

**The Protohistoric Pueblo World,  
A.D. 1275–1600**

**Edited by E. Charles Adams and Andrew I. Duff**

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## Homol'ovi

### A 13th–14th-Century Settlement Cluster in Northeastern Arizona

E. Charles Adams

Homol'ovi consists of seven primary villages situated along the Middle Little Colorado River (appendix, fig. 12.1). No more than five villages were occupied at any time. Homol'ovi IV is the earliest, establishing the Homol'ovi cluster about A.D. 1260. About 1280–1290, Homol'ovi IV was abandoned and five new villages were established. From west to east, these were Homol'ovi III, Homol'ovi I, Cottonwood Creek, Chevelon, and Jackrabbit. Chevelon and Homol'ovi I grew to considerable size, 500 and 1,100 rooms respectively, but initially had 200 and 400 rooms, about 1300 (table 12.1). The seventh village, Homol'ovi II, was planned and constructed over a brief period at about 1350. By 1375 only Homol'ovi II, Homol'ovi I, and Chevelon, the three largest villages, were occupied. By 1400 the occupants of the last village, Homol'ovi II, left and returned to villages on the Hopi Mesas.

Homol'ovi has been divided into phases, Tuwiuca and Homolovi (Colton and Hargrave 1937; R. Lange 1996, 1998). The Tuwiuca phase, named after Colton's term for Homol'ovi IV, spans the period from 1260 to 1330. It is characterized by small- to medium-size villages lacking large enclosed plazas, the absence of yellow-firing pottery imported from Hopi Mesa villages, and a focus on the river and its floodplain for farming. In contrast, the Homolovi phase, which spans the period 1330–1400, is characterized by medium to large villages having large, enclosed plazas, the predominance of yellow-firing pottery in the decorated ceramic assemblage, and the expansion of farming into upland areas ranging several miles from the river. Not only is the range of farming expanded, but

Table 12.1 Total Structure Count by Village through Time

Village/Date	1250	1275	1300	1325	1350	1375	1400
Homol'ovi I	0	0	400/400	600/500	900/600	1,100/700	1,100/0
Homol'ovi II	0	0	0	0	1,000/1,000	1,200/1,000	1,200/600
Homol'ovi III	0	0	45/45	45/10	50/15	50/15	50/0
Homol'ovi IV	0	150/150	200/0	200/0	200/0	200/0	200/0
Cottonwood	0	0	60/60	75/60	120/75	120/0	120/0
Chevelon	0	0	200/200	300/250	400/300	500/350	500/0
Jackrabbit	0	0	30/30	30/0	120/120	120/100	120/0
Total Rooms	0/0	150/150	935/735	1,250/820	2,790/2,110	3,290/2,165	3,290/600

Note: The first number in the column refers to the total rooms, the second to estimated number of occupied rooms.

also the formalization of ownership of the landscape is expressed in the construction of shrines and field houses.

Why was the Homol'ovi cluster established in this location? Richard Lange (1998) and others noted that in the vicinity of Homol'ovi I, II, III, and IV, the floodplain is over 4 km wide, creating an enormous potential resource for canal, diversion dam, or floodwater recession farming. This width exceeds any other area of the 250-mile course of the Little Colorado. Additionally, Richard Lange (1998) noted that Chevelon Creek, Clear Creek, and Jack's Canyon all drain into the river at or just upstream from the location of all but Jackrabbit Ruin. These spring-fed drainages provide a permanent source of water into the area. This source of water and the presence of an outcrop of Moenkopi Formation bedrock at the base of the active floodplain combine to provide a year-round supply of water to this section of the river. The presence of a year-round flow of water in the river during the occupation of the Homol'ovi villages can be inferred from the faunal record, where

Strand (1998) documented four species of fish.

#### Hopi Territoriality and the Founding of Homol'ovi

Migration to Homol'ovi IV was directly from Hopi, as demonstrated from the preponderance of ceramics manufactured at Hopi that were brought or traded to Homol'ovi IV. Additionally, the same stylistic tradition was maintained on locally manufactured pottery as that found in contemporary communities on the Hopi Mesas (Lyons 2001). Why was Homol'ovi IV established? Perhaps it was indirectly related to overpopulation at Hopi due to immigrants from farther north, west, and east. But 100 to 200 people probably would not make a difference. Besides, why would the indigenous people of Hopi choose to move? Why not simply deny access to immigrants trying to move to Hopi, thereby forcing them to move to Homol'ovi themselves? With all the migration of the period beginning no later than 1260, the establishment of Homol'ovi IV may have been

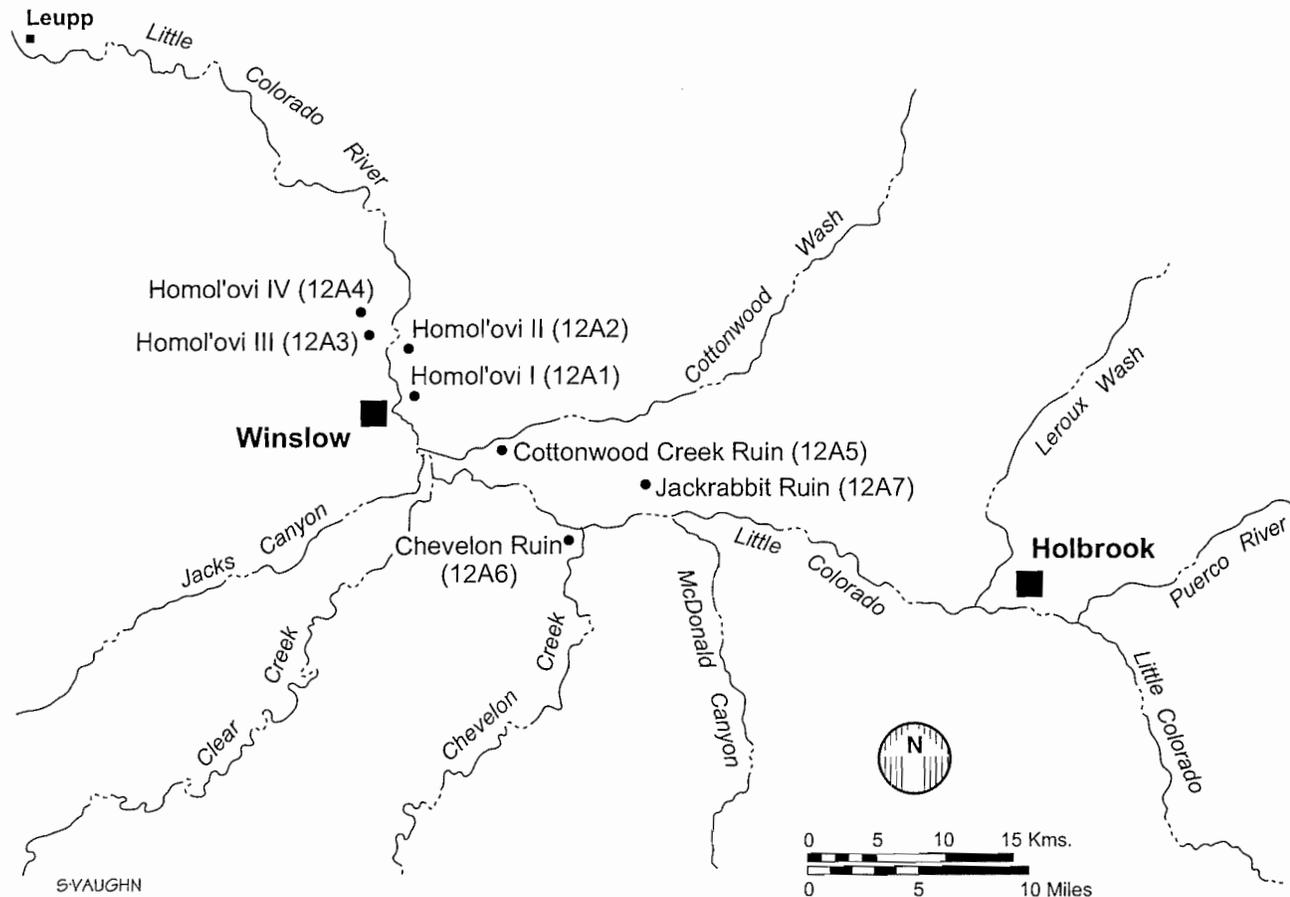


Fig. 12.1. The Pueblo IV Homol'ovi settlement cluster.

first and foremost to secure or consolidate ownership of the area and to prevent migrants from elsewhere from settling in the area. At the same time, strong exchange relationships were developed with Sinagua on Anderson Mesa, as suggested by the high frequency of Alameda Brown Ware in the Homol'ovi IV ceramic assemblage (Adams 2002).

The concern for access to the Little Colorado River was for the resources it provides. These resources are focused in the riparian habitat of the area, in contrast to virtually the entire southern Colorado Plateau. This habitat was home to unique and important animals. Additionally, the combination of water and a long growing season was favorable for growing cotton. The presence of cotton in about 5% of flotation samples from Homol'ovi IV indicates cotton production was a factor in the settlement of the village.

The establishment of Homol'ovi IV is coincident with the beginnings of massive abandonment of the Four Corners and unprecedented breadth and quantity of migration. Its creation was due to politics, power, and the control of traditional land and resources by contemporary Hopi Mesa communities when the threat of these very migrations was beginning. Perceived threats from the coalescence of proximate clusters, such as Anderson Mesa and particularly Nuvakwewaqa (Chavez Pass Pueblo), only 50 km from Homol'ovi IV, also could have spurred Hopi to expand into Homol'ovi.

Between 1280 and 1300, the Homol'ovi cluster went through an enormous transformation, when Homol'ovi IV was abandoned and Homol'ovi III, Homol'ovi I, Cottonwood Creek, Jackrabbit, and Chevelon all were founded. These villages were spaced 6–9 km apart, creating al-

most identical quantities of floodplain a basic subsistence resource. The village stretched a distance of 31 km between Jackrabbit and Homol'ovi III. This represents a 400% increase over the area controlled by Homol'ovi IV. Although it is difficult to know the size of the original village especially at Homol'ovi I and Chevelon, it is safe to say that population increased substantially with the construction of the villages. It is quite possible the occupants of Homol'ovi IV were in fact incorporated into Homol'ovi I, either causing its establishment or making it the largest village of the five in the cluster.

There are two primary reasons for expansion in the Homol'ovi area by groups living at Hopi: to demonstrate ownership of the area and to continue access to unique resources provided by the Little Colorado River. The tree-ring records throughout the Four Corners amply d-

onstrates that building ceased in the Four Corners in the mid-1280s. Therefore, it is thought that the major emigration out of the Four Corners took place in the late 1280s and 1290s (Varien et al. 1996). The stream of populations leaving northern Arizona certainly numbered in the thousands. The enormous riparian habitat of the Little Colorado River would have been an obvious choice for these groups. After all, only a single settlement, Homol'ovi IV, was using a truly enormous span of productive agricultural land. This was especially true because the settlements were becoming larger, through aggregation, and Homol'ovi IV had proven the success of this strategy in farming the floodplain of the Little Colorado. The response to the threat to this critically important habitat within Hopi traditional lands was additional Hopi migration to the Little Colorado River to build five villages.

#### Cluster Organization

Settlement clusters in the greater Pueblo region of the Colorado Plateau, Mogollon Rim, and Rio Grande during the 13th and 14th centuries are quite variable. Members of some clusters share common roots, and others do not (Duff 1998). Some clusters are quite large in number of villages and population, and others are quite small. Some are long-lived, others short-lived, and so on. Two traits increase the likelihood of success, as measured in longevity. These traits are growth in cluster size, probably representing population, and growth in individual village size, termed aggregation. Clusters that were successful in recruiting people had more labor, potential warriors, and the ability to control more land. For example, there are six settlement clusters adjacent to Homol'ovi: Hopi, Anderson Mesa, Bidahochi, Puerco, Silver Creek, and Upper Little Colorado River. Homol'ovi probably persists later in time than all but one of its neighbors, the Hopi. By settlement cluster standards Homol'ovi was relatively successful. With over 3,000 rooms, Homol'ovi was second

only to Hopi in size, suggesting it succeeded in attracting and keeping population.

How was the Homol'ovi cluster organized? It could be organized into a fixed hierarchy or a sequential hierarchy, or each village could be autonomous. Upham (1982) contends that within clusters there was a hierarchy of villages, although the structure of this hierarchy varied by cluster. Those having a fixed hierarchy had one large village, usually at least twice the size of other villages, termed the primate center. Elites occupied this village and had decision-making authority for the entire cluster.

Upham (1982:120) proposes a model of political and social organization for the individual settlement clusters and all the settlement clusters in the Western Pueblo region. He offers the term *decision making elite*, adopted from political anthropology, for individuals or groups who would control surplus food and make decisions on when to exchange it, and with whom. These elites also organized labor and acquired nonlocal commodities. Based on research on Mormon communities by Lightfoot (1979, 1984), different clusters would have surplus in different years. The surpluses would be exchanged with proximate, or adjacent, clusters between elites. Elites would control nonlocal goods, which were collected or "banked," then exchanged to elites when food was needed. Upham suggests that pottery, particularly Jeddito Yellow Ware, was an elite exchange commodity. The extensive distribution of this type, versus other Pueblo IV types, suggests its primacy. This relationship Upham termed the Jeddito Alliance.

His analysis (Upham 1982:100) identified the Homol'ovi cluster as the one having the likelihood of the highest degree of interaction among villages in a settlement cluster. This was considered a product of the central location of the cluster with respect to other clusters in the system, and the related factor of being the most accessible. The Homol'ovi cluster was considered accessible because it had no domi-

nant primate center where goods and services would be concentrated.

For Homol'ovi, the expectations are that there was a high degree of exchange among contemporary villages, that Homol'ovi II was a dominant, but not proximate, center, and that each of the villages had elites who managed labor to produce surplus food, which was exchanged for nonlocal goods. The central location of the Homol'ovi cluster made it a key player in regional exchange, but second to Hopi in the Jeddito Alliance. The variety of goods (ceramics) at Homol'ovi villages supports its central role in this exchange system. However, the presence of the primary elite ware, Jeddito Yellow Ware, in all post-1325 structures in Homol'ovi villages violates Upham's assumption of its exotic status and its role as a commodity controlled by an elite (Adams, Stark, and Dosh 1993). The material remains suggest a more fluid dynamic of power in Homol'ovi society, with no group controlling surplus or trade.

Kate Spielmann (1994a) has offered an alternative model to the organization of settlement clusters. She has suggested the model of clustered confederacies for the Pueblo IV Rio Grande settlement clusters, following the historic confederacies around the Great Lakes. Confederacies are organized along the lines of sequential hierarchies, unlike the simultaneous or fixed hierarchy model proposed by Upham. Under confederacies, individual villages act autonomously, but interact or are connected for limited purposes (Spielmann 1994a:48). Within a Great Lakes confederacy the political system consisted of four levels of sequential hierarchy ranging from the clan within the individual village to the confederacy council (Spielmann 1994a:49). Within this system, all participating entities were represented and had input into decision making, yet remained autonomous from the larger units.

Members of the tribal councils (consisting of several villages) and confederate council (consisting of four tribes) were chosen from the village leaders, who attained their position through heredity

and/or individual accomplishments. The village leaders had ritually, socially, and economically advantaged positions within the village. However, although prestige was accumulated, wealth was not (Spielmann 1994a:49–50). The development of confederacies has been linked to the need to suppress conflict within the individual confederacy, as well as to enable the confederacy to successfully compete with its neighbors in trade and deal with threats of conflict.

For Homol'ovi, then, a sequential hierarchy could have developed to suppress conflict or competition within the cluster, for defense against other clusters, and to promote exchange with proximate clusters. There is little evidence for conflict within the Homol'ovi cluster. Certainly, the Tuwuica phase settlements have no patterns of burned rooms, and their plazas are open and accessible. There is no skeletal evidence available to assess this critical evidence for conflict. The second reason for development of a sequential hierarchy was to monitor exchange between clusters. Upham (1982) also suggests that exchange was a significant factor in causing the development of clusters.

A third possible model for the Homol'ovi cluster is that each village was totally autonomous, with no central authority, consensual or nonconsensual. The unique histories of each village coupled with their unique material culture could argue for such autonomy and lack of central authority. However, the archaeological evidence suggests that the occupants of the Homol'ovi cluster considered themselves part of a social framework beyond the village, while maintaining village autonomy. Evidence for the cluster-size identity begins with shared origins. Groups who trace their origins to Hopi Mesa villages founded all of the Homol'ovi villages. Such shared roots may have enabled members of the Homol'ovi cluster to cooperate more readily and perhaps work more efficiently together than clusters, such as those on the Upper Little Colorado River,

where village histories suggest the populations came from much more diverse backgrounds (Duff 1999, 2002).

The most telling evidence for shared roots and a shared identity lies in the ceramic tradition of the Homol'ovi villages, the decorated Winslow Orange wares and utility Homolovi Orange wares. The ceramics from Homol'ovi III, Homol'ovi I, Chevelon, Jackrabbit, and Cottonwood Creek are virtually indistinguishable, especially stylistically (Lyons 2001). This homogeneity developed early in the ceramic sequence of each village and was maintained throughout. Winslow Orange Ware came to symbolize the Homol'ovi cluster both inwardly to the members and outwardly to neighboring clusters. Additionally, this shared identity is expressed in adobe brick architecture, similar segmentary building units termed "ladder construction" (see LeBlanc 1999), and plaza architecture. Perhaps the best indicator of cluster identity and cooperation is that all the villages were dependent on the Little Colorado River for water and subsistence, which required cooperation.

There is no indication of a primate village at Homol'ovi, at least until the arrival of Homol'ovi II late in the history of the cluster. It would seem that the model of a consensual hierarchy best fits the Homol'ovi cluster when it was established, at the end of the 13th century. However, the consensual governance was probably based on the necessity of cooperation in managing water in the river to the benefit of all villages, rather than on the need to reduce conflict. In a situation where there is no primate village, where there is no differentiation of material culture, no differentiation of architecture, this is the most compelling model. As noted by Spielmann (1994:45), a sequential hierarchy best accounts for societies so common in the Greater Southwest that are not egalitarian and have clear internal differences in power and ranking but lack centralized, permanent decision makers. It is possible that the cluster was more hier-

archically organized during the late period, with Homol'ovi II as the primate center (cf. Upham 1982).

#### Development of the Homol'ovi Settlement Cluster and Intercluster Relations

The construction of Homol'ovi IV established the Homol'ovi settlement cluster. The high frequency of Alameda Brown wares and Jeddito Orange wares at Homol'ovi IV indicates prolonged and significant interaction with people in these areas (table 12.2). The Alameda Brown wares were produced by Sinagua people in several contemporary villages on Anderson Mesa 50 km to 100 km south and west of Homol'ovi IV. Along with exchange of pottery, Homol'ovi IV occupants obtained finished products in obsidian from the Sinagua using the Government Mountain source west of Flagstaff (Harry 1989). From their homeland at Hopi, the Homol'ovi IV people received substantial amounts of the decorated pottery, Jeddito Orange Ware. These were undoubtedly traded, but the continual growth of the village from lineage-size population segments suggests that new immigrants brought much of the Jeddito Orange Ware. Although the frequency is low compared to later periods, 5% of the flotation samples at Homol'ovi IV did contain cotton seeds (K. Adams 1997). Cotton could have been exchanged from Homol'ovi IV to Anderson Mesa and to Hopi for pottery and obsidian. Additional exchangeable goods identified at other villages would have included aquatic birds and turtles.

A true sense of community developed with the founding of five villages, Homol'ovi I, Homol'ovi III, Cottonwood Creek, Chevelon, and Jackrabbit. Although this founding may not have been simultaneous, there is no doubt the occupation of the five communities overlapped significantly. The spacing of the villages take advantage of identical floodplain resources along a 31 km stretch of the riv-

Table 12.2 Percentages of Excavated Ceramics from Homol'ovi Villages and Sample Size<sup>1</sup>

Ceramic Wares/Types	Homol'ovi IV	Homol'ovi III:		Homol'ovi II	Homol'ovi I:		Jackrabbit
		Early	Late		Early	Late <sup>2</sup>	
Jeddito YW	0.94	0.98	7.67	43.80	2.51	43.62	24.30
Orange ware	0.90	0.13	0.22	0.45		0.12	0.00
Yellow ware	0.04	0.85	7.45	43.25		43.50	24.30
Jeddito OW	6.85	1.17	0.81	0.45	2.12	0.47	0.80
Winslow OW	18.19	24.45	21.45	2.32	30.67	3.21	11.95
Tuwiuca	1581	13.11	12.13	0.49		0.81	1.20
Red slipped	1.51	8.21	2.62	0.15		0.86	1.20
Homolovi Polychrome	0.40	2.62	6.47	0.15		0.73	0.00
White Ware	10.37	3.35	3.39	1.48	3.48	1.18	11.95
Pinedale B/w	0.03	0.02	0.06		0.00		0.00
Other Cibola	2.58	0.73	0.31		1.45	0.06	0.40
Walnut B/w	0.12	0.04	0.00		0.00	0.01	3.98
Other Little Colorado	0.84	0.17	0.08		0.19	0.27	5.18
Hopi/Tusayan	6.80	0.06	1.28		1.84	0.84	2.39
White Mountain Red Ware	0.44	0.86	1.81	0.31	0.68	0.46	0.00
Fourmile	0.00	0.03	0.16			0.07	
Pinedale	0.01	0.06	0.06			0.07	
St. Johns	0.07	0.02	0.01				
Other/Unknown	0.37	0.75	1.58			0.32	
Other Decorated	0.88	4.55	3.42	1.90	5.11	1.05	1.59
Total Decorated	37.67	35.68	38.81	50.25	44.64	50.00	50.60
Total Utility Ware	62.33	64.32	61.19	49.75	55.36		49.40
Homolovi	3.70	52.44	45.10	7.80	43.69		14.34
Awatovi	0.00	0.00	0.46	9.46			1.20
Tusayan	36.42	3.50	2.00		5.20		3.98
Little Colorado	6.77				0.19		5.58
Other	1.50	5.70	9.75	30.35	2.02		23.51
Alameda BW	13.95	2.68	2.97	2.14	0.29		0.80
Total Ceramics	16,734	18,650	22,618	6,489	1,035	3,377	251

Note: Where appropriate, the percentages have been divided into Tuwiuca (early) and Homolovi (late) Phase, or pre-yellow ware and post-yellow ware ceramic phases.

1. Percentages for Homol'ovi IV are from Hays-Gilpin et al. (1996), for Homol'ovi III are from Lyons and Hays-Gilpin (2001), for Homol'ovi II are from Hays (1991), for Homol'ovi I and Jackrabbit are compiled from unpublished analyses.

2. Because only the decorated ceramics from Homol'ovi I, late, have been tabulated, a frequency of 50% decorated, which is comparable to Homol'ovi II, was assumed to calculate percentages for decorated ceramics.

implies control of local resources for each village, but also the need to cooperate in water management to ensure each village's subsistence base. This has been demonstrated in the Hohokam area in the Southwest and elsewhere in the world (Fish and Fish 1994).

To survive, these communities must have cooperated in the sharing of water, because the arid environment of the region (ca. 200 mm precipitation a year) precluded effective dry farming, and only Chevelon was situated along a perma-

nently flowing side drainage, Chevelon Creek. All other villages relied on the same water source, the Little Colorado River. Sharing of food and cotton may have been minimal, because access to water and identical floodplain resources would have leveled risk and minimized the need for exchange of food. During the early occupation of Homol'ovi III, cotton was recovered from 10% of flotation samples, double that of Homol'ovi IV. The frequency of cotton in flotation samples at Homol'ovi I and Homol'ovi III is 28% and

25%, respectively, during the late occupation, ca. 1350–1390.

From Duff's (1999, 2002) analysis, differences were maintained in Upper Little Colorado River settlements throughout their occupation. These differences included unique ceramic traditions. Homol'ovi is different from the Upper Little Colorado River and is more like Hopi and Zuni in having a distinct, relatively uniform ceramic tradition that developed early in the settlement history. Ceramic tradition therefore often reflects cluster

history (see Spielmann, this volume). Both Hopi and Zuni have lengthy histories or occupations in place already by the latter half of the 13th century (Adams 1996a; Duff 1999; Kintigh 1985). These lengthy histories forged an identity that was shared over a wide area built on the development of alliances through social and economic connections, and on the slow process of aggregation. Continued aggregation was possible by establishing higher orders of consensual groups, including clans and sodalities (Duff 2002:189–91).

Homol'ovi settlers, although lacking the deep social history in place, brought their social history with them from Hopi and simply imbued the local landscape with it. The ability to develop uniform local decorated and undecorated ceramic traditions suggests the success of a cluster-wide identity comparable to Hopi and Zuni. This was enhanced by the large size of two of the villages that would have incorporated organizing principles to segmentary units brought with them from Hopi.

Abandonment of Homol'ovi III and Jackrabbit left Homol'ovi I, Chevelon, and Cottonwood Creek as the only villages occupied from about 1305 until perhaps 1350 (table 12.1). During the early 1300s, these three villages probably exchanged cotton, aquatic birds, turtles, and perhaps other things associated with riparian habitats with neighbors to the north, southwest, and southeast. In exchange they received obsidian and a small amount of pottery from the southwest (the Sinagua), a small amount of pottery from the Silver Creek communities to the southeast, and relatively more pottery from Hopi to the north. They also forged a cluster identity through the manufacture of Winslow Orange Ware and Homolovi Orange Ware that clearly distinguished Homol'ovi from its neighbors. Cooperation among the Homol'ovi villages probably centered on the need to manage water and is suggested by their persistence for up to 100 years and the presence of small villages, such as Cottonwood Creek. This implies organization of

Homol'ovi villages above the level of the village.

As local supplies of fuel decreased, importation of pottery and obsidian increased. The obsidian was consumed but also traded along with cotton and other goods to Hopi soon after 1325 for coal-fired, yellow pottery. This can best be perceived as mutualistic exchange, where both partners benefit from the relationship.

About 1350, Homol'ovi II was established on the west end of the Homol'ovi area, and Jackrabbit was reestablished on the east end. The political dynamics of the cluster changed dramatically with these events. Homol'ovi II brought a new level of village organization based on ceremonies focused in communal plaza spaces, including katsina ritual (Adams 1991b). This more focused social power within Homol'ovi II enabled the planning and construction of the village and water management to produce cotton crops that were exchanged to Hopi for pottery. The indigenous villages copied Homol'ovi II in the construction of large, enclosed plazas and the performance of katsina and other ceremonies planned in large kivas in the plazas. Fill beneath the 150+ rooms built to enclose the south plaza of Homol'ovi I contains frequencies of yellow ware exceeding 50% of decorated ceramics.

Most of the Jeddito Yellow Ware vessels are small bowls, ranging from 18 cm to 24 cm in diameter. Jars are much less common and are generally fairly small. In contrast, the vessel size at the western mound at Awat'ovi, which is contemporary with Homol'ovi I and II, has much greater variability in jar and bowl size (Smith 1971). The uniform nature of the Jeddito Yellow Ware vessels exchanged to Homol'ovi seems standardized, possibly even mass-produced for export. The standardization of size suggests selection of vessels for export (Hagstrum 1995). With the arrival of Homol'ovi II, production of Winslow Orange wares all but ceased, and importation of standardized yellow ware vessels attained staggering proportions. I estimate

that more than 100,000 yellow-ware vessels arrived at Homol'ovi during this 40-year period. The identification of 50% of the Jeddito Yellow Ware vessels from Homol'ovi I and II to Awat'ovi using neutron activation analysis (Bernardini 2002; Bishop et al. 1988) implicates Awat'ovi as the source population for Homol'ovi II and possibly Homol'ovi I. This supports the archaeological evidence and Hopi oral history that Awat'ovi was the dominant village at Hopi in the 1300s.

Although the exchange of ceramics was pervasive during the occupation of Homol'ovi IV from 1260 to the 1280s, and after 1325, when yellow ware was exchanged, the frequency of ceramics from Hopi between 1285 and 1325 was uniformly low. In fact, exchange in ceramics from other areas, along with obsidian and other items indicate trade occurred relatively equally with adjacent settlement clusters (table 12.2). The arrival of Homol'ovi II changed all that. In addition to more yellow ware, katsina ritual and village organization mimic Homol'ovi II. Winslow Orange Ware is practically nonexistent at the western mound at Awat'ovi (Smith 1971); however, Government Mountain obsidian, probably traded from the Sinagua around Flagstaff and Anderson Mesa, accounts for over half the obsidian (Shackley 1997). The faunal remains reveal a small number of aquatic birds, including pelican, great blue heron, Canada goose, sandhill crane, and teal, that could have come from Homol'ovi (S. Olsen 1978:4–5). The quantity of material at Hopi from Homol'ovi versus the amount from Hopi at Homol'ovi is infinitesimal. The difference almost certainly was cotton, which normally would not survive in the archaeological record of open sites like Awat'ovi.

From the perspective of the indigenous villages at Homol'ovi, the changes in layout and organization were noticeable. There are no indications of violence in any of the indigenous communities, which one might expect with a transformation in basic leadership within a settle-

ment as large as Homol'ovi I. Certainly there was change in the structure and layout of Homol'ovi I that was echoed at Chevelon and Cottonwood Creek. The imitation of Homol'ovi II by the indigenous villages strongly suggests they were emulating whatever organizational change Homol'ovi II was bringing to the settlement cluster.

Therefore, after about 1350 the Homol'ovi cluster increased to five villages, but was closely allied with Hopi. Obsidian probably flowed from Sinagua villages through Homol'ovi to Hopi. But the economic engine that ran the entire regional exchange system was the cotton that was produced in abundance at Homol'ovi and exported to Hopi. Within a generation, the Homol'ovi community began to shrink in number of villages and possibly in population. Jackrabbit and Cottonwood Creek, the two smallest villages, were abandoned before 1375, based on the complete absence of Sikyatki Polychrome and other late yellow ware types in the limited assemblages collected from these villages (R. Lange 1998). The other three villages all ceased occupation by 1400 (table 12.1).

So what happened to cluster identity? It would seem that Homol'ovi II not only changed the dynamics, organization, and power within the Homol'ovi cluster, but also changed, perhaps usurped, its unique identity. Although perhaps out of necessity, the replacement of Winslow Orange Ware with Jeddito Yellow Ware symbolized the gradual incorporation of Homol'ovi back into Hopi. The establishment of Homol'ovi II completed the task. Winslow Orange Ware was no longer produced, suggesting Homol'ovi no longer had an identity unique and distinguishable from Hopi.

The appearance of Jeddito Yellow Ware in the archaeological record of the clusters that had traded with Homol'ovi seems related to an increase in the intensity of exchange in the system, with Homol'ovi continuing to act as the middleman. The unique color and quality of yellow wares alone may have prompted this

demand, but certainly it appears that Hopi Mesa potters were producing pottery far in excess of their local needs. The continued increase in cotton production at Homol'ovi, based on ubiquity values in flotation samples, is probably the key to its role in this exchange. Expansion of katsina and other religious sodalities may have increased demand for cotton. Commensurate with increased yellow-ware exchange was a several-fold increase in the frequency of obsidian in Homol'ovi deposits (Harry 1989; Lyons and Pitblado 1996).

Among Homol'ovi villages, there are no indications of the accumulation of material goods associated with status. As Feinman and Neitzel (1984) note, this is to be expected with villages of the political and social complexity of Homol'ovi and located in a marginal subsistence environment. There is every indication that exchange occurred at the household or economic-group level, with the economic group almost certainly kinship-based. Household-level exchange is also expected in corporate modes of political economy, although the arrival of Homol'ovi II may have shifted the exchange economy to a more network mode (Feinman 2000). Specialized production of Jeddito Yellow Ware is the best evidence for a shift to a more network-like mode of exchange.

### Hopi, Homol'ovi, and Regional Politics

Why was Homol'ovi abandoned? To consider the question, both local and regional factors must be taken into account. After all, large areas of the Colorado Plateau and the Mogollon Rim were abandoned about the same time (Cordell 1984; Fish et al. 1994). Perhaps this abandonment of nearby regions is the explanation. If Hopi groups established Homol'ovi primarily as a move to maintain control of its territory and its boundaries, the collapse of proximate clusters could have lessened or eliminated the need for Homol'ovi to continue to exist.

The presence of Sikyatki Polychrome and abundance of asymmetric designs on bowl interiors in the latest ceramic assemblages at Homol'ovi I and Chevelon suggest an abandonment date between 1375 and 1400. For Homol'ovi II, Sikyatki Polychrome had become common in the latest occupation levels of the village surrounding the west and central plazas and some kivas. An educated guess would put abandonment of Homol'ovi I and Chevelon at about 1385–1390 and of Homol'ovi II at about 1400.

Events on the local and regional scene fit in with these suggested dates. Van West's (1996) reconstruction of environment and stream flow (see also R. Lange 1998) together with that of Dean (1988b) and others (Dean, Doelle, and Orcutt 1994; Dean et al. 1985) indicate that the 1380s were both cooler and wetter than normal, with the likelihood of severe flooding during the early 1380s. Mills (1998) and others have suggested that the abandonment of the Silver Creek and Upper Little Colorado River areas occurred in the 1380s due to the coldness of the period. The latest tree-ring dates in the region are in the mid-1380s (Duff 1999, this vol.; Mills 1998).

On the local level, a series of floods through the Little Colorado River could have devastating effects on any water management systems as well as crops in the floodplain. Stream flow reconstruction suggests monumental floods struck in 1382 and 1384 (Van West 1996). The period from 1385 to 1395, in contrast, was very dry, suggesting drought conditions. These alternating conditions could have placed subsistence stress on the Homol'ovi populations.

The cumulative effect of these problems could have prompted the abandonment of the Homol'ovi area. However, Homol'ovi did not live in a vacuum. Its relationships with nearby settlement clusters were extensive and complex. It is probably no coincidence that the Anderson Mesa, Silver Creek, Upper Little Colorado, Puerco, and Bidahochi clusters were all abandoned

within the period 1350–1400. Perhaps the abandonment of the Puerco and Bidahochi clusters, followed by Silver Creek, Upper Little Colorado, and probably Anderson Mesa clusters, seriously impacted Homol’ovi. These abandonments would have affected the complex network of exchange in which Homol’ovi was central during its entire occupation. Without adjacent trade partners with whom to exchange cotton and riparian flora and fauna, the primary purpose for the cluster may have diminished. Given the increasing dimensions and complexity of religious ritual, ritual performance, and ritual technology, disruption of regional exchange could have impacted the ability of communities and even clusters to survive. Additionally, if the clusters were politically and militarily allied, the collapse of the other clusters may have left Homol’ovi vulnerable to attack, although by whom it is unknown.

Prime candidates for understanding regional and Homol’ovi abandonment are the political situations within Hopi and between Hopi and Zuni. The ancient history of the Western Pueblo region, which includes Hopi and Zuni-Acoma, has, since the A.D. 700s, revealed a boundary between these two areas. This boundary has fluctuated around the Puerco River of the west through this period up to the present. Hopi and Zuni boundaries marking the edges of their ancestral lands meet in a series of shrines following the course of the Puerco River (Page and Page 1982). The ceramic traditions of the two areas became very clear in the 1200s and 1300s. Rarely was yellow-ware pottery traded into the Zuni/Upper Little Colorado/Silver Creek area, and rarely were wares from these areas found at Homol’ovi and Hopi (Duff 1999). Some permeability of these wares, where they are shared, is found in border clusters, such as Puerco and even Anderson Mesa. However, Duff (1999, 2002) has demonstrated that virtually all Zuni wares found at Homol’ovi were in fact manufactured in Upper Little Colorado River communities rather than at Zuni.

There is no question that immigrants

from northern Arizona settled into communities in the Silver Creek drainage, the Upper Little Colorado River, below the Mogollon Rim, and to points farther south (Haury 1958; Lindsay 1987, 1992; Lyons 2001). However, these populations seem to be almost solely Kayenta Anasazi from north of historic Hopi, and not Tusayan Anasazi, groups coming directly from Hopi Mesa communities, given the distinctive layouts of the northern polychromes of Kayenta Anasazi versus those on Tusayan pottery, which Smith (1971) and Lyons (2001) call the “Jeddito School.” Perhaps this intensified the competition between the two areas for land, resources, and people. If competition was increasing between Hopi and Zuni, allied settlement clusters may have withdrawn into the respective regions for protection, stimulating the abandonment of intermediate settlement clusters.

Additionally, within Hopi there was apparently competition among the villages, especially between Awat’ovi on the east and Orayvi on the west (see Adams, LaMotta, and Dongoske, this vol.). Oral traditions and archaeological remains demonstrate that these were the two largest villages during the 1300s and continued so until Awat’ovi was attacked and abandoned in 1700 or 1701 (Adams 1996a; Brew 1949; Rushforth and Upham 1992). Based on ceramic sourcing, it is likely that not only was Homol’ovi II founded by occupants of Awat’ovi or at least Antelope Mesa villages, but that relations with Antelope Mesa villages may have ultimately involved all the Homol’ovi cluster villages (Bernardini 2002). Exchange between the two areas seems to have been based on the flow of cotton to Hopi (Awat’ovi) and the flow of pottery from Antelope or First mesas to Homol’ovi. Control over cotton production carried significant prestige and probably marked Awat’ovi, and perhaps all of Antelope Mesa, as the dominant settlement cluster at Hopi. Antelope and First mesas were also the principal production areas for the famous Jeddito Yellow Ware ceramics that were exchanged over vast

areas beginning in the 14th century. The economic and political power of Awat’ovi and its allies was impressive.

There are indications toward the end of the 14th century that Orayvi was gaining in prestige and power on the western end of Hopi. The size of the community was growing, and about 1400 it established a farming village, Mùnqapi, 60 km west of Orayvi in a well-watered valley named after Mùnqapi village. At Spanish and Mexican contact, Mùnqapi was described as a cotton-producing area for Orayvi (Adams 1989; Nagata 1970). It may or may not be coincidental that the founding of Mùnqapi corresponded almost exactly with the abandonment of Homol’ovi, the principal cotton-producing area for Awat’ovi. Either the abandonment of Homol’ovi provided a window of opportunity for Orayvi to join in cotton production, or competition from Orayvi caused or sped the abandonment of Homol’ovi.

Whatever the scenario, political and social factors external to Homol’ovi almost certainly played a role in its abandonment. Diminishing productivity of the area due to environmental factors combined with political exigencies may have caused the withdrawal of Hopi from Homol’ovi. It may be that the purpose for founding Homol’ovi by the Hopi, to control a boundary or resources, was removed with the abandonment of adjacent clusters between 1375 and 1400. With no nearby sedentary village to threaten its resources, Hopi could control the area from the mesas.

The scenario favored here is that environmental conditions had two initial effects. On a local level, conditions probably reduced carrying capacity for the cluster, forcing communities to decide between fissioning and totally abandoning the area. As elsewhere, carrying capacity never decreased to the point where the area could not be occupied, but the social networks would have been seriously compromised. Compounding the problem was the disruption in exchange networks with neighbors. Not only were nonfood products affected, but also some food products,

including possibly agave and meat of big game animals, were also no longer available. As nearby settlement clusters were abandoned, Homol'ovi was left only with Hopi with whom to exchange. Not only were social networks compromised, but the actual safety of the Homol'ovi vil-

lages may have also been called into question. This relates to the second effect, regional politics. Competition between Hopi and Zuni and probably internally between Awat'ovi and its allies on Antelope and First Mesa, and Orayvi and its allies on Second Mesa, may have intensified

to the point that Homol'ovi populations were no longer safe. Homol'ovi populations may have been needed not so much for their labor, but for being able to bolster population size to provide potential warriors should conflict break out either with Orayvi or Zuni.