 %
MiscIRTool	Miscellaneous Iron Tools	3	0.3 %
MiscCPTool	Miscellaneous Copper Tools	10	0.9 %
MiscNMTool	Miscellaneous Non-Metal Tools	27	2.4 %
	Rare, Miscellaneous Objects: Utilitarian, Decorative, or Ceremonial		
MiscCPObj	Miscellaneous Copper Objects	21	1.8 %
MiscShellObj	Miscellaneous Shell Objects	33	2.9 %
MiscObsid	Miscellaneous Obsidian Objects	5	0.4 %
MiscStone	Miscellaneous Stone Objects	27	2.4 %
MiscUtilFancyObj	Miscellaneous Utilitarian or Fancy Objects	58	5.1 %
	Raw Materials and Manufacturing Debris		
BoneMisc	Miscellaneous Animal Bone	44	3.8 %
CannelRaw	Cannel Coal, Raw	1	0.1 %
CoppRawScrap	Copper, Raw & Scrap	13	1.1 %
FlintRawScrap	Flint, Raw & Scrap	45	3.9 %
GalenRaw	Galena, Raw	25	2.2 %
GoldScrap	Gold Scrap	1	0.1 %
GraphRaw	Graphite, Raw	2	0.2 %
HematRaw	Hematite, Raw	6	0.5 %
IronRaw	Iron, Raw	5	0.4 %
MicaScrap	Mica Scrap	33	2.9 %
PearlRaw	Pearl, Raw	11	1.0 %
PyriteRaw	Pyrite, Raw	2	0.2 %
SilverRaw	Silver, Raw	4	0.3 %
TortShlRaw	Tortoise Shell, Raw	11	1.0 %
QuartzScrap	Quartz Scrap	5	0.4 %
	Arifact Location Relative to the Body (Position)		
Variable + P1	Primary Position of Item	n/a	n/a
Variable + P2	Secondary Position of Item	n/a	n/a
Variable + P3	Tertiary Position of Item	n/a	n/a

[1] Represents number of cells in data base with an entry regardless of the number of artifacts. Shared artifacts (those denoted by an asterisk in the data base) are counted more than once if an asterisk appears in more than one cell.
[2] Indicates the relative ubiquity of an entry for an item or characteristic in Ohio Hopewell proveniences.

ARTIFACT CLASSIFICATION

The artifact classification used in the data base distinguishes items most fundamentally by their formal and material qualities, which are directly observable. However, it also aims at capturing the social and ceremonial functions of artifacts, in order to give insight into the social and ceremonial roles of the people who used the items. In other words, artifact classes were designed to help reveal the social and ceremonial actions of past people, thereby personalizing the reconstruction of Scioto Hopewell life (Chapter 4, The Concept of the Social Role).

For example, metallic headplates are divided in the data base into ones that are plain and those that reference different kinds of animals - deer, bears, birds, humans - in order to distinguish social leaders who may have had different social, political, and/or cermonial functions. Smoking pipes are separated into small platform pipes, either plain or decorated with various animal effigies, and much larger and rarer animal effigy smoking pipes. The

aim of the division is to separate individually owned pipes, probably used in personal and sodality ceremonies that focused on relationships with personal power animals, from pipes possibly owned by whole communities and used in broader community ceremonies. Cones and hemispheres made of quartz are separated from ones made of non-quartz materials in the data base because items of quartz were almost never buried with individuals and were almost always decommissioned instead in ceremonial deposits. In contrast, cones and hemispheres made of other materials were sometimes placed in the graves of individuals. This distinction probably indicates the greater power attributed by Ohio Hopewell peoples to quartz than to the other materials from which cones and hemispheres were made, thus usually requiring the careful decommissioning of quartz ceremonial items separate from the deceased (Cowan 2005; Turff and Carr 2005:679). The distinction may also define persons with greater and lesser spiritual and/or sociopolitical power, in the case of occasional persons who were buried with quartz cones instead of cones made of other materials.

MUTUAL EXCLUSIVITY OF VARIABLES

The variables in the data base have been defined so as to be mutually exclusive in almost all cases. This logical characteristic of the variables allows their proper statistical analysis for any associations and correlations among them. The exceptions to this rule include redundancies between some or all of the variables within each of the following five sets: Water, MicaSheet, PearlRaw, and Conch; Wand/Baton, Mushroom, and HumanUk; FlyHuman and HumanUk; AnimImage and CPCutout; and Owl relative to each of Weapon, BigPipe, and SmallPipe. For example, in certain instances, a single artifact might be coded as present for both the variables Weapon and Owl, or both Wand/Baton and Mushroom, etc., rather than just one of these variables. The particular redundancies that do occur within each of the six sets are noted below in the definition of the variables and the states they take. These redundancies were allowed to occur among these variables, rather than eliminating some of the variables or some of the variables' states, because each variable is important interpretively and, to be useful, all instances of its occurrence should be coded.

ARTIFACT TERMINOLOGY

The terms used in the data base to refer to artifact classes commonly correspond to the terms used by the excavators of the sites, but sometimes do not. Instances of lack of correspondence arise in part from the long period of time over which the sites were investigated-from the 1830s through the 1990s – and changes over this period in the names given to some artifact classes; at the same time, we needed to use one standard term for each artifact class consistently across sites. For example, the terms, breastplate and boatstone, were used throughout much of the period and we retained these names in the data base. In contrast, many different terms were used for bifacial points (e.g., spear point, spearhead, ceremonial point, blade, knife, instrument), and a standard suite of terms for given formal classes of points had to be devised. An additional reason why our terminology does not always match that of the excavators of sites is because the functions of some artifact classes were not known at the time of excavation, and appropriate functional names were not given to the classes in the excavators' reports (e.g., earspools, metal-jacketed panpipes; Ruhl 2005:697; Turff and Carr 2005:651).

The artifact classes that required the most frequent conversion of their names from those given by site excavators are bifacial points of various forms, and prismatic blades. To standardize the diverse terminology used in the literature, field notes, and museum records, we first surveyed these sources of information for illustrations of bifacial points and prismatic blades recovered from a large number of the Ohio Hopewell sites in the data base. From these illustrations, we then defined in modern archaeological terms six classes of bifacial points and prismatic blades that cover the full range

Table 8.2. Definition of Classes of Bifacial Points and Prismatic Blades Used in the Data Base

Odd, Asymmetrically Shaped Biface
A pointed biface defined by its asymmetrical shape upon visual inspection or written description. Large, small, or unknown in size.

Symmetrically Shaped, Large Biface
A pointed biface defined by its symmetrical shape and being larger than four inches from the tip of its point to the tip of its base upon visual or written description. It is not of the Ross Barbed style (see below). It lacks a Ross Barbed-like narrow stem, and possibly lacks a long Ross Barbed-like flaring blade with strong barbs. Notching and the existence of a stem are unnecessary to this class.

Ross Barbed Biface
A pointed biface that is defined generously, according to Griffin (1965:117) and Seeman (1995:150). It is symmetrically shaped. It generally is large, greater than four inches and usually between six and nine inches from the tip of its point to the tip of its base. Its stem is generally narrow, although a stem is not necessary to this class. It often, but not necessarily, has a flaring blade and strong barbs. "The secondary flaking of the blade is highly stylized, with long, shallow flakes struck at regular intervals perpendicular to the lateral edge, apparently with either a soft hammer or by indirect percussion" (Seeman 1995:150). Bifaces that have traits diagnostic of the Ross Barb type, such as a flaring blade and strong barbs, but that also are asymmetrically shaped are defined here as Odd, Asymmetrically Shaped Bifaces.

Unknown Shaped, Large Biface
A pointed biface defined by its being larger than four inches from the tip of its point to the tip of its base from written descriptions, but of unknown shape.

Projectile Point and/or Knife
A pointed biface defined by its symmetrical shape and its being smaller than four inches from the tip of its point to the tip of its base and of any shape, diagnostic or otherwise.

Prismatic Blade
A long, slender blade, at least twice as long as wide, and removed from a prismatic core.

of illustrated morphological variability of the points and blades and that are used as variable states in the data base (Table 8.2). We then surveyed the literature, field notes, and museum records again for a complete list of the various names given to each of the six classes of bifacial points and prismatic blades by specific excavators and museum personnel for specific sites, to the extent knowable from illustrations. Finally, we created a conversion table (Table 8.3) that links the diverse names given historically to bifacial points and prismatic blades by excavators and museum personnel to the six modern classes. Different mappings are listed between the old and modern terms for different sites, excavators, and curating museums. These different conversions were necessary because, historically, different terminologies were used by the different researchers at different sites, and even by the same researcher at different sites or times. The conversion table was then used to code in the data base the published and unpublished, old-term descriptions of the artifact contents of burials and ceremonial deposits in consistent, modern terms, even when illustrations of the artifacts were lacking.

Note in Table 8.3 that although excavators vary considerably among one another in the names they used to refer to each of the six modern categories of bifacial points and prismatic blades, and although the names used cross over among the six modern categories from excavator to excavator and from site to site, nevertheless for a *given* excavator at a *given* site, one or a few names were used consistently for each specific modern category of artifact. It was thus commonly possible for us to map antiquated verbal descriptions of instances of bifacial points and prismatic blades to their appropriate modern class.

In certain instances, firm equations could not be drawn between historic descriptions of bifacial points or prismatic blades and the six modern categories. Sometimes, an excavator at a site used the same term for several different modern categories of items. For example, in Table 8.2, it can be seen that Moorehead used the term, "blade", for large to small, oddly shaped, ceremonial bifaces, for large,

Table 8.3. Conversion of Terms Used for Bifacial Points and Prismatic Blades

Site	Citation	Oddly Shaped Biface	Symmetric Biface	Ross Barbed Biface	Unknown Biface	Points/Knives	Prismatic Blades
Ater	Baby 1948					leaf-shaped blade	flake knife, knife
Circleville	Atwater 1820				spearheads	arrowheads	
Ginther	Shetrone 1922, 1925					arrow point	flake knives
Harness (Liberty)	Mills 1907					arrowpoints	flint knives, flint knives (flakes), knives
Hopewell	Moorehead 1891, 1897b, 1922	blade, probably knives	blade	blade	spearhead	arrowhead, points	flake knife, knives
Hopewell	Shetrone 1922, 1923, 1924, 1925, 1926	spear point, ceremonial points	spear point	spear point, ceremonial spear point	spear point	blade, arrow point, point	flakes, flake knives
Hopewell	Squier and Davis 1848		instruments		spearhead	instruments	
Kohl	Whitman 1977		large ceremonial blade		large bifacially flaked blade	Snyder's point	unifacial flakes, classic Hopewellian unifacial flakes
Levina Russel	Baby 1963					Hopewell corner-notch projectile pts.	
Liberty	Seeman and Soday 1980					blade pieces, triangular bifaces	prismatic blade
Martin	Mortine and Randles 1978					stemmed pts. Typically Adena, point, late Adena stemmed pt.	prismatic blades

(*Continued*)

(*continued*)

Site	Citation	Oddly Shaped Biface	Symmetric Biface	Ross Barbed Biface	Unknown Biface	Points/Knives	Prismatic Blades
McKenzie	Moorehead 1899				spearhead	arrowhead	
McKenzie Area	Moorehead 1899					arrowhead	
Mound City	Mills 1922	curved knife	spear point	spears, spear point	spear point, spear, spearhead, large spear point	arrow point, spear point	knives, flake knives
Mound City	Squier and Davis 1848		spearhead		spearhead	arrow point, arrowhead	
North Benton	Magrath 1945					arrowhead, arrow point	flake knife
Seip	Shetrone 1925, 1926; Shetrone and Greenman 1931	ceremonial knives, blade	blade			arrow point, arrowhead	flake knives, knives, blades
Tremper	Mills 1916	spear point			spearhead	small spear point, arrowhead	flake knives
Turner	Metz 1882						flaked knives
Turner	Putnam 1886c					point, knives	flaked knives
Turner	Saville 1889, 1890					knife, shipped knife	flaked knives
Turner	Volk 1905						flaked knives

symmetrically shaped ceremonial bifaces, and for Ross Barbed style bifaces when he reported the artifact inventory from his excavations at the Hopewell site. Such ceremonial bifacial points at the site could be assigned to one or the other of these three modern categories in the data base only when they were illustrated. When they were not, they had to be assigned to the catch-all category of "unknown biface".

Within the HOPEBIOARCH data base, the six defined modern categories of pointed bifaces and prismatic blades are not used directly as variables but, rather, as the states taken by broader, culturally significant variables. These broader variables include quartz bifaces, obsidian bifaces, gem bifaces, other translucent bifaces, other flint bifaces, point effigies made of other fancy materials (mica, copper), prismatic blades made of fancy materials (obsidian, gems, other translucent materials), and other flint prismatic blades. For example, the distinction of quartz, obsidian, gem, and other translucent bifaces from ones made of flint distinguishes the activities of shaman-like practitioners in their spiritual practices from utilitarian subsistence and other tasks that might be performed by anyone (Chapter 4, Table 4.2).

PRESENTATION OF INFORMATION ON VARIABLES AND VARIABLE STATES

The remainder of this chapter presents the variables and variable states used in the HOPEBIOARCH data base. The variables in the data base are of several kinds, and depending on their kind, they are defined below, either individually or as groups of similar variables. First are qualitative variables that record each provenience; its intrasite location; whether it is a burial or ceremonial deposit; if a burial, the treatment, age, and sex of the human remains; formal and raw material characteristics of the grave; the forms and/or raw materials of artifact classes; and quantities of raw materials. Each of these variables takes diverse, alternative states. Second are largely quantitative variables that record the counts or approximate numbers of an artifact class that does not vary in raw material and varies little in form (e.g., copper breastplates), or the dimension of a tomb characteristic or artifact (e.g., grave length, celt length, celt weight). Both the first and second kinds of variables and most of the states they take are defined individually, below. Codes of variable states that are common to multiple variables of the first and second kinds are defined below once for all the variables rather than repetitively across them. The common variable states include materials such as copper and mica, counts and measures such as "about 100" items and "large" size, and human demographic states such as female, male, and adult. A third kind of variable, largely quantitative, records the counts or the approximate numbers of artifacts of those classes that are each diverse in their forms and raw materials, that are described for their forms and raw materials, yet that also require count descriptions. These count variables in the data base are coupled with, and follow to the right of, the variables that describe the formal and raw material characteristics of the artifact classes. The count variables are easily recognized in having a name similar or identical to those that describe the formal and raw material traits of the artifact classes, followed by the suffix "NUM". The count variables are not defined below, being self-obvious. A final kind of variable describes the positions of artifacts within a grave. These variables are described as a group in general terms, given their very similar nature.

Descriptions of variables that refer to an artifact class usually include a citation to one or more figures in Chapters 1 through 5 that illustrate the class. Variables that are redundant with others are noted. Functions of historic Woodland and Plains Native American artifacts that are analogous to the Ohio Hopewell ones coded in the data base are listed in Chapter 11, Table 11.3 and Appendix 11.8.

To aid users of the data base, Table 8.1 lists all of the 172 variables that pertain to provenience, age and sex estimates, tomb form, and artifact formal-material classes, the code name of each of these variables in the data base, and the number and percentage of proveniences that contain information on each class.

CODES FOR COMMON VARIABLE STATES

Materials

CP	=	copper
IR	=	iron
SI	=	silver
ST	=	stone
MI	=	mica
MS	=	mica sheet
PE	=	pearl
SH	=	shell
PY	=	pottery
BN	=	bone
WD	=	wood
BK	=	bark
CL	=	clay
SD	=	sand
GR	=	gravel
CH	=	charcoal
FB	=	fabric
SK	=	skins

Counts and Measures

F	=	about fifty
H	=	around one-hundred
LG	=	large amount
HS	=	hundreds
LT	=	a little
M	=	many (approx. 10 to unknown)
S	=	several (approx. 3–9)
TH	=	around one-thousand
TW	=	around twenty

Animal Body Parts

CL	=	real claw or talon
TC	=	real tooth and real claw
TD	=	real tooth, drilled or perforated
TE	=	real tooth or teeth, unmodified or modification unknown
TP	=	real tooth, pearl inset
ECB	=	effigy claw, bone
ECC	=	effigy claw, copper
ECM	=	effigy claw, mica
ECS	=	effigy claw, stone
ETB	=	effigy tooth, bone
ETC	=	effigy tooth, copper
ETM	=	effigy tooth, mica
ETU	=	effigy tooth, unknown material
JW	=	jaws (mandible and/or maxilla)
MX	=	maxilla

Demographic States (Age, Sex)

F	=	female
F?	=	probable female
F??	=	more likely female than male
M	=	male
M?	=	probable male
M??	=	more likely male than female
D	=	designation exists but disagreement among physical anthropologists about sex
AD	=	adult
YA	=	young adult
MA	=	middle-age adult
OA	=	old adult
AA	=	assumed adult (assumed to be an adult when no information is given and the burial represents an inhumation, a partial cremation, or a charred skeleton. Cremations are treated as unknown unless stated otherwise in publications, field notes, site reports, and etc.)
Q	=	questionable (designation exists, but was either performed on cremated remains using unknown techniques, or by a researcher whose results do not correlate well with others)

Blank Cells

In order to make scanning for information in the data base easier, cells were left empty in cases where an artifact was absent or the variable was irrelevant to a particular provenience. Most of the contextual variables, such as Site, Mound, Proven, and ArtPresAbs, contain an entry for every case in the data base. The demographic variables have many empty cells, either because no attempt was ever made to age and sex the human remains, or because the provenience is a

non-burial ceremonial deposit. For burial proveniences, a blank cell means that no information is available about age or sex, either because no attempt was made to collect the information, or the results of analyses were inconclusive and not reported. Blank cells under the tomb form variables also indicate either incomplete reporting or non-burial proveniences. Among the qualitative variables relating to artifacts and raw materials, a blank usually means that the item was not described in any of the extant sources about a particular provenience, and thus the item can be treated as absent, with the recognition that a small number of these apparent absences could be due to incomplete reporting. Table 8.4 lists all of these variables and the meaning of blank cells for each.

Artifact count variables associated with a qualitative variable (e.g. ButtonNum) are not listed in Table 8.4, for the purpose of brevity. Blank cells for all of these variables mean that the count variable is not applicable because the item itself is absent from the provenience. Artifact position variables are also absent from Table 8.4, in order to be brief. Blank cells for these variables mean that sources provided no information about the positions of an artifact class relative to the human remains.

VARIABLES AND ASSOCIATED STATES

Listed and defined below are each variable and the states it takes in the data base, with two exceptions. Count variables that record the number or amount of a particular artifact type and that have the suffix NUM in their name are not defined because their meanings are clear. Variables that describe the positions of artifacts

Table 8.4. The Meaning of Blank Cells in the HOPEBIOARCH Data Base[1]

Variable Name	Unabbreviated Name	Meaning of Blank Cell
Site	Site	No Blanks
Mound	Mound	No Blanks
Proven	Provenience	No Blanks
PrimSource	Primary Source	No Blanks
Cluster1	Cluster 1	No Info/Not Applicable
Cluster2	Cluster 2	No Info/Not Applicable
Cluster3	Cluster 3	No Info/Not Applicable
	Overview Information	
BurialDep	Burial/Ceremonial Deposit	No Blanks
Treatment	Body Treatment	Non-Burial
ArtifAccum	Artifact Accumulation	No Blanks
MNI	Minimum Number of Individuals	Non-Burial
IndAssoc	Individuals Associated	No Info/Not Applicable
ArtPresAbs	Artifacts Present or Absent	No Blanks
	Demographic Information	
AgeCode	Age Code	No Info/Not Applicable
SexCode	Sex Code	No Info/Not Applicable
Age1	Age 1	No Info/Not Applicable
Age2	Age 2	No Info/Not Applicable
Age3	Age 3	No Info/Not Applicable
PhysAnthAge	Physical Anthropologist, Age	Not Applicable
Sex1	Sex 1	No Info/Not Applicable
Sex2	Sex 2	No Info/Not Applicable
Sex3	Sex 3	No Info/Not Applicable
PhysAnthSex	Physical Anthropologist, Sex	Not Applicable
PAagree	Physical Anthropologists Who Agree	Not Applicable
PAdisagree	Physical Anthropologists Who Disagree	Not Applicable
	Body Treatment, Tomb Form and Size	
FloorPrep	Floor Preparation	No Info/Non-Burial
WallPrep	Wall Preparation	No Info/Non-Burial

(*Continued*)

Table 8.4. ***(continued)***

Variable Name	Unabbreviated Name	Meaning of Blank Cell
CoverPrep	Cover Preparation	No Info/Non-Burial
BodyWrap	Body Wrapping	No Info/Non-Burial
Platform	Platform	No Info/Absent
Water	Water Barrier	No Info/Absent
WatPosit	Water Position	No Info/Absent
WatShape	Water Shape	No Info/Absent
GraveAreaQL	Grave Area Qualitative	No Info/Non-Burial
GraveAreaQT	Grave Area Quantitative	No Info/Non-Burial
GraveLength	Grave Length	No Info/Non-Burial
GraveWidth	Grave Width	No Info/Non-Burial
GraveOrien	Grave Orientation	No Info/Non-Burial
	Shaman-like Practitioner's Paraphernalia, Probable or Possible	
QuartzCryst	Quartz Crystals	Absent
MicaSheet	Mica Sheets	Absent
QuartzDisc	Quartz Discoids	Absent
QuartzCone	Quartz Cones	Absent
ConeHemi	Cones/Hemispheres	Absent
QuartzBoat	Quartz Boatstones	Absent
Boat	Boatstone, Non-Quartz	Absent
QuartzCup	Quartz Cups	Absent
QuarColorPeb	Quartz or Colored Pebbles	Absent
Marble	Marbles	Absent
CopperBall	Copper Balls	Absent
Plummet	Plummets	Absent
FossilConc	Fossils/Concretions	Absent
TubeFuncUnk	Tubes, Function Unknown	Absent
Barracud	Barracuda Jaws	Absent
SharkTeeth	Shark Teeth	Absent
AlligTeeth	Alligator Teeth	Absent
Rattle	Rattlers/Tinklers	Absent
Fan	Fan Effigies	Absent
CPNose	Copper Nostril Inserts	Absent
Mushroom	Mushroom-Shaped Objects	Absent
FlyHuman	Flying Human	Absent
Owl	Owl Effigies	Absent
Supernat	Supernatural Effigies	Absent
GoatHorn	Goat Horn	Absent
Awl	Awls, Bone/Antler	Absent
QuartzBiface	Quartz Bifaces	Absent
GemBiface	Gem Bifaces	Absent
OtherTransBiface	Other Translucent Bifaces	Absent
ObsidBiface	Obsidian Bifaces	Absent
FancyPt	Fancy Points	Absent
Weapon	Weapon Effigies	Absent
FancyPrismBlade	Fancy Prismatic Blades	Absent
QuartzNum	Number of Quartz Object Types	Not Applicable
	Other Ceremonial Paraphernalia	
BigPipe	Big Smoking Pipes	Absent
SmallPipe	Small Smoking Pipes	Absent
Panpipe	Panpipes	Absent
Flute	Flutes/Whistles	Absent
PaintEquip	Painting Equipment	Absent
OchrePaint	Ochre or Paint	Absent
StoneTablet	Stone Tablets	Absent
FancyPot	Fancy Pottery Vessels	Absent
TortShellOrn	Tortoise Shell Ornaments	Absent
TrophSkJw	Trophy Skulls/Jaws	Absent

(*Continued*)

Table 8.4. (*continued*)

Variable Name	Unabbreviated Name	Meaning of Blank Cell
TrophFg	Trophy Fingers	Absent
TrophEar	Trophy Ears	Absent
TrophHn	Trophy Hands	Absent
HumanM	Human Figures, Male	Absent
HumanF	Human Figures, Female	Absent
HumanUk	Human Figures, Unknown Sex	Absent
AnimImage	Animal Images	Absent
CarveBone	Carved Bone	Absent
	Paraphernalia and Role Markers of Nonshaman-like Leaders, Sodality Leaders and Members, and Other Important Persons	
Headplate	Headplates	Absent
CeltCopp	Celt, Copper	Absent
CeltAreaKnown	Celt Area, Known	No Info/No Copper Celts
CeltAreaAll	Celt Area, All	No Info/No Copper Celts
CeltAreaLgst	Celt Area, Largest	No Info/No Copper Celts
CeltAreaCode	Celt Area Code	No Info/No Copper Celts
TotCeltWeight	Total Celt Weight	No Info/No Copper Celts
CeltWtKnown	Celt Weight, Known	No Info/No Copper Celts
HeavyCelt	Heaviest Celt	No Info/No Copper Celts
LightCelt	Lightest Celt	No Info/No Copper Celts
LongCelt	Longest Celt	No Info/No Copper Celts
ShortCelt	Shortest Celt	No Info/No Copper Celts
CeltIron	Celt, Meteoric Iron	Absent
CeltCoal	Celt, Cannel Coal	Absent
CeltStone	Celt, Stone	Absent
Conch	Conch Shell Vessel	Absent
ShellSpoon	Shell Spoons	Absent
WandBaton	Wands/Batons	Absent
Breastplate	Breastplates	Absent
BPTotalArea	Breastplate Total Area	No Info/No Breastplates
BPTotalNum	Breastplates, Total Number	Not Applicable
BPLongest	Longest Breastplate	Not Applicable
BPShortest	Shortest Breastplate	Not Applicable
BPThickThin	Breastplate, Thick or Thin	No Info/Not Applicable
Earspool	Earspools	Absent
CPCutout	Copper Cutouts	Absent
MicaCutout	Mica Cutouts	Absent
ShellCutout	Shell Cutouts	Absent
Crescent	Crescents	Absent
PendantGorg	Pendants/Gorgets	Absent
Button	Buttons	Absent
	Animal Power Parts that Mark Clans	
RaptorPP	Raptor Power Parts	Absent
WolfDogPP	Wolf/Dog Power Parts	Absent
BigCatPP	Big Cat Power Parts	Absent
FoxPP	Fox Power Parts	Absent
ElkPP	Elk Power Parts	Absent
DeerPP	Deer Power Parts	Absent
RaccoonPP	Raccoon Power Parts	Absent
OpossumPP	Opossum power Parts	Absent
BadgerPP	Badger Power Parts	Absent
MarmotPP	Marmot Power Parts	Absent
GroundhogPP	Groundhog Power Parts	Absent
SmMamPP	Small Mammal Power Parts	Absent
BeaverPP	Beaver Power Parts	Absent

(*Continued*)

Table 8.4. *(continued)*

Variable Name	Unabbreviated Name	Meaning of Blank Cell
BearPP	Bear Power Parts	Absent
KnSpeciesPPNum	Known Species Power Part Number	Not Applicable
SpeciesUnkPP	Species Unknown Power Parts	Absent
	Personal Decoration and Wealth	
Bead	Beads	Absent
BeadNeck	Bead Necklaces	Absent
BraceAnklet	Bracelets/Anklets	Absent
BeadString	Bead Strings	Absent
HairSkew	Hair Skewers	Absent
	Utilitarian Objects Not Obviously Ceremonial	
Container	Containers	Absent
NeedleBodkin	Needles or Bodkins	Absent
BoneAntPointKnife	Bone/Antler Points/Knives	Absent
CopperRod	Copper Rods	Absent
HornBiface	Hornstone Bifaces	Absent
OtherFlintBiface	Other Flint Bifaces	Absent
OtherFlintPrisBlad	Other Flint Prismatic Blades	Absent
MiscIRTool	Miscellaneous Iron Tools	Absent
MiscCPTool	Miscellaneous Copper Tools	Absent
MiscNMTool	Miscellaneous Non-Metal Tools	Absent
	Rare, Miscellaneous Objects: Utilitarian, Decorative, or Ceremonial	
MiscCPObj	Miscellaneous Copper Objects	Absent
MiscShellObj	Miscellaneous Shell Objects	Absent
MiscObsid	Miscellaneous Obsidian Objects	Absent
MiscStone	Miscellaneous Stone Objects	Absent
MiscUtilFancyObj	Miscellaneous Utilitarian or Fancy Objects	Absent
	Raw Materials and Manufacturing Debris	
BoneMisc	Miscellaneous Animal Bone	Absent
CannelRaw	Cannel Coal, Raw	Absent
CoppRawScrap	Copper, Raw & Scrap	Absent
FlintRawScrap	Flint, Raw & Scrap	Absent
GalenRaw	Galena, Raw	Absent
GoldScrap	Gold Scrap	Absent
GraphRaw	Graphite, Raw	Absent
HematRaw	Hematite, Raw	Absent
IronRaw	Iron, Raw	Absent
MicaScrap	Mica Scrap	Absent
PearlRaw	Pearl, Raw	Absent
PyriteRaw	Pyrite, Raw	Absent
SilverRaw	Silver, Raw	Absent
TortShlRaw	Tortoise Shell, Raw	Absent
QuartzScrap	Quartz Scrap	Absent
	Arifact Location Relative to the Body (Position)	
Variable + P1	Primary Position of Item	No Info/Not Applicable
Variable + P2	Secondary Position of Item	No Info/Not Applicable
Variable + P3	Tertiary Position of Item	No Info/Not Applicable

[1] "Blanks" refers to empty cells in the data base. "No Info" is used when reporting for a particular variable type is believed to have been poor or inconsistent among the various excavators. This designation primarily applies to the demographic variables and many of the tomb form variables. "Not Applicable" is used when a variable is sometimes not relevant for a particular provenience. For example, the name of the physical anthropologist who made an age determination for a particular individual (PhysAnthAge) is not applicable when no such determinations are known to have been made. A variable might also be not applicable because the definition limits the contents to certain sites (e.g. Cluster1) or some subset of the total data base (e.g. BPThickThin). "Absent" is used primarily for artifacts. It indicates that the artifact was not mentioned in records relating to the site. "No Blanks" is used when there is an entry present for every case in the data base. When two terms are used for the same variable (e.g. No Info/Non-Burial) it means that one or the other applies, depending on the case. For the SexCode variable, this would mean that there is either no sex information available, or the case is a non-burial ceremonial deposit.

within a grave are described in only general terms because they are all alike in the states they can take.

Site (Hopewell Site Name)

Description:

Name of site as given in most recent site report(s), field notes, or accession records, or as commonly referred to in the literature.

Variable States:

Ater, Boblett, Bourneville, Campbell, Circleville, Esch, Finney, Fortney, Ginther, Glen Helen, Headquarters, Hazlett, Hopeton, Hopewell, Irvin Coy, John Boyle's Farm, Joseph Dayrs' Farm, Kohl, Lee, Levina Russell, Manring, Marietta, Martin, McKenzie, Melvin Phillips, Miami Fort, Mound City, North Benton, Pence, Perry Township, Purdom, Richard Shumard's Farm, Rockhold, Rutledge, Seip, Shilder, Shinkal, Snake Den, Stone, Stubbs, Tremper, Turner, Twin, West, Wright-Holder, Yant, *plus*

Fort Ancient Area	=	a mound in the vicinity of the Fort Ancient Earthwork
Liberty	=	the Edwin Harness Mound and Russell Brown Mounds of the Liberty Group
Marietta Area	=	a mound in the vicinity of the Marietta Earthwork
Newark	=	Wells Mounds
Old Town	=	Frankfort, an alternate name for the site.

Mound (Mound/Cemetery)

Description:

Mound or cemetery number, letter, or other designation as reported in site report, field notes, or accession records. If no number was assigned and only one mound was excavated at the site, it is called Mound 1. The equivalency of Shetrone's (1926a), Moorehead's (1922), and Squier and Davis' (1848) mound numbers for the Hopewell site are provided in Table 7.6.

Variable States:

Various numeric and alphanumeric codes

Proven (Provenience)

Description:

Burial or ceremonial deposit identifier as described in the site report, field notes, site maps, or accession records. These identifiers are usually numbers or letters, preceded by a descriptive word such as "Burial", "Skeleton", or "Altar". Ceremonial deposit identifiers tend to be more descriptive (e.g. Small Crematory, Central Deposit, Copper Deposit), whereas those for burials tend to be more formulaic (Burial 2, Skeleton 6, Crematory Basin 1, etc.). For sites with only one series of graves excavated by one archaeologist, "Burial" is normally used as the default label unless the excavator consistently applied some other label, such as Cremation, Skeleton, or Feature. For sites with two or more series of graves excavated by two or more archaeologists (e.g., Moorehead and Shetrone at the Hopewell Site; Putnam, Saville, Volk at the Turner site), the multiple series of graves are distinguished. Thus, at Hopewell, one series of graves is labeled using Moorehead's term, "Skeleton", whereas the second series is labeled using Shetrone's term, "Burial". For the Turner site, lowercase letters are appended to the burial number in order to distinguish among the various excavations.

When a long series of burials is described but not labeled in any way in published or unpublished sources, numbers are assigned in the order that they appear in the source. At the Liberty Earthwork, burials excavated by Mills and Moorehead at the Edwin Harness Mound were numbered consecutively by the excavators, but many of the descriptions of individual burials, or of groups of burials with the same attributes, do not include burial numbers. In these cases, burial numbers were assigned consecutively beginning with the last specific burial number mentioned in the source. For example, if Mills (1907) specifically discussed Burial 100, and then later described three skeletons without numbering them, they were assigned numbers 101–103.

In cases where most of the burials are part of a sequence but a few were left out of the numbering scheme, or when only one or two burials exist for a site and were not numbered in any way, a code identifying the burial

was assigned. These codes have three parts: (1) the author's name, (2) the publication date followed by a colon, and (3) the page number. For example, "Shetrone 1926:38" would designate an unnumbered burial from Shetrone's 1926 site report, page 38. If there are two unnumbered skeletons in a grave, a lowercase "a" and "b" is affixed to the ends of their codes, identifying the skeletons in the order they are mentioned in the source. For example, "SH1926:38b" would designate the second unnumbered individual mentioned in Shetrone's 1926 site report, on page 38. If an unnumbered skeleton was found in field notes, the code for it includes: (1) the author, (2) the year, and (3) the date in the notes. For example "SH1922:9–2" identifies an unnumbered burial mentioned in Shetrone's 1922 field notes on September 2nd.

When two or more individuals are reported in the same grave in a publication, or in the field notes, but only one burial number is given, a capital letter is affixed after each burial number beginning with the letter A. Thus, Burials 6A and 6B in the same mound would represent a double burial collectively called Burial 6 by the excavator. Furthermore, every attempt was made to assign artifacts in multi-person graves to specific individuals. Artifacts clearly associated with one individual are coded for that skeleton alone, as one would code the grave inclusions in a single burial. For artifacts that could not be assigned to a particular skeleton with a fair degree of certainty, the variable state describing the artifact is followed by an asterisk in the record for the "A" burial, and an asterisk alone appears in place of the variable state describing the artifact under the "B" burial and any additional burials in the grave.

PrimSource (Primary Source)

Description:

Published or unpublished material that served as the primary source of information for the provenience. When a source has multiple authors, only the first author's name is listed. A bibliography listing sources by site can be found at the end of Chapter 7.

Cluster1

Description:

Designation for a cluster of burials sharing a defined space, such as a group surrounded by a ring of postholes, a group under a primary mound within a larger mound, and so on. These clusters are the ones assigned by Greber (1976) and Greber and Ruhl (1989) to Hopewell Mound 25, the Seip-Pricer Mound, and the Ater mound only, with a modification to Burial 276 based on observations by Shetrone (1923) in his August 16th field notes. If cluster membership is somewhat uncertain, the Cluster1 entry denotes the cluster to which a particular burial most likely belongs.

Cluster2

Description:

See Cluster1 description above. Second possible cluster to which a burial belongs if cluster membership is uncertain. In addition to the clusters identified by Greber (1976), Burials 2–7 are included as a likely cluster (Cluster A) based on descriptions in Shetrone and Greenman (1931).

Cluster3

Description:

See Cluster1 description above. Third possible cluster to which a burial belongs if cluster membership is uncertain.

BurialDep (Burial/Ceremonial Deposit)

Description:

Designates whether the provenience listed is best described as a burial, a ceremonial deposit of artifacts outside of a burial context, or a miscellaneous ceremonial feature that did not fit into either of these definitions (e.g., the Horseshoe Feature at the North Benton site). A burial is a provenience containing

enough skeletal material to suggest that it was an intentional interment of a human body, the disarticulated skeletal remains of an individual following decomposition, or their equivalent in ashes. A distinction is made between normal burials containing one or a small number of individuals, and commingled burials in which many individuals appear to have been interred together and not treated as discrete burials (e.g. the communal burial areas at the Tremper site). Only burials of Middle Woodland age are included in the data base. Burials that were placed in capping layers of a mound well after its floor had been used, after the Middle Woodland period, are excluded (e.g. "Intrusive Culture" burials, as in Mills 1922:435, 462, 464, 497, 506, 568–582). A ceremonial deposit, often called a "cache" in the early excavation reports on classic Scioto Hopewell sites, is a collection of several artifacts, whether of the same or different type, that appears to have been intentionally placed together and buried without accompanying human remains. Individual skulls or jaws that show evidence of intentional modification (e.g. drilling for suspension, etc.) are treated as artifacts. Thus, the presence of only intentionally modified remains with a deposit of artifacts defines the provenience as a ceremonial deposit rather than a burial. Accumulations or deposits containing only faunal or other organic elements, fragments of a single artifact type that appear to have been utilitarian (e.g. plain pottery), or both are not included in the database. Exceptions are deposits of a single type of utilitarian object that were clearly arranged with purpose (e.g. the Pottery Cache in the Ginther mound). Special deposits, such as fancy pottery found deposited in a crematory basin containing no human bone, were included in the data base as a ceremonial deposit. Artifacts that occurred individually and not as part of a specially prepared deposit were not included in the data base. A borderline case is the Pipe Deposit in Esch Mound 1. This deposit contained a single, large effigy pipe, but its location at the mound center and just above the stone cover for a burial seemed to warrant its inclusion in the data base as a ceremonial deposit.

Variable States:

U, plus

B	=	burial
C	=	ceremonial deposit
CM	=	commingled or mass burial
M	=	miscellaneous

Treatment (Body Treatment)

Description:

Denotes whether the body was inhumed with or without burning, and if burned, the extent of the burning based exclusively on descriptions in the site reports, field notes, or accession lists.

Variable States:

U, plus

C	=	cremation
CH	=	charred skeleton
CH?	=	probably charred skeleton
H	=	inhumation
HC	=	half cremation
PC	=	partial cremation

ArtifAccum (Artifact Accumulation)

Description:

An accumulation of artifacts meeting one or more of the following three criteria: (1) It is a collection of several artifacts, of the same or different type, that appears to have been intentionally placed together and buried without accompanying human remains, fitting the definition of a ceremonial deposit in the BurialDep variable, above; (2) it is a collection of a large diversity of artifact classes (15 or more) placed with a burial; and/or (3) it is a collection of a large number of artifacts that are of a single class and that stand out numerically compared to the numbers found in other burials (e.g., 10 earspools, 10 awls).

Variable States:

P	=	present
A	=	absent

MNI (Minimum Number of Individuals)

Description:

Minimum number of individuals in a particular burial context that appear to be in the same grave, usually because they share the same platform or are lying immediately adjacent to one another. Communal burial within a single large structure (e.g. Fort Ancient Area, Burials 1–15) was not sufficient to treat the burials as belonging to a single grave, as these skeletons could have been interred individually over an extended period of time. The MNI is based on descriptions in site reports and field notes, and not on skeletal analyses done after excavation. The MNI count for a grave where multiple individuals are listed (i.e., multiple rows of the data base) is recorded for the first individual (row), only. An asterisk is recorded for all subsequent individuals (rows) associated with the first. For cremations, the MNI is generally considered to be one individual unless the amount of cremated bone is noted to be large, or to probably contain multiple individuals. For large cremations, the MNI reflects the excavator's estimate of the number of individuals. If the excavator only noted that there appeared to be more than one individual, then two individuals are reported.

Variable States:

Specific numbers, S, M, HS, U

IndAssoc (Individuals Associated)

Description:

Abbreviated provenience designation(s) for other individual(s) in the same grave or burial context as the given skeleton.

Variable States:

Various provenience designations

ArtPresAbs (Artifacts Present/Absent)

Description:

Denotes whether the site report or field notes state that artifacts were definitely present or definitely absent, as opposed to simply no mention being made of artifacts.

Variable States:

P	=	present
AA	=	apparently absent (no artifacts mentioned)
DA	=	definitely absent (explicitly stated in site report, etc.)

AgeCode

Description:

Our summation of the age range for the skeleton, based on analyses done by one or more physical anthropologists, or reported by the excavators in site reports or field notes. When we are confident in the age determinations because of agreement among physical anthropologists or because the techniques used appear to be fairly accurate (see Chapter 9), the skeletons are assigned to the following categories: Child (0–12), Adolescent (13–20), Young Adult (21–35), Middle Adult (36–49), and Old Adult (50+). These are drawn from the numeric age ranges or categorical ages reported under the Age1 and Age2 variables. When we are less confident, because of disagreement among researchers or a lack of knowledge of the techniques used, a less precise variable state, such as "AD" for "adult" is used. All inhumations, except those that are commingled, are assumed to be adults unless otherwise stated by the excavator or later researchers, since non-adults are generally easy to identify in skeletons (see Chapter 9), and excavators appear to have normally mentioned child skeletons when they encountered them. This coding of adult age was used for "charred" skeletons and "partial cremations" as well as unburned inhumations because charring and partial cremation imply that much of the skeleton was not consumed by fire. Cremated individuals were not assumed to be adults. Individuals over the age of 25 with specific age ranges listed under either the AGE2 or AGE3 variables were simply placed in the "adult" category for the AGECODE variable, because of uncertainty about the accuracy of these age estimates.

Variable States:
AA, AD, Q, plus
A = 0–12 years
B = 13–20 years
C = 21–35 years
D = 36–49 years
E = 50+ years

SexCode

Description:
Our summation of the sex of the skeleton, based on analyses done by one or more physical anthropologists, or reported by the excavators in site reports or field notes. When we are confident in the sex determinations because of agreement among physical anthropologists or because the techniques used appear to be fairly accurate (see Chapter 9), the skeletons were assigned to either the male or female category. When we are less confident, because of disagreement among researchers or a lack of knowledge of the techniques used, a less precise variable state (e.g. M? or F??) was used, or the variable was left blank. Individuals listed as female under the SEX2 variable are coded under SEXCODE as "F?" and those listed as male under the SEX2 variable are coded as "M?", to indicate a degree of uncertainty about the sex determination. Individuals listed as "F?" or "M?" under the SEX2 variable are coded respectively as "F??" or "M??" under SEXCODE, because uncertainty about the assessment is felt to be too high to warrant inclusion in some analyses. Assessments under the SEX3 variable are not included under SEXCODE, as the uncertainty about these assessments is probably too great to warrant inclusion in most analyses.

Variable States:
D, F, F?, F??, M, M?, M??, Q

Age1

Description:
Ages determined based on solid criteria, or determined by anthropologists whose results correlate well with those determined by solid criteria (see Chapter 9). Subadult designations are accepted by all investigators except in cases of extreme disagreement because they can be easily aged by developmental indicators. Because many of the best aging techniques are relatively new, many of the older determinations (based mostly on the cranium or dentition, for example) are excluded from this category; they often correlate poorly with determinations made from the pelvis. Those determinations known to have been made from the pelvis (e.g. many of the determinations by Johnston, Cadiente, and Giesen), and any assessments made by physical anthropologists after 1990 when current standards were published, are recorded here. When multiple age ranges are reported, the age range with the greatest agreement among researchers is reported. Cremations are never recorded under Age1 except in the case of subadults.

Variable States:
Various age ranges, numeric or categorical

Age2

Description:
Ages that do not meet the criteria for entry into the Age1 variable but which still appear to have merit. These ages are generally not determined recently, and are sometimes not determined using the pelvis. In other cases, the technique used is simply unknown. These ages are best used as minimum ages, recognizing that the true ages could be older but are probably not much younger (see Chapters 9, 10).

Variable States:
Various age ranges, numeric or categorical

Age3

Description:
Reserved for age information that has been recorded but which is of questionable accuracy. Examples include ages from fully cremated individuals, ages determined by an investigator whose assessments correlate poorly with others, or ages determined by dental wear alone and not as part of a formal

dental wear seriation study. These data are included only for the sake of completeness.

Variable States:
Various age ranges, numeric or categorical

PhysAnthAge (Physical Anthropologist, Age)

Description:
Name of the physical anthropologist or excavator whose age determination is considered the most accurate. Names of excavators are used when the information is reported in site reports or field notes and no person is credited with making the determination.

Variable States:
Various researchers' last names

Sex1

Description:
Sexes determined based on solid criteria, or determined by anthropologists whose results correlate well with those determined by anthropologists using solid criteria (see Chapter 9). These include determinations made on inhumations by Johnston, Konigsberg, Pickering, Reichs, Sciulli, Shetrone, and Snow, because of the generally high levels of agreement among these researchers. They also include sexes from the pelvis by Cadiente and Giesen, and sexes determined by Santa Luca using unknown techniques but which correlate well with those of Cadiente and Giesen. In addition, Cadiente's femoral head diameter sexes made using criteria generated from the Turner sample itself are included as they also correlate very well with the pelvic determinations (see Chapter 9).

Variable States:
F, F?, M, M?

Sex2

Description:
Sexes that do not meet the criteria for entry into the SEX1 variable but which still appear to have merit. For example, determinations made by Cadiente and Giesen on the skull, Hooton's laboratory determinations based on unknown criteria, Konigsberg's sexes from cremated material but based minimally on presence or absence of the preauricular sulcus, and the occasional assessments by excavators that could not be correlated with any other researcher's determinations.

Variable States:
F, F?, M, M?

Sex3

Description:
Reserved for sex information that has been recorded by various individuals but which is of questionable accuracy. Examples include sexes from cremated individuals where the techniques used are unknown, sexes determined by an investigator who shows poor correlation with others, or sexes for skeletons on which there is serious disagreement among several researchers. These data are included only for the sake of completeness.

Variable States:
F, F?, M, M?

PhysAnthSex (Physical Anthropologist, Sex)

Description:
Name of the physical anthropologist or excavator whose sex determination is considered most accurate. Names of excavators are used when the information is reported in site reports or field notes and no person is credited with making the determination.

Variable States:
Various researchers' last names

PAagree (Physical Anthropologists Who Agree)

Description:
Number of physical anthropologists or site excavators agreeing with the sex determination made by the physical anthropologist listed under PhysAnthSex.

Variable States:
Specific numbers

PAdisagree (Physical Anthropologists Who Disagree)

Description:

Number of physical anthropologists or site excavators disagreeing with the sex determination made by the physical anthropologist listed under PhysAnthSex.

Variable States:

Specific numbers

FloorPrep (Floor Preparation)

Description:

Description of the materials used to construct/cover the floor of the grave, or the form of the floor of the grave (e.g. a hole dug in the mound body or mound floor). This description excludes burial platforms, which are indicated under a separate variable.

Variable States:

CH, CL, GR, MI, SD, ST, plus

CB	=	crematory basin
GC	=	gravel + charcoal
HL	=	hole or depression
NP	=	no preparation
TS	=	in tree stump
SS	=	some stone
A	=	HL + MI
B	=	SD + ST
C	=	GR + ST
D	=	HL + ST
E	=	HL + CH
F	=	GR + CL

WallPrep (Wall Preparation)

Description:

Description of the materials used to construct the walls of the grave, or the form of the walls of the grave (e.g. three logs high).

Variable States:

CL, ST, plus

2L	=	two logs high
3L	=	three logs high
FL	=	flint enclosure
IW	=	burial cavity in stone wall within a mound
LG	=	logs, at least 1 high
LS	=	LG + SS
MLV	=	multi-burial log vault containing five or more burials
NL	=	no logs (Hopewell Site only)
NP	=	no preparation
SEC	=	stone enclosure for multiple burials
SR	=	stone ring
SS	=	some stone
A	=	3L + ST
B	=	LG + ST
C	=	2L + ST
D	=	2L + SS

CoverPrep (Cover Preparation)

Description:

Description of the materials used to construct the cover over the grave, or the form of the cover of the grave. The term "excavated cave" refers to the appearance of a grave in field photographs that show slumped soil above a collapsed tomb. The particular burials blanketed together under a given primary mound within Hopewell Mound 25 were determined from Shetrone (1926a) and Greber and Ruhl (1989:43, 44, 51–52).

Variable States:

CH, CL, FB, GR, MI, SD, ST, plus

EC	=	excavated cave (only proveniences for which photos are available)
GC	=	GR + CL
NP	=	no preparation
PM	=	individual primary mound
PM1	=	primary mound #1 in Hopewell Mound 25
PM2	=	primary mound #2 in Hopewell Mound 25
PM3	=	primary mound #3 in Hopewell Mound 25
PM4	=	primary mound #4 in Hopewell Mound 25
PM5	=	primary mound #5 in Hopewell Mound 25
SS	=	some stone
A	=	CL + PM2
B	=	ST + FB + PM
C	=	EC + PM5
D	=	EC + PM6
E	=	EC + PM4
F	=	ST + PM
G	=	MI + PM
H	=	ST + GR
I	=	ST + SD
J	=	GR + SD
K	=	PM + GR
L	=	PM + EC
M	=	CL + PM
N	=	FB + PM
O	=	CL + PM + LG
P	=	MI + ST

BodyWrap (Body Wrapping)

Description:

Materials above, below, or surrounding the body that probably were designed as a layer between the body and the floor, walls, or cover of the grave. These include bark above or below the body, skin mats, and so on.

Variable States:

BB	=	bark below body
BC	=	bark cover on body
BK	=	bark, above and/or below
FB	=	fabric above
SB	=	skins below body
SK	=	skins, above and/or below
NP	=	no preparation
NW	=	no wrap visible (only proveniences for which photos available)
A	=	BB + SB + FB

Platform

Description:

Denotes whether a burial platform is mentioned or suggested in the site report, field notes, or field photographs.

Variable States:

P	=	present

Water (Water Barrier)

Description:

An interpretive category that denotes whether any set of artifacts or natural materials placed in a grave may have been so interred as to act as a water barrier, much like the water barriers known to exist around some Adena mounds (Carr 1999; Hall 1976b). Materials that might signify a water barrier are those that come from water or have a color or shine that might represent water, such as mica, shells, pearls, limestone, light colored rocks and sand. Clay might also be associated with water but was excluded from this variable. Sandstone slabs were excluded because of their generally dark color. This variable is not mutually exclusive of Mica Sheet, Pearl Raw, and Conch (see below, MicaSheet, PearlRaw, Conch). (e.g., Figures 5.3A–E)

Variable States:

MI, PE, SH, SD, plus

GA	=	galena
LT	=	light-colored stone
MS	=	mica sheet
OC	=	ocean shell container
P	=	possible water barrier, non-stone
PLT	=	possible light-colored stone water barrier
A	=	LT + SH
B	=	OC + MS
C	=	MI + GA
D	=	MI + PLT
E	=	LT + SD

WatPosit (Water Position)

Description:

Location of the set of water barrier artifacts relative to the remains, such as surrounding the remains, beneath the remains, and so on.

Variable States:

A	=	surrounding human remains
B	=	below human remains
C	=	above human remains
D	=	surrounding human remains and below
E	=	surrounding human remains and above
F	=	surrounding, above, and below human remains
G	=	beside body
H	=	near head
S	=	platform edge

WatShape (Water Shape)

Description:

General shape of the set of water barrier artifacts if a line were to be drawn between adjacent artifacts in a connect-the-dots fashion.

Variable States:

U, plus

L	=	line of objects beside body
O	=	outlining body
R	=	round or oval
S	=	square/rectangular

GraveAreaQL (Grave Area Qualitative)

Description:

Subjective size of the grave relative to others at the same site as stated in the site

report or field notes. These entries are most often based on rough visual assessment by the different excavators, with likely differences among them in what constitutes a "large" versus a "small" grave.

Variable States:

LG	=	large
MD	=	normal/average
SM	=	small

GraveAreaQT (Grave Area Quantitative)

Description:

Calculated floor area of the grave, regardless of the number of individuals in the grave, in square feet. The grave areas were calculated from length and width measurements for rectangular graves, and from diameters when graves were more circular. For the Ater site, grave sizes were recorded from Baby's (1948) field notes. The grave areas for Seip were recorded primarily from Shetrone's (1925, 1926) field notes. However, Greber (1976:Table 2) reported additional grave areas for the Seip site. These additional values are recorded in the database and preceded by a "#" sign. There were a few discrepancies between the grave area data reported by Greber (1976:Tables 1–3) and the site field notes for the Ater and Seip sites. In such cases, grave areas from the field notes were used. The grave areas for the Putman proveniences at the Turner site were recorded from Greber (1976:Table 3). All other grave areas came from the relevant field notes or site reports associated with each site.

GraveLength

Description:

Long dimension of rectangular grave, or diameter (di) of circular grave, in feet. Diameters are indicated by a number followed by "di". Where available, these data were used in calculating GraveAreaQT. Graves with length and width data were assumed to be rectangular, while those with diameters were assumed to be circular.

GraveWidth

Description:

Width of rectangular grave in feet. Where available, these data were used in calculating GraveAreaQT. Graves with length and width data were assumed to be rectangular.

GravOrien (Grave Orientation)

Description:

Compass direction in which the head is pointed, based on descriptions in field notes and site reports as well as information taken from site maps. If the burial is a cremation, the state represents the long axis of the grave in which the cremation occurs, if known (e.g., east-west). When a disagreement exists between grave orientations listed in the site report or field notes and the orientations shown on maps, the report or notes were given precedence unless there was good reason to believe the maps were more accurate. Grave orientations for burials excavated by Shetrone from Mound 25 at the Hopewell Site are based on his published field map (Shetrone 1926a). The arrow on Moorehead's field map for Mound 25 is roughly ninety degrees clockwise from Shetrone's (1926a) map arrow, such that a northern orientation on Moorehead's map is equivalent to a western orientation on Shetrone's map. The main mound axis of Shetrone's (1926a) map corresponds with Greber and Ruhl's (1989) map, and is therefore assumed to be the correct one. Also, note that grave orientations depicted in Greber and Ruhl's (1989) map do not always correspond with Shetrone's and Moorehead's field maps.

In the data base, head orientations for the burials that Moorehead excavated in Mound 25 at the Hopewell site are limited to burials for which head orientation is mentioned in the field notes (Moorehead 1891). Head orientations shown on his published map of the mound floor (Moorehead 1922) and his unpublished field maps (Moorehead 1891) are not included because there is, in general, too much inconsistency between

them and the orientations described in the field notes. This is the case for the unpublished maps that Moorehead drew of the individual cuts he made through the mound in addition to his unpublished and published overview map. For example, Skeletons 260–261 in Moorehead's Cut No. 3, and Skeleton 248 in Cut No. 2, are depicted on Moorehead's Mound 25 map as having had their heads facing the same direction (northwest). Because of the problem with the north arrow on Moorehead's map, this direction would be southwest on Shetrone's map. However, according to the field notes, Skeletons 260–261 and Skeleton 248 had their heads oriented in different directions: Skeletons 260–261 to the west, compared to Skeleton 248 to the southeast. That would be a difference of approximately 120 degrees between the two burials. Because of a number of such inconsistencies, it would be counterproductive to attempt to integrate into the data base the head orientations that Moorehead drafted on his maps with the head orientations described in the field notes. It should be noted, however, that although the field notes are given precedence, it is possible that the map is actually the more accurate source.

Variable States:

N	=	north
NS	=	north-south
NE	=	northeast
NESW	=	northeast-southwest
NW	=	northwest
NWSE	=	northwest-southeast
S	=	south
SE	=	southeast
SW	=	southwest
E	=	east
EW	=	east-west
W	=	west

QuartzCryst (Quartz Crystals)

Description:

Number of quartz and other translucent stone crystals that have not been worked (e.g., Figure 4.1F).

Variable States:

Specific numbers, S, M

MicaSheet (Mica Sheet)

Description:

Cut or uncut sheets or multi-layered books of mica, including all objects in the site report or field notes described as "mica mirrors". In contrast, smaller pieces of mica that appear to have not been cut or formed into an identifiable object, as well as small fragments of mica that are probably too small to have served as raw material for a mica cutout, are coded below under "Mica Scrap." This variable is not mutually exclusive of Water Barrier (see above, Water) (e.g., Figures 1.9, 4.1G, 4.16).

Variable States:

MB	=	mica book(s) (multi-layer plates of mica)
MC	=	cut mica sheet(s)
MS	=	mica sheet(s)
A	=	MC + MS

QuartzDisc (Quartz Discoid)

Description:

Number of items described in the site report or field notes as being "discoidal-shaped" objects of quartz.

Variable States:

Specific numbers

QuartzCone (Quartz Cone)

Description:

Number of solid, cone-shaped objects made of quartz (e.g., Figure 4.1H).

Variable States:

Specific numbers

ConeHemi (Cone/Hemisphere)

Description:

Number of objects described in the site report or field notes as being shaped like a "cone" or "hemisphere", regardless of size. Cones are actually subconoidal rather than pointed at the top. Cones may be solid or hollow, whereas hemispheres are solid. Excludes quartz cones (see above, QuartzCone) (e.g., Figures 4.1F, 4.1G).

Variable States:
Specific numbers, S, U

QuartzBoat (Quartz Boatstone)

Description:
Number of items in the site report or field notes described as "boat-shaped" or "boatstones," and made of quartz.

Variable States:
Specific numbers

Boat (Boatstone)

Description:
Items described as "boat-shaped", "boatstones", or "hollow effigies" in the site reports and/or field notes, or which have been photographed and resemble other artifacts so described. Excludes quartz boatstones (see above, QuartzBoat). (e.g., Figure 4.1J).

Variable States:

PL	=	plain in form
EB	=	effigy beaver
ED	=	effigy duck
EH	=	effigy hawk
A	=	effigy crow + effigy eagle
B	=	effigy owl + effigy vulture
C	=	horned serpent + U
D	=	effigy salamander? + PL + effigy owl
E	=	PL + EB + effigy beetle

QuartzCup

Description:
Number of cups made of quartz.

Variable States:
Specific numbers

QuarColorPeb (Quartz or Colored Pebble)

Description:
Pebbles of quartz or other colored stone.

Variable States:

C	=	colored pebbles
Q	=	quartz pebbles

Marble

Description:
Small round spheres about the size of a traditional marble, engraved with designs (e.g., Figure 4.1K, L).

Variable States:
Specific numbers

CopperBall

Description:
Number of large, hollow copper balls found in the provenience.

Variable States:
Specific numbers, U

Plummet

Description:
Material of which any "plummets" or "plumb-bobs" found in the provenience are made (e.g., Figure 4.1P).

Variable States:
CP, SH, plus

CH	=	plummet of chlorite
DI	=	plummet of diorite
GR	=	plummet of granite
HE	=	plummet of hematite
JA	=	plummet of jasper
A	=	CP + CH + DI + SH
B	=	JA + SH
C	=	HE + SH

FossilConc (Fossil/Concretion)

Description:
Locally available fossils, concretions, and other stones that have an unusual shape sometimes suggesting the shape of an animal, and that are described in the site report or field notes as a fossil or concretion (e.g., Figure 4.1M, N).

Variable States:

CN	=	concretion(s)
FS	=	fossil(s)
FC	=	FS + CN

TubeFuncUnk (Tube, Function Unknown)

Description:
Wooden and/or copper tubes of unknown function because they lack holes, reeds, or

stops that would suggest a musical function (e.g., Figure 4.1U).

Variable States:
CP, ST, WD, plus
WC = wood with copper cover
WS = wood with silver cover

Barracud (Barracuda Jaw)

Description:
Number of barracuda jaws (e.g., Figure 4.1X).

Variable States:
Specific numbers

SharkTeeth (Shark Teeth)

Description:
Number of shark teeth (real or fossil) that could, on ethnographic grounds, symbolize a shark's power (e.g., Figure 4.1Z).

Variable States:
Specific numbers, S, U

AlligTeeth (Alligator Teeth)

Description:
Alligator teeth (real or effigy) that could, on ethnographic grounds, symbolize an alligator's power.

Variable States:
TD, TE, ETC

Rattle (Rattler/Tinkler)

Description:
An interpretive category. Items described in the site report or field notes as probably being used as a rattle or as an item for making noise (e.g., Figure 4.1EE).

Variable States:
AT = tinkler, antler tip
CT = tinkler, cone-shaped
SC = tinkler, silver & copper
TU = turtle effigy belt (e.g., Figure 4.1EE)
A = SC + CT + AT (e.g., Figure 2.10)

Fan (Fan Effigy)

Description:
An Interpretive category. Effigies probably representing a fan made of bird feathers (e.g., Figure 4.1MM).

Variable States:
CP, ST

CPNose (Copper Nostril Insert)

Description:
Presence of copper, cone-like objects found lodged in the nasal aperture of the skeleton after death (e.g., Figure 4.1I).

Variable States:
P = present

Mushroom

Description:
An interpretive category. Mushroom-shaped objects of stone, copper, etc. This variable is not mutually exclusive of Wand/Baton (see below, WandBaton).

Variable States:
C = copper effigy. Also coded as Wand/Baton (e.g., Figure 4.1HH)
MP = mushroom or penis effigy, stone

FlyHuman (Flying Human)

Description:
An interpretive category. Artifacts that may represent a human in flight. This variable is not mutually exclusive of HumanUk (see below, HumanUk). The reconstructed flying human-insect composite from the Hopewell Earthwork, Mound 25, Burial 35 may instead be reconstructed as a human in an elaborate feather headdress (see caption for Figure 4.9I).

Variable States:
CP

Owl (Owl Effigy)

Description:
Artifacts in forms interpreted to represent owls or owl eyes. Hall (1977:Figure 1, Figure 2 caption) convincingly interprets the latter as

atl-atl effigies, as well. This variable is not mutually exclusive of Weapon, Big Pipes, Small Pipes, or Copper Cutouts (see below, Weapon, BigPipe, SmallPipe, CPCutout). Also, this variable excludes quartz cups (see above, QuartzCup).

Variable States:

EEC	=	effigy owl eyes of copper
EEM	=	effigy owl eyes of mica (same as Weapon [MC]) + boatstone
EFF	=	owl effigy, non-pipe (e.g., Figure 4.1Q)
PIP	=	owl pipe (same as BigPipe [A] and SmalPipe [E]) (e.g., Figure 4.1R)

SuperNat (Supernatural Effigy)

Description:

Type of composite creature depicted in a figurine or carving (e.g., Figures 2.9 J–M).

Variable States:

A	=	fish with rattle tail
H	=	horned serpent (e.g., Figures 2.9H, I)

GoatHorn

Description:

Copper effigy of a goat horn that could, on ethnographic grounds, symbolize the animal's power.

Variable States:

EHC	=	effigy horn, copper

Awl

Description:

Thick, somewhat pointed bone or antler implements, several inches in length and lacking an "eye", probably used to punch holes in fabric and hides. Some appear to have been used as pegs for pinning fabric to the earth (e.g., Figures 4.1V, W).

Variable States:

Specific numbers, S, M, U

QuartzBiface

Description:

Type and number of bifaces made of quartz as specifically mentioned in various sources (quartz, limpid quartz, etc.) (e.g., Figure 4.1A, B). See Table 8.2 for definitions of the codes for objects by their size, shape, and/or production method.

Variable States:

PK	=	points/knives
SB	=	symmetrical biface
UB	=	unknown biface
A	=	SB + PK + UB

GemBiface

Description:

Type and number of bifaces made of a "gem" material, including: manganese garnet, amethyst, chalcedony, agate or specifically mentioned as translucent by various sources. See Table 8.2 for definitions of the codes for objects by their size, shape, and/or production method.

Variable States:

PK	=	points/knives
RB	=	Ross-barbed
SB	=	symmetrical biface
UB	=	unknown biface

OtherTransBiface (Other Translucent Biface)

Description:

Type and number of bifaces made from a translucent material as mentioned in various sources, but not including any of the types listed for "gem". See Table 8.2 for definitions of the codes for objects by their size, shape, and/or production method.

Variable States:

PK	=	points/knives
SB	=	symmetrical biface

ObsidBiface (Obsidian Biface)

Description:

Type and number of bifaces made from obsidian as specifically mentioned in various sources (e.g., Figure 4.1D, E). See Table 8.2 for definitions of the codes for objects by their size, shape, and/or production method.

Variable States:

OB	=	odd biface
PK	=	points/knives
RB	=	Ross-barbed
SB	=	symmetrical biface

UB = unknown biface
A = RB + SB + OB
B = SB + PK
C = SB + RB
D = PK + OB
E = OB + UB

FancyPt (Fancy Point)

Description:
Number of mica, copper, or micaceous schist artifacts fashioned into the shape of a projectile point (e.g., Figure 4.1C).

Variable States:
CP = copper
MI = mica
MS = mica schist

Weapon

Description:
An interpretive category. Effigies fashioned into the shapes of certain weapons such as atl-atls. This variable is not mutually exclusive of Owl (e.g., Figure 4.8H; see also Figure 4.8G).

Variable States:
MC = atl-atl shaped mica cutout Same as Owl [A].
TC = atl-atl shaped tortoise shell comb

FancyPrismBlade (Fancy Prismatic Blade)

Description:
Type and number of prismatic blades made from a "gem" material, obsidian, or another translucent material. See Table 8.2 for definitions of the codes for objects by their size, shape, and/or production method.

Variable States:
GM = gem
OB = obsidian
OT = other translucent

QuartzNum (Quartz Number)

Description:
Total number of different categories of artifacts made of quartz or other similar translucent stone. These include QuartzCryst, QuartzDisc, QuartzCone, QuartzBoat, QuartzCup, QuarColorPeb, QuartzBiface, GemBiface, OtherTransBiface, and FancyPrismBlade (codes GM and OT only).

Variable States:
Specific numbers

BigPipe

Description:
Type of any large, effigy pipes commonly called "Copena" pipes in the published literature. This variable is not mutually exclusive of Owl (see above, Owl) (e.g., Figure 2.9L–M, 4.1DD, 4.14).

Variable States:
A = owl (same as Owl [P]) + misc. bird + dog or wolf + bear
B = composite creature (snake, bird, and perhaps caiman/crocodile)

SmallPipe

Description:
Forms of all small platform or elbow-shaped smoking pipes found in the provenience. This variable is not mutually exclusive of Owl (see above, Owl) (e.g., Figures 2.9E, 4.2A–D, 4.5A, 4.19A–D).

Variable States:
U, plus
NP = non-platform pipe
PL = plain platform pipe
SB = short beaked bird
VT = various animal and human types
VU = various unspecified types
A = PL + duck + serpent
B = PL + bird on fish's back + roseate spoonbill
C = miscellaneous bird + U
D = PL + otter + rabbit + frog + miscellaneous bird + pheasant
E = bear + mt. lion + wildcat + raccoon + porcupine + opossum + beaver + otter + dog + rabbit + mink + deer + fox + wolf + squirrel + owl (same as Owl [P]) + kingfisher + heron + crane + crow + carolina parakeet + EG + hawk + quail + miscellaneous bird + PL
F = PL + U
G = PL + frog + crow + miscellaneous bird

Panpipe

Description:

Conjoined copper tubes or a copper band of a form that usually hold tubes judged to be musical instruments by site excavators and/or Turff (1997) in her definitive inventory of Hopewellian panpipes in Eastern North America (e.g., Figure 4.1JJ).

Variable States:

U, plus

1A	=	tubular, long, copper, 3 tubes
1B	=	tubular, probably long, copper, 3 tubes
1C	=	tubular, long, copper-iron, 4 tubes
1D	=	tubular, long, copper-silver, 3 tubes
1E	=	tubular, long, iron, 3 tubes
2	=	copper band
3	=	silver band

Flute

Description:

Single copper, wooden, or bone tubes having holes, reeds, and/or stops, and judged to be flutes or whistles (e.g., Figures 4.1KK, LL).

Variable States:

FL	=	flute
WH	=	whistle

PaintEquip (Painting Equipment)

Description:

Items that bear or sometimes bear pigments such as red ochre, and that may have been used for painting (see also StoneTablet).

Variable States:

CO	=	cup with ochre. Excludes quartz cups (see above, QuartzCup).
CU	=	cup
A	=	pestle + paint grinder

OchrePaint (Ochre or Paint)

Description:

Color of any ochre or paint identified in provenience.

Variable States:

U, plus

R	=	red
Y	=	yellow
A	=	R + Y

StoneTablet

Description:

Flat tablets of stone not clearly associated with pigments.

Variable States:

Specific numbers, S, U

FancyPot (Fancy Pottery Vessel)

Description:

Pottery with considerable decoration on it, excluding pots with simple cord marked decoration. Examples include Hopewell Series vessels incised with birds, Chillicothe Incised, Chillicothe Rocker Stamped, and simple and complex-stamped Southeastern Series vessels (Prufer et al. 1965).

Variable States:

FS	=	fancy sherd(s)
FV	=	fancy vessel(s)

TortShellOrn (Tortoise Shell Ornament)

Description:

Number of ornaments made of tortoise shell found in the provenience. Excludes tortoise shell ornaments in the form of atl-atls (see above, Weapon).

Variable States:

U, plus

BC	=	bird engraving with four-directional and flower petal symbolism, plus a swan cutout.
CB	=	comb
PD	=	pendant-like
SC	=	scroll-shaped
SP	=	spatula-shaped
TB	=	tablet

TrophSkJw (Trophy Skull/Jaw)

Description:

The type of skeletal element interred as a trophy. A "trophy" is defined in the published literature and field notes as a human skull, mandible, and/or maxilla that is found with another skeleton and treated as an artifact. Evidence of such treatment is decoration or manipulation of the element such as drilling, painting, or carving of the item.

Variable States:

JW	=	jaws (mandible and/or maxilla)
MX	=	maxilla
SF	=	skull fragments
SK	=	skull
A	=	JW + MX
B	=	SK + MX

TrophSKNum (Trophy Skull/Jaw Number)

Description:

Number of "trophy" elements interred in the provenience. It is usually unclear in the literature whether the term "jaws" means a single maxilla, a single mandible, or both.

Variable States:

Specific numbers, U

TrophFg (Trophy Finger)

Description:

Number of perforated human digits, or effigy fingers made of stone (e.g., Figure 4.9D).

Variable States:

Specific numbers

TrophEar (Trophy Ear)

Description:

Number of effigy human ears of copper.

Variable States:

Specific numbers

TrophHn (Trophy Hand)

Description:

Number of effigy human hands made of mica or copper.

Variable States:

Specific numbers

HumanM (Human Figurine, Male)

Description:

Number of artistic renditions of male human figures that represent a head and/or body. This variable is mutually exclusive of WandBaton.

Variable States:

Specific numbers

HumanF (Human Figurine, Female)

Description:

Number of artistic renditions of female human figures that represent a head and/or body (e.g., Figure 5.5C). This variable is mutually exclusive of WandBaton.

Variable States:

Specific numbers

HumanUk (Human Figurine, Unknown Sex)

Description:

Number of artistic renditions of human figures of indeterminate sex that represent a head and/or body. This variable is not mutually exclusive of Flying Human (see above, FlyHuman) for one case. The reconstructed human in an elaborate feather headdress from the Hopewell Earthwork, Mound 25, Burial 35 may instead be reconstructed as a flying human-insect composite (see caption for Figure 4.9I). This variable is also not mutually exclusive of WandBaton for one case. (e.g., Figures 1.1, 4.8A, I, 4.9A–C, F, I, 4.21, 5.5A, C).

Variable States:

Specific numbers

AnimImage (Animal Image)

Description:

Type of animal depicted in a figurine, carving, or cutout, other than animals on effigy smoking pipes and headplates (see above, BigPipe, SmallPipe). This variable is not mutually exclusive of CPCutout (e.g., Figures 2.9A, B, D, F, G, 4.1E, O, S).

Variable States:

BR	=	bear
DE	=	double eagle head
EG	=	eagle/falcon
FE	=	frog or salamander-like animal
FI	=	fish
IN	=	insect
MB	=	miscellaneous bird
RA	=	raven-like/crow-like bird
SN	=	snake
TU	=	turtle or tortoise
A	=	MB + BR

B = SB + MB
C = FI + raven + snake head + barracuda (?) teeth in jaw
D = RA + BR

CarveBone (Carved Bone)

Description:
Often intricately carved items of bone. This variable does not include a number of carved bone wands and batons, which are recorded in the Wand/Baton variable. Inversely, not all wands and batons reported in the Wand/Baton variable were made of bone and carved. For a complete list of carved bones in the data base, consult the provenience sheets for each provenience listed under the CarveBone *and* Wand/Baton variables.

Variable States:
U, plus
HU = human
PH = human parietals
A = HU + U

Headplate

Description:
Type of metallic headplate/headdress found in provenience; all are copper except for the one class of iron headplates.

Variable States:
U, plus
AS = plate with antler stubs (e.g., Figure 4.8E)
CP = plate with 4-clawed cat paw cut into it (e.g., Figure 4.8B)
DG = plate in form of a dog (e.g., Figure 4.8C)
FL = feather-like plate (e.g., Figure 4.8H)
HH = headless human plate (e.g., Figure 5.5B)
IR = iron plate
PL = plain, helmet like (e.g., Figure 4.9J)
PLR = plain, helmet-like, with 3 associated copper effigy antler racks (e.g., Figure 4.8D)
RA = plate with rack of antlers (e.g., Figure 4.8G)
SP = plate with shell and/or pearl attachments
WB = winged bird plate (e.g., Figures 4.8J)
A = AS + IR

CeltCopp (Celt, Copper)

Description:
Number of copper axe- or adze-shaped celts found in the provenience (e.g., Figures 1.2, 4.8K, 4.9K).

Variable States:
Specific numbers, S, U

CeltAreaKnown

Description:
Total combined area (cm^2) of all celts in the provenience whose length and width dimensions are known.

Variable States:
Specific numbers

CeltAreaAll

Description:
Total combined area (cm^2) of all celts in the provenience if data were available for all celts found in the provenience.

Variable States:
Specific numbers

CeltAreaLgst (Celt Area Largest)

Description:
Area of the largest celt (cm^2) among those found in the provenience.

Variable States:
Specific numbers

CeltAreaCode (Celt Area Code)

Description:
Size category for the largest celt in the provenience based on a histogram of areas for all available Ohio Hopewell celts.

Variable States:
A = 151–250 cm
B = 100–150 cm
C = 100 cm or below

TotCeltWeight (Total Celt Weight)

Description:
Total combined weight (kg) of celts whose length and width dimensions are known

or estimated. Weights for each celt, if unknown, were estimated from the length of the celt using the regression equation: weight = 0.06(length) − 0.32 (Bernardini and Carr 2005: Appendix 17.1). Additional celt data were recorded for Hopewell Mound 17 Deposit 2, Mound 25 Burial 260–261, Mound 25 Copper Deposit, Mound 25 Burial 274, and Mound 25 Altar 1. The number of celts recorded for the Crematory Basin under Hopewell Mound 26 differed between Bernardini and Carr (2005: Appendix 17.1) and Shetrone (1926a). Therefore, only the four celts recorded in both sources are included in the database.

Variable States:
Specific numbers

CeltWtKnown (Celt Weight Known)

Description:
Number of celts used to determine the TotalCeltWt value.

Variable States:
Specific numbers

HeavyCelt (Heaviest Celt)

Description:
Weight (kg) of the heaviest celt among those measured from the provenience.

Variable States:
Specific numbers

LightCelt (Lightest Celt)

Description:
Weight (kg) of the lightest celt among those measured from the provenience. If only one celt was measured from the provenience, HeaviestCelt will be the same as LightestCelt.

Variable States:
Specific numbers

LongCelt (Longest Celt)

Description:
Length (cm) of the longest celt among those measured from the provenience.

Variable States:
Specific numbers

ShortCelt (Shortest Celt)

Description:
Length (cm) of the shortest celt among those measured from the provenience. If only one celt was measured from the provenience, LongestCelt will be the same as ShortestCelt.

Variable States:
Specific numbers

CeltIron (Celt, Meteoric Iron)

Description:
Number of iron axe- or adze-shaped celts found in the provenience.

Variable States:
Specific numbers, S

CeltCoal (Celt, Cannel Coal)

Description:
Number of cannel coal axe- or adze-shaped celts found in the provenience.

Variable States:
Specific numbers

CeltStone (Celt, Stone)

Description:
Number of stone axe- or adze-shaped celts found in the provenience (e.g., Figure 4.9L). In rare instances where material is not indicated (e.g. Fort Ancient, East Terrace, Burial 01), the celt is assumed to be stone.

Variable States:
Specific numbers, S

Conch (Conch Shell Vessel)

Description:
Conch shell containers in the shape of a large cup or bowl. This variable is not mutually exclusive of Water Barrier (see above, Water). (e.g., Figures 4.1AA, 5.3A, 15.3E).

Variable States:
Specific numbers, S, U

ShellSpoon

Description:

Shell objects, often associated with an ocean shell container, and described in the site report or field notes as a "spoon".

Variable States:

Specific numbers

WandBaton (Wands, Batons)

Description:

Long, often intricately carved items of bone or antler that may have served as a wand, baton, or scepter, depending on the item's size. This variable is not mutually exclusive of Mushroom (see above, Mushroom). At the Hopewell site, in Mound 25, the human or bear femur incised with a bear claw could have occurred with either Skeleton 278 or 281. The human or bear femur incised with a human skull with deer antlers and a spoonbill duck nose could have occurred with either Skeleton 278 or Skeletons 260-261. The bird bone wand incised with an ocelot was excavated from Skeletons 260-261, and is probably human according to Moorehead (1922:159). The human head carved on antler and depicted in Moorehead (1922:167, figure 66) was excavated from Altar 1. The human head carved on antler and depicted in Moorehead (1922:168, figure 67) was unearthed from Altar 2. The human head carved on "ivory or shell" and shown in Moorehead (1922:169, figure 68) came from either Altar 1 or Altar 2.

Variable States:

BH	=	bird humerus
TD	=	a bone, small in length, triangular in cross-section, dark in color, engraved with cross-hatching, and sometimes mounted with a pearl on top (e.g., Figure 4.1T)
FM	=	carved femur or similar bone, human or bear
FU	=	carved femur or ulna, human
HM	=	horned mammal, copper (Shetrone and Greenman 1931:407 called this form a praying mantis, but this may be an inverted view of the item.)
MU	=	large effigy mushroom wand, copper (same as Mushroom [C])
AH	=	human effigy carved from antler (e.g., Figure 4.1BB)
A	=	TD + ANH
B	=	FM + BH

Wand BatonNum

Description:

Number of long, often intricately carved items of bone or antler that may have served as a wand, baton, or scepter, depending on the item's size.

Variable States:

1, 2, S, Plus

A	=	0 to 1 wand/batons
B	=	0 to 2 wand/batons
C	=	1 to 2 wand/batons
D	=	1 to 2 wand/batons (as in C but for a different reason; see note below)

Ranges A and B express the uncertainty of the locations of two human or bear femur batons, one carved with a bear claw and the other with a human skull with deer antlers and spoonbill duck nose. See Greber and Ruhl (1989:268, footnotes 35–37) for the nature of the uncertainties. Range C expresses the uncertainty of the locations of the three human effigies shown in Moorehead (1922: 167–169, Figures 66–68). Range D expresses the known bird bone carved with an ocelot found with Skeletons 260–261 from the Hopewell site (Moorehead 1922:165, Figure 64) and the uncertain location of the human or bear femur baton carved with a human skull having deer antlers and spoonbill duck nose.

BreastPlate

Description:

Number of rectangular, thin copper plaques, commonly called "breastplates" in site reports (e.g., Figures 1.2, 4.4, 4.17E–G). For one unusual case, a qualitative code was used.

Variable States:

Specific numbers, S, U, plus

FM	=	one breastplate made into a face mask with nose rest and eye holes and placed appropriately over the skull.

BPTotalArea (Breastplate Total Area)

Description:

Total combined area (cm^2) of all breastplates in the provenience whose length and width dimensions are known or estimated. Proveniences with estimated total breastplate areas include Hopewell Mound 23 Burial 213, Mound 25 copper deposit, Mound 25 Burial 260–261, Mound 25 Burial 270, and Seip Mound 1 Burial 59. Estimated dimensions were calculated based on one known length or width measure following a logarithmic trendline based on length and width proportions known for complete specimens. The area of each breastplate was calculated simply as its length times width, assuming rectangular shape.

Variable States:

Specific numbers

BPTotalNum (Breastplate Total Number)

Description:

The total number of breastplates used to determine the TotalAreaBP.

Variable States:

Specific numbers

BPLongest (Breastplate, Longest)

Description:

The length (in cm) of the longest breastplate among those found in the provenience.

Variable States:

Specific numbers

BPShortest (Breastplate, Shortest)

Description:

The length (in cm) of the shortest breastplate among those found in the provenience. If only one breastplate is in the provenience, LongestBP is the same as ShortestBP.

Variable States:

Specific numbers

BPThickThin (Breastplate Thick or Thin)

Description:

Subjective classification of each breastplate as thick or thin, as determined by Carr from his observation of nearly all extant breastplates.

Variable States:

A	=	thick
B	=	thin
C	=	A + B (if two breastplates)
D	=	mostly thick for three or more breastplates

Earspool

Description:

Material(s) from which any bicymbal earspools present in the provenience are made (e.g., Figures 4.17A–D, 4.18).

Variable States:

CP, U, plus

CI	=	copper overlaid with iron
CS	=	copper overlaid with silver
SD	=	copper with silver in the depression only
SP	=	stone pulley type
A	=	earspools composed of copper, silver, and iron
B	=	CP + PY + CS + CI
C	=	CP + CI
D	=	B + SP
E	=	CP + SP
F	=	PY + SP

CPCutout (Copper Cutout)

Description:

Type of thin form(s) of copper found in the provenience. Excludes effigy "power parts" of animals, natural human effigies, natural animal effigies, weapon effigies, reel-shaped gorgets, and crescents. This variable is not mutually exclusive of AnimImage (e.g., Figures 2.17B, 3.10, 4.1S, 4.9U), or Owl.

Variable States:

U, plus

AR	=	four armed shapes (Mills 1922:549)
DK	=	disk
FE	=	frog or salamander-like effigy
FH	=	flying human or natural human in headdress, depending on the reconstruction (Figure 4.9I)
G	=	G-clef form
GB	=	grid of bosses

HA = crescent shape extending into arms and hands
SH = shield-shaped
RA = raven-like or crow-like bird
RG = rings, annuli, or pinwheel-like design
ST = star-shaped
STR = strips
V = various forms
A = owl eye-like forms + swastika + three-lobed design + disk + intertwined raptors + flower form + rings + snake-like head + G-clef form + diamond shape + fish + bear paw + eagle + raven + saw-shaped design + spoon shaped + squares + circles and bars + cross and circles + cross + semicircles + various forms + flying human + unknown.
B = rings + flower forms + G-clef form + pear-shaped eyes + grid of holes
C = RG + RA

MicaCutout

Description:

Type of thin, cutout form(s) of mica found in the provenience. Excludes effigy "power parts" of animals, human effigies, animal effigies, weapon effigies, and crescents (e.g., Figure 2.17).

Variable States:

U, plus
CR = circle
G = G-clef form
L = links
P = pear-shaped eye
PP = projectile point
SH = shield-shaped
ST = strip
V = various forms
A = rings + circles + ovals + unknown
B = ST + V
C = beak-like form + circle
D = SH + U
E = PP + U

ShellCutout

Description:

Type of thin, cutout form(s) of shell found in the provenience. Excludes effigy "power parts" of animals and reel-shaped gorgets.

Variable States:

U, plus
DK = circular disk
A = circular disk + rectangular

Crescent

Description:

Material from which any large crescent-shaped ornaments in the provenience are made (e.g., Figure 4.9N).

Variable States:

CP, MI

Pendant Gorg (Pendant or Gorget)

Description: Shape of the pendants and/or gorgets found in the provenience as well as the material from which they are made. Both the term pendant and the term gorget are used interchangeably to describe similar artifacts. This category does not include crescents of copper and mica, tortoise shell pendants, any pendants made from animal power parts (e.g., a drilled tooth or jaw of a bear, cat, wolf, or fox), perforated shell disks, shell ear pendants, or plummets. (e.g., Figures 4.9O–T).

Variable States:

U, plus
BD = bar shape, of cannel coal
BG = bar shape, of chlorite
BP = bar shape, of pipestone
BS = bar shape, of stone
CB = claw shape, of bone
OH = round shape, of marine shell
OC = ovate shape, of copper
PA = pendant/gorget of slate
PB = pendant/gorget of bone
PC = pendant/gorget of copper
PL = pendant/gorget of chlorite
PM = pendant/gorget of marl
PR = pendant/gorget of resin
PS = pendant/gorget of stone
PV = pendant/gorget of silver
RC = reel shape, of copper
RS = reel shape, of stone
RH = reel shape, of shell
RU = reel shape, unknown material
SH = rectangular, of shell
TC = "teaspoon" or "spoon" shape of copper (described as such by Moorehead 1922:106; Shetrone 1926a:79; Shetrone and Greenman 1931:387)

A = PS + PA
B = BG + BP + PL
C = PL + PA
D = PC + PA
E = RH + BS
F = RC + RS + U
G = OH + SH

Button

Description:
Material from which the metal covers of all stone or clay "button-shaped" artifacts found in the provenience are made (e.g., Figure 4.10B).

Variable States:
CP, IR, SI, plus
A = SI + U

RaptorPP (Raptor Power Part)

Description:
Type of a raptorial bird's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. claws) (e.g., Figure 2.9C). Power part designations in this data base include those of only local animals that have potential for having been used by Ohio Hopewell peoples as animal-totemic clan markers (contra. Shark teeth, alligator teeth, barracuda jaws, and a goat horn).

Variable States:
CL, ECB, ECC, ECM, ECS

WolfDogPP (Wolf or Dog Power Part)

Description:
Type of a dog's, coyote's, or wolf's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws and teeth) (e.g., Figure 1.8A).

Variable States:
CL, JW, TD, TE

BigCatPP (Big Cat Power Part)

Description:
Type of a large cat's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws and teeth) (e.g., Figure 1.8A, 4.12H).

Variable States:
ETU, JW, TD, TE

FoxPP (Fox Power Part)

Description:
Type of a fox's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws and teeth).

Variable States:
JW, TD

ElkPP (Elk Power Part)

Description:
Type of an elk's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. teeth). (e.g., Figure 4.12G).

Variable States:
TD, TE, plus
AS = astragali (ankle bones)
A = TD + ETU

DeerPP (Deer Power Part)

Description:
Type of a deer's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g., astragali). (e.g., Figure 4.12G).

Variable States:
AS = astragali (ankle bones)
TE = teeth
EAN = effigy antler, copper

RaccoonPP (Raccoon Power Part)

Description:
Type of a raccoon's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. teeth and baculums) (e.g., Figure 4.12F).

Variable States:
TD, TE, plus
A = TD + penis bone

OpossumPP (Opossum Power Part)

Description:
Type of an opossum's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. teeth).

Variable States:
TD

BadgerPP (Badger Power Part)

Description:
Type of a badger's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws and teeth).

Variable States:
TD

MarmotPP (Marmot Power Part)

Description:
Type of a marmot's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws and teeth).

Variable States:
JW

GroundhogPP (Groundhog Power Part)

Description:
Type of a groundhog body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws and teeth).

Variable States:
MX

SmMamPP (Small Mammal Power Part)

Description:
Type of a small mammal body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws, teeth, claws).

Variable States:
TD, TE, plus

FT	=	foot bones
A	=	TE + FT

BeaverPP (Beaver Power Part)

Description:
Type of a beaver's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws and teeth).

Variable States:
JW, MX, TE

BearPP (Bear Power Part)

Description:
Type of a bear's body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws, teeth, claws) (e.g., Figures 4.1FF, 4.3C, 4.12A–E, 4.13, 4.20).

Variable States:
CL, ECB, ETB, ETC, ETM, JW, TD, TE, TP, plus

EPC	=	effigy paw, copper
ETA	=	effigy tooth, antler
A	=	JW + ETB
B	=	ETB + TP
C	=	TP + ETB + TD + ETS
D	=	CL + ETU
E	=	CL + JW
F	=	JW + CL + TE + TP
G	=	ETA + TE + TP
H	=	CL + TE + ETS
I	=	TP + TE
J	=	TD + TP
K	=	ETN + CL + TD
L	=	EPC + ETC
M	=	TD + CL
N	=	ETU + TD
O	=	TP + TD + TE
P	=	ETB + TD
Q	=	ETB + TE

BearCanNum (Bear Canine Number)

Description:
Number of real bear canines in the provenience. This variable was constructed to identify burials with specific numbers of real bear canines (e.g. 4, 6) which seems to be culturally meaningful.

Variable States:
Specific numbers, S, M, U

KnSpeciesPPNum (Number of Power Parts from Known Species)

Description:

Minimum number of known kinds of animals that are native to Ohio (Raptor, Big Cat, Wolf, Raccoon, Fox, Opossum, Bear, Beaver, Badger, Elk, and Deer) and whose power parts (either real or effigy) are found in the provenience. Excludes SpeciesUnkPP.

Variable States:

Specific numbers

SpeciesUnkPP (Species Unknown Power Part)

Description:

Type of an unknown species' body part (either real or effigy) that could, on ethnographic grounds, symbolize the animal's power (e.g. jaws and teeth).

Variable States:

ETC, JW, TD, TE, plus

MX	=	maxilla
A	=	JW + TE

Bead

Description:

Material from which are made all beads that are found in the provenience and that are not necklaces (BeadNeck), bracelets or anklets (Brace/Anklet), or strings of beads in general (BeadString).

Variable States:

CP, IR, PE, SH, BN, U, plus

CL	=	clay
IV	=	ivory
PS	=	PE + SH
A	=	CP + IR + PE + SH + WD
B	=	ST + SH + CP + PE
C	=	BN + CP
D	=	BN + PE
E	=	PE + SH + IR + BN
F	=	IR + BN + PE + CP + SI + SH
G	=	PE + CP
H	=	CL + SH
I	=	PS + GA
J	=	PS + BN
K	=	SH + BN
L	=	SH + U
M	=	PS + CP

BeadNum (Bead Number)

Description:

Number of individual beads (not known to be from a necklace or bracelet) found in the provenience.

Variable States:

Specific numbers, S, M, TW, F, H, HS, TH, U, plus

20K	=	around 20,000
100K	=	around 100,000

BeadNeck (Bead Necklace)

Description:

Material from which any necklace of beads found in the provenience is made. Coded only if identified as a necklace in the site report, field notes, or accession records, usually found in a string. Other beads found near the neck or on the chest may also represent necklaces, but were not coded as such.

Variable States:

BN, PE, SH, U, plus

A	=	PE + SH
B	=	CP + PE
C	=	PE + SH + CP

BraceAnklet (Bracelet/Anklet)

Description:

Material from which any bracelet or anklet found in the provenience is made, whether bead or otherwise. For bead formed bracelets and anklets, coded only if called such in the site report, field notes, or accession records, usually when found in a string. Other beads found near the wrists, ankles, or hands may also represent bracelets or anklets, but were not coded here.

Variable States:

CP, PE, SH, U, plus

CS	=	copper overlaid with silver
A	=	CP + CS
B	=	CP + PE

BeadString

Description:

Material from which any string of beads found in the provenience is made. Coded only if the site report, field notes, or accession records

record a string of beads but give no indication of whether they may have been a necklace, anklet, or bracelet (e.g., Figure 4.10A).

Variable States:
BN, PE, SH, U

HairSkew (Hair Skewer)

Description:
Skewer-like objects of copper apparently associated with the head as determined by their location in some burials and probably worn as a hair decoration.

Variable States:
Specific numbers

Container

Description:
Type of pottery vessels, pottery sherds, or stone vessels found in the provenience. Excludes quartz cups, other stone cups, and cups with ochre pigment (see above, QuartzCup and Paint [CU, CO]).

Variable States:

JR	=	jar
PS	=	pottery sherd(s)
PV	=	pottery vessel(s)
SB	=	stone bowls
SC	=	stone cups
SD	=	stone dish
SBX	=	stone box

NeedleBodkin (Needle or Bodkin)

Description:
Thin, pointed bone implements, often with an "eye".

Variable States:
Specific numbers, S, M, U

BoneAntPointKnife (Bone/Antler Point/ Knife)

Description:
Number of points or knives made of bone and/or antler as specifically mentioned in various sources.

Variable States:
Specific numbers, S

CopperRod

Description:
Number of copper rods (often with bone handles) resembling the modern tool used for sharpening knives, but not used for this purpose.

Variable States:
Specific numbers

HornBiface (Hornstone Biface)

Description:
Number of symmetrical bifaces made from hornstone.

Variable States:
Specific numbers

OtherFlintBiface

Description:
Type and number of bifaces made of flint mentioned in various sources as flint, chert, Mercer, Flint Ridge, Knife River, etc. or there is no specific type mentioned. Excludes bifaces made of quartz, other gemstones, other translucent stones, and obsidian. (See above, QuartzBiface, GemBiface, OtherTranslucentBiface, Obsidian Biface). See Table 8.2 for definitions of the codes for objects by their size, shape, and/or production method.

Variable States:

OB	=	odd biface
PK	=	points/knives
SB	=	symmetrical biface
UB	=	unknown biface
A	=	PK + SB
B	=	PK + SB + UB
C	=	UB + PK

OtherFlintPrisBlad (Other Flint Prismatic Blade)

Description:
Number of prismatic blades made from flint and exclusive of prismatic blades made of obsidian, gemstones, or other translucent stones. (See above, FancyPrismaticBlade). See Table 8.2 for definitions of the codes for objects by their size, shape, and/or production method.

Variable States:
Specific numbers, S, M, U

MiscIRTool (Miscellaneous Iron Tool)

Description:
Types of all iron artifacts that appear to be tools.

Variable States:

DR	=	drill
PF	=	perforator

MiscCPTool (Miscellaneous Copper Tool)

Description:
Types of all copper artifacts that appear to be tools.

Variable States:

AW	=	awl
BL	=	blade
CH	=	chisel
PF	=	perforator

MiscNMTool (Miscellaneous Non-Metal Tool)

Description:
Miscellaneous non-metal tools not coded elsewhere in the database.

Variable States:

ABS	=	abrader, sandstone
CHBT	=	chisel, beaver tooth
CHS	=	chisel, stone
CNB	=	curved needle, bone
CTA	=	chipping tool, antler
CTB	=	chipping tool, bone
DRF	=	drill, flint
HMS	=	hammerstone
HNA	=	handle, antler
HNS	=	handle, stone (atl-atl?)
HOS	=	hoe, slate
KNH	=	knife in handle
MES	=	mealing stone
PFF	=	perforator, flint
PST	=	pestle
SPB	=	spatulas, bone
SCF	=	scraper, flint
A	=	DRF + CTB + SCF + HMS
B	=	HMS + SPB
C	=	CHS + HNS
D	=	CTA + ABS
E	=	MES + PST
F	=	HNA + KNH

MiscCPObj (Miscellaneous Copper Object)

Description:
Type of miscellaneous copper object that does not fit in any other category.

Variable States:
U, plus

FH	=	fishhook-shaped object
FR	=	copper fragments/pieces from unknown object
OR	=	ornament
ORS	=	silver-covered copper ornament
PN	=	pin
RG	=	ring of unknown type/size

MiscShellObj (Miscellaneous Shell Object)

Description:
Worked shell items not in the form of beads, cutouts, or spoons, as well as various forms of unworked shells such as:

Variable States:
U, plus

EM	=	embroidery shells
FS	=	fluviate shells
MS	=	mussel shells
OR	=	ornament
PC	=	piece of shell
PY	=	small pyrula shells
RG	=	ring, shell
RS	=	river shells
SL	=	spool shaped shells
SN	=	snail shells
SP	=	spiral shells
SS	=	miscellaneous sea shells
A	=	RG + EM

MiscObsid (Miscellaneous Obsidian Item)

Description:
Type of miscellaneous obsidian item that does not fit in any other category. Includes artifacts and worked raw material.

Variable States:
U, plus

BTF	=	butterfly-shaped piece
CHK	=	chunks
CHP	=	chips
COR	=	cores
DEB	=	debitage
FLK	=	flakes
FRG	=	fragments
TLS	=	small worked tools
A	=	DEB + COR + FLK + CHP + FRG + TLS
B	=	FLK + CHK

MiscStone (Miscellaneous Stone Objects)

Description:

Type of miscellaneous stone object that does not fit in any other category. Includes artifacts, unworked raw material and production debris.

Variable States:

U, plus

BLS	=	balls, sandstone
BTC	=	beetle-shaped object, chlorite
CL	=	coral pieces
CLS	=	club-shaped sandstone object
CON	=	conical stone object (large)
CRT	=	black crystal, tourmaline
DIA	=	diamond shape
DIH	=	diamond-shaped hematite
DIS	=	discoidals
DSK	=	disk, flint
ELG	=	elongated granite object
FKC	=	flakes, chalcedony
FRG	=	fragments, granite
LID	=	container lid
OBSH	=	object, shale
ORSL	=	ornament, slate
PIP	=	unworked pipestone
SLP	=	slate pieces
STP	=	painted stones, boulders
A	=	ELG + CLS
B	=	STP + OBSH + PIP
C	=	CL + U
D	=	ORSL + CRT
E	=	STP + DIH + BLS
F	=	ORSL + DIA

MiscUtilFancyObj (Miscellaneous Utilitarian or Fancy Object)

Description:

Catch-all category for objects that are typically rare or unique and are not coded elsewhere.

Variable States:

Various text descriptions

BoneMisc (Miscellaneous Animal Bone)

Description:

Type of miscellaneous animal bone not clearly representative of a power part or recognizable artifact form.

Variable States:

U, plus

BR	=	bear
DG	=	dog
DR	=	deer
DS	=	doe skeleton
EKS	=	elk skeleton
FI	=	fish
MB	=	miscellaneous bird
MS	=	muskrat
MM	=	miscellaneous mammal
RH	=	raptor head attached to fabric or bag covering a copper headdress or celt
TY	=	turkey
A	=	DR, MM, FI, BR
B	=	DR, BR, MB
C	=	DG? + U
D	=	MB + MM

CannelRaw (Cannel Coal Raw)

Description:

Relative amount of cannel coal that has not been formed into an identifiable artifact. The category includes unworked or worked items referred to as "pieces".

Variable States:

LG

CoppRawScrap (Copper Raw & Scrap)

Description:

Relative amount of copper that has not been formed, or fully formed, into an identifiable artifact. The category includes items referred to as pieces, nuggets, masses, or fragments.

Variable States:

LT, LG

FlintRawScrap (Flint Raw & Scrap)

Description:

Type of miscellaneous flint (or occasionally chert) item that does not fit in any other category. Includes unworked raw material, cores, and production debris.

Variable States:

U, plus

BLK	=	blank
CHK	=	chunk
CHP	=	chip
COR	=	core
FLK	=	flake
PEC	=	piece
A	=	BLK + U
B	=	FLK + COR

GalenRaw (Galena Raw)

Description:
Relative amount of galena that has not been formed into an identifiable artifact. The category includes worked or unworked items referred to as lumps, ore, pieces, chunks, crystals, and masses.

Variable States:
LT, LG, U

GoldScrap

Description:
Relative amount of gold that has not been formed into an identifiable artifact. The category includes production debris referred to as "sheets".

Variable States:
LG

GraphRaw (Graphite Raw)

Description:
Relative amount of graphite that has not been formed into an identifiable artifact. The category includes unworked items referred to as pieces or chunks.

Variable States:
LT, LG

HematRaw (Hematite Raw)

Description:
Relative amount of hematite that has not been formed into an identifiable artifact. This category includes unworked or worked items referred to as "pieces".

Variable States:
LT, LG

IronRaw

Description:
Relative amount of iron that has not been formed into an identifiable artifact. The category includes unworked items referred to as nuggets and ore.

Variable States:
LT, LG

MicaScrap

Description:
Relative amount of mica that has not been formed into an identifiable artifact, and not in the form of mica sheets or books (see MicaSheet). The category includes items referred to as pieces, fragments, bits, and flakes.

Variable States:
LT, LG, U

PearlRaw

Description:
Relative amount of pearls without holes drilled to make them into beads. This variable is not mutually exclusive of Water Barrier (see above, Water).

Variable States:
Specific numbers, S, M, HS

PyriteRaw (Pyrite Raw)

Description:
Relative amount of pyrite that has not been formed into an identifiable artifact. The category includes unworked items referred to as "pieces".

Variable States:
LT

SilverRaw

Description:
Relative amount of silver that has not been formed into an identifiable artifact. The category includes unworked items referred to as nuggets and masses.

Variable States:
LT, LG

TortShlRaw

Description:
Relative amount of tortoise shell that has not been formed into an identifiable artifact. This category includes unworked items referred to as fragments and pieces, or whole shells. The whole shells may have been used as rattles, though this function could not be verified from written records.

Variable States:
LT = the equivalent of one carapace or less

QuartzScrap

Description:
Relative amount of production debris and undefined forms referred to as bits, cores, and polished fragments of quartz.

Variable States:
LT, LG

ARTIFACT LOCATION RELATIVE TO THE BODY

Positions (P1, P2, P3)

Description:
Each variable in the data base that codes an artifact class has three corresponding variables (columns) that describe the position(s) of each example of the artifact type relative to the deceased's body. Exceptions are those artifact classes for which no information on artifact positioning was available for any of the proveniences containing the item. The Primary Position (P1) indicates the direction or the locations of the artifact relative to the body (e.g., under, over, near, on). The Secondary Position (P2) indicates the particular part of the body to which the direction or location of the artifact is referenced (e.g., head, legs, elbow, ear). The Tertiary Position (P3) indicates the side of the body to which the direction or location of the artifact is referenced (e.g., right side, left side, both sides). Thus, for example, the variable, CeltCopp, which records the number of copper celts in a provenience, has three associated position variables to the right of it: a Primary Position variable, CeltCoppP1; a Secondary Position variable, CeltCoppP2; and a Tertiary Position variable, CeltCoppP3. The one copper celt found with Burial 4, Mound 1, at the Esch site and recorded in the CeltCopp column has the Primary Position code UN, the Secondary Position code HA, and the Tertiary Position code RL in the CeltCoppP1, CeltCoppP2, CeltCoppP3 columns, respectively. These columns indicate that the celt, which was broken in half, was found under both the right and left hands, one half under each hand.

When an artifact class occurs in several locations within a burial, as is common for beads, those multiple locations are recorded in each of the three position variables for that artifact class. For example, the Primary Position variable might record the codes BS, ON, BW; the Secondary Position variable might record in parallel order AR, CH, LE; and the Tertiary Position variable might record in parallel order LT, RT, RL. This coding would mean that the artifact class occurred beside the left arm, on the right side of the chest, and between the legs. The first codes in each column correspond with one another; the second codes in each column with one another, and the third codes in each column with one another. In cases where all items of an artifact class within a grave have the same position and have the same codes (e.g. several objects are present, all on the right side of the body), the code is listed once instead of being repeated three times. In the above example, if all items were on the right side of the body, three codes (BS, ON, BW) would be recorded under CeltCoppP1, three codes (AR, CH, LE) under CeltCoppP2, and only one code (RT) under CeltCoppP3.

In instances where two or more artifact classes were stacked one on top of another, the position of each artifact class is referenced to the body, rather than to other artifact classes. Such instances of close association among artifacts of two or more classes are reported in the provenience sheets in Appendix 6.1 and thereby accessible to researchers. When an artifact class is associated with one body part and that body part in turn is placed next to another body part, then the position of the artifact class is recorded for the first body part, alone. For example, an earspool in a hand that was placed over the chest is coded as having been in the hand of the person. A bracelet on a wrist that was placed over the abdomen is coded as having been on the wrist. Such complex bodily associations of artifacts, like

those where two or more artifact classes are closely associated, are recorded in the provenience sheets in Appendix 6.1 and accessible for analysis.

When an artifact is associated with both sides of a body, such as both shoulders, both legs, both hands, the Tertiary Position variable P3, indicating sidedness, is coded as RL, meaning right and left sides. When the human remains are a cremation or a bundle, for which specific body locations do not pertain, the Secondary Position variable, P2, is given the code CB (cremation or bundle) and the Tertiary Position variable, P3, is coded IR, meaning that side information is irrelevant.

Variable States:

Primary Positions (P1)

- UN = under (in contact with remains or nearly so)
- BN = beneath (below remains and not in contact, could be beneath floor of burial)
- ON = on (in contact with remains or with another item in contact with remains)
- OV = over (item is stratigraphically above remains but not in contact)
- IN = in (within or contained in)
- BS = beside (immediately adjacent to body, within a distance of a few inches at most)
- NR = near (in vicinity of, but not close to remains)
- BW = between
- SR = surrounding
- BE = burial edge (at periphery of burial and not beside remains)
- CR = corner (at corner of burial and not beside remains)
- CE = corner and edge (at both one or more corners of burial and at edge, not beside remains)
- CN = center (in middle of burial but not beside remains)
- ZZ = present instead of the head
- AB = above (pertains only to the head) and probably indicates a position near the top of the head, rather than above the face
- OI = on/in (particularly when some objects may have fallen in to the chest cavity during decomposition of the deceased)

Secondary Positions (P2)

- BD = position for artifacts found in the same provenience with an inhumation but not necessarily in contact with it (e.g. platform edge).
- CB = positions for artifacts found with a cremation or bundle burial.
- HE = head
- LE = leg
- LL = leg, lower (near tibia or fibula)
- LU = leg, upper (near femur)
- KE = knee
- FT = foot
- AR = arm
- AL = arm, lower
- AU = arm, upper
- EL = elbow
- SH = shoulder
- HA = hand
- WR = wrist
- NS = nose (in nose)
- AB = abdomen (on the abdomen)
- CH = chest
- NE = neck
- HI = hips
- MT = mouth
- AN = ankle

Side Position (P3)

- RT = right
- LT = left
- RL = right and left
- UK = right or left, unknown
- IR = irrelevant (as in the case of a cremated burial)

The Scioto Hopewell

and Their Neighbors

Bioarchaeological Documentation and Cultural Understanding

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Additional material to this book can be downloaded from http://extras.springer.com.

ISBN: 978-0-387-77386-5 (hardcover) e-ISBN: 978-0-387-77387-2
ISBN: 978-1-4419-6507-3 (softcover)

Library of Congress Control Number: 2008927598

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Cover Design Acknowledgment: Digital painting, "On the Way", by Christopher Carr, based on portraits of three ceremonial leaders rendered on three copper celts by anonymous Ohio Hopewell artists, compositions of processions of persons rendered on copper breastplates by anonymous Ohio Hopewell artists, and an early photograph of a virgin hardwood forest in the Allegheny Plateau province of Ohio. The three celts bearing the portraits of leaders, from left to right, are: Carr no. C023 Side A, from the Hopewell earthwork, possibly Mound 25, Skeletons 260–261, curated at the Ohio Historical Society, cat. no. 283/351B; Carr no. C301 Side A, from the Edwards Mound Group, 33HA7, curated at the Harvard Peabody Museum, cat. no. 84-6-10/32346; and Carr no. C011 Side A, from the Seip earthwork, curated at the Ohio Historical Society, cat. no. 957/-. Example depictions of processions of ceremonial leaders are found on breastplates Carr B061 Side B, from the Liberty earthwork, curated at the Ohio Historical Society, cat. nos. 7/1.007 and 13716; and Carr B025 Side A, from the Hopewell earthwork, Mound 25, Burial 6, curated at the Ohio Historical Society, cat. no. 283/83C. The portraits and processions were revealed by color and near-infrared digital photography, hybrid color-near-infrared image display, and image contrast enhancement. The full forest photograph is published by Gordon (1969:Frontispiece). Top and bottom border designs are, respectively, a snake-skin design incised on the top of a pottery vessel and a rocker-stamped bird feather design placed on the body of the same vessel, from the Hopewell earthwork, Mound 25, Altar 1 (Moorehead 1922:171, Figure 70). Cover layout by Christopher Carr and Deann Gates.

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Regional Geographic Data Base
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Ethnohistorical Data Base
Christopher Carr, Rex Weeks, and Mark Bahti

Figures
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Other Appendices
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