Chapter 8

Animal-Totemic Clans of Ohio Hopewellian Peoples

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Studies of prehistoric social organization with mortuary data in the modern tradition of anthropological archaeology have emphasized vertical dimensions of social differentiation over horizontal ones. Ranked lineages, conceptual and economic classes, leaders of achieved or inherited position, power, and authority have been the foci (e.g., Binford 1964; J. A. Brown 1981; Cannon 1989; Howell 1995; McGuire 1992:93–135; Peebles and Kus 1977). Less commonly of concern have been lineages, clans, phratries, dual divisions, sodalities, and informal networks within a society (but see Goldstein 1981; Mitchell 1992; O'Shea 1981). This general emphasis on the vertical is no less true in the case of Hopewell archaeology (e.g., Braun 1979; J. A. Brown 1981; Greber 1979a; Tainter 1978).

In part, this orientation reflects the greater subtlety with which horizontal social distinctions are often distinguished in life and in the mortuary record than vertical ones linked to differences in wealth, control over material resources, and prestige (Carr 1995b; O'Shea 1981). In part, the focus represents an overriding concern in modern anthropological archaeology with the origins of social complexity, and with documenting the degree and kind of vertical complexity in particular societies.

This chapter breaks from this intellectual tradition by searching for the animal-totemic clans that comprised Ohio Hopewellian societies: their identities, organization, and functions. The particular clans, their sizes, their numbers per community and distribution among communities, any formalized ties among them, and any possible distinctions among them in social roles, prestige, and leadership recruitment are our primary subjects. These features of Hopewellian societies we compare to the nature of clans in the historic Eastern Woodlands tribes. Phratries, sodalities, and dual divisions are also of interest, but secondarily, due to the paucity of firm Woodland ethnohistoric and archaeological information on them.

Our study depends most fundamentally on identifying kinds of artifacts that marked the various clans in Ohio Hopewellian societies and that were placed in graves commonly enough to make sociological interpretation possible. The real and effigy power parts (e.g., claws, talons, teeth, jaws, antlers) of animals of various species native to Ohio are found here to have almost certainly marked clans and, also, were fairly frequent grave inclusions. The parts reference animals, which were the most common clan eponyms historically, reference about the same number of

species as the average number of clans per historic tribe, and correspond in their species relative frequencies to the varying commonality of historic clans with different eponyms. Animal power parts also were widely distributed among individuals across the burials of cemeteries and across communities, as one would expect of clan markers. Further, animal power parts were closely associated with sacred packs and clan affiliation among the central Algonquian tribes of the Historic Woodlands. Alternative possible clan markers in the form of animal-effigy platform pipes do not exhibit any of these above similarities to the Historic clan eponyms. They also were deposited primarily in only two ceremonial deposits, in great numbers in each, within the sites of Tremper and Mound City (Mills 1922a, 1922b), rather than distributed widely among individuals in their graves. Further, given their very great species diversity and appearance on smoking pipes useful in trancing, we infer that the animal effigies on platform pipes represented personal power animals, instead.

This chapter begins with a summary of the clans, phratries, dual divisions, and sodalities recorded for Historic Native American tribes of the Eastern Woodlands. Their names, relative sizes, degree of localization, functions, and hierarchical and reciprocal relationships are discussed. Commonalities and differences between clans of the Great Lakes–Riverine (largely central Algonquian) tribes and the Iroquoian tribes of the Northeast, and between these and tribes of the Southeast, are elucidated. Next, the question of what kinds of Ohio Hopewellian artifacts represented what kinds of animal-totemic divisions—clans, phratries, or dual divisions—is addressed. The identity of animal power parts as clan markers is established quantitatively and contextually. The remainder of the chapter reveals various sociological aspects of clanship in Ohio Hopewellian societies by examining the frequency and distribution of clan markers among graves and sites, and their associations with artifactual markers of other social roles. A total of 85 individuals buried with clan markers in 16 cemeteries is so analyzed.

At least nine common animal-totemic clans are identified here to have comprised Ohio Hopwellian societies: Bear, Canine, Feline, Raptor, Raccoon, Elk, Beaver, Nonraptorial Bird, and Fox. Subdivisions of some of these animal-totem categories, and possible clans marked by rare artifacts that referenced the opossum, turtle, insect, snake, and fish, may have filled out the Hopewellian clan inventory. Significantly, the first nine clans listed were the most common clans among historic Woodlands tribes, equally for the Northeastern and Southeastern Woodlands, and the typical number of clans per tribe in the Woodlands ranged between 8 and 10, using the collapsed animal categories that we could track archaeologically.

Most Ohio Hopewellian clans appear to have been of similar size, although the Feline and, possibly, the Canine and Bear clans may have been larger. Clan composition seems to have varied somewhat among the Scioto valley, northeastern Ohio, and southwestern Ohio. Natural variations in clan population levels and frequencies of marriage exchange among communities are adequate to explain the partial localization of clans in the Scioto valley, as was the case historically in the Woodlands. It is unlikely that institutionalized geographic segregation of clans existed. Clans are examined for the key shamanic and nonshamanic roles of leadership or of other importance into which they were recruited, including war or hunt diviners, other kinds of diviners, healers, body processors/psychopomps, public ceremonial leaders, possible community-wide peace and war "chiefs" of a kind, and sodality members and high achievers. All of these key roles are found to have been distributed widely across clans rather than dominated by one or a few clans. However, different clans were favored for different key roles. This pattern resembles the only partially restrictive recruitment to critical social positions that was typical among the historic Woodland tribes, and broader, cross-cultural patterns (Winkelman 1992) in leadership recruitment in societies with multiple, specialized, powerful, shaman-like leaders. The Ohio Hopewellian clans that are identified to have frequently filled particular social roles often referenced animals with natural characteristics relevant to those roles and/or are the clans known ethnohistorically to sometimes have filled

those roles. Most Ohio Hopewellian clans differed only mildly in their wealth and degree of social networking through sodalities and their achievement within sodalities. However, these clan traits are strong predictors of clan success in attaining key social positions, in line with Sahlins's (1972) economic theory of the basis of social power and leadership in middle-range societies. Clan size is not found to correlate with clan social success, in contrast to Chagnon's (1979) demographic theory of the basis of power and leadership. No evidence is uncovered for phratry relationships among clans. Bear canines, which are common in Ohio Hopewellian graves and are a defining characteristic of Hopewell across the Eastern Woodlands, probably marked the work of Bear clanpersons in mortuary rites and suggest the possibly essential place of a bear-related mortuary role in the religious ideas and practices that comprised pan-regional Hopewell.

The headway made in this chapter on identifying Ohio Hopewellian clans and their characteristics depends fundamentally on our having taken a role perspective to interpreting the archaeological record (Carr, Chapter 1). A deliberate effort is made here to identify the specific social identities and roles indicated by various symbolic artifact classes rather than lumping such classes under the general rubric of "status markers" (e.g., Struever 1964:88; Struever and Houart 1972:49), "sociotechnic artifacts" (Binford 1962:219), or "symbols of authority" or "rank" or "office" (Braun 1979:67; Brown 1981:28; Hohmann 2001; Loendorf 2001; Peebles and Kus 1977:431), as has typically been done in mortuary studies. (For similar critiques see Bayman 2002:70, 74 and Pearson 1999:84.) Clan membership symbolized by animal power parts, particular clans marked by animal power parts of particular species, and the specific social roles taken by the members of individual clans and symbolized by other specific, socially significant, physically associated artifact classes, are each identified in this chapter. These insights into the identity and role-specific meanings that Ohio Hopewell peoples attributed to individual artifact classes form the foundation for our social analysis of clan identities, sizes, localization, roles, reciprocal relationships, wealth, and relative social power and access to leadership positions.

In writing this chapter, Thomas made the ethnohistoric survey, and Thomas and Carr were responsible for identifying animal power parts as clan markers. The sections of the chapter that address the identity and nature of Ohio Hopewellian clans, based on archaeological patterns, were the work of primarily Carr and Keller.

HORIZONTAL DIFFERENTIATION IN THE HISTORIC EASTERN WOODLANDS

Any study of relatively recent prehistoric societies should begin with an examination of historically known descendant groups. Such ethnohistorically informed methods have the potential to illuminate much more of a prehistoric society's organization than archaeological analysis in isolation. The goal of this section is to ground the archaeological analysis that follows in the ethnohistoric record of the Eastern Woodlands, and to use ethnohistory to illuminate which aspects of the archaeological record are relevant to horizontal differentiation.

To accomplish this, a broad survey of historic Native American groups in the Eastern Woodlands was undertaken. The groups dated to the 19th Century and earlier. The survey identified large-scale patterning in horizontal differentiation at both the interregional and the regional scales. It was not exhaustive, nor did it focus intensively on any single tribe or group of tribes. The purpose, instead, was to gain an idea of the range of social variation, and patterning within that variation, present in the Historic period.

Wherever possible, six kinds of information were gathered for each of four types of horizontally differentiated groups: clans, phratries, sodalities, and dual divisions. The six kinds of information are (1) the number and names of each such type of group per tribe and, related, (2) how individuals were assigned to a particular group; (3) the relative sizes of each group, i.e., were some clans/phratries/etc. larger than others? (4) whether each group was localized to a particular settlement or dispersed across several; (5) the social functions of each group and the tasks

performed by its members; and (6) hierarchical relationships among groups of the same type. Although it was not always possible to collect this information for every tribe or type of group, enough information was available to accomplish the survey's goal.

Selection of the Ethnohistoric Sample

As the first step in the survey, it was necessary to determine which Eastern Woodland tribes were relevant. Ideally, only those tribes directly descendant from Ohio Hopewellian peoples would have been included. This was impossible, of course, because the identity of those tribes—if, indeed, they ever existed as singular entities—is unknown. The European colonization of the Ohio valley greatly disrupted indigenous societies, as had earlier Iroquois pushes westward (Hunter 1978). Geographical displacement, social mixing, and fissioning have irretrievably obscured the relationships between Historic tribes and prehistoric archaeological cultures.

Since the ideal case was not possible, a more extensive approach was adopted. In 1967, James B. Griffin published a map of the Eastern Woodlands indicating the geographical extent of the archaeological traditions in the United States that participated in the Hopewellian Interaction Sphere. These traditions can reasonably be expected to have shared certain aspects of social organization with the Ohio Hopewellian heartland, given certain close relationships in material culture and apparently in religion. Griffin's map was then superimposed over a map from *The National Atlas of the United States of America* (U.S. Geological Survey 1970:130–131), which shows the geographic extent of Historic tribes at the time of European settlement. Any Historic tribe located relatively close to one of Griffin's Hopewellian traditions was considered potentially informative for this study, yielding a list of 47 tribes. This broad selection of a sample of tribes is reasonable because it is known that significant geographic displacement of tribes occurred between the time of initial contact and the time of significant European settlement, and the atlas map only represents the end of that process. In addition, the selection of both Northeastern and Southeastern Woodland tribes seemed right because work by Carr (1998, 2000a, 200b), on the art and religion of Ohio Hopewellian peoples, indicates their mixture of Northeastern and Southeastern Woodland forms and themes.

The relatively large list of tribes was then partitioned regionally. The map suggested a reasonably intuitive division: between the northernmost extent of the Copena area and the southernmost extent of the Crab Orchard area, one can draw an east–west line across the whole Eastern Woodlands without intersecting any Hopewellian traditions. A division between Northeastern and Southeastern tribes was made based on this dividing line. Also, those tribes sharing space with the Kansas City and Cooper Hopewellian traditions were eliminated; these cultures were peripheral enough to the Hopewell phenomenon, and many of the Siouan-speaking tribes peripheral enough to the Eastern Woodlands, that it seemed unlikely that they would provide much insight into the issue at hand. The result of these decisions is a list of 9 Southeastern tribes expected to be somewhat relevant to Ohio Hopewellian societies and 15 Northeastern tribes expected to be especially so.

Next, the Northeastern tribes were again partitioned on either side of a roughly north–south line, dividing the Historic Great Lakes–Riverine (largely Central Algonquian) tribes to the west from the Iroquoian tribes to the east. The Great Lakes–Riverine tribes shared space with both the Ohio and Illinois Hopewellian heartlands and the Crab Orchard and Trempeleau traditions. The Iroquoian tribes are more relevant to the New York Hopewellian tradition.

Ethnohistoric information was obtained for the Southeastern tribes, the Northeastern tribes, and the Great Lakes–Riverine tribes (as a particularly important subset of the Northeastern tribes), from several secondary sources on these tribes. The most important source was the *Handbook of North American Indians, Volume 15, Northeast* (Trigger 1978). The works of Swanton (1911, 1928, 1931, 1942, 1946) were the major sources for data on the Southeastern tribes. Other sources used were works by Callender (1962), Knight (1990a), and Hudson (1976), and as cited. Clear information on social organization could not be located for all 47 tribes, and where lacking, the

tribe was simply dropped from further analysis. Useful data were located for 24 of 47 tribes.

Survey of Horizontal Differentiation in the Eastern Woodlands

Clans

All the tribes investigated were of "middle-range" social complexity, with the Southeastern tribes being relatively more complex than those in the Northeast. Due to the nature of the ethnohistoric data, the most easily identifiable social segment among all these tribes was the clan. The clan was the most important social division among most tribes, with notable exceptions being the Natchez, Timucua, and Chitimacha, which had institutionalized noble classes (Knight 1990a; Swanton 1911). Clans in the Eastern Woodlands were almost always based on genealogical ties, but there were seldom mythical ancestors from which all members of a clan were descended (Knight 1990a:5).

Though founding ancestors were missing from most Woodlands tribes' concept of clan, virtually all clans were known by some eponym drawn from the natural world, primarily animals.[1] Table 8.1 lists which tribes named clans for which animals and/or other phenomena. This is important for the upcoming analysis of archaeological data, because animal symbols—both artistic representations and actual faunal material made into artifacts—are common in the Ohio Hopewellian archaeological record and species are usually identifiable. This allows a close comparison of important species between the historic and prehistoric groups (see below).

Names and Number of Clans in a Tribe. Determining the names and number of clans in a tribe is somewhat difficult. Clan structure seems to have been fairly fluid during the early Historic period, with the number and relationships of clans in almost constant flux. Each source describes a relevant tribe at a particular instant in its history. Where multiple ethnohistoric sources exist for the same tribe, they frequently disagree on the names and number of clans. Only infrequently have scholars speculated on how different "clan lists" can be articulated with one another.[2]

The various lists of clan eponyms were combined and collapsed into archaeologically recognizable groups (see below), and produced Table 8.1. Excluding outliers like the Creek, the average number of collapsed clan categories reported per tribe for the whole sample is about 10. Northeastern tribes average about 9 clan categories per tribe. The Great Lakes–Riverine tribes are closer to an average of 11 clan categories per tribe, and the Southeastern tribes (excluding the Creeks) also average about 11 clan categories per tribe. Because these numbers come from combining multiple, somewhat varying clan lists for single tribes, the numbers may be slightly elevated. At the same time, having used clan categories that were collapsed implies that the numbers may be somewhat low for estimating the actual number of clans per tribe. A good estimate of the typical number of clans per tribe in the Eastern Woodlands is probably 9 to 11, and the usual number of collapsed clan categories per tribe is probably 8 to 10.

Assignment Principles. Most tribes had fairly straightforward rules for determining one's clan by referring to the clans of parents. Great Lakes–Riverine clans were typically patrilineal (Callender 1987a:612); Iroquoian clans were matrilineal (Fenton 1978:309–310). Southeastern clans were typically matrilineal (Knight 1990a). The Caddo practiced a system where clan affiliation could be either patrilineal or matrilineal, depending on the relative ranks of the clans of the child's parents (Swanton 1942:164–165).

Size Differentials among Clans. There are few mentions of clan size in the ethnohistoric record. If one can argue from the absence of evidence, it would appear that clans were usually of roughly equivalent sizes. There are some hints, however, that the size of a clan cannot always be simply found by dividing the tribal population by the number of clans.

For example, Trowbridge (1939:16–17) lists 34 individual "ancient" clans among the Shawnee, only 12 of which were still "operating" when he gathered his information. It is possible that smaller clans merged with larger clans as their numbers dropped historically. Mooney

Table 8.1. Clans of Historic Tribes in the Eastern Woodlands

Clan	Tribe																										
	Shawnee	Miami	Illinois	Potawatomi	Fox	Sauk	Kickapoo	Menomini	Winnebago	Cherokee	Mohawk	Oneida	Onandaga	Cayuga	Seneca	Creek	Hitchiti	Alabama	Natchez (late)	Yuchi	Timucua	Caddo	Chitimacha	Chickasaw	Total	Northern total	Southern total	Great Lakes–Riverine
Birds																												
Raptor[a]	X	X		X	X	X	X	X	X		X		X	X	X	X				X	X	X			16	12	4	7
Nonraptorial Bird[a]				X	X			X	X	X	X		X	X	X	X	X	X	X		X	X		X	16	9	7	3
Waterfowl[a]	X	X	X	X	X	X		X						X	X										9	9	0	7
Turkey	X	X					X									X	X	X		X					7	3	4	3
Owl	X																								1	1	0	1
Small terrestrial animals																												
Raccoon	X	X		X			X									X	X		X	X		X		X	10	4	6	4
Snake[a]	X								X							X	X		X	X			X		7	2	5	1
Rabbit	X			X												X				X	X				5	2	3	2
Skunk[a]																X	X			X				X	4	0	4	0
Squirrel																				X				X	2	0	2	0
Daddy Longlegs																X		X							2	0	2	0
Mole																X	X								2	0	2	0
Opossum																				X					1	0	1	0
Porcupine								X																	1	1	0	1
Mink																X									1	0	1	0
Aquatic animals																												
Beaver				X			X	X			X		X	X	X	X	X	X	X	X		X			13	7	6	3
Turtle	X	X	X					X			X	X	X	X	X	X				X					11	9	2	4
Fish[a]				X	X	X			X							X				X	X			X	8	4	4	3
Otter				X												X	X			X		X		X	5	1	4	1
Alligator																X	X	X				X		X	5	0	5	0

(*Continued*)

Table 8.1. (*continued*)

Clan	Tribe																										
	Shawnee	Miami	Illinois	Potawatomi	Fox	Sauk	Kickapoo	Menomini	Winnebago	Cherokee	Mohawk	Oneida	Onandaga	Cayuga	Seneca	Creek	Hitchiti	Alabama	Natchez (late)	Yuchi	Timucua	Caddo	Chitimacha	Chickasaw	Total	Northern total	Southern total	Great Lakes–Riverine
Eel											X		X	X											3	3	0	0
Toad				X				X								X	X								2	0	2	0
Muskrat																									2	2	0	2
Large animals																												
Canine[a]	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	22	14	8	7
Bear[a]	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		21	13	8	7
Deer/Elk/Moose[a]	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	20	13	7	7
Feline[a]	X	X				X										X	X	X	X	X	X	X	X	X	12	3	9	3
Buffalo	X			X			X		X							X						X			6	4	2	3
War/Man							X																		1	1	0	1
Plants/nature																												
Natural Forces[a]		X		X		X	X	X	X							X	X	X	X	X	X	X			13	6	7	5
Potato[a]						X										X	X								3	1	2	1
Tree	X						X																		2	2	0	2
Cane																X	X								2	0	2	0
Salt																X		X							2	0	2	0
Corn																X									1	0	1	0
Blackberry							X																		1	1	0	1
Hickory Nut																X									1	0	1	0
Spanish Moss																X									1	0	1	0
Other																												
Ball										X		X	X												3	3	0	0
Lye Drip																X	X								2	0	2	0
Spanish																X								X	2	0	2	0
Horse	X																								1	1	0	1
Angel				X																					1	1	0	1
Spirit									X																1	1	0	0

(*Continued*)

Table 8.1. (*continued*)

Clan	Tribe																												
	Shawnee	Miami	Illinois	Potawatomi	Fox	Sauk	Kickapoo	Menomini	Winnebago	Cherokee	Mohawk	Oneida	Onandaga	Cayuga	Seneca	Creek	Hitchiti	Alabama	Natchez (late)	Yuchi	Timucua	Caddo	Chitimacha	Chickasaw	Total	Northern total	Southern total	Great Lakes–Riverine
Fork			X																						1	0	1	0
Calumet											X														1	1	0	0
Medicine																X									1	0	1	0
Weevil/English																X									1	0	1	0
Arrow																X									1	0	1	0
Pubic Hair																X									1	0	1	0
Blue Paint										X															1	1	0	0
Red Paint										X															1	1	0	0
Long-Hair										X															1	1	0	0
Blind Savanna(?)										X															1	1	0	0
Chief																								X	1	0	1	0
Sucker				X																					1	1	0	1
Total	15	8	5	16	7	9	12	11	10	7	10	3	9	10	8	34	18	11	8	17	9	11	4	11	263	140	123	83

[a]Multiple ethnohistoric clan eponyms collapsed into one general category.

(1975:221) makes this process explicit for the Cherokee; he says that each of the seven Cherokee clans was formed by the fusion of two smaller clans.

Among the Natchez, Timucua, and Chitimacha, where the most important social distinction was between noble and common rather than among clans, the commoners appear to have been much more numerous than nobles (Knight 1990a; Swanton 1911). Insofar as nobility belonged to a particular clan (as among the Timucua), this would make noble clans much smaller. Unfortunately, we have no evidence of the clan structure of the Natchez while their nobility system was operating (Swanton 1911:108), and it is impossible to say whether the Great Sun's clan was small, or just the noble division of it.

It is unclear whether there were any significant differences among the three tribal regions in variation in clan sizes. It seems unlikely that the range of clan sizes varied greatly between the Northeast and the Southeast.

Localization of Clans. Nowhere in the Eastern Woodlands do clans appear to have been localized to specific villages (Knight 1990a:5–6). Among the Shawnee, each village was theoretically associated with one of the five large divisions of the tribe, but not necessarily one of the division's constituent clans (Callender 1978c:623). Residence among the rest of the Great Lakes–Riverine tribes—where data exist—seems to have been too fluid to have allowed the localization of clans in particular villages (Callender 1978a:616–617). In the Southeast, the Creeks had nonlocalized clans scattered among various towns (Swanton 1928:114–120). The historically recorded Natchez clan system seems to have been adopted from the Creek and Cherokee (Swanton 1911:107–108) and, so, was probably also nonlocalized. The pattern of nonlocalized clans found in the Eastern Woodlands accords with the same situation cross-culturally among tribal societies generally, in which clans serve as one kind of pan-tribal, non-residential-based sodality (Service 1971:102, 105–107).

Functions and Tasks of Clans. There is no shortage of statements assigning tasks or offices to particular clans among the Eastern Woodlands tribes. However, there is seldom independent confirmation of any particular statement, and it is difficult to guess whether such assignments were mandatory, traditional, or merely expedient.

Most tribes in the Eastern Woodlands had dual leadership, with peace chiefs and war chiefs. Among the Shawnee, War Chiefs were drawn from the Great Lynx clan, and the vanguard of a war party was drawn from the Wolf clan (Callender 1978c:627). Peace chiefs may have come from the Rabbit clan (Howard 1981:96). The Fox drew their peace chiefs from the Bear clan and their war chiefs from the Fox clan (Callender 1978b:640). The Sauk, Menominee, and Kickapoo paramount (peace?) chiefs were drawn from the Sturgeon, Bear, and Eagle clans, respectively (Callender 1978d:649; Callender et al. 1978:661; Spindler 1978:713). However, the Winnebago war chief was drawn from the Bear clan (Lurie 1978:693), so the bear was not always associated with peace in the Great Lakes region.

Beyond peace/war chiefships, other clan functions are less well known for the Great Lakes–Riverine tribes. The Winnebago Bear clan was responsible for organizing tribal hunts and policing the hunting camps, and the Hawk clan was particularly associated with warfare (Lurie 1978:693). Public speakers among the Kickapoo were drawn from the Raccoon clan (Callender et al. 1978:661).

In the Southeast, the situation is much less clear. Peace/war functions were distributed according to the White/Red dual divisions among the Creek (Swanton 1928:165, 249). Insofar as clans belonged to one of these divisions, they were also assigned peace or war duties. However, the assignment of particular clans to particular divisions varied widely from town to town (Swanton, pp.156–166).

Ranking of Clans. Occasionally, clans were ranked vertically with respect to their relative prestige. This is especially true in the more hierarchical tribes of the Southeast, where certain clans were recognized as "noble." Among the Caddo, however, clans seem to have been

ranked vertically without having an explicit noble/common split (Swanton 1942:164–165). Other evidence of ranking can be found in certain Northeastern tribes. For example, the Shawnee, Fox, and Kickapoo traditionally assigned chiefly roles to particular clans (Callender 1978b:640, 1978c:627; Callender et al. 1978:661; see above). Such assignments were apparently not obligatory, however, since there is ample evidence of chiefship falling to other clans.

There is no evidence that belonging to a clan that traditionally held a chiefship changed one's access to critical resources. The exceptions to this, of course, are those tribes that had institutionalized noble classes, but in these cases, differential access can be attributed to nobility, rather than clan affiliation per se.

Phratries and Sodalities

Phratries are relationships, often formalized, between two or more clans. Phratries were found in most Eastern Woodlands tribes. Sodalities are voluntary organizations not based on common descent or residence. They are evidenced in the ethnohistoric record also, but for neither of these groups is the historical record detailed enough to provide all five of the types of information gathered for clans. Nevertheless, some general observations about the nature of phratries and sodalities in the Eastern Woodlands can be made.

For phratries, the nature of the relationships between constituent clans varied greatly, from simple joking rivalries, as among recent Shawnee "name groups" (Callender 1978c:627), to highly elaborated ritual relationships, as among Creek phratries (Swanton 1928:122–123). Data on phratries are listed in Table 8.2.

If we can assume that the sample of historic phratries identified in the research is remotely representative, then phratries were much rarer than clans in the Eastern Woodlands. For a given number of clans in a tribe, there are many more possible phratry relationships (i.e., the number of pairwise combinations of clans), but Table 8.2 shows phratries for only eight tribes and an average of only five phratries per tribe. The average is roughly the same for tribes in the Northeast, Great Lakes–Riverine, and Southeastern geographic regions.

There are several reasons for the paucity of phratries. First, while phratries may have been important in certain contexts, they were seldom as salient in most contexts as one's clan membership. Given that the great majority of the primary documentation of Woodland tribes was not by trained anthropologists, it is not surprising that phratries were less often identified. Second, and related, the phratries listed in Table 8.2 are only those that were specifically labeled phratries by the secondary sources.[3] Finally, the relative sparsity of phratries may indicate that clan-to-clan relationships in the Eastern Woodlands were seldom formalized. This may be reflected in that the specific clans that constituted a phratry were remarkably variable across tribes. Additionally, among the Creek, phratry relationships varied even from town to town.

Phratry structure, from what information is available (Table 8.2), takes two forms. One projects the three-tiered structure of the Woodland cosmos and is found in the Northeastern Woodland tribes. The second does not correspond to the Woodland cosmos and is found primarily in the Southeastern tribes. Among the Shawnee, Potawatomi, and Winnebago tribes of the Northeast, each phratry includes only clans having eponyms that pertain to the same level of the universe—Upper, Middle, or Lower World—emphasizing the cohesiveness of clans within a phratry. There may be one or more phratries in a tribe that pertain to a give level of the cosmos.[4] In contrast, among the Timucua, Creek, and Chickasaw tribes of the Southeast, as well as the Menominee of the Northeast, phratries commonly include clans with eponyms pertinent to different levels of the universe, emphasizing clan complementarity within phratries.

Sodalities are especially relevant in the discussion of the Great Lakes–Riverine tribes, where ritual organizations were prominent in the historic period (Radin 1945). Central Algonquian ritual was centered on small "sacred pack" organizations (Callender 1962:26, 31, 65, 77)—sodalities formed for a variety of specialized reasons such as healing, sorcery, and warfare. Each sodality possessed a bundle of sacred objects, frequently thought to be connected to a patron spirit through whose power the group

Table 8.2. Phratries of Historic Tribes in the Eastern Woodlands

Tribe	Phratry name	Constituent clans	Comments
Shawnee	Turkey	Bird clans	All Shawnee phratries are late "name groups"
	Turtle	Aquatic animal clans	〃
	Rounded Feet	Carnivorous animal clans	〃
	Horse	Herbivorous animal clans	〃
	Raccoon	Clans of animals who can scratch	〃
	Rabbit	Rabbit	〃 (single clan)
Potawatomi	Water	Fish, Sea, Sturgeon, Sucker, Beaver, Loon, Crane, Heron	
	Bird	Thunder, Bald Eagle, Golden Eagle, Crow	
	Buffalo	Buffalo, Elk, Moose, Deer	
	Wolf	Wolf, Fox, Coyote, Raccoon	
	Bear	Bear, Grizzly Bear, Rabbit, Jackrabbit	
Fox	Fish	Bass, Kenwamewok, Swan	
Winnebago	Thunderbird People	Thunder	Some of these identifications may be wrong
	Air Family	Eagle, Hawk, Pigeon	〃
	Land People	Bear, Wolf, Buffalo, Deer, Elk	〃
	Water Family	Water, Spirit, Fish, Snake	〃
Menominee	1	"Unworthy Chief," Snapping Turtle, Porcupine	
	2	Big Sand, Bald Eagle, Black Bear	
	3	Wolf, Wave, Fox, Dog, Deer	
	4	Beaver, Muskrat	
	5	Crane, Spagpoke	
	6	Elk	
	7	Thunder, Golden Eagle, Crow	
Timucua	X	White Deer	(Single clan)
	X	Dirt	(Single clan)
	X	Fish, Rabbit, 2 untranslated	
	X	Buzzard, Fox, 7 untranslated	
	X	Bear, Bird, 1 untranslated, "others"	
	X	Panther, Partridge, Dog, 4 untranslated	
Creek[a]	X	Wind, Skunk, Fish, Rabbit, Otter, Turtle	All phratry associations varied from town to town
	X	Bear, Wolf, Salt, Fresh-Land, Spanish Moss, 1 untranslated	
	X	Bird, Medicine, Pubic Hair	
	X	Beaver	(Single clan)
	X	Alligator, Turkey, Daddy Longlegs, 1 untranslated	
	X	Raccoon, Eagle, Hickory Nut, Fox, Cane, Mink, Potato, 2 untranslated	
	X	Water Moccasin, Snake, Lye Drip, 1 untranslated	
	X	Deer, Mole, Toad, 2 untranslated	
	X	Panther, Wildcat, Arrow	
Chickasaw	Panther	Wildcat, Bird, Fish, Deer	More probably a dual division than a phratry
	Spanish	Raccoon, Spanish, Royal, Skunk, Squirrel, Alligator, Wolf, Blackbird	

[a]The phratries listed are the most common that Swanton (1928:122–123) could find but still represent a relative minority of actual reported phratries.

Table 8.3. Dual Organizations of Historic Tribes in the Eastern Woodlands

Dual organization	Shawnee	Miami	Illinois	Fox	Sauk	Kickapoo	Winnebago	Menominee
Group 1 names	X	Sky	Sky	White	White	White	Upper	Thunderers
Group 1 clans	Calaka, Mekoce	Raccoon, Turkey, Moon	?	X	X	Turkey, Tree, Water, Eagle, Berry	Hawk, Eagle, Thunder, Pigeon	?
Group 2 names	X	Earth	Earth	Black	Black	Black	Lower	Bears
Group 2 clans	Kispoko, Pekowi, Thawakila	Little Turtle, Snow Thaws	?	X	X	Raccoon, Bear, Wolf, Elk, Fox, Beaver	Snake, Deer, Bear, Wolf, Elk, Buffalo, Water, Fish, Spirit	?
True moieties?	No	?	?	No	No	Possibly	Yes	Probably
If no, why not?	Based on five tribal divisions, rather than clans			Not descent-based	Not descent-based	Modern not descent-based, but possibly ancient was		
Comment								

could achieve its goals (Callender 1962:31). Other sodalities in the Great Lakes region, such as the Midewiwin (Hoffman 1888, 1891; Radin 1945) and the more recent Dream Drum cult (Gill 1982:167–171; Ritzenthaler 1978:755–756; Skinner 1915, 1920; Spindler 1978:716; Venum 1982), drew membership more widely.

War parties were a kind of temporary sodality universal among the Eastern Woodlands tribes. Occasionally these groups were made formal, such as the warriors that served as police among the Potawatomi (Clifton 1978:732) or the warrior sodalities among the Yuchi (Swanton 1928:156). For the most part, however, sodalities are not especially visible in the ethnohistoric sources, probably for lack of their having been formalized, as with phratries.

Dual Organization

The last type of social organization one can identify in the ethnohistoric record, and relatively easily, is dual organization. This is the division of a tribe into two mutually exclusive parts, with a well-defined relationship between them. Moieties are a classic example, where the division serves primarily to organize marriage partners, and each half of the society forms an exogamous unit. Most of the tribes investigated here had some form of dual organization, but very few Eastern Woodlands tribes had true moieties.

Names and Commonality of Dual Divisions. Data on dual divisions in the Eastern Woodlands are listed in Table 8.3. Of 24 tribes for which adequate ethnohistoric information was gathered, 19 had some form of dual organizational principle. It seems likely that the other five—the Potawatomi, Hitchiti, Alabama, Yuchi, and Caddo—also had dual divisions, but the evidence of such is not as obvious in the ethnohistoric sources consulted. Swanton (1946:664) denied that the Cherokee had any form of dual organization, but Gilbert (1943:356–358) believed that the Red and White organizations of Cherokee towns constituted dual divisions that alternated in political ascendancy.

Assignment Principles. Dual divisions among the Northeastern tribes were determined by a variety of principles. Many tribes' dual divisions were not based strictly on descent. For example, the Fox and Sauk assigned children to one division or another based on the order

Onandaga	Other Iroquois	Creek	Choctaw	Cherokee	Chitimacha	Timucua	Natchez
Longhouse	Yes	White	Their Own People	White	Nobles	Nobles	Sons
Wolf, Turtle, Snipe, Beaver, Ball	?	Wind, Bear, Bird, Beaver	?	X	?	White Deer	Suns, Nobles, Honoreds
Mudhouse	Yes	People of a Different Speech	Chiefs	Red	Commoners	Commoners	Stinkards
Hawk, Deer, Eel, Bear	?	Raccoon, Water Moccasin, Potato, Alligator, Deer, Panther	?	X	?	Dirt, Fish, Vulture, 2 untranslated	Stinkards
?	No	No	Yes	No	No	No	No
	Not Exogamous	Not Exogamous		No evidence that these were groups of clans	Vertically ranked, not descent-based	Vertically ranked, not descent-based	Vertically ranked, not descent-based
Possibly recent development out of Longhouse religion		Clan divisions varied from town to town, these are most common divisions		Gilbert (1943:356) suggests that everyone was a member of one group or the other			

of their birth (Callender 1978b:640, 1978d:650). The Winnebago and Choctaw are the only tribes in Table 8.3 that clearly had exogamous moieties determined by descent (Lurie 1978:694; Swanton 1946:663). In the case of the Winnebago, this likely reflects their close historic and linguistic relationship to Plains tribes, where true moieties are more common.

In the Southeast, dual organizational principles are similarly broad. Creeks were affiliated with either the White division or the "People of a Different Speech" division based on a combination of their clan and their town. Particular clan eponyms were assigned to different divisions in different towns. The Timucua, Natchez, and Chitimacha assigned people to noble or common divisions based on complex formulae dependent on the relative ranks of their parents (Knight 1990a:11–13; Swanton 1911:107, 348–349). The Timucua's and Natchez's dual organizational principles were close to being true moieties, since the noble class in each was exogamous. The Chitimacha noble class was endogamous. However, Swanton (1911:107) notes that the Natchez commoner division must not have been exclusively exogamous, or the sizes of the noble and commoner groups would have been more equal. The same applies to the Timucua commoner division.[5]

Size Differentials among Dual Divisions. Dual divisions in Eastern Woodlands tribes seem generally to have been of roughly equal size. In the Northeastern tribes, especially among the Great Lakes–Riverine tribes, this was made certain by the method of assigning individuals to a particular division. For example, the Fox and Sauk assigned individuals based on their birth order, with children alternating between divisions (Callender 1978b:640, 1978d:650). The moieties of the Winnebago (Lurie 1978) would also have remained roughly the same size.

In the Southeast, however, the situation differs. Some tribes kept their divisions of roughly equal size. Among the Creek, clans might change divisional affiliation based on their local circumstance (Swanton 1928:162–164), and the Choctaw moieties would naturally have remained equal. Other tribes, however, did not maintain equal-sized dual divisions. As mentioned above, the Natchez commoner division was much larger than the noble division.

Localization of Dual Divisions. Dual divisions do not seem to have been strongly localized anywhere in the Eastern Woodlands. Among the Great Lakes–Riverine tribes, each division would have made up roughly half of each settlement. There was no clear statement about localization among Iroquoian divisions.

The situation is, again, more complicated in the Southeast. Although Creek towns were assigned to Red or White divisions, it is not entirely clear how these related to the People of a Different Speech and White divisions among clans. Certainly every town had representatives of both clan divisions. Both Hudson's (1976) and Swanton's (1928) discussions suggest that, although whole towns were assigned to a Red or White division, these assignments had little real relationship to the dual division of clans. Hudson (1976:235–236) states that towns could change affiliation based on the results of several sequential ball games. Swanton (1928:249) says that chiefs of the towns were chosen from the corresponding clans, but Hudson (1976:236) makes no mention of this practice.

Functions and Tasks of Dual Divisions. The primary function of the Winnebago and Choctaw moieties, and the Natchez and Timucua noble/common division, was to determine potential marriage partners (Knight 1990a; Lurie 1978; Swanton 1911, 1946). For the Winnebago and Choctaw, one could only marry outside one's own moiety. In the other two tribes, nobles could only marry commoners, but commoners seem to have been able to marry anyone outside of their own clan (Knight 1990a:9)

Organizing marriage partners is not the most common function of dual divisions in the Eastern Woodlands, however. Warfare and competition seem to be the primary purpose of dual divisions in most tribes. The two divisions of the Central Algonquian tribes served primarily to determine the team on which one was a member for ritual games (Callender 1978b:640; Callender et al. 1978:660). The exception to this is the Shawnee. One Shawnee dual division, consisting of three of the Shawnee's five supraclan divisions, possessed the paramount war chiefship and was probably responsible for warfare. The other dual division, comprised of the remaining two supraclan divisions, possessed the paramount peace chiefship and was probably peaceful (Callender 1978c:627).

Creek dual divisions also organized ball games (Hudson 1976:237); however, the games were a surrogate for warfare between two towns, rather than within a single community. The opposition of White clans versus People of a Different Speech also took a role in overt warfare, though, with the White clans having been associated with peace, and People of a Different Speech with warfare (Swanton 1928:167). A similar distinction is true of the Cherokee White/Red divisions (Gilbert 1943:356–358).

The final major function of dual divisions in the Southeast was the distinction between ruler and ruled. Among those tribes with institutionalized noble classes, the noble/common split served to designate who was eligible to hold chiefly or other high-ranking offices (Knight 1990a; Swanton 1911:107–108). Commoners, of course, were not eligible for these positions, but their children might be.

Ranking of Dual Divisions. The hierarchical ranking of noble/common divisions is obvious, but whether other forms of dual division involved ranking is not nearly so clear. Theoretically, dual divisions, as a form of horizontal differentiation, should not be ranked. However, Knight (1990a:6) has suggested that all dual organization systems include an inherent aspect of vertical ranking.

Ranking of a weak sort between dual divisions can, indeed, be found in some Woodland tribes. For example, among the Sauk, each division had its own war chief, but the one from the Kishkoha division had higher prestige (Callender 1978d:650). Such distinctions, however, were not strong or consistent across multiple contexts, so they should not be taken as evidence of an institutionalized hierarchy.

IDENTIFYING CLAN MARKERS IN THE OHIO HOPEWELLIAN ARCHAEOLOGICAL RECORD

Of the four kinds of social divisions just described—clan, phratry, sodality, and dual organization—the one that has the most

ethnohistoric data available on it, and that seemed to us most likely to be visible in the Ohio Hopewellian archaeological record, is the clan. As mentioned above, Historic clans were typically named for animals. Animal representations and faunal artifacts are common in the Ohio Hopewellian record and, thus, seemed to be good candidates for symbols of clan affiliation.

To investigate and refine this hunch, a statistical comparison was undertaken between Historic clan eponyms and two different, frequent artifact classes that refer to animals. The two classes are platform pipes, which were sculpted into various animal species, and real or effigy animal power parts, which included claw, talon, teeth, and jaw forms. The platform pipes ($n \simeq 345$) came from primarily two, nongrave ceremonial deposits, in the Tremper Mound and Mound City's Mound 8 (Mills 1922; Otto 1984, 1992). The animal power parts came from a broad range of graves ($n = 85$), ceremonial deposits ($n = 15$), and Hopewellian sites ($n = 16$) across Ohio (Figure 8.1, Table 8.4), as documented by Case and Carr (n.d.). Appendix 8.1 lists the proveniences from which the data on animal power parts are taken.

Power parts were expected to be relatively good indicators of clan affiliation, given the historic relationships of animal power parts, sacred packs, and clan affiliation among the geographically close central Algonquian tribes (Callender 1962:26). Moreover, power parts were widely distributed among graves and sites, as clan members would have been. Finally, the number of species represented by animal power parts in the Ohio Hopewellian record—15—roughly corresponds to the numbers of clans per tribe found ethnohistorically in the Eastern Woodlands. Animal-effigy platform pipes, on the other hand, were suspected not to represent clans because their distribution was limited almost completely to the two ceremonial deposits, and the variety of species into which they were carved was very great. The large number of species that were depicted, and their expression in particular on pipes that could have been smoked to induce a trance and to communicate with the depicted species, suggested instead the representation of personal power animals within a shaman-like belief system. This interpretation accords with the historic Woodland and broader cross-cultural practice of inducing a trance through smoking or other means so that one's "dream soul" or "free soul" could travel to the spirit world, talk with and be guided by one's personal tutelary animal spirit, and sometimes merge with it to share in its power (von Gernet and Timmins 1987:39–40; Harner 1980:73–88; Hultkrantz 1953:375–376; cf. Grim 1983:144; Mails 1979:50–51). The fact that animal effigy platform pipes were sculpted so that the smoker had to look at the animal effigy face to face while smoking suggests the practice of communication and/or merging with an animal spirit guardian (e.g., Mails 1979:57). The interpretation that platform pipes depicted personal power animals also follows the logic of Woodland and broader North American aboriginal belief that personal tutelary spirits can reside in physical objects such as pipes and bundles (Carse 1949:37–38; von Gernet and Timmins 1987:40; see also Mails 1979:58, 1991:54). de Rios (1977:242) came to a similar conclusion, that the effigies on Ohio Hopewellian platform pipes depicted animal guardians within a shamanic belief system. In sum, we expected that the species represented by animal power parts would correspond more closely to Historic clan eponyms than would the species indicated by the pipes.

In order to make these comparisons, the level of detail of species used for clan names in the ethnohistoric record had to be matched to the grain of species identification for the artifacts of concern. Ethnohistoric sources often report very specific clan eponyms, such as White-Tailed Deer, Pigeon Hawk, and Ringed Perch. Clan eponyms of this specificity could be compared to the species carved on the platform pipes directly and easily, because the carvings are very realistic and their species have been identified in detail. In contrast, effigy and real animal power parts are often identified more vaguely in the archaeological literature. A comparision of their animal categories to ethnohistoric clan eponyms required the collapsing of some ethnohistoric clan names into broader animal categories, such as Deer/Elk/Moose, Raptor, Nonraptorial Bird, and Fish. Appendix 8.2 shows how the collapsing was accomplished. The resulting classes of clan eponyms were used in the quantitative comparison of clan names to animal power

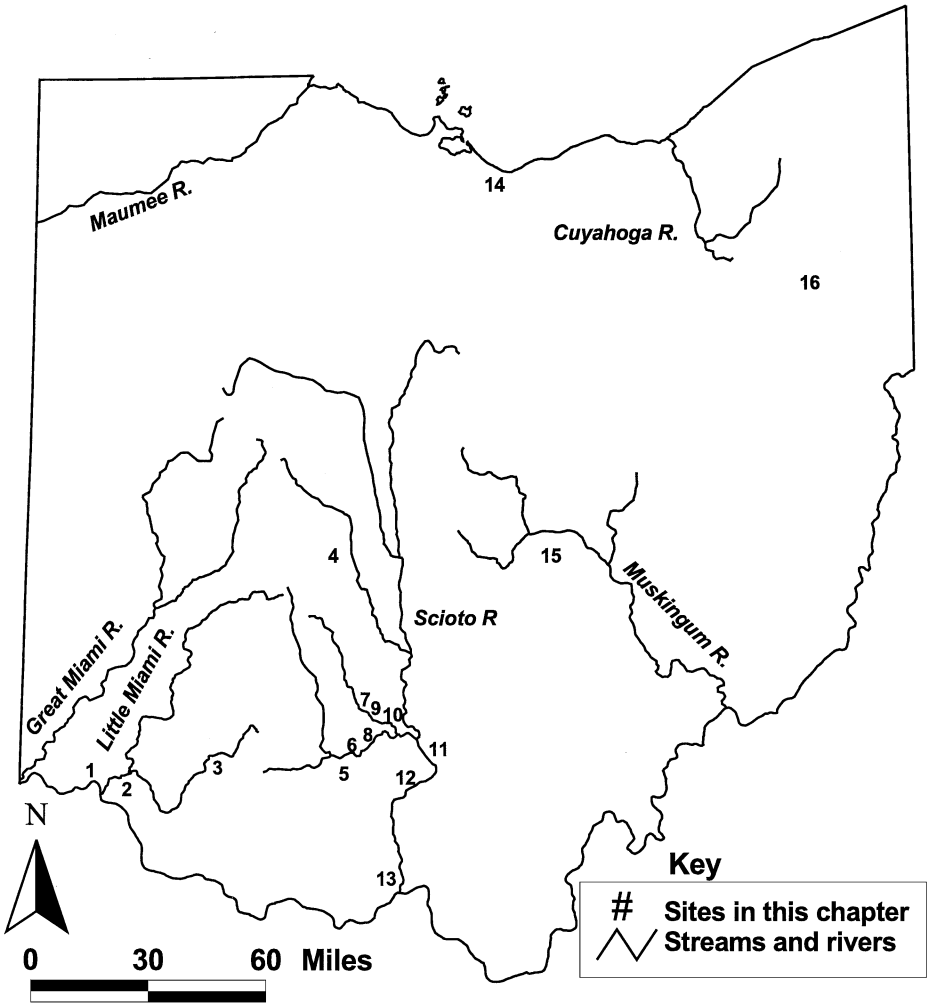

Figure 8.1. Locations of sites used in this study: (1) West Mound, (2) Turner, (3) Boyles' Farm, (4) Rutledge, (5) Rockhold, (6) Seip, (7) Ater, (8) Bourneville, (9) Hopewell, (10) Mound City, (11) Liberty, (12) McKenzie, (13) Tremper, (14) Esch, (15) Hazlett, and (16) North Benton.

parts, as well as in all subsequent archaeological studies of the nature of Ohio Hopewellian clans. Table 8.1 identifies which tribes had examples of which collapsed clan eponyms, with some tribes having had more than one clan subsumed under a broader class.[6]

Correspondences between clan eponyms documented ethnohistorically throughout the Eastern Woodlands and the species represented by animal power parts and on platform pipes were measured using a Jaccard coefficient of similarity and Kendall's tau-*b* statistic of rank correlation. The Jaccard analysis involved tabulating the number of species shared between the clan eponyms and the platform pipes, compared to the number not shared, and likewise, the number of species shared between the clan eponyms and the animal power parts, compared to the number not shared, excluding negative matches. The analysis of platform pipes used the detailed list of clan eponyms, while the analysis of the animal power parts used the collapsed list. The results are shown in Table 8.5. Expectations were met. The Jaccard similarity of the animal species represented by Ohio Hopewellian power parts to the eponyms is .433, that is, 43%

Table 8.4. Burials and Ceremonial Deposits with Clan Items in Regions with the Ohio Hopewellian Area

Region	Site	Burials	Caches	Total	Burials and caches with clan Items	Region total (burials + caches for all sites)	Region clan total (clan burials + clan caches for all sites)
1. Northeast Ohio	Esch	49	1	50	1		
	North Benton	14	2	16	1	66	2
2. Central Muskingum	Hazlett	2	0	2	1		
	Rutledge	4	1	5	0	7	1
3. South–central Scioto	Liberty	7	3	10	1		
	McKenzie	10	1	11	1		
	Mound City	106	8	114	15		
	Ater	60	1	61	4		
	Hopewell	214	18	232	44		
	Bourneville	11	0	11	1		
	Rockhold	5	1	6	1		
	Seip	125	4	129	19		
	West	10	0	10	0	584	80
4. Southern Scioto	Tremper	8	2	10	2	10	2
5. Southwest Ohio	Boyle's Farm	1	0	1	0		
	Turner	91	12	103	9	104	9
Total		717	54	771	100		

correspondence. The similarity of animal species on the Ohio Hopewellian platform pipes to all Woodlands clan eponyms is only .328, that is, 32% correspondence.

Although animal power parts show greater similarity in their species representation to historic clan eponyms than do animal-effigy platform pipes, the 43% level of similarity of power part species to clan eponyms is not impressive, itself. This situation reflects the fact that the nine species of power parts in the test are compared to a much larger number of clan eponyms, but unfairly, only nine at most of the eponyms can logically match. When analysis is restricted to the eight most common clan eponyms and all eponyms tied for ninth place, the Jaccard similarity between power part species and clan eponyms rises to .8, that is, 80% correspondence—a healthy match. The similarity between platform pipe species and clan eponyms, for the same adjustment, remains low, at .47, that is, only 47% correspondence.

The results of the Jaccard test indicate the shared presence of particular animal species in the lists of clan eponyms, pipe sculptures, and power parts, but not the relative commonality of the species in the lists. The latter was also desirable to assess. If, for example, the most common clan eponyms were among the least common animal species represented on platform pipes or by power parts, this would be a strong indicator that the animal species depicted on pipes or by power parts were not clan markers, even though a strong Jaccard coefficient might be calculated. Kendall's tau-*b* was used to reveal such situations, by measuring correspondences in the rank ordering of species in the three lists.

In order to calculate the tau-*b* statistic, clan eponyms were ranked according to the number of Woodland tribes in which they were found historically. Both the full and the collapsed lists of clan eponyms were ranked, to be used in the analyses of the pipes and power parts, respectively. Species depicted on platform pipes were ranked by their frequency in the collections of pipes from Tremper and Mound City ceremonial deposits. Species represented by power parts were ranked by the number of individual deposits (e.g., individual burials, multiple burials, or altars) that contained them. A deposit containing multiple

Table 8.5. Measures Comparing Species of Clan Eponyms of Historic Eastern Woodlands Tribes to Species Represented by Certain Ohio Hopewellian Artifacts

	Jaccard similarity coefficient considering . . .							
	All Historic clans		Most common Historic clans[a]		Kendall's tau-*b* value considering the most common Historic clans		Number of species referenced in Kendall's tau-*b* calculations[b]	
Tribes	Real and effigy power parts	Tremper and Mound City platform pipes	Real and effigy power parts	Tremper and Mound City platform pipes	Real and effigy power parts	Tremper and Mound City platform pipes	Real and effigy power parts	Tremper and Mound City platform pipes
All	.43	.33	.80	.47	.43	.35	13	19
Northeastern	.52	(not calculated)	.54	.50	.22	.16	12	15
Southeastern	.48	(not calculated)	.64	.38	.48	.33	12	15
Great Lakes–Riverine	.55	(not calculated)	.57	.52	.22	.15	12	15

[a]The eight most common Historic clans and all clans tied for ninth place.
[b]Each pairwise comparison eliminates only those species missing in at least one of the two samples compared.

examples of a species contributed only a count of one.[7]

Table 8.5 compares the species rankings for clan eponyms, platform pipes, and power parts, over the whole of the Woodlands and in the Northeastern, Great Lakes–Riverine, and Southeastern cultural regions. In each case, the animal species represented by power parts are more similar in their rankings to those of the clan eponyms than are the species carved on the platform pipes. The tau-*b* statistics corroborate the results of the Jaccard calculations.

From the results of both tests, we conclude that real and effigy animal power parts in Ohio Hopewellian sites were markers of clan affiliation and symbolized clan eponyms. The animals depicted on the platform pipes may sometimes have symbolized clan affiliation, but often had other meanings. Thus, in our study of Hopewellian clans, we used the species or broader taxonomic category of animal power parts to infer clan eponym and affiliation.

This phase of study has allowed an informed choice of which kinds of archaeological items are most likely to have marked Ohio Hopewellian clans. The remainder of this chapter is devoted to exploring, within Ohio Hopewellian sites, the depositional relationships that occur among animal power parts or other artistic representations that indicated clan membership, in an attempt to understand the intricacies of Ohio Hopewellian clan organization.

CLAN ORGANIZATION OF OHIO HOPEWELLIAN SOCIETIES

Archaeological Data Used

The nature and relationships of animal-totemic clans in the Ohio Hopewellian area are explored here with artifacts taken to be markers of clan affiliation and found within burials and ceremonial deposits throughout the area. The items include animal power parts—claws, talons, teeth, and jaws—real and effigy, as well as much less frequent artistic representations of animals, especially carvings, all of which were identified to species or a broader category. Animals depicted on platform pipes, however, are not included in the study. Copper headplates with representations of animal power parts, which are rare, were also excluded from study, for several solid reasons.[8]

The Ohio Hopewellian area was initially divided into 10 regions based on drainage and cultural differences and having a total of 35 sites, 854 buried individuals, and 64 ceremonial deposits, as inventoried by Case and Carr (n.d.). Excluding sites that lacked clan markers and combining regions that had few burials or ceremonial deposits with clan markers resulted in five regions containing 16 sites, 717 individuals, and 54 ceremonial deposits (Table 8.4).[9]

Animal-totemic clan markers were found in both burials and ceremonial deposits. Both suggest the presence, and/or the participation in ceremonies, of particular clans in the regions of study and both were used to make this determination. However, to explore clan affiliation as a social role and other social correlates of clan affiliation (e.g., prestige, leadership recruitment) required the tracking of individuals and the manner in which their various social characteristics were combined or segregated in varying or patterned ways. Ceremonial deposits that contained a conglomerate of animal tokens from multiple individuals and sources do not allow this fine-grained work and, thus, were excluded from such analyses. In addition, some large deposits probably represent the offerings or disposal of materials from persons beyond the local community (Carr et al., Chapter 13) and were deemed inappropriate for addressing issues such as the regional geographic distribution and community localization of clans. Thus, detailed analyses concerned with more than the specific clans present in a region were focused on only burials with clan markers, leaving 85 buried individuals from 16 sites for study.[10]

The sample of buried individuals for whom probable clan affiliation is known is only about 12% of all documented interred individuals (Table 8.6). If the composition, organization, and social functions of Ohio Hopewellian clans are to be reliably reconstructed, it is essential to understand which 12% of the total population these individuals comprise and the ways in which the sample is and is not representative. Four kinds

of data are helpful in this regard and suggest that burial with clan markers possibly was reserved generally for individuals of moderate to high importance. First is the percentage, itself—12%—which is about the proportion of local kin heads and community-wide leaders and specialists of various kinds one might expect to find in a society where leadership was decentralized (Carr and Case, Chapter 5). Many of those buried with clan markers could easily have been the heads of the extended households that comprised a community and that probably have an analog in the small habitations mapped by Pacheco (1993, 1997) within a small drainage in the Newark earthwork community. Second, a high proportion of the burials having clan markers (ca. 70%) did, in fact, also hold markers of other, wider-scale positions of leadership or importance (see Table 8.12, below). Third, almost all of the buried individuals marked with animal power parts and for whom their age and/or sex are known were adult males (27 adult, 3 less than 20 years; 13 males, 2 females). Finally, across most of the five regions of Ohio examined here, the proportion of burials with clan markers remains fairly stable (Table 8.6), around the 12% range, as one would expect for a series of similarly organized, dispersed communities comprised of extended households, household heads, and wider-scale leaders marked specially at burial.

A sample of clanpersons of this nature, if we are right about its characteristics, places us in a good position to assess the eponyms of the animal-totemic clans that comprised Ohio Hopewellian societies, the differential distribution of socially important roles among clans, their varying prestige and wealth, variation in clan eponyms present across geographic regions, and whether or not different clans were localized in different communities. The topic of the relative sizes of clans is more difficult to address with the extant sample because it is a selection of elite from each clan and persons of specific important roles, rather than a proportionate sampling of each clan. Finally, clans with other than animal eponyms would not be exposed by the archaeological indicators of clanship used, although such clans are infrequent among the historic Woodland tribes (see Table 8.1 and Appendix 8.2).

Table 8.6. Ratio of Burials with Clan Markers to All Burials in Five Ohio Hopewellian Regions[a]

Region	No. of burials	No. of burials with clan markers	Ratio
1. Northeast	63	1	0.02
2. Central Muskingum	6	1	0.17
3. South–central Scioto	548	75	0.14
4. Southern Scioto	8	1	0.12
5. Southwest Ohio	92	8	0.09

[a] Regions with no clan-marked burials are eliminated.

Clan Names in Ohio Hopewellian Societies

Fifteen possible animal-totemic clans are marked materially in the burials and ceremonial deposits of the Ohio Hopewellian area, by real or effigy power parts or by other artistic representations (Table 8.7). Of these fifteen, nine are most certain, having been marked frequently in burials and sites, and with animal power parts shown above to have probably indicated clan affiliation. The nine clans are Bear, Canine, Feline, Raptor, Raccoon, Elk, Beaver, (nonraptorial) Bird, and Fox.

Opossum may have represented an additional, small clan. Opossum teeth occurred in two regions, in ceremonial caches at the Seip and Turner sites. However, because opossum parts were not found in burials, this possible clan could not be included in subsequent, more detailed sociological analyses. Snake, Turtle, Fish, and Insect were represented only by carvings, not with power parts, were lone occurrences, and were found only in caches. It is thus questionable whether these carvings indicate clans. Only three duck representations were found: one a ceramic pot engraved with a broad-billed duck, paired with a pot engraved with a raptor, and two copper cutouts of a duck's webbed foot with a bird's head appended and associated spatially with a raptor copper plate.[11] These associations are more easily interpreted as symbolism contrasting Upper and Lower World animals (Carr 1998; Penney 1983, 1985) than as duck and raptor clan representations and their relationship, given the

Table 8.7. Animal-Totemic Clans in the Ohio Hopewellian Area and Their Artifactual Markers

Clan	Markers
Bear	Claw, effigy claw (bone), drilled tooth, tooth with pearl, effigy tooth (bone, silver, mica, copper), teeth, effigy paw (copper), jaw, carving
Canine	Jaw, drilled tooth, claw, teeth
Feline	Jaw, teeth, effigy tooth, drilled tooth
Raptor	Claw, effigy claw (mica, copper, bone), carving
Raccoon	Drilled tooth, teeth, penis bone
Elk	Teeth, drilled tooth, effigy tooth
Beaver	Teeth, jaw
Nonraptorial Bird	Carving
Fox	Jaw, drilled tooth
Opossum	Drilled tooth
Snake	Carving
Turtle	Carving
Fish	Carving
Insect	Carving
Duck/Eagle	Carving
Bird/Bear	Carving

lack of any other duck markers by themselves in Ohio Hopewellian graves and ceremonial deposits.

Deer was a very common clan eponym in the historic Woodland tribes (Table 8.1) and might be guessed to have been a clan in Ohio Hopewellian societies. However, firm material evidence is missing. Deer antler tines and teeth, as potentially recognized power part of the species, are not found in Ohio Hopewellian graves or other ceremonial deposits. Astragali, which could have symbolized the swiftness of deer and their kicking when fighting, are found only in one ceremonial deposit and in bulk in Ohio, rather than spread across graves and sites like other animal power parts. In their infrequent occurrence, deer power parts are much out of accord with the popularity of the Deer clan in the historic Woodlands. Six copper deer antler headdresses and one deer antler effigy cutout are known from four graves and one ceremonial deposit in Ohio,[12] but their rarity as well as contextual evidence suggests fairly strongly that animal-effigy headplates were not clan markers (see Note 8). We thus omit Deer from the list of firmly known Ohio Hopewellian clans at this time.

In sum, there is good evidence for at least nine clans in Ohio Hopewellian societies, with a possible tenth. These numbers agree well with the Historic Woodland pattern discussed above, which was 8 to 10 collapsed clan categories, or 9 to 11 actual clans, per tribe.

Hopewellian and Historic Woodland Clan Names Compared

The eponyms proposed for the Ohio Hopewell clans also agree well in their presence–absence and commonality with those known from the Historic period in the Eastern Woodlands (Table 8.8, Note 7). Of the nine clearly identified Ohio Hopewellian clans, only the Fox clan is not represented among the common clans of the Historic Northeastern, Great Lakes–Riverine, and Southeastern tribes; and Fox was the least common clan among Ohio Hopewellian societies. Six of the eight most common Great Lakes–Riverine clans, six of the top eight Northeastern clans, and six of the most frequent eight Southeastern clans are found among the most common eight Ohio Hopewellian clans (i.e., excluding Fox). The one significant difference between Ohio Hopewellian societies and the Historic tribes of the Woodlands is the commonality of the Feline clan (ranked second) among Hopewellian peoples and its infrequency among Historic tribes.

Ohio Hopewellian clans do not clearly resemble the clans of Historic Northeastern tribes more than the clans of Historic Southeastern tribes, or vice versa. In part, this is because the clans of the two areas are not strongly distinct; Historic Northeastern and Southeastern tribes shared three of their four most common clans (Table 8.8). Ohio Hopewellian societies, in excluding snake, alligator, turkey, skunk, and otter from their clan eponyms, are similar to the tribes of the Northeast and distinct from those of the Southeast. Ohio Hopewellian societies are also similar to the Northeastern tribes in having raptor as a common clan eponym, which is less frequent among Southeastern tribes. Also, Ohio Hopewellian societies share three of their four most common clan eponyms with the

Table 8.8. Comparison of Proposed Ohio Hopewellian Clan Eponyms to Clan Eponyms of the Historic Eastern Woodlands[a]

No. of tribes	Clan
Northeast	
14	Canine
13	Bear
13	Deer/Elk/Moose
12	Raptor
9	Nonraptorial Bird
9	Waterfowl
9	Turtle
7	Beaver
4	Raccoon
4	Fish
Southeast	
8	Canine
8	Bear
7	Deer/Elk/Moose
7	Nonraptorial Bird
6	Raccoon
6	Beaver
5	Snake
5	Alligator
4	Turkey
4	Skunk
4	Fish
4	Otter
4	Raptor
Great Lakes–Riverine	
7	Canine
7	Bear
7	Deer/Elk/Moose
7	Raptor
7	Waterfowl
4	Raccoon
4	Turtle
3	Nonraptorial Bird
3	Turkey
3	Beaver
3	Fish
Ohio Hopewell	
68	Bear
20	Canine
15	Feline
11	Raptor
8	Raccoon
6	Elk
5	Beaver
4	Nonraptorial Bird
2	Fox

[a] Historic eponyms are listed in descending order of prevalence. The top nine eponyms, along with all those tying for tenth, are listed. See Note 7 for qualifications regarding the comparability of the historic and prehistoric data.

four most common eponyms of the Northeastern tribes, but only two with the four most common eponyms of the Southeastern tribes. At the same time, comparing the presence–absence and rank-order commonality of Hopewellian clan representations to Historic clan eponyms for each of the Historic Northeastern Woodlands, Historic Great Lakes–Riverine, and Historic Southeastern Woodlands cases, using the Jaccard similarity coefficient and Kendall's *tau-b* (Table 8.5), indicates Ohio Hopewellian clans to have corresponded little more to historic Northeastern clans than to Southeastern clans, or even the reverse—more so to Southeastern clans. A Jaccard similarity between species of Ohio Hopewellian power parts and all Historic clan eponyms is marginally higher for the Great Lakes–Riverine tribes and all Northeastern tribes (54% and 52% correspondence, respectively) than the Southeastern tribes (48% correspondence). Considering only the eight most common Historic clans and all clans tied for ninth place in each of the regions, which eliminates the effect of most impossible matches (see above), the species of Ohio Hopewellian power parts more closely resembles the eponyms of Southeastern clans (64% correspondence) than those of the Great Lakes–Riverine or all Northeastern tribes (57% and 54% correspondence, respectively). This pattern holds more strongly using Kendall's *tau-b*, again considering only the most common historic clans: the correlation is about twice as high between Ohio Hopewellian-represented clans and Southeastern clan eponyms (.484) as between Ohio Hopewellian-represented clans and Great Lakes–Riverine or all Northeastern clan eponyms (.223 and .217, respectively).

The similarity of clan eponyms among Ohio Hopewellian societies to those of both the Historic Northeastern and the Historic Southeastern tribes in the various manners just described is somewhat surprising. Previous researchers have suggested that of the Historic Woodland tribes, the central Algonquian tribes were probably most closely related culturally to Ohio Hopewellian peoples (Callender 1979). A concomitant of this finding is that the form and complexity of Ohio Hopewellian societies may have resulted in part

Table 8.9. Percentage of Burials with Animal-Totemic Clan Representations in the Ohio Hopewellian Area and Its Specific Regions

Clan	All burials ($n = 85$)	%	Region 1: Northeast Ohio ($n = 1$)	Region 2: Muskingum ($n = 1$)	Regions 3 & 4: South–central and southern Scioto ($n = 75$)	Region 5: Southwest Ohio ($n = 8$)
Bear	58	68	1	0	50	7
Canine	17	20	0	1	15	1
Feline	13	15	0	0	13	0
Raptor	9	11	0	0	9	0
Raccoon	7	8	0	0	7	0
Elk	5	6	0	0	5	0
Beaver	4	5	1	0	3	0
Nonraptorial Bird	3	4	0	0	3	0
Fox	2	2	0	0	2	0
Total	118	—	2	1	107	8

from Ohio–Southeastern contact and emulation during the Middle Woodland period more than has previously been supposed.

The Relative Sizes of Clans in Ohio Hopewellian Societies

Here, we attempt to gain some insight into the relative sizes of Ohio Hopewellian clans from the counts of individuals buried with clan markers. Factors other than clan size in life affect clan marker counts and obscure the size of some clans, but a general picture of the relative sizes of most clans can be constructed.

Burials with bear clan markers are far more common than burials with any other kind of clan marker. Bear power parts occur in 68% of all burials with defined clan symbols ($n = 58$ of 85; Table 8.9). In addition, bear clan markers are found in burials in every region examined except one, and that region is sparsely represented by only one burial with a clan marker.

The overwhelming commonality of burials with bear clan markers could indicate the large membership of a bear clan and a great imbalance in the proportions of various clans in Ohio Hopewellian life. However, two situations would suggest otherwise. First, although such imbalances probably occurred among the colonially disturbed societies of the Woodlands (e.g., Callender 1978a:613–615, 1978c:627; Fenton 1978:312; Landy 1978:523; Swanton 1928:122–123), they are more than one would expect in a demographically healthy society with a functioning clan system. Second, bear power parts co-occur frequently in burials with other animal power parts, which one would not expect for symbols that marked only clanship.

An alternative interpretation that is backed empirically in several ways, and that we find more reasonable, is that the presence of a bear power part in a burial not only indicates the buried person's clan membership, but also may reflect the essential participation of a Bear clan in funeral ceremonies. Directly supporting this idea is the Wray figurine (Dragoo and Wray 1964) from the Newark site. It depicts a man in a bearskin costume, or with a bear spirit behind him, with a decapitated head on his lap (see also Carr, Chapter 5). Thus, a bear-associated individual and the realm of death are linked. Also, a natural symbolic tie between the bear and death is found in the bear's habit of hibernating (i.e., apparently dying) in winter (A. Goldberg, personal communication). Further, among the historic Algonquian Menominee, Chippewa, and Cree, at least, the bear was identified with the Lower World because the bear hibernates in dens within the earth (Turff and Carr, Chapter 20; Gill and Sullivan 1992:23). In turn, the Lower World was connected with death, in two ways. The Chippewa believed that a journey through

the Lower World was necessary to reach the Land of the Dead (Barnouw 1977:18–19, 136), and the Iroquois believed it to be the Land of the Dead, itself (Barbeau 1914:290–294). (One or more of these natural associations is implied by the native Western Siberian notion of the bear as a mediator between the living and the dead [Holliman 2001:127]). Finally, the idea that the high frequency of Bear clan markers in Ohio Hopewellian burials reflects the role of Bear clan members in mortuary ceremonialism is indicated in burials with multiple clan animal symbols. In such graves, Bear clan markers co-occur with other clan markers much more often than do any other clan markers.

A third possibility, that bear power parts symbolized a sodality involved in death rites rather than a bear clan involved in such rites, is considered and rejected below (see Leadership Roles Recruited from Specific Clans and Note 21).

The most common clans after the Bear clan are, in order, Canine, Feline, Raptor, Raccoon, Elk, Beaver, Nonraptorial Bird, and Fox (Table 8.9). The five least common clans (Raccoon through Fox) are all represented fairly evenly in the sample, from 4% to 13% of burials with clan markers, excluding Bear. In contrast, the Canine and Feline clans are indicated for 32.1% and 24.5%, respectively, of the burials with clan markers, excluding Bear—from five to eight times more frequent than burials with Nonraptorial Bird and Fox clan markers, and three to four times more frequent than burials with Elk and Beaver clan markers. It is possible that these differentials represent real differences in the sizes of the clans in life. Another possibility, which is not mutually exclusive of the first, is that the different frequencies of burials with clan markers reflect the varying access of persons from different clans to mound burial. The age–sex distributions of the individuals buried in some of the mounds examined here indicate that not all members of some Ohio Hopewellian communities had access to burial within those mounds (see Carr, Chapter 7); perhaps discrimination by clan was an aspect of this selective practice. Finally, the disproportionate commonality of the Canine and Feline clans may also reflect some preference for Canine and Feline clan members to have played certain roles in mortuary ritual and to have left their clan markers in the graves of others, as we have proposed in the case of Bear clan markers. A couple of forms of evidence that the Canine clan had a hand in psychopomp work, like the Bear clan, are presented below, but no analogous support can be found for the Feline clan.

In short, the relative sizes of all the indicated Ohio Hopewellian clans cannot yet be firmly estimated because too many factors are known or suspected to have contributed to the mortuary record of clan markers. However, as a best guess, it would appear that the Raptor, Raccoon, Elk, Beaver, Nonraptorial Bird, and Fox clans were roughly similar in size and were less common than at least the Feline clan, and perhaps the Canine and Bear clans as well. We could not find analogous patterning for the Historic Woodland tribes or, for that matter, evidence that any Historic Woodland clans with particular eponyms were often larger or smaller; the ethnohistoric record is vague about size differentials among clans of a tribe.

The Geographic Distribution of Clans in Ohio Hopewellian Societies

Large differences across the regions of Ohio in the numbers of known burials and ceremonial deposits with clan markers prohibit a fine-grained study of the distribution of clan eponyms over the state. However, within the limits of the sample, there is no evidence for substantial interregional differences in clan eponyms. All of the clan eponyms indicated in sparsely known northeastern Ohio, the central Muskingum drainage, and southwestern Ohio are found in the well documented south–central and southern Scioto valley, using data from both burials and ceremonial deposits (Table 8.10). Nearly all of the clans evidenced in the first three, sparsely sampled regions are among the most common clans found in the well-sampled Scioto valley—as one would expect on a probabilistic basis if clan popularity were similar across regions (Tables 8.9 and 8.10).

Two distinctions may be culturally significant. First is the absence of markers of the Raptor clan in Hopewellian Southwestern Ohio.

Table 8.10. Animal-Totemic Clans Represented in Burials and Ceremonial Deposits in Regions within the Ohio Hopewellian Area

Totemic clan	Region 1: Northeast Ohio	Region 2: Central Muskingum	Regions 3 & 4: South–central and southern Scioto	Region 5: Southwest Ohio
Bear	X		X	X
Canine		X	X	X
Feline			X	X
Raptor			X	
Raccoon			X	X
Elk			X	
Beaver	X		X	
Nonraptorial Bird	X		X	X
Fox			X	X
Number of Burials with clan markers	1	1	75	8
Number of ceremonial deposits with clan markers	1	0	13	1

This situation may indicate the cultural ties of this Hopewellian tradition to those in the Southeast, where the Raptor clan was very uncommon among the Historic tribes. Such a connection is reasonable, in light of the Southeastern cast of Hopewellian assemblages in southwestern Ohio and southwestern Indiana in their ceramics, mound architecture, and settlement within ceremonial centers (Ruby et al., Chapter 4; Keller and Carr, Chapter 11).

The second possibly significant distinction is between northeastern Ohio and the south–central and southern Scioto valley. On a probabilistic basis, one would expect that the clan eponyms indicated for sparsely sampled northeastern Ohio would be the most populous ones. If the relative commonality of clans in northeastern Ohio was similar to that in the Scioto valley, then the clans evidenced for northeastern Ohio should be among the most common of clans in the Scioto valley. Instead, two of the rarer Scioto valley clans—Beaver and Nonraptorial Bird—are documented for northeastern Ohio. This situation may reflect the distinctive commonality of the Beaver and Nonraptorial Bird clans in northeastern Ohio.

Northeastern Ohio also differs from the Scioto valley area and the state-wide pattern generally in having only 2% of its burials marked with clan symbols. In the south–central and southern Scioto valley, the central Muskingum valley, and southwestern Ohio, 9% to 17% of the burials there have clan symbols (Table 8.6). This difference may reflect the peripheral location of northeastern Ohio societies relative to those in the Scioto valley core region of Hopewellian development and the known, sparse participation of northeastern Ohio societies in Hopewellian ceremonialism. (Drainage and routes of communication in northeastern Ohio are north to Lake Erie and to the east rather than to southern Ohio and the Ohio river, where Hopewellian life flourished.) This explanation would hold true if Hopewellian ceremonies were orchestrated through clan lines and if clan affiliation were therefore particularly important to symbolize in the Scioto area but not northeastern Ohio.

Localization of Clans in Scioto Hopewellian Societies

Ohio Hopewellian clans were not expected to be localized to particular communities because no evidence of localization was found among Historic tribes of the Eastern Woodlands, or is found more broadly among tribes cross-culturally (see Localization of Clans, above). To explore the Ohio Hopewellian situation empirically required us to be able to define individual communities within the mortuary record for Ohio and then to

Table 8.11. Clan Markers Present in Burial Clusters under the Seip–Pricer Mound and Hopewell Mound 25[a]

Mound/cluster	Corresponding community (Carr, Chap. 7)	Canine	Feline	Raptor	Raccoon	Beaver	Bird
Seip West	North Fork of Paint Creek	1	3	1	0	1	0
Seip Middle	Main valley of Paint Creek	0	3	0	0	0	0
Seip East	Scioto valley	0	1	0	1	0	0
Hopewell C1	Main valley of Paint Creek? Scioto valley?	2	3	2	1	0	0
Hopewell D1	Scioto valley? Main valley of Paint Creek?	1	1	0	0	1	0
Hopewell E	North Fork of Paint Creek	0	0	1	0	0	3

[a]Cell values indicate number of burials associated with that clan marker. Bear clan markers are excluded from this study, as most.

compare their clan compositions. Fortunately, a study by Carr (Chapter 7) allowed this kind of detailed investigation.

Carr argued that three Hopewellian communities occupied the Central Scioto drainage during the Middle Woodland period. One was centered in the North Fork of Paint Creek, one in the main valley of Paint Creek, and one in the adjacent section the main Scioto valley. The three communities buried some of their dead together under each of three large mounds, one in each community, as a part of efforts to build and express an alliance between them—a society in formation. The three mounds are the Pricer mound in the Seip Earthwork, Mound 25 of the Hopewellian earthwork, and the Edwin Harness mound of the Liberty earthwork. At each of these sites, the different communities buried their dead in different spatial clusters of burials, which corresponded to different rooms of a single charnel house (Pricer, Harness) or to different charnel structures (Hopewell).

The issue of clan localization can be addressed using this archaeological layout of community cemeteries. If Ohio Hopewellian clans were not localized within a society, then the clan markers located in each of the three clusters at each of Hopewell, Seip–Pricer, and Edwin Harness should be largely the same. If clans were localized, then clan markers should vary among burial clusters within a mound, and each burial cluster in one mound should correspond closely in its restricted clan composition to that of another burial cluster in the other two mounds.

Data to compare against these test implications are sparse. Intrasite locational data for burials and clan marker do not exist for Edwin Harness, leaving only the burial clusters under Hopewell 25 and Seip–Pricer to analyze. In these two mounds, a total of 55 burials with clan markers was excavated, but only 26 had a clan marker other than Bear. The clans other than Bear represented are Raptor, Feline, Canine, Raccoon, Beaver, and Bird (Table 8.11). A chi-square test of the data, comparing all six clusters to all six present clans, suggests that the clans are differentially distributed among the clusters ($p = .074$, $df = 25$); i.e., there is some tendency toward clan localization. Because the table cell frequencies in this test are low and do not ensure reliability, the information statistic, $2\hat{I}$ (Kullback et al. 1962), was also calculated. It produced a corroborating but somewhat weaker result ($2\hat{I} = 32.44$, $p = .146$, $df = 25$).

Spatial patterning of the markers of specific clans within mounds tends to support the idea that clans were neither fully localized nor fully dispersed across communities. At Hopewell, where more clan markers were buried, symbols of the Canine, Feline, and Raptor clans each occur in two clusters (i.e., communities) rather than all three, suggesting their incomplete dispersion among communities, i.e., some clan localization. These clans are the more populous, or more frequently marked regionally, and ones for which archaeological patterning can be expected to be most stable. Symbols of Raccoon, Beaver, and Other Bird clans occur in only one cluster each at Hopewell. This pattern could reflect their localization. However, because these clans are less populous or were marked less frequently regionally, the pattern may simply result from sampling error.

The Seip–Pricer mound exhibits a similar pattern but in a degenerate form, owing to the fewer clan markers buried there. Symbols

of the Feline clan—a populous or well-marked one regionally—occur in all three clusters, suggesting their full dispersion among communities. However, symbols of the Canine and Raptor clans, which were also populous or well marked regionally, occur in only one burial cluster each, suggesting clan localization. The single-cluster distributions of symbols of the less populous or less well-marked Raccoon and Beaver clans could suggest either their localization or sampling error. In all, within-mound patterning at Hopewell and Seip suggest some dispersion and some localization of clans.

Patterning between mounds does not evidence clan localization. Based on the overall material richness of each of the burial clusters at Hopewell 25 and Seip–Pricer, and the overall richness of each of Hopewell 25, Seip–Pricer, and Edwin Harness, Carr (Chapter 7) concluded that members of the community centered on the North Fork of Paint Creek were buried in both the West Cluster at Seip–Pricer and Cluster E at Hopewell 25. However, the clan compositions of these two burial clusters are not limited to the same few clans, as one would expect with clan localization and with the two clusters representing the same community (Table 8.11).[13]

From the above mixed results, it can be concluded that clans in the central Scioto region were localized to some degree. However, patterning is not strong enough to have resulted from institutionalized practices. Rather, the distributions of clan markers among burial clusters could simply reflect natural variation in clan populations in the three communities and, possibly, variation in the frequency of marriage exchanges among the three communities. This reconstruction for Hopewellian societies in the central Scioto fits well with the lack of clan localization found among the historic tribes of the Eastern Woodlands and more broadly.

Division of Social Tasks and Roles among Clans in Ohio Hopewellian Societies

The topic of which social roles were filled by which clans was addressed by finding associations between artifact indicators of specific roles and symbols of clan membership buried in graves. Two kinds of analyses were performed. The first examined a wide array of roles—both leadership roles and others—using 52 artifact classes. The roles and their indicative artifact classes are listed in Appendix 8.3. The artifact classes linked to the roles are a subset of those defined by Carr et al. (Chapter 13; Appendix 13.2) and include only those classes found with clan markers. Associations were sought here at a general level between roles, as indicated by one or more artifact classes, and clan markers. Associations between specific artifact classes and clan markers were not explored. The second analysis focused more narrowly on leadership roles using a finer-grained and somewhat different array of artifact classes. Here, associations were sought between particular artifact classes and clan markers, as well as between sets of artifacts indicating one role and clan markers. The roles, artifact classes, and sets of artifact classes are defined and listed by Carr and Case in Chapter 5 (Tables 5.4 and 5.5). The first analysis has the beauty of working fairly directly and simply with the mortuary data, but does not explore multivariate patterns of association among artifact classes. The second analysis does provide a multivariate perspective, but also is technically more opaque.

In both kinds of analyses, associations between bear power parts and artifact classes reflecting other roles were not interpreted as members of a bear clan fulfilling those other roles, for reasons given above (see Relative Sizes of Hopewellian Clans). In addition, because the number of burials with clan markers is small for most clans, it is possible to document only the roles filled by clans, not the roles absent from a clan's repertoire.

Finally, in considering the issue of recruitment to roles of leadership or other social importance, it should be remembered that whether or not clan affiliation influenced recruitment, importance in one's clan was an essential foundation for rising to other key social positions. Those buried with clan markers were probably the heads of local residential and kin units of the kind identified by Pacheco (1993, 1997). Most were adult (90%; $n = 30$), were male (86%; $n = 15$), and held positions of importance (70%; $n = 53$; Table 8.12, below)—excluding burials

with Bear clan markers, which may not indicate the clan affiliation of the deceased (see Relative Sizes of Hopewellian Clans, above).

Social Roles Recruited from Specific Clans

The distribution of social roles of 6 general categories and 16 specific categories among deceased persons having various clan markers, other than Bear, is summarized in Table 8.12. The social role(s) of a deceased person is defined by the presence in a grave of one or more of the artifact classes that indicate those roles, shown in Appendix 8.3. The frequency with which one clan versus another filled a given social role can be compared in Table 8.12 using the absolute counts of burials of each clan that had markers of the role or the percentages of burials of each clan that had markers of the role. Using counts assumes that all clans had equal access to burial in the cemeteries examined. This seems unlikely, given the fairly large differences in the grave counts of certain clans and evidence for the differential access of at least some age and sex categories to burial in some mounds (see Relative Sizes of Hopewellian Clans, above; Carr, Chapter 7). Using the percentage of burials of each clan that had markers of a role in order to estimate the relative commonality with which clans filled that role corrects for the possible bias of differential access to mound burial and seems preferable to us.

In order to look for the strongest patterns of differential distribution of roles among clans, two tabulations were made. First, in Table 8.12, all clans having a social role indicated in 50% or more of the burials with their clan markers were highlighted in boldface. This information reveals the social roles that a given clan filled most frequently and which clans filled which roles most frequently, under the assumptions cited immediately above. Second, all cells of clan–role associations in Table 8.12, measured as the percentages of burials with a given kind of clan marker having artifact indicators of a given social role, were compared to "expectable" percentages assuming a random distribution of roles among clans. Expectable percentages were calculated from the marginal totals in Table 8.12. Then clan–role associations that were 50% more or less frequent than their expected percentages *and* that involved at least two burial counts above or below the expected (Appendix 8.4) were recorded. These are shown in Table 8.13 as boldface cell values. Weaker associations are shown without bolding.[14] The requirement of a difference from expectation by at least two burial counts ensured that unstable, high percentage deviations resulting from extremely small sample sizes would not make their way into the recorded patterns. Cells in Table 8.13 with positive deviations from expectation reveal clans whose members filled given social roles much more often than average. Cells with negative deviations show clans whose members filled particular social roles much less often than average. The patterns summarized in Table 8.13 are the strongest ones found in Table 8.12 but are not exhaustive.

Examining the distribution of the six general categories of social roles among clan-marked burials (Table 8.12) shows that almost all clans filled one form or another of each general category of roles at least occasionally: shamanic roles, unknown important roles that were not shamanic, community-wide leadership positions, sodality positions, and prestigious and mundane personal roles. At this coarse level of division of social duties, there is no evidence for full clan specialization. However, two clans appear not to have been included in the filling of certain important roles, showing limited restriction on role distribution among clans. The Fox clan shows no evidence of having held central shamanic roles and community-wide leadership roles, though the few number of Fox burials may explain this lack. The Elk clan apparently did not fill key nonshamanic roles, community-wide leadership positions, and positions of sodality achievement or membership.

Considering the frequency with which given clans fulfilled general categories of social tasks (Table 8.12) provides a picture similar to the presence–absence associations just described. Most clans, except Fox and Elk, frequently filled most general categories of social roles. However, community-wide leadership roles were filled less frequently by members of the Canine, Feline, and Raptor clans, as well as the Elk and Fox

Table 8.12. Frequencies and Distributions of Social Roles among Clans

Social role	All clans (excludes Bear) ($n = 53$)	%	Canine ($n = 17$)	%	Feline ($n = 13$)	%	Raptor ($n = 9$)	%	Raccoon ($n = 7$)	%	Elk ($n = 5$)	%	Beaver ($n = 4$)	%	Nonraptorial Bird ($n = 3$)	%	Fox ($n = 2$)	%
Shamanic roles	31	**59**	10	**59**	9	**69**	7	**78**	5	**71**	2	40	3	**75**	3	100	0	0
War or hunt divination	13	25	7	41	1	8	4	44	4	**57**	1	20	2	**50**	1	33	0	0
Other divination	9	17	4	24	0	0	3	33	4	**57**	1	20	0	0	1	33	0	0
Public ceremonial leader	12	23	3	18	3	23	3	33	0	0	0	0	2	**50**	3	100	0	0
Psychopomp	9	17	5	29	1	8	0	0	5	**71**	2	40	0	0	0	0	0	0
Philosopher	5	9	0	0	1	8	2	22	0	0	0	0	0	0	2	67	0	0
Trancing/ceremony	7	13	3	18	2	15	3	33	0	0	0	0	1	25	0	0	0	0
Shamanic equipment	11	21	4	24	3	23	1	11	4	**57**	1	20	0	0	2	67	0	0
Important nonshamanic roles	29	**54**	9	**53**	10	**77**	7	**78**	5	**71**	0	0	2	**50**	3	100	1	50
Crescents	1	2	1	6	0	0	1	11	0	0	0	0	1	25	0	0	0	0
Reel-shaped gorgets	1	2	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trophy skulls, jaws, fingers, hands	4	8	0	0	2	15	1	11	1	14	0	0	0	0	0	0	0	0
Community-wide leadership	16	30	6	35	4	31	4	44	4	**57**	0	0	2	**50**	3	100	0	0
Headplates	9	17	5	29	2	15	1	11	4	**57**	0	0	1	25	1	33	0	0
Celts	7	13	1	6	2	15	3	33	0	0	0	0	1	25	2	67	0	0
Sodalities	25	47	9	**53**	9	**69**	6	**67**	4	**57**	0	0	2	**50**	2	67	1	**50**
Breastplates	18	34	7	41	7	**54**	3	33	4	**57**	0	0	2	**50**	2	67	0	0
Earspools	18	34	5	29	8	**62**	5	**56**	0	0	0	0	2	**50**	1	33	1	**50**
Prestige personal roles	32	**60**	12	**71**	8	**62**	7	**78**	5	**71**	3	**60**	4	**100**	3	100	0	0
Metal	17	32	9	**53**	1	8	2	22	4	**57**	3	**60**	2	**50**	3	100	0	0
Nonmetal	26	49	9	**53**	8	**62**	6	**67**	5	**71**	2	40	3	**75**	1	33	0	0
Ordinary personal roles	16	30	6	35	3	23	3	33	2	29	1	20	2	**50**	0	0	1	50

Table 8.13. Significant Clan–Role Associations

	Type of association[a]							
Social roles	**Canine**	**Feline**	**Raptor**	**Raccoon**	**Elk**	**Beaver**	**Nonraptorial Bird**	**Fox**
Shamanic roles	P	P	P	P		P	P	
War or hunt divination	**P**	**N**	**P**	**P**		P		
Other divination		**N**		**P**				
Public ceremonial leader				**N**		P	**P**	
Psychopomp	**P**		**N**	**P**				
Philosopher	**N**						**P**	
Trancing/ceremony			**P**					
Shamanic equipment				**P**			P	
Important nonshamanic roles	N	P	P	P	**N**	N	P	
Crescents						P		
Reel-shaped gorgets	P							
Trophy skulls, jaws, fingers, hands		P	P	P				
Community-wide leadership				**P**	**N**	P	**P**	
Headplates	P			**P**			P	
Celts			**P**				**P**	
Sodalities	P	P	P	P	**N**	P	P	P
Breastplates		**P**		**P**	**N**	P	P	
Earspools		**P**	**P**	**N**	**N**	P		P
Prestige personal roles	P	P	P	P	N	P	P	
Metal	**P**	**N**		**P**	P	**P**	P	
Nonmetal	P	P	P	P		P		
Ordinary personal roles						P		P
Total number of roles frequently filled:								
General categories 1–3	3	0	3	5	0	2	4	0
General categories 1–4	3	2	4	6	0	4	5	0

Note: Bold entries changed by more than 50% *and* by at least two burials.
[a]P—positive association based on expected and actual cell frequencies in Table 8.12. N—Negative association based on expected and actual cell frequencies in Table 8.12.

clans (<50% of the burials of a clan). Raccoon, Nonraptorial Bird, and Beaver clanpersons filled community-wide leadership roles more often (≥50% of the burials of a clan).

At the level of specific roles within the broader categories, several patterns emerge that are understandable in light of ethnohistoric and/or symbolic considerations. Here we use the conservative Table 8.13. War or hunt diviners were frequently recruited from the Canine, Raptor, Raccoon, and Beaver clans. These clan eponyms are sensible for war or hunt-related divination. Both canines (typically, the wolf) and raptors are predatory. The Wolf clan led the war party among the Shawnee (Callender 1978c:627), a reasonable position for those charged with gathering information. The Winnebago Hawk clan was also specially charged with warfare (Lurie 1978:693). The association of the Raccoon clan with the arena of death is expectable, given the nocturnal nature of the raccoon, its apparent symbolic association in part with warfare in the Mississippian society of Spiro, Oklahoma (Phillips and Brown 1978:154), and its association in the Historic Northeast with trickery (Gill and Sullivan 1992:19, 253). In addition, the raccoon is a night animal capable of seeing through darkness, making it a natural symbol of the diviner, who sees through the darkness of the present into the future (Harner 1980:28)

On the other hand, the Feline clan has significantly *fewer* war or hunt diviners than

expected. This is contrary to ethnohistoric patterns among the Shawnee, where a member of the Great Lynx clan held the office of war chief (Callender 1978c:627). Also, the Panther clan among the Creeks was usually part of the People of a Different Speech division responsible for warfare (Swanton 1928:167). Perhaps the Feline clan in Ohio Hopewellian societies was associated with warfare or the hunt, but not with war or hunt divination specifically. The three clans that have members who were buried with human skeletal parts that possibly were war trophies (Seeman 1988; but see Johnston [2002] regarding specifically trophy skulls and jaws) are the Feline, Raptor, and Raccoon clans.

The role of body processor/psychopomp, like the role of war or hunt diviner, was frequently recruited from the Canine and Raccoon clans. This is understandable, since both roles deal closely with death. In addition, the association of the Canine clan with psychopomp work may be represented in one of the large Copena-style effigy pipes from the pipe cache above the Great Multiple Burial in the Seip–Pricer mound. The pipe depicts a dog eating a decapitated human head held between his front paws (Shetrone and Greenman 1931:416, 418). One to three of the other five effigy pipes in this ceremonial deposit also potentially have connotations of psychopomp work and death, supporting our interpretation of the canine effigy pipe and the role of the Canine clan in psychopomp work.[15] The lack of any evidence that Raptor clan members were psychopomps is puzzling, given the potential role of raptors in defleshing corpses placed on scaffolds.

Other divination activities using mica mirrors, cones, hemispheres, and/or boatstones are indicated in an unexpectedly high frequency of graves having Raccoon clan markers. The raccoon's ability to see through the night, logically associating it with divination, has been mentioned above.

Trancing and other ceremonial equipment is found more frequently than expected in only graves bearing Raptor clan markers. This association makes sense, given the connection in shamanic practice between trancing, the experience of soul flight, and the experiencing of that flight as becoming a bird (Eliade 1964:4–5; Harner 1980:26). It is reasonable that a clan associated with birds is specially connected to this practice. Why the Nonraptorial Bird clan is not similarly associated with trancing is unclear; however, in many Woodland tribes, the eagle raptor is the paramount bird, flying higher and "closer to the divine" than any other bird (Grant 1994:119; Hudson 1976:129, 164; Mails 1978:149) and serving as a conduit between the divine and humans in prayer (Mails 1978: 99–100).[16]

The roles of both shamanic public ceremonial leader and shamanic philosopher are associated strongly with only the Nonraptorial Bird clan. Mica and copper geometrics in cosmological shapes, which indicate the shamanic philosopher materially, are also forms that may have decorated public ceremonial clothing (Greber and Ruhl 1989). Thus, it is not surprising that both roles are associated with the same clan. In addition, the tie of a bird clan to the role of cosmologist–philosopher has a natural logic—birds in flight have a grand view of the cosmos and its layout and come closest of all animals to the divine as a source of knowledge (see references above).

Community-wide leadership markers in the form of headplates were found at unexpectedly high frequencies with members of the Canine and Raccoon clans. In contrast, members of the Raptor and Nonraptorial Bird clans filled the community-wide leadership role marked by metallic celts at greater frequencies than expected. Thus, the strong mortuary pattern found across Ohio Hopewellian societies, where headplates and celts almost never were buried together in the same grave (Carr, Chapter 7),[17] extends to a dichotomized clan association with these artifacts.

It is unclear whether this crisp division of roles and the analogous division of the clans that filled them reflects a distinction between war chiefs represented by celts and peace chiefs represented by headplates. Supporting this inference is the ethnohistoric association of raptors with warfare and the archaeological association of the Hopewellian Raptor clan with war or hunt divination, as discussed above. In addition,

trophy heads and axes (celts) were paired in Mississippian iconography in the Douglass gorget and the Wilbanks monolithic ax, suggesting a strong connection between axes and warfare (Phillips and Brown 1978:177, 193). Trophy heads and axes were also coupled in Historic Woodland practice (Feest 1978:259, Goddard 1978:227). Further, among the Kickapoo, the peace chief's speaker was drawn from the Raccoon clan (Callender et al. 1978:661). This may suggest an earlier period when the Raccoon clan had frequent access to peace chief positions. At the same time, running against the grain of the archaeological patterning found here is the practice of the Historic Kickapoo and Winnebago of drawing their paramount peace chiefs from clans with bird eponyms (Callender et al. 1978:661; Lurie 1978:693). Moreover, archaeologically, metallic celts do not co-occur with trophy skulls, fingers, or hands, as possible symbols of war achievement, in more than a few graves in Hopewellian sites across Ohio (see Carr and Case, Chapter 5, Table 5.5). This situation would cast doubt on the identification of metallic celts as representations of warfare and leadership in warfare.

Trophy skulls, jaws, fingers, and hands, which by their nature suggest achievement as a warrior as one possible interpretation, are not found in percentages of burials significantly above or below expectation for any clan, but on a presence–absence basis, are limited to the Feline, Raccoon, and Raptor clans. Accordingly, the Raccoon and Raptor clans were also found significantly associated with war or hunt divination (see above), and all three clans were associated with warfare in the Historic or Mississippian periods of the Eastern Woodlands.

Sodality positions of achievement or membership, indicated by breastplates and earspools (Carr, Chapter 7), were occupied by persons of many different clans. This finding is reasonable because, by definition, the members of a sodality may be recruited from multiple kinship and residence groups across a society (Service 1971:105–106).[18] Apparently only the Elk clan did not have members who participated in one or both of the sodalities. This situation follows the archaeological pattern for Elk clanpersons to seldom have taken on important shamanic roles and, apparently, never to have occupied important nonshamanic roles and community-wide leadership positions marked by headplates and celts. The generally scarce recruitment of Elk clanpersons into positions of social importance is surprising compared to the moderately common occurrence of Elk clans historically among Northeastern and Great Lakes–Riverine tribes.

In all, the 14 roles of leadership or importance tracked in this analysis, including shamanic, nonshamanic, and community-wide roles and sodality achievement or membership (Table 8.12), were well distributed across many clans rather than concentrated in the hands of a few. However, not all clans had equal access to these roles of importance, and some clans seldom or never attained them. Members of the Raccoon clan held the greatest diversity of important positions (six) with frequency, followed by members of the Nonraptorial Bird, Raptor, Beaver, and Canine clans (five, four, four, and three positions, respectively). Members of the Feline, Elk, and Fox clans never held any of the positions frequently, and the Fox clan apparently never held most of them at all (Tables 8.12, 8.13).

The importance of the social roles that a clan frequently held correlates with the number of important roles that the clan frequently held and, perhaps, was determined by the scope of the clan's secured power base. Community-wide leadership positions were held frequently only by those clans that frequently filled three or more of the leadership or other important positions documented in this study. The clans are the Raccoon, Nonraptorial Bird, Raptor, and Canine clans. Similarly, public ceremonial leaders and shamanic philosophers who wore clothes decorated with large copper and mica geometrics intended for a large audience were drawn from only the Bird clan, which frequently filled five leadership or other important roles. Finally, diviners of warfare and/or the hunt were recruited frequently from only those clans that frequently held three or more important positions: the Raccoon, Raptor, Beaver, and Canine clans.

In contrast, clan size, to the extent that it is understood (see above), does not appear to have been essential to whether a clan regularly attained

the most important of social roles documented here. The apparently large Feline clan did not frequently fill the positions of community-wide leadership, public ceremonial leader, shamanic philosopher, or war or hunt diviner, while the apparently smaller Raccoon, Nonraptorial Bird, and Raptor clans did (Table 8.13).

Leadership Roles Recruited from Specific Clans

In order to shed further light on the particular clans from which leaders and other important personae in Ohio Hopewellian societies were recruited, a second, finer-grained analysis was undertaken. The study is an extension of the multivariate role analysis performed by Carr and Case (Chapter 5), and uses their more detailed classification of leadership and other important social roles.[19]

Carr and Case documented quantitatively the patterns of association and dissociation among artifact classes that marked leadership or other important social roles. The study included 767 burials within 57 mounds at 15 ceremonial centers, both large and small, in northeastern Ohio, the south–central Scioto valley, and southwestern Ohio. The artifact patterns revealed 13 sets of artifact classes and 8 independent artifact classes that could be interpreted as social roles or bundles of roles pertinent to leadership and other important positions in Ohio Hopewellian societies (Table 8.14). The mathematical grouping procedures used to define the sets of artifact classes/roles involved calculating Jaccard similarity coefficients among all pairs of socially relevant artifact classes, then grouping the artifact classes based on their Jaccard relationships using ordinal-scale multidimensional scaling procedures and hand examination of the Jaccard matrix, itself. The details of the procedures are given in Chapter 5, Note 25.

To extend the analysis to the recruitment of clan members into important social roles, Jaccard coefficients of similarity were again calculated, this time between each kind of clan marker defined above and each of the artifact classes in the 13 roles or role sets and the 8 independent artifact classes. The same 767 burials as those analyzed by Carr and Case were examined for patterns of association and dissociation among clan markers and artifact classes. A clan marker that strongly associated in burials with the artifact classes in a role or role set was interpreted as the recruitment of members of that clan into a social position having that role or set of roles. Clan markers that occurred repeatedly with particular symbols of leadership and importance (Jaccard coefficient, >0.1) are shown in boldface in Table 8.14 and provide the most reliable relationships for social reconstruction.[20] Other clan markers that occurred less frequently with markers of leadership and importance are also listed, in normal font. However, it cannot be determined whether these latter co-occurrences indicate relevant instances of recruitment of leaders and other important social personae from particular clans or, instead, instances of occasional gifts (either clan markers or markers of leadership and importance or both) given to the deceased.

Examining the most reliable, bolded relationships in Table 8.14, supplemented by the remainder, reveals four significant social patterns. In defining these patterns, Bear clan markers have largely been excluded from consideration, as in the previous studies.

First, certain roles of leadership and importance were filled repeatedly by a small number of clans. One of the strongest patterns was for healers and those who apparently sent or sucked power intrusions (Role Set 10) to have been recruited from the Raptor and Beaver clans and, secondarily, from the Canine clan. Additionally, the Feline clan sometimes provided healers who used sucking or blowing tubes (Role Set 9). Another strong pattern was the filling of the positions of war or hunt diviner, other diviners, and nonshamanic(?) public ceremonial leaders (Role Set 6) with members of the Canine and Raccoon clans. The roles of body processor and possibly psychopomp (Role Set 8) were also consistently filled by these two clans. The association of the Canine and Raccoon clans with both war or hunt divination and psychopomp work, which relate to death, was found in the above univariate analysis and is discussed there for its ethnohistoric and other prehistoric analogs. The role of shamanic public ceremonial leader (Role Set 1)

Table 8.14. Global Organization of Roles and Associated Clan Markers at 15 Ohio Hopewellian Ceremonial Centers[a]

Role sets and artifact classes	Clan markers[b]
Role Set 1: Shamanic public ceremonial leadership	
Headplate, copper with shamanic-animal referents	**Nonraptor**, canine, bear
Cutout, copper with shamanic-cosmos symbolism (shared)	**Nonraptor**, feline, bear
Cutout, copper and mica with unknown symbolism	**Feline**, raptor, beaver, bear
Baton of bone, antler, or copper (shared)	**Nonraptor**, bear
Iron, raw (shared)	**Nonraptor**, bear
Silver, raw	**Nonraptor**, bear
Copper, raw (shared)	**Canine**, bear
Role Set 2: Nonshamanic (?) public ceremonial leadership	
Headplate, copper, without shamanic-animal referents	**Canine, raccoon**, feline, deer, beaver, bear
Baton of bone, antler, or copper (shared)	**Nonraptor**, bear
Celt, stone	**Feline, nonraptor**, beaver, bear
Cutout, copper with shamanic-cosmos symbolism (shared)	**Nonraptor**, feline, bear
Iron, raw (shared)	**Nonraptor**, bear
Silver, raw	**Nonraptor**, bear
Copper, raw (shared)	**Canine, nonraptor**, bear
Role Set 3: Ceremonial leadership	
Conch shell	Raptor, feline, canine, beaver, bear
Spoon, shell	None
Role Set 4: Sodality achievement and nonshamanic leadership recruitment	
Breastplate, copper	**Bear**, raptor, feline, canine, raccoon, beaver, nonraptor
Earspool, copper, placed elsewhere than in hand	Raptor, canine, beaver, bear
Celt of copper or iron	**Bear**, feline, raccoon
Conch shell	None
Role Set 5: Sodality and war (?) achievement	
Breastplate, copper	**Bear**, raptor, feline, canine, raccoon, beaver, nonraptor
Earspool, copper, placed in the hands	Raptor, canine, beaver, bear
Trophy jaw or skull, human	**Bear**, feline, raccoon
Prismatic blade, gem (shared)	None
Role Set 6: War or hunt divination or sending or pulling power intrusions, other divination, and nonshamanic (?) public ceremonial leadership	
Biface, obsidian	**Canine, raccoon**, elk, bear
Biface, quartz or gem (shared)	**Canine, raccoon**, beaver, bear
Galena, raw	Raptor, canine, raccoon, bear
Mica sheet	Raptor, canine, elk, raccoon, bear
Shark tooth	**Canine, raccoon**, bear
Headplate, copper, without shamanic-animal referents	**Canine, raccoon**, feline, deer, beaver, bear
Copper, raw (shared)	**Canine**, bear
Pyrite, raw (from analysis of caches)	?
Owl effigy (from analysis of caches)	?
Marble (from analysis of caches)	?
Role Set 7: Divination	
Boatstones, any material	**Nonraptor**
Cones and hemispheres, any material	**Nonraptor**, bear
Barracuda jaw	Bear
Crescent, copper (shared)	**Raptor**, canine, beaver, bear
Nose insert, copper	Bear
Ornament, tortoise shell	**Feline, bear**

(*Continued*)

Table 8.14. (*continued*)

Role sets and artifact classes	Clan markers[b]
Buttons, copper	Canine, elk, bear
Cup, quartz (from analysis of caches)	?
Owl effigy (from analysis of caches)	?
Marble (from analysis of caches)	?
Role Set 8: Body processor and possibly psychopomp	
Awl	**Canine, raccoon**, feline, elk, bear
Pipe, small	**Canine, raccoon**, raptor, feline, elk, bear
Role Set 9: Healing, sucking energies, and possibly sending energies	
Tube, function unknown	Feline, bear
Alligator teeth	**Elk**, feline, bear
Role Set 10: Healing, and sending and/or removing power intrusions	
Fancy points, copper, mica, or schist	**Raptor, beaver**, canine, feline, bear
Panpipe	**Raptor, canine**, beaver, bear
Crescent (shared)	**Raptor**, canine, beaver, bear
Tortoise shell, raw	**Raptor, beaver**
Plummet (from analysis of caches)	?
Role Set 11: Shamanic leadership: philosophy, divination, and war achievement (?)	
Cutout, copper with shamanic-cosmos symbolism (shared)	Feline, bear
Cutout, mica with shamanic-cosmos symbolism (shared)	**Raptor**
Cones and hemispheres, any material (shared)	Bear
Trophy parts, effigy human finger or hand, of mica, copper, or stone	**Raptor, deer**, bear
Role Set 12: Unknown role	
Painting equipment (cup, pestle, ochre, grinder) and/or tablet of stone	Feline, bear
Pottery, fancy surface treatment and decoration	None
Role Set 13: Divination (?)	
Balls, copper	None
Prismatic blade, gem (shared)	None
Independently distributed artifact classes	
Reel-shaped gorgets	None
Flute	None
Pebbles, quartz and colored	None
Fossils and concretions	None
Points, translucent but not quartz or gem	None
Prismatic blade, obsidian	None
Obsidian, raw	None
Fan of feathers, effigy of copper or stone	None

[a] The 15 ceremonial centers and 57 of their mounds upon which the analysis is based are Ater; Bourneville; Circleville; Esch Mounds 1 and 2; Hopewell Mounds 2, 3, 4, 7, 8, 11, 16, 18, 19, 20, 23, 24, 25, 26, 27, 29, and 30; Liberty's Edwin Harness Mound and Russell Brown Mounds 1, 2, and 3; McKenzie Mounds A, B, and C; Mound City Mounds 1, 2, 3, 7, 8, 9, 10, 12, 13, 15, 18, 20, 23, and 24; North Benton; Rockhold Mounds 1, 2, and 3; Seip–Pricer; Shilder; Tremper; Turner Mounds 1, 2, 3, 11, 12, Enclosure, and Turner–Marriot; and West.

[b] Clan markers in boldface are those that occurred in repeated association with particular markers of leadership and importance (Jaccard coefficient ≥ 0.1). Clan markers in normal font occurred less frequently with markers of leadership and importance. Bear power parts may mark membership in a sodality, or a mortuary duty of the Bear clan and "gifted" bear power parts, rather than clan affiliation of the deceased, given their very widespread distribution among burials compared to the distribution of the power parts of other animal species.

was often filled by the Nonraptorial Bird clan and secondarily by the Feline and Canine clans. Nonshamanic public ceremonial leaders (Role Set 2) were also frequently recruited from the Nonraptorial Bird clan and secondarily from the Feline and Canine clans, but also the Raccoon clan. In the univariate analysis above, headplates, which are a part of the public ceremonial leader role sets defined here, were likewise found to be associated with canine and raccoon power parts. Shamanic leadership in the arenas of philosophy and divination (Role Set 11) was commonly tied to the Raptor clan and, secondarily, to the Elk clan, while other forms of divination (Role Set 7) were associated with both the Raptor and the Nonraptorial Bird clans and, also, the Feline clan.

The two sodalities marked by breastplates and earspools (see Carr, Chapter 7) were found to associate with a wide diversity of clans, as one would expect. Only the Elk clan shows no indication of having participated in the two sodalities, as was the case in the univariate analysis, above. However, if bear power parts are brought into consideration, the two sodalities do have regular associations with bear. This may indicate the critical role played by Bear clan members in the two sodalities and/or the dominance of Bear clanpersons in their membership.[21]

A second social pattern found in Table 8.14 is that while personnel for some roles of leadership and importance were recruited from a limited set of clans, other critical roles were open to a wider number of clans. These roles include nonshamanic(?) public ceremonial leader (Role Set 2), ceremonial leadership (Role Set 3), and war achievement (Role Set 5).

Third, no roles of leadership or importance were recruited from only one clan. No single clan dominated any given critical sector of the sociopolitical theater. This situation would also imply that no roles of leadership or importance were inherited along lineage lines, if clan membership was assigned by birth family.

Finally, whether considering only the most reliable relationships between clans and roles of importance or also the weaker co-occurrences in Table 8.14, members of three clans filled the greatest number of important roles most often in Ohio Hopewellian societies. These clans are Feline, Canine, and Raptor. Secondary success in filling important roles was had by members of the Raccoon and Beaver clans. In contrast, Elk and Fox clan members appear to have seldom or never filled social roles of importance in Ohio Hopewellian societies. The specific frequencies with which given clans filled given roles cannot be stated firmly, given uncertainty in the cases of weak patterning (Jaccard coefficients ≤ 0.1) whether clan markers and/or symbols of leadership and importance belonged to the deceased or were gifts to the deceased.[22] These results of multivariate analysis differ to some extent from the patterns found univariately, above.

The overall pattern found here univariately and multivariately—of some but not full restriction in the access of clans to leadership or other important positions—is consitent with social patterning in the Historic Eastern Woodlands tribes. Although leadership roles were frequently assigned to members of clans with particular eponyms, members of other clans were seldom completely forbidden from filling those roles. For example, the peace chief of the Fox tribe was traditionally drawn from a particular lineage within the Bear clan, but the tribal council was empowered to change the lineage or clan if there were no candidates in the appropriate group (Callender 1978b:640). Similarly, although Creek chiefs were usually drawn from particular clans, council decisions were capable of changing which clan (Swanton 1928:162–164).

Leadership Recruitment in Crosscultural Comparison

Our finding that Ohio Hopewellian shamanic and shaman-like leadership roles were each filled by members of multiple clans instead of only one clan or most clans is consistent with what is known about the nature of Ohio Hopewellian leadership relative to crosscultural patterns in leadership. Ohio Hopewell societies were characterized by powerful, specialized kinds of shaman-like, magicoreligious practitioners, such as war or hunt diviners, healers, and body processors, that had differentiated earlier from the generalized, classic shaman position. Formal priests or chief-priests in the classic sense (Earle 1997; Peebles and Kus 1977; Service 1962) appear

to have just begun to have emerged at the end of the Ohio Middle Woodland period, shared power with shaman-like leaders, and had not yet overshadowed them politically (Carr and Case, Chapter 5). In a world-wide, crosscultural Human Relations Area Files survey of magicoreligious practitioners, Winkelman (1992:69, 71) found that in such social situations having differentiated, shaman-like leadership roles but lacking powerful priests or priest-chiefs, recruitment into the shaman-like positions is seldom based on inheritance within clans—the pattern found here. In contrast, in societies having strong priests or priest-chiefs and shaman-like practitioners of diminished power, recruitment into shaman-like roles is based on clan. Thus, the clan-leadership role associations documented here make sense in a broad, crosscultural perspective as well as compared to the specific, ethnohistorical record for the Eastern Woodlands.

Clan Wealth, Networking, and Size as Bases for Societal Leadership in Ohio Hopewellian Societies

A critical question to ask about any society is the nature of the power base of its leaders. General anthropology offers at least four models of the basis of leadership in middle-range societies. Economic advantages (Sahlins 1968, 1972), demographic advantages (Chagnon 1979), spiritual talents (Netting 1972), and strategic positioning and promotion of minor, specialized leaders to major, more general ones during times of social stress (Flannery 1972) have each been suggested as the bases from which leaders derive power and consolidate their roles. To these can be added achievement within sodalities, which offer a person an opportunity to network with individuals from multiple kinship and residence groups and gain a wide base of support. In Chapter 5, the first four theories are summarized, and rich archaeological data are shown to indicate spiritual talents as a critical basis of leadership in Ohio Hopewellian societies. Whether the economic wealth and reproductive success of leaders and their kin, and their achievements within sodalities, were also important elements in leadership formation in Ohio Hopewellian societies is not addressed Chapter 5. However, these factors can be explored with archaeological data on clans, their roles, and their resources.

Table 8.15 lists the percentage of burials of each clan that had metallic and nonmetallic items of personal wealth/prestige (e.g., necklaces, bracelets; Appendix 8.3) as a measure of clan wealth and the percentage that had breastplates and earspools that marked sodality membership or achievement (Carr Chapter 7) as a measure of clan networking through sodalities. Also listed is the approximate relative size of each clan to the extent knowable (see above). These three measures of clan strength and bases for leadership formation are then evaluated, in part through correlation analysis, for their contributions to clan success in attaining social positions of leadership or importance of three kinds: shamanic roles, nonshamanic community-wide roles, and other nonshamanic roles (Table 8.12, Appendix 8.3). A clan's success in gaining these three kinds of positions is measured by the percentage of burials of that clan that had markers of those positions.

The information in Table 8.15 indicates that in Ohio Hopewellian societies, clan size had no relationship to the success of clan members in attaining any of the three kinds of positions of leadership or importance. Chagnon's (1979) demographic theory of the basis of social power and leadership in middle-range societies does not apply at the clan scale examined here, though it was found to be relevant in explaining between-community differentials (Carr, Chapter 7). In contrast, clan wealth and clan networking through sodalities and achievement within them both correlate strongly with clan recruitment into leadership and other important positions. The correlations of wealth and networking with filling any of the three kinds of roles range between .612 and .860, except for the insignificant relationship between clan wealth and attaining nonshamanic community-wide leadership positions. These correlations equate to clan wealth and networking individually having explanatory values (R^2 values) between 78.2% and 92.7%. When clan wealth and networking are combined into one factor, its correlation with success in gaining access to the three kinds of positions rises to

Table 8.15. Comparison of the Wealth, Social Networking, and Size of Clans to Their Prevalence in Leadership Roles

Social role	Aggregate score for . . .			Approximate clan size	% of burials with . . .		
	Wealth and sodality networking[a]	Wealth, alone[b]	Sodality acheivement, membership, and networking, alone[c]		Shamanic roles	Community-wide leadership roles	Nonshamanic important roles
Nonraptorial Bird	58.25	66.50	50.00	Smaller	100.00	100.00	100.00
Beaver	56.25	62.50	50.00	Smaller	75.00	50.00	50.00
Feline	46.50	35.00	58.00	Larger	69.00	31.00	77.00
Raccoon	46.25	64.00	28.50	Smaller	71.00	57.00	71.00
Raptor	44.50	44.50	44.50	Smaller	78.00	44.00	78.00
Canine	44.00	53.00	35.00	Larger	59.00	35.00	53.00
Elk	25.00	50.00	.00	Smaller	40.00	.00	.00
Fox	12.50	.00	25.00	Smaller	.00	.00	50.00
Correlation with:	1.00	.81	.72		.95	.86	.61
Wealth and sodality prestige							
Wealth alone	.81	1.00	.17		.83	.70	.18
Sodality prestige alone	.72	.17	1.00		.62	.61	.81

[a] Percentage of clan burials with metallic or nonmetallic personal items of wealth/prestige or breastplates or earspools as markers of sodality achievement or membership (Table 8.12 and Appendix 8.3).
[b] Percentage of clan burials with metallic or nonmetallic personal items of wealth/prestige (Table 8.12 and Appendix 8.3).
[c] Percentage of clan burials with breastplates or earspools as markers of sodality achievement, membership, and social networking (Table 8.12 and Appendix 8.3).

.614 to .954, which equates to explanatory values of 78.4% to 97.7%. These statistics suggest that Sahlins's (1972) economic theory of the basis of social power and leadership in middle-range societies, and the idea of social networking through sodalities, both apply to clan-level dynamics and differentials in Ohio Hopewellian societies.[23]

The importance of social networking through sodalities to success in attaining key positions in Ohio Hopewellian societies is complemented by our finding, above (see Social Roles Recruited from Specific Clans), that the relative importance of the social roles that a clan frequently held correlates with the number of important roles that it frequently held. The number of roles held often by a clan is a measure of the span of its social network complementary to the frequency of its membership and achievement within sodalities.

Although the wealth and networking of Ohio Hopewellian clans did determine their degree of access to positions of social importance, the actual differences among clans in these regards is small. Most clans were similarly privileged. Five of the eight clans have moderate measures of wealth (40%–60% of their burials have items of wealth) and six of the eight clans have moderate measures of sodality networking (40%–60% of their burials have markers of sodality membership or achievement). This picture corresponds with the finding, above, that no one or few clans monopolized social positions of importance in Ohio Hopewellian societies (see Division of Social Tasks and Roles). Only the Elk and Fox clans fall low on the scales of wealth and/or sodality networking, and they in turn also apparently filled few or no positions of leadership or importance. The small sample of Fox clan burials, however, prohibits a firm assessment of its standing. In all, these observations agree with the ethnohistoric northern Woodland pattern discussed above, where clans typically had similar levels of prestige, wealth, and access to critical resources, but those clans that held leadership roles were slightly advantaged (e.g., Callender 1978c:627, 1978d:650).

The correlations found here among clan wealth, sodality networking, and access to positions of social power have been expressed here in the form presented in ethnological theory, whereby economic and social factors are seen as causal, and the political factor of access to positions of power is seen as the result. However, it should be recognized that the reverse flow of causality may instead apply, with clan success in attaining leadership and other important positions having augmented clan wealth and level of achievement within sodalities. Differential access of clans to leadership and other important positions in Ohio Hopewellian societies may have ultimately originated in other factors, such as the religious vehicles posed by Netting (1972) and discussed in Chapter 5. In this case, the flow of causality would be from the religious to the political and then to the economic and social. The data currently in hand do not allow us to distinguish between these two scenarios.

The Question of Phratries in Ohio Hopewellian Societies

Whether informal or institutionalized phratries existed in Ohio Hopewellian societies is investigated here in two ways. First, we sought complementary distributions among Hopewellian clans in the critical social tasks that they undertook. The rationale for this approach follows directly from the definition of a phratry as two or more clans that stand in some special, and often times complementary, relationship. In this light, three of the many important social roles explored above (see Division of Social Tasks and Roles among Clans in Ohio Hopewellian Societies) were found to each have been filled by multiple clans, but in a complementary fashion, with one clan strongly associated with it and another strongly dissociated from it (Table 8.13). Shamanic public ceremonial leaders were recruited much more often than statistically expected from the Nonraptorial Bird clan and much less frequently than expected from the Raccoon clan. Shamanic philosophers were recruited more often than expected from the Nonraptorial Bird clan and less often than expected from the Canine clan. Finally, diviners of things other than war or the hunt were recruited at unexpectedly high frequencies from the Raccoon

clan and at unexpectedly low ones from the Feline clan. These complementary distributions of roles among clans may hint at the organization of the clans into formal or nascent phratries. No analogs of eponym pairs within Historic Woodland phratries are apparent (Table 8.2).

The second approach we took to explore the possible existence of phratries in Ohio Hopewellian societies focused on burials with more than one kind of clan marker. Markers in these burials might represent clans that stood in a phratry relationship to each other. Alternatively, or complementarily, they might represent the deceased's natal clan and gifts from the clan of his or her children if they were of a different clan. Other possible explanations include gifts from unrelated clans; the special mortuary ritual responsibilities of a second clan and the gifting of its markers, much as we posited for the Bear clan (see Relative Sizes of Hopewellian Clans); adoption or honorary membership; and personal power animals of the deceased.

There were 10 persons who had markers of more than one clan buried with them, other than markers of the Bear clan, which was a common extra marker in many burials (Table 8.16). Four of these individuals were buried together in a single grave, making a total of seven funeral events marked by more than one clan. All the burials with multiple markers come from the Scioto region.

The markers in the seven graves do not appear to indicate phratry relationships between clans. If this were the case, then the same clan pairs should be observed repeatedly among graves, or at least the pairs should not overlap in clan membership. Instead, the clans that pair vary from grave to grave, and in a complex, overlapping pattern. Only markers of the Canine and Beaver clans occur together twice.

The one alternative hypothesis that seems to explain the most, but not all, of the distribution of clan markers among the seven graves, and that has additional contextual support, is the special mortuary ritual responsibilities of a second clan and the gifting of its clan markers. If this were the only cause of multiple clan markers per grave, then the extra markers should consistently reference only the one clan or however many clans that had special mortuary duties. In fact, in five of the seven graves, the Canine clan is a second marked clan, and in four of the graves, it is the only additional one. Additional evidence that the Canine clan filled the role of a mortuary specialist is found in the kinds of artifacts associated in graves with Canine clan markers and in the Copena-style effigy pipe from the Seip–Pricer mound, depicting a dog holding and eating a decapitated human head (see Social Roles Recruited from Specific Clans, above).

Other interpretations of the graves with multiple clan markers have distinct test implications and are not as strongly supported empirically as the idea of the Canine clan as a mortuary specialist, but may help to explain the clan markers in the two or three graves where this idea does not apply. In these cases, the multiple clan markers could reflect contributions from unrelated clans, the personal power animals of the deceased, and/or other unappreciated situations.[24]

CONCLUSIONS

A personalized and contextualized view of Ohio Hopewellian societies has been offered here by

Table 8.16. Age, Sex, and Clan Affiliation Data for Burials with Multiple Clan Markers

Site	Mound	Provenience	Sex	Age	Clan markers
Ater	1	B51A	Male	30–39	Raptor, Canine, Beaver
Hopewell	23	S186	Male	Teen	Cat, Fox
Hopewell	23	S207	?	Adult	Canine, Fox
Hopewell	25	B22A	Male	40–50	Canine, Beaver
Mound City	8	B2	?	?	Raptor, Cat, Deer/Elk/Moose
Mound City	8	B3	?	?	Canine, Deer/Elk/Moose
Mound City	13	B1A–D	?	?	Canine, Raccoon

identifying the material representations of Ohio Hopewellian clans and by documenting their sizes, their degree of localization, the socially critical roles that their members filled, and their bases of power. In these regards, the clans of Ohio Hopewellian peoples did not differ substantially from those of Historic Eastern Woodland tribes at Contact. However, the specific details of Ohio Hopewellian clan organization and function that have been revealed take the researcher beyond a generalized historic analogy to Woodland social life and bring to mind rich images of Hopewellian personnel in roles and actions of various and particular kinds, with an empirical basis—what Carr (Chapter 1) calls "thick prehistory". The documented details also lay the foundation for future studies of yet uninvestigated, anthropologically central topics of many kinds: the roles of clans in the origins of institutionalized, supralocal leadership positions and leadership centralization among Hopewellian peoples, clan means of community integration and firming up intercommunity alliances, and the relationship of clan organization to cosmological schema and natural environmental structure and content.

Our ethnographic survey shows that, historically, individual tribes of the Woodlands had 9 to 11 clans on average, the most common being the Canine, Bear, Deer/Elk/Moose, Raptor, Nonraptorial Bird, Waterfowl, Raccoon, Beaver, Turtle, Turkey, and Fish clans. Clans usually were at least the same order of magnitude in size, excluding the effects of Contact and sometimes the ranking of clans in the Southeastern Woodlands. Nowhere were clans localized to specific villages. Specific social tasks, including leadership roles of many kinds, were commonly assigned by clan. However, assignment was often flexible, with certain clans tending only to fill certain positions rather than dominating them, and recruitment sometimes varying quite situationally.

Clans were the most important horizontal social divisions among the Woodland tribes in governing daily life. Phratries were recorded for few of the tribes surveyed here and, apparently, were seldom strongly formalized and thus less visible ethnographically. Their functions ranged from simple joking relationships to complementary ritual arrangements. Five phratries per tribe was the Woodland average, though data are sparse. Sodalities were uncommon, sometimes ad hoc, and of small membership, save the Midewiwin and Dream Drum pan-tribal cults, which were institutionalized and drew members more widely in recent history. The "sacred pack organizations" of the central Algonquian tribes were not sodalities, their members having been recruited within clans rather than across them. Dual organizations were more common, having occurred in most of the surveyed Woodland tribes. Dual organizations served to structure warfare and ritual games, and seldom functioned as true moieties, governing marriage. Like clans, the two halves of dual organizations were typically similar in size and were not localized.

Ohio Hopewellian clans and their social behaviors were tracked in the archaeological record using the real and effigy power parts and select artistic representations of animals of diverse species found in graves. Animal power parts were almost certainly clan markers, for many reasons. They reference animals, which were the most common clan eponyms historically. They reference about the same number of animal species as the average number of clans per historic tribe. They correspond closely (80% match) in species to those of the most common eponyms of historic tribes across the Woodlands. The rank-order commonality of the represented species, measured by the number of deceased individuals buried with each species, correlates significantly ($.433$; $R^2 \simeq 66\%$) with the rank order of clan eponym species for the most common eponyms across the Woodlands. Finally, the artifacts are distributed widely among burials and ceremonial deposits within cemeteries and across many cemetery sites. In contrast, the animal species represented on smoking pipes—the only other major Ohio Hopewellian artifact class with animal imagery—have the opposite characteristics and, given their extraordinary species diversity, most likely represent the personal power animals of individuals. Animal power parts and artistic representations are too diverse in kind to represent either phratries or dual divisions and, in their species, do not correspond to the names of phratries. The commonly weak organization and

functions of phratries in the historic Woodlands also cast doubt on Ohio Hopewellian animal power parts and artistic imagery representing phratries, when socially central clans would be the more obvious Historic Woodland correlate.

A sample of 85 individuals buried with clan markers in 16 sites was analyzed for the frequencies of clan markers of different species, their spatial distributions within and across sites, and their associations with each other and with artifacts indicating other key social roles. These studies provided the following insights into Ohio Hopewellian clans.

(1) Clans across Ohio Hopewellian societies minimally numbered nine: Bear, Canine, Feline, Raptor, Raccoon, Elk, Beaver, Nonraptorial Bird, and Fox. Some of these categories, such as Feline, Raptor, Elk, and Nonraptorial Bird, may have been divided more finely by Hopewellian peoples (e.g., Bobcat versus Cougar or Deer versus Elk versus Moose; see Weets et al., Chapter 14). Other possible clan eponyms represented by only one or two artifacts are Opossum, Snake, Turtle, Fish, and Insect. The first nine are among the most common clans found historically in the Woodlands. They are equally similar to those in the Northeastern and Southeastern Woodlands.

(2) The Raptor, Raccoon, Elk, Beaver, Nonraptorial Bird, and Fox clans were probably roughly similar in size, based on the number of burials that contained their markers. The Feline clan was probably larger, and the Canine and Bear clans may have been as well.

(3) Clan composition appears to have varied somewhat regionally. A Raptor clan may have been missing in southwestern Ohio, following the pattern of many other cultural ties of this region to the Southeastern Woodlands (e.g., Ruby and Shriner, Chapter 15). Raptor clans were not common among tribes of the historic Southeast. Beaver and Nonraptorial Bird clans may have been more populous in northeastern Ohio than in the Scioto valley heartland.

(4) Clans in the central Scioto valley were probably localized residentially to some degree. Different earthwork–mound communities appear to have had somewhat different clan compositions or proportions. These variations probably resulted from natural variations in clan populations and frequencies of marriage exchanges among communities, rather than institutionalized geographic divisions. This pattern accords with the Historic Woodland one, where clans were not formally localized.

(5) All roles of leadership and social importance, including shamanic, nonshamanic, and community-wide roles, as well as sodality achievement and membership, were well distributed across many Ohio Hopewellian clans. However, not all clans apparently had equal access to all roles. Members of the Raccoon clan were recruited with frequency into the greatest diversity of social positions, followed by members of the Nonraptorial Bird, Raptor, Beaver, and Canine clans. The Feline and Elk clans did not hold any important social roles frequently, and the Fox clan did not hold most of them at all. No single clan monopolized any one key social role. The overall pattern of only partially restrictive recruitment to positions of leadership and importance is similar to that found in the Historic Woodlands and across the globe, generally, in societies of middle range complexity having multiple, differentiated, powerful, shaman-like leaders but lacking powerful priests or priest-chiefs (Winkelman 1992).

The clans that were found statistically to have filled particular social roles more frequently than expected also referenced animals with natural characteristics relevant to those roles, or were the clans known ethnohistorically to sometimes have filled those roles, or were corroborated with auxiliary archaeological evidence. Combining the results of univariate and multivariate studies of artifact associations revealed the following patterns. War or hunt diviners were frequently recruited from the Canine, Raptor, Raccoon, and Beaver clans; body processors/psychopomps from the Canine and Raccoon clans; other kinds of diviners from the Raccoon clan; healers from the Raptor and Beaver clans and, secondarily, the Canine and Feline clans; public ceremonial leaders from the Nonraptorial Bird clan; and participants of unknown duties in trance rituals from the Raptor clan. Community-wide leadership positions marked by headplates with and without shamanic animal referents, which may have

indicated peace chiefs of a kind, were filled frequently by the Canine, Raccoon, and Nonraptorial Bird clans. In contrast, community-wide leadership positions marked by metallic celts, which may have symbolized war chiefs of a kind, were most commonly recruited from the Raptor and Nonraptorial Bird clans. Expectedly, sodality positions of achievement or membership, indicated by breastplates and earspools, were occupied by persons of many different clans. Finally, contextual evidence of several different forms, distinct from the results of the univariate and multivariate analyses, indicate that the Bear clan served as a mortuary specialist of a kind, as did the Canine and Raccoon clans.

(6) The success of clans in attaining positions of leadership or importance was highly correlated with both their wealth and their social networking through sodalities and achievement within sodalities. The significance of wealth to advancement follows Sahlins's (1972) economic theory of the basis of social power and leadership in middle-range societies. In contrast, the relative sizes of clans do not appear to have significantly influenced their attainment of key social positions. Chagnon's (1979) demographic theory of the foundations of social power and leadership in middle-range societies does not seem critical to the Ohio Hopewellian case. Additionally, although clan wealth and networking influenced clan sociopolitical success, most clans were roughly similar in their wealth and degree of networking. The Fox and Elk clans, however, had noticeably less wealth and were significantly less well networked through sodalities than other clans.

The ultimate causes of differential access of clans to critical social roles in Ohio Hopewellian societies is empirically unclear. It is possible that differential religious advantages of the kinds posited by Netting (1972) were the root causes of differential success in access to important social positions, and that clan wealth and networking differentials flowed from sociopolitical success. Religious and economic factors may have also worked in combination as root causes of social and sociopolitical differentiation of the Ohio Hopewellian clans.

(7) No evidence was found for the existence of phratries, as regular, formal, or informal relationships among clans.

(8) The relatively common occurrence of bear canines among Ohio Hopewellian graves, which is one defining characteristic of Hopewell across the Eastern Woodlands at large (Seeman 1979a:313, 381), probably does not indicate the large size of the Bear clan and its success in filling social roles of importance. Rather, a variety of lines of contextual evidence suggests that bear canines often were gifts to the deceased or markers left with them by Bear clanpersons who were mortuary specialists. This interpretation suggests the possibility that a bear-related mortuary role was an essential element of the religious ideas and practices that constituted panregional Hopewell.

In conclusion, the detail with which a picture of Ohio Hopewellian clan life can be painted was constantly a surprise to us, as we worked through the analyses and data patterns presented here, and may be to the reader as well. Cross-cultural tendency for horizontal social distinctions to be marked much more subtly than vertical ones in the mortuary realm (Carr 1995b; O'Shea 1981) would suggest the unlikelihood of reconstructing clan organization and function to the extent that we have been able. However, taking a point of view contextualized in the culture of Ohio Hopewellian societies makes the material visibility of Ohio Hopewellian clanship more understandable. Two matters are relevant. First, Ohio Hopewellian peoples placed clear importance culturally on the social realm—positions and relationships—and in symbolizing these richly in material ways. This preoccupation was noted early on in the development of modern archaeology's interest in prehistoric sociology (e.g., Struever 1964:88, 1965:216–218; Struever and Houart 1972:49). Second, in the "economy of symbols" (J. A. Brown 1981:28) of Ohio Hopewellian societies, the order of importance given to materially expressing various social and religious matters in mortuary settings was not topped by vertical social distinctions. Instead, within each of the large, excavated Hopewellian charnel houses of the Scioto valley,[25]

community affiliation and intercommunity alliances—horizontal distinctions—were given priority for symbolization over social ranking (if it existed) and social prestige generally (Carr, Chapter 7). Likewise, in the Great Enclosure cemetery within the Turner site, horizontal distinctions among social units whose graves were oriented in two different directions were emphasized (Coon 2002; Greber 1979a). Within the context of this cultural value system, it is reasonable to find that clans, as yet another horizontal dimension of social differentiation, were given recognition materially in the mortuary realm of Ohio Hopewellian societies.

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NOTES

1. Several clans, especially among the Creek, were named after cultural artifacts such as the arrow. These are exceptions to the general rule, probably due to the Creek's unique way of creating clans (see Swanton 1928).
2. For one spectacular attempt, see Swanton's (1928) study of Creek organization.
3. The phratries listed in Table 8.2 are the most common that Swanton (1928:122–123) could find, but still represent a minority of the phratries that actually existed.
4. For example, among the Potawatomi, one or two phratries (Water, Bear) have Lower World associations, two (Buffalo, Wolf) have Middle World associations, and one (Bird) has an Upper World association.
5. Knight (1990a:9) believed that the individual clans constituting the Timucua commoner division were probably exogamous, though.
6. In addition, eponyms that were not translated in the literature are not included in Table 8.1 Such clans probably were unique.
7. The ranking of clans for this comparison, including the tau-*b* test, uses somewhat different measures of commonality for the animal eponyms of historic clans, animals represented by power parts, and animals depicted on platform pipes. The Historic data describe the number of tribes (analogous to regions) that had a clan of a given animal name present. The power part data measure both the number of regions in Ohio (analogous to tribes) that had a clan of a given animal name present and the number of people within each of those regions who were members of that clan. The platform pipe data estimate the number of individuals who were associated with given animal species and who assembled at (or whose remains were brought to) Tremper and Mound City from unknown distances and regions (analogous to tribes) and deposited (or had deposited) their pipes there.
8. Copper headplates with representations of animal power parts were not defined here as clan markers. If persons buried with real and copper effigy power parts were clan-persons of moderate to high importance (see below), it might be argued that persons buried with copper headplates having power part representations were top clan leaders. In line with this interpretation, such headplates are much more elaborate and bigger than real and copper effigy power parts and are much less frequent than power parts, occurring in only 11 of 855 burials across Ohio. However, the bulk of the archaeological evidence weighs to the contrary. First, only four of the nine species that are represented by power parts and that clearly signify clans (see Clan Names in Ohio Hopewellian Societies) are found in headplate form: elk, feline, nonraptorial bird, and bear are, while canine, raccoon, raptor, beaver, and fox are not. Second, the great majority of headplates do not have power part representations—they are plain—and one takes the form of a headless human body, which does not obviously refer to a clan. Third, of the 11 burials with headplates having animal power part representations, none also have real or copper effigy power parts of the same species. Six burials with headplates have no additional real or effigy power parts, four burials with headplates that do not represent bear have bear power parts, and one headplate with a copper elk rack has, instead, canine and bear power parts. In Chapter 7, additional considerations led to the conclusion that headplates were indicators of leadership of a community or some other very large-scale social unit.

9. Regions that lacked clan markers were the Tuscarawas tributary to the Muskingum valley (Kohl, Martin, and Yant sites), the southern Muskingum valley (Marietta site), the northern Scioto valley around Columbus (Wright–Holder and Melvin Phillips sites), the central Scioto valley around Circleville (the Circleville, Ginther, Westenhaven, and Snake Den sites), and the Great and Little Miami valleys around Dayton (Finney, Lee, and Pence sites).
10. The 85 individuals include 10 within 4 graves, each of which contained multiple individuals for whom it is unclear who was associated with the clan marker(s) present in the grave. In these cases, all individuals in the grave were assumed to have membership in the clan(s) indicated. The 10 individuals are Mound City, Mound 13, Burials 1A–D; Ater Mound, Burials 20A–B; Hopewell Mound 25, Skeletons 248–249; and Hopewell, Mound 25, Skeletons 260–261.
11. The pair of pots was found in Mound City, Mound 2 (Mills 1922b:510–511; Squire and Davis 1848:190). The duck feet with bird head appendages were found in Mound City, Mound 7, Burial 12 (Mills 1922:332, fig. 39, 361, fig. 66). In addition, an antler carving that mixes elements of bird and bear, again animals associated with the Upper versus the Lower World, was found at Hopewell, Mound 25, Skeletons 260–261.
12. A total of 284 deer and elk astragali was found at Turner, Mound 4, Central Altar. The four graves with effigy deer antler headplates are Mound City, Mound 13, Burial 4; Mound City, Mound 7, Burial 9; Hopewell, Mound 25, Skeletons 260–261; and Hopewell, Mound 25, Burial 12. The one ceremonial deposit with a deer effigy copper cutout is Hopewell, Mound 25, Copper Deposit. In addition, a unique, complete doe skeleton was found in grave 5 of Mound C, the McKenzie mound group.
13. Instead, the compositions of the two clusters are almost fully complementary, with Canine, Feline, Beaver, and Raptor clans represented in the West Cluster under Seip–Pricer and Nonraptoral Bird and Raptor clans represented in Cluster E under Hopewell 25. Interpreted at face value, this situation appears to reflect the practice of the North Fork community burying certain clans (Nonraptorial Bird, Raptor) within the mound (Hopewell 25) in their own community territory and burying other clans (Canine, Feline, Beaver, and Raptor) in the mound (Seip–Pricer) outside of their territory. This burial pattern would not be unusual if the different clans filled different important social roles, and persons of different specific roles were buried in the two different cemeteries. The situation does not appear to indicate a misinterpretation of which clusters under Hopewell Mound 25 and Seip–Pricer represent which communities. No other coupling of burial clusters from the two mounds provides any better correspondence in clan markers.
14. Expectable cell values can be calculated from either the percentages or the counts of burials with a given kind of clan marker having artifact indicators of a given social role. Both calculations produce the same results, despite the different assumptions they imply—count data implying that all clans had equal access to burial in the cemeteries studied, and percentage data overcoming any deviations from this ideal burial pattern.
15. An owl and a possible nighthawk are both birds of the night, which is commonly associated with death in Woodlands cosmology. A possible bear effigy pipe recalls the Wray figurine (Dragoo and Wray 1964), which depicts a bear shaman with a decapitated head on his lap.
16. In the Sundance of the Sioux, the sundancer blows a hollow eagle-bone whistle with attached feathers as he dances and prays to *Wankan-Tanka*, the Divine one above, for healing and well-being. Power from *Wankan-Tanka* flows through the sun to the sacred tree (*axis mundi*) and thence to the sundancer. The role of the hollow-bone eagle whistle in channeling this energy to the sundancer is unclear (Mails 1978:99–100).
17. The only exception to this pattern found in dozens of burials is a large ceremonial deposit of metallic celts placed on top of skeletons 260–261 within Mound 25 at the Hopewell site. Skeleton 260 wore a copper effigy elk antler headdress, and one other headplate was found in the grave (Case and Carr n.d.). It is not clear that any of the celts were specifically the social paraphernalia of either of the two deceased persons.
18. Breastplates and earspools were identified as sodality markers by traits of theirs *other* than the diversity of clans with which they associate. The traits include primarily their commonality, occurrence almost always with adults, association with both males and females but more so with males, and occurrence together at times and, secondarily, their association with prestigious artifacts and a difference in their prestige implied by the artifacts with which they associate (Carr, Chapter 7).
19. Specifically, whereas the roles examined in the first analysis, above, were defined "univariately" with individual artifact classes, noting their form and nature, the roles in the second analysis were defined "multivariately" by grouping artifacts that occurred together repeatedly in burials as sets and that shared a common function. Also, the roles defined in the first analysis are based on the artifact classes found in only the 53 burials that contained clan markers, whereas the roles defined in the second study are based on artifact class associations found in a much larger sample of 767 burials, regardless of whether or not clan markers were present in the burials.
20. A Jaccard level of similarity of 0.1 or greater between a kind of clan marker and an artifact class was judged to indicate a stable, repeated pattern of association based on the experience gained in working with the Jaccard matrix and multidimensional scaling plots calculated in Chapter 5. In particular, the 0.1 cutoff level accommodated the fact that clan markers are infrequent compared to many other artifact classes, leading to asymmetrical associations between them, which would naturally yield fairly low Jaccard coefficients.
21. Alternatively, the archaeological association may indicate that bear power parts marked not a clan but a third

sodality—a bear sodality—the members of which overlapped moderately with the members of the sodalities marked by breastplates and earspools, as identified in Chapter 7 by Carr. This is a reasonable alternative interpretation at first glance, given that the two sodalities marked by breastplates and earspools themselves are known to have had moderately overlapping memberships, and given that a social function for the potential third sodality—in funerary ritual—can be specified (see Relative Sizes of Hopewellian Clans, above). A bear sodality also might have served in the arena of medicine. Bear medicine societies were and are common among Algonquian, Iroquoian, and Siouan peoples (Abler and Tooker 1978:515; Dewdney 1975:116–121; Gill 1992:23–25; Tooker 1978:460; Weaver 1978:534). Among the Ojibwa, the bear was a key power for practitioners of the fourth level of the Grand Medicine Society, or Midewiwin (Dewdney 1975:109, 111, 115, 138, 147, 149–150). In Algonkian belief , at least, bears and bear paws are associated with herbs and thus healing, given that bears dig for roots with their paws (Dewdney 1975:115, fig. 114).

The specific degrees of overlap in membership of the three posited sodalities are as follows. In our sample of 767 burials, 39.3% (24 of 61) of the burials with bear power parts have breastplates and 41.0% (25 of 61) have earspools. Also, 27.6% (24 of 87) of the burials with breastplates have bear parts and 42.5% (37 of 87) have earspools. Finally, 20.7% (25 of 121) of the burials with earspools have bear parts and 30.6% (37 of 121) have breastplates. Ethnographically, for tribal societies, such overlapping membership among sodialities is a socially reasonable reconstruction—see Chapter 7, Note 17.

The possibility that bear power parts might have marked a sodality is also in line with some evidence for yet additional sodalities beyond those symbolized by earspools and breast plates (Carr et al. Chapter 13). However, these identifications are tentative.

Taking bear power parts to represent a sodality rather than a Bear clan, however, would leave Ohio Hopewellian societies without material evidence of a bear clan. This situation would run counter to the ethnohistoric record, where Bear clans were the second most common clans in the Northeastern, Great Lakes–Riverine, and Southeastern tribes of the Woodlands (Table 8.8). Accordingly, the idea of a Bear sodality seems less likely.

22. The various Ohio Hopewellian clans repeatedly filled the following numbers and percentages of the 13 role sets defined in Table 8.14: canine (5 sets; 38.5%), feline (3 sets; 23.1%), raptor (3 sets; 23.1%), raccoon (3 sets; 23.1%), beaver (1 set; 7.7%), elk (1 set; 7.7%), deer (1 set; 7.7%), and fox (1 set; 7.7%). These statistics pertain to only the stable, boldface entries in Table 8.14, where Jaccard similarity coefficients of 0.1 or greater were observed and the association between a clan marker and an artifact class is relatively strong. If one assumes that clan markers in burials only indicated the clan of the deceased and were not occasionally gifts to the deceased, then weaker associations can also be considered—both the boldface and the regular entries in Table 8.14. Using these observations, the various Ohio Hopewellian clans repeatedly or occasionally filled the following numbers and percentages of the 13 role sets defined in Table 8.14: feline (12 sets; 92.3%), canine (9 sets; 69.2%), raptor (9 sets; 69.2%), beaver (8 sets; 61.5%), raccoon (5 sets; 38.5%), elk (4 sets; 30.7%), deer (3 sets; 23.1%), and fox (1 set;, 7.7%).
23. The applicability of Sahlins's theory of the economic foundations of social power is evident in the correlation between clan wealth and success in gaining access to leadership positions, generally. However, the correlation is highest (.830) for shamanic leadership positions, which one would instead expect to be founded more on spiritual than economic advantages, and is lowest (.179) for nonshamanic community-wide leadership positions, which one would instead expect to be bolstered economically. The reason for these unexpected patterns is unclear. However, the correlation between shamanic leadership positions and clan wealth does suggest that such positions had probably evolved beyond classical shamanic ones and become more secularized, in line with findings in Chapter 5.

    The applicability of the idea of social networking through sodalities as a basis for leadership is supported by the correlation between levels of clan participation or achievement in sodalities and access to leadership positions. The idea is not clearly supported or refuted by this correlation being higher for nonshamanic, community-wide leadership positions and lower for shamanic leadership positions. Sodalities could be religious or otherwise in nature, and participation in them could have favored attainment of religious, shamanic positions or nonshamanic ones.
24. If the extra clan markers in a grave represent gifts from unrelated clans or personal power animals of the deceased, then there could be more than two markers per grave, and there should be no strong pattern for markers of given clans to pair or to predominate in the sample. In fact, the graves that do not support the hypothesis of mortuary specialists of one clan leaving their clan markers in burials (i.e., those without a Canine clan marker) do have a diversity of clans and one of the graves has more than two markers (Table 8.16).

    If the multiple-clan marked burials indicated natal and marriage clans, there should never be more than two clan markers (other than Bear or Canine; see above) buried with an individual, and the deceased should be old enough to have been married. Also, individuals buried with multiple clan markers should all be of the same sex. In a matrilineal society, they should be male, because children in this case would belong to a different clan than their father's. In a patrilineal society, the persons buried with multiple clan markers should be female, because children in this arrangement would be members of a different clan than their mother's.

The hypothesis of natal and marriage clan markers has good support considering the data in Table 8.16 but less support than other ideas considering sampling issues and the results of other kinds of analyses. Of the seven multiple-clan marked graves, five have exactly two clans marked. Of the four burials for which there is age and/or sex data, the buried individual is always a male of marriageable age. (Here we assume that the burial from Hopewell Mound 23, aged as a "teen," was of marriageable age.) It is possible, then, that one clan marker in these burials likely represents the man's own natal clan, and the other represents that of his children. If men's children were members of other clans, this would imply that Scioto Hopewellian societies reckoned descent matrilineally. The two cases with three clan markers could logically reflect men that had been married twice or polygynously to women of different clans and that had children of two different clans, additional contributions of clan markers gifted from unrelated clans, personal power animals of the deceased, and/or unknown factors.

The implication that Scioto Hopewellian societies were matrilineal would align them more closely with matrilineally dominant tribes of the Southeastern Woodlands than the patrilineally dominant tribes of the Northeast. This interpretation is within the range of possibilities found in our comparison of Hopewellian clan eponyms to those of the Historic Northeastern and Southeastern Woodland tribes (see Hopewellian and Historic Woodland Clans Compared, above). However, the interpretation does not accord with the conclusions reached by Field et al. (Chapter 10), whose study of gender is designed to handle the issue of descent more directly and is based on a much larger sample of burials.

25. The large charnel houses are those under Seip–Pricer mound, Seip-Conjoined mound, Edwin Harness mound, Hopewell Mound 25, and Ater mound.

Gathering Hopewell

Society, Ritual, and Ritual Interaction

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