

# A DECADE IN IRAN

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The establishment of a basic chronology consisting of broadly defined cultural phases from the earliest village settlements to the beginning of the historic period; the elucidation of each of these periods with some knowledge of technological development, social organization, architecture, funerary customs, and settlement pattern; and the integration of this information into the broader picture of Iranian prehistory—these are the three major goals which have been set for the Hasanlu Project which has just completed its tenth season of excavations in the Solduz and Ushnu segments of the Qadar River valley in southwestern Azerbaijan, Iran.

During this ten year period the Project has been jointly sponsored and aided by the Archaeological Service of Iran. It has been supported for seven seasons also by the Metropolitan Museum of Art of New York City with Dr. Vaughn E. Crawford and Dr. Oscar White Muscarella serving as co-directors. Additional support has been received for specific aspects of the work from private donors, the Explorers Club of New York, the Kevorkian Foundation, the University of Kansas, the Royal Ontario Museum, the National Science Foundation, and the Ford Foundation. Through the support of these various organizations it has been possible to carry out the desired research and at the same time provide field training for outstanding graduate students from several universities. Many of these students have now gone on to responsible professional careers at the following institutions: Harvard University (Dr. C. Lamberg-Karlovsky); the Metropolitan Museum of Art (Dr. Oscar White Muscarella); the Oriental Institute of the University of Chicago (Dr. Maurits Van Loon); the Royal Ontario Museum (Dr. T. Cuyler Young, Jr.); the University Museum (Dr. George F. Dales); and Yale University (Dr. Richard Ellis). Other students from the University of Pennsylvania are currently working on or toward dissertations on the prehistory of Iran and neighboring Iraq (Mary M. Voigt, William M. Sumner, Ragnar B. Kearton, Louis Levine, Carol Hamlin, and

Christopher Hamlin). All of these staff members and others who have participated as senior or junior members of the party have contributed their own understanding, suggestions, and questions which, combined with constant open discussions with other colleagues, have led to the results so far obtained.

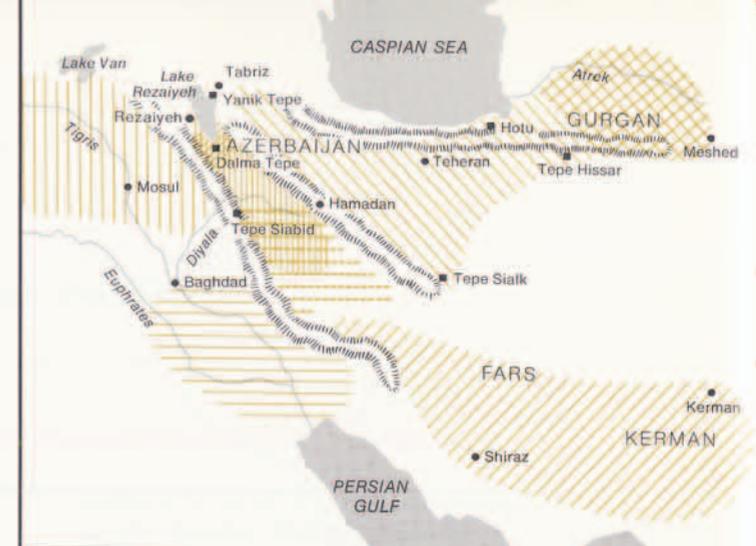
Some of these results, accumulated over the past decade, are illustrated in the current University Museum exhibition. They may be further elaborated here in terms of the three basic aims set forth above.

The basic chronology of the valley under study has been developed in the following way: excavations undertaken at the major site studied, Tepe Hasanlu, produced a stratified sequence of superimposed ceramic remains to a depth of 27½ meters (about 89 feet). This sequence included nine recognizable ceramic phases each characterized by a major shift of fabric, shape, and style. A tenth, and earliest phase, was inferred from sherds found out of position, but was never reached due to the high level of the water table brought about through the extensive irrigation practiced around the site. This ceramic development began with low fired 'soft wares' decorated with red or brown painted geometric designs and ended with the drab wheelmade buff wares of the early historic period. The periods were numbered from the top of the mound downward from I through X. Period II produced no sherds (and was based on architectural remains) but period III subsequently was found to consist of an early and a late ceramic phase (IIIB and IIIA) bringing the total back to ten. Transitions between phases, given the local evidence at only this one site, appear abrupt, but are almost certainly not always so. In one instance, that of the Early Bronze Age (3000-2500 B.C.) there seems a real possibility that there may be a major hiatus in the sequence. Excavations carried out at Pisdeli Tepe, Dalma Tepe, and Hajji Firuz Tepe confirm the basic stratigraphy of Hasanlu as well as confirming the inferred basal position of Hajji Firuz Ware as



IRAN Map 1  
Hasanlu X and contemporary pottery wares. 6000-5000 B.C.

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IRAN Map 2  
Hasanlu IX and contemporary pottery wares. Ca. 4200 B.C.

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IRAN Map 5  
Hasanlu VI and contemporary pottery wares. Ca. 1800-1500 B.C.

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IRAN Map 3  
Hasanlu VIII and contemporary pottery wares. Ca. 3500 B.C.

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IRAN Map 4  
Hasanlu VII and contemporary wares. Ca. 2500-2000 B.C.

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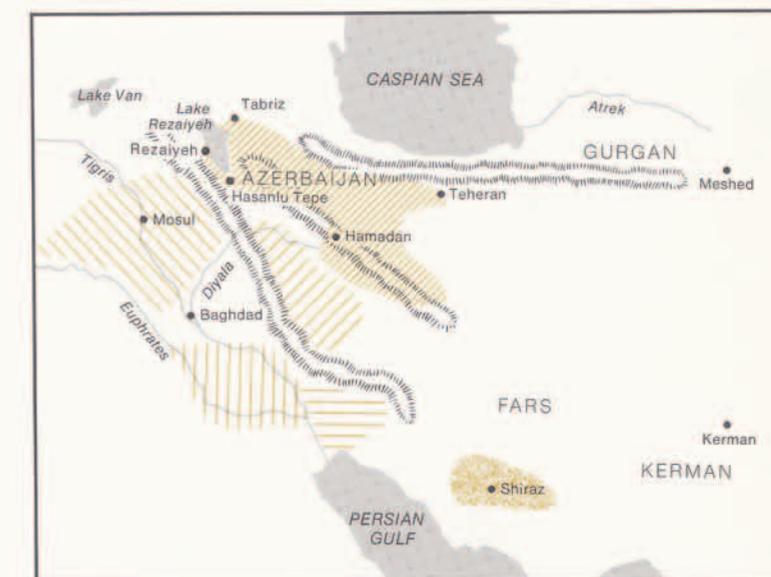
period X. The pottery of the three earliest phases was named after the site where the best sample was obtained; thus, Pisdelli Ware (period VIII), Dalma Ware (period IX) and Hajji Firuz Ware (period X). Excavations at Dinkha Tepe 14 miles west of Hasanlu in 1966, and again in 1968, confirmed the sequence of Hasanlu IV and V Iron Age grey wares overlying the painted wares of period VI (Late Bronze Age) at both sites. Excavations at Tepe Agrab near Hasanlu, and at Ziwiyeh in Kurdistan, augmented our knowledge of the period III early historic materials but added nothing to our stratigraphic information. Survey work has indicated the possible presence of the supposedly missing Early Bronze Age occupation in the upper or Ushnu segment of our valley.

Given this stratigraphic sequence of ceramic wares and shapes (which stretches from 6000 to 400 B.C.) a comparison was then made with the ceramics from neighboring sites in Iraq, Iran, and Turkey. Similarities were found allowed a cross-correlation with existing chronologies in these areas.

Independently of the comparative ceramic analysis, a series of associated stratified carbon samples from the sites excavated were submitted to the University of Pennsylvania C-14 Laboratory for testing. The laboratory has now run over fifty samples in this series, providing an absolute chronology in broad terms for the 6000 year range. More recently, the Museum Applied Science Center for Archaeology has been applying the experimental thermoluminescence dating technique to a sherd series, with results which in general confirm the sequence.

The first aim of the Project may thus be considered in a large measure achieved. Corrections will have to be made as dating procedures are improved and these gross ceramic phases will someday have to be refined into detailed developmental stages. When this is done, by myself or others working in the field, it will be possible to study the true nature of the transitions between these periods. At this point many questions of theoretical interest to cultural anthropology will be under examination.

Some aspects of these transitions will no doubt become clear as we proceed with the horizontal excavations necessary to create a minimum understanding of the cultural pattern that goes with each of these ceramic phases. This study, in which we are currently engaged, forms the second of our three major aims as now formulated. Thus far we have obtained considerable data for the periods from 1000 to 400 B.C. (Hasanlu IV, IIIB, IIIA, and II) and from



IRAN Map 6  
Hasanlu V and contemporary wares. Ca. 1350-1000 B.C.

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*"Stolper House" at Hajji Firuz, consisting of rear door (behind plaque), hearth (right of door), short partition wall (center right) and opposite post holes (center left), dates to between 5500 and 5300 B.C.*

6000-5000 B.C. (Hasanlu X). Limited data are available for phases VI and V (2000-1000 B.C.), with current work at Dinkha Tepe aimed at further elaborating both chronology and cultural pattern. Excavation of a horizontal type has yet to be carried out for phases VII, VIII, and IX (5000-2000 B.C.) but is programmed hopefully for the near future.

The earliest phase, X, has been extensively explored this past summer at Hajji Firuz Tepe, about a mile south of Hasanlu. Over two hundred square meters of the middle sixth millennium occupation were cleared under the co-direction of Mary M. Voigt who is at present in Iran working on the material. Although not the earliest building level at the site, the excavated materials may be taken as representative of period X, to judge by the stratigraphic sample already recovered from the same site adjacent to the area now cleared and previously reported on by the excavator T. Cuyler Young, Jr. (*Illustrated London News*, No. 6431, 1961). In 1968 two complete house plans were recovered along with partial plans of several other houses built of mud mortar and sun baked brick. After some initial difficulties due to the wetness of both fill and walls we were able to separate the two by allowing a period of drying before clearing and thus produced free-standing walls at the end of the excavation. A mass burial containing thirteen individuals, animal bones, some plant remains (ob-

tained by 'flotation'—a method of washing and sieving), and numerous small objects of flint, bone, and clay were recovered. The houses were small structures with walls a single mudbrick in thickness, roofed with poles, reeds, and clay. The house appears to have been basically a single room partitioned on one side by a dividing wall which may have been a support for a pitched roof (as suggested for contemporary Hassuna period houses in Iraq by the British archaeologist Seton Lloyd). The floor was usually of packed mud or clean yellow clay, sometimes stained red. The floor area was often divided into special bins or storage areas and hearths by low curb walls. In one house a step led up to a raised doorway. The houses generally were square in plan, measuring between 6.5 and 4.0 meters on a side (18 to 13 feet). They can only have been a single story in height, given the thinness of their walls. Generally the structures were located between about one and a half and three meters apart (5 to 10 feet) and were oriented toward the points of the compass. Occasional outside storage structures of packed mud occurred as appendages to the main house. The limited open areas outside the structures were usually filled

with layers of dense black ashy soil containing sherds and bones. The occupational floors within the houses, in contrast, were often quite clean.

The villagers kept sheep and/or goats in quantity and possibly pigs as well (or at least hunted wild boar, the point being yet unsettled), and kept dogs but do not seem to have possessed cattle. The animal bones from this and the Bronze and Iron Age levels at Dinkha Tepe will make an interesting comparative study in themselves. Plant remains were few (in spite of efforts to employ the recently developed flotation method) although the pottery appears to be full of chaff temper. Surprisingly few grinding tools were found, although querns and handstones did occur. On the other hand, virtually no stone sickle blades were recognizable as such. Apparently the wool and/or hair of the animals was spun into cloth, as some sixty-seven biconical clay spindle whorls were found. Reed mats were also used, as indicated by impressions on the bases of pots, and coiled basketry was made and used in building up pot forms. Apparently this latter was done by using the basket as a mould and filling it with clay which was allowed to harden and then removed. The vessel, retaining the impression of the basketry, was then coated inside and out with finer clay and the surface burnished

and sometimes painted. Forms tended toward storage jars with undercut bases and short straight necks—a type well known in the Hassuna culture of Iraq. Designs were bold geometric patterns. Among the small objects the most exciting was a small female figurine which came to be called by the staff the 'Hajji Firuz Venus.' She is a curiously abstract and stylized figure, which is unique, but which has some elements in common with the pinched and fingernail impressed figurines from central Zagros sites farther south. 'Venus' has been awarded to the Museum as part of its share of the excavated materials. Fragments of other figurines show that the villagers made quite a range of such things.

Excavations carried out during the past two seasons at Dinkha Tepe have begun to shed light on the Late Bronze Age, three thousand years later than Hajji Firuz. Here massive walls were built of square sun-dried brick set on foundations of boulders and river cobbles. One massive structure partly explored by the expedition has sections of wall 8 meters thick (about 26 feet) and is preserved to a height of 5 meters (roughly 16 feet). The expedition originally thought this system of walls was part of a fortification wall but that interpretation appears quite questionable as the result of the latest excavations which

*Excavations of the Iron Age citadel (1000-800 B.C.) at Hasanlu, as seen from the air.*





*Inscription of the Urartian king Menua (810-781 B.C.) found at Cheshmi Gol, Ushnu valley, Azerbaijan, Iran.*

seem to reveal something on the order of a massive building. Elsewhere Late Bronze Age buildings have walls two meters thick (6½ feet) with white plaster faces and brick pavements. The painted wheelmade pottery which characterizes at least the middle second millennium is virtually identical to the 'Khabur Ware' known from northern Mesopotamian sites and from southern Turkey at this same time. This pottery is accompanied by finely made wheel-turned grey ware reminiscent of the Minyan ware of Greece. In the earliest levels above virgin soil at Dinkha, the fine grey ware and the fine painted ware appear to be lacking, having been preceded by a simpler and coarser pottery with some related types.

Small objects found include votive pottery wall cones, animal-headed pottery 'andirons,' and a clay bulla bearing an early second millennium cylinder seal impression of Mesopotamian type with several cuneiform signs. It is apparent that this phase represents an occupation of the valley by intruders from Mesopotamia. An important find was the stone tomb of at least nine individuals accompanied by an agate necklace, crescent and embossed star gold pendants, strip-twisted gold earrings, a bronze sword blade, and several plain pots. The jewelry as a group has Late Bronze Age parallels to the west in Iraq and Palestine and to the east in the Early Iron Age Royal Tombs at Marlik Tepe. The date is confirmed by C-14 dates as middle second millennium.

The following phase (Hasanlu V) begins the Iron Age and is characterized by a partial shift in burial habits, ceramics, and architecture. A great many mounds in the area appear to have been used for extra-mural cemeteries in this period, in direct contrast to the intra-mural burials which preceded. Each grave is now equipped with burnished grey, red, and buff vessels in the form of single-handled goblets with

pedestal bases, flaring bowls with inverted crescent-shaped lugs, and jars with horizontal free-standing spouts. One grave at Dinkha also contained a jar decorated with black, cream, and red polychrome designs. Two graves of this period at Hasanlu contained a vessel of period VI type. Otherwise, grave goods were quite standardized except for one iron finger ring found at Hasanlu and one Mitannian style cylinder seal found at Dinkha. All of the available evidence points to the appearance of an entirely new group of people in the valley.

Around 1000 B.C., following the occupation of the valley by these newcomers, the great Iron Age citadel of Hasanlu IV was constructed, probably along with several similar citadels spaced along the valley. Within the 3.20 meter thick (about 10 feet) walls, large buildings were constructed on a basically 'megaron' plan consisting of anteroom, pillared hall with hearths and benches, and storage rooms. Later, an open portico was added to two of the buildings and finally was incorporated into one as part of the formal plan. The portico is suggestive of the Assyrian influence which became very strong in the ninth century, as indicated by many of the small objects found.

The destruction of the citadel with its treasure of gold, silver, ivory, bronze, and iron objects occurred sometime around 800 B.C. at the hands of the Urartians who at this time expanded their frontier eastward from the area of the Kel-i-Shin pass in the mountains at the western end of the valley, to the plain of the Jaghaitu Chai in the east where an inscription at Tash Tepe commemorates the event. Hasanlu, Dinkha, and probably the other contemporary citadels in the valley which must have functioned as an advanced allied frontier for the Assyrian-governed provinces to the south, were destroyed and temporarily or permanently abandoned. The Urartians then built a new stronghold on a mountaintop on the north side of the Ushnu sector of the valley at Qalatgah. This imposing site remained in use until the early historic period some centuries later, as indicated by the results of our surface survey undertaken in 1968. Mr. Christopher Hamlin of the expedition staff discovered a stone building block bearing six lines of cuneiform script and an Urartian text belonging to the same king Menua who marched from Kel-i-Shin to Tash Tepe in the campaign just referred to. Thus, with these three inscriptions and the site of Qalatgah, the frontier of Urartu is established for the beginning of the eighth century B.C. as running just south of Lake Rezaiyeh.



*Tumulus mounds I (rear) and II (foreground) at Se Girdan, dating perhaps to the 7th century B.C.*

After a short hiatus Hasanlu was reoccupied. The old fortification wall was reused and small barracks-like rooms were built around its inside face. The old gate was abandoned and the wall shortened. Agrab Tepe, a small fort-like structure, was built nearby. Pottery now became buff colored or red-slipped and painting reappeared in the form of hanging triangles. To this period, but quite distinct culturally from Hasanlu and Qalatgah, belongs the great castle at Ziwiyeh explored briefly in 1964. Although Ziwiyeh contains some of the Hasanlu IIIB painted pottery, the general ceramic tradition looks more like a later version of the Hasanlu V-IV development. At Hasanlu the ceramic tradition of IIIB seems to have developed into IIIA (600-400 B.C.) with

Urartian elements lingering on, to the exclusion of the more characteristic pottery of this period as known in the central Zagros and in Fars.

To the seventh or even sixth century may belong the tumulus field at Se Girdan not far from Dinkha Tepe. Excavations carried out here in 1968 revealed both a stone-built tomb chamber and a pit grave roofed by timbers and covered with a mound of rubble, packed clay, gravel, and more clay. The largest tumulus measured 8 meters in height and 60 meters in diameter (26 feet high by about 190 feet). The pit or

Timber-grave of Tumulus III contained the body of a single individual accompanied by a silver drinking vessel, a bronze axe-adze blade, a bronze knife, a necklace of small gold and silver beads, two rods of silver, and a ground stone sceptre or baton decorated with a lion's head at one end. No pottery was found and the relationship of the grave to other materials in the valley remains to be determined.

Turning finally to our third aim, the integration of the local cultural history into that of Iranian prehistory in general, we can make a few general comments of a tentative nature, although a full evaluation of this aspect of the Project must await analysis of all the material. So far, in spite of our own efforts and those of Dr. Ralph Solecki in the area, we have been unable to locate any sites older than 6000 B.C. This situation is more likely the result of the environment (which does not favor caves and rock shelters), than of a total lack of population prior to this date. Nevertheless, at the moment we can only see the Hajji Firuz villagers as pioneer farmers and herders settling the area around Lake Rezaieh and establishing for the first time a series of permanent villages. Whether these people actually moved into the plain from elsewhere or whether they simply learned various techniques from their neighbors we cannot now tell. But at the time they appear they are already practicing a way of life based on a mixed economy of husbandry and agriculture that has been called "Primary Village Efficiency." Their ceramics at least indicate that a direction of influence, if not of actual origin, was from Mesopotamia where the Hassuna culture occupied the plains of Assyria. These two related cultures appear to stand somewhat in contrast to the Zagros Group of cultures centered between Jarmo in Iraq, Sarab in the Kermanshah valley, and Ali Kosh in southwestern Luristan on the one hand, and the early 'soft ware' cultures of northern Iran as seen at sites like Yanik Tepe near Tabriz, Cheshmi Ali near Teheran, and Hotu and Belt Caves and Yarim Tepe on the Caspian shore. That the Hajji Firuz Culture formed a link in the chain of contemporary early village cultures stretching from Mesopotamia to central Asia is clear; the exact nature of that relationship remains momentarily obscure.

Following Hajji Firuz, and quite possibly derived from it, is the Dalma Culture, dated by radiocarbon to the second half of the fifth millennium. This period saw the development of what appears to be a painting style localized in the area southwest of Lake Rezaieh: the Qadar River valley and the upper end of the valley of

the Little Zab. This pattern of ceramic development is contemporary with two others—an Ubaid-related grouping to the south in the central Zagros region, and a second grouping in central Iran of Sialk II-III type (stretching from Yanik Tepe in northeastern Azerbaijan eastward to Tepe Hissar). The Dalma painted ware is largely cream or orange-buff with bold designs painted on in red paint applied with sweeping strokes. The pottery to the south (as found at Tepe Siabid near Kermanshah) is fired to a greenish white and painted with intricate designs. The pottery of the central region is largely red with black painted animals and geometric patterns. During this period, however, all of northwestern and central Iran shared an elaborate repertory of impressed wares made by applying various tools to the surface of the wet clay. This group of techniques is also found commonly in Greece, the Balkans, and the southern Soviet Union and raises the question of possible contacts by way of the Black Sea or around its coasts. None of this pottery survives, however, in the period which follows (4000-3000 B.C.) when once again the major influence in the Qadar Valley seems to have been western, derived from the Ubaid cultures of Mesopotamia and the central Zagros. This cultural phase, the Pisdeli Culture, seems to have been restricted to the southwest corner of Lake Rezaieh, north as far as Rezaieh on the western shore. On the east it was in contact with a local 'chalcolithic' culture at Yanik Tepe near Tabriz. Following this period comes our possible hiatus during which all of Azerbaijan north and east of the Qadar Valley appears to have been occupied by Early Bronze Age people moving southward out of eastern Turkey and the Caucasus, bringing with them burnished black pottery and new architectural forms. Some of this pottery is known from the upper end of the Qadar Valley but to date we have been unable to demonstrate an actual occupation of the valley. It may be that, as has happened on numerous occasions in recent history, the valley formed a no-man's land between two opposing cultural groups and was actually unoccupied for a period. Be that as it may, at the end of the third millennium, about 2200 B.C. the settled area of Hasanlu was greatly expanded by people making a different kind of pottery—this time painted with animals and geometric patterns. Pottery of this type occurs as far away as the Maragheh plain halfway up the east side of Lake Rezaieh, near Mahabad south of the lake, and in the Qadar Valley. The shapes of the pottery recall Akkadian and later shapes in nearby Mesopotamia, and the designs reflect

a tradition developed in Susa and Luristan (Godin Tepe and Tepe Giyan) immediately to the south. It would seem, therefore, that we have returned to the same direction of influence experienced in the Pisdeli period, but at a later date. It is during this period that the beautiful burnished grey pottery of Tepe Hissar and related Gurgan sites was being made in eastern Iran, while people bearing the Early Bronze Yanik pottery had pushed southward from eastern Azerbaijan into the Hamadan plain, effectively splitting eastern Iran from western Iran.

During the second millennium the major impact on the Qadar Valley came from northern Mesopotamia or southern Turkey with the intrusion into the area of people manufacturing 'Khabur Ware.' The valley thus forms the eastern end of a zone affected during the early second millennium by the infiltration of Hurrian-speaking peoples coming down from the Anatolian plateau, and by small groups of Indo-Europeans coming in probably from the east. During this period polychrome pottery appears over much of northern Azerbaijan, and again the Qadar Valley seems to form a frontier, as the ware is very rare there and seems not to penetrate farther south (where there is polychrome, but of another type). The small objects and burial customs are also Mesopotamian in origin, indicating that we are dealing with an intrusion across the mountains into this valley. The newcomers apparently penetrated no further, as sites containing this same material have not been reported from any of the surveys recently carried out in adjacent areas.

Toward the last quarter of the second millennium this complex of architecture, burial custom, small objects and ceramics is abruptly replaced at Hasanlu and at Dinkha by the first wave of grey pottery-using people ushering in the Iron Age. These people appear to have been less settled than their predecessors and were perhaps more dependent upon herding as a way of life. They utilized ancient mounds all over the valley for cemeteries but seem to have built few major installations. Their origin appears to have been eastern and they clearly form part of a major cultural movement taking place in central Iran with extensions into Azerbaijan, the Kermanshah Valley, and down into Fars. This pattern of dispersal, beginning with the Gurgan area and carrying with it materials of Tepe Hissar type is currently interpreted as the appearance of the Median and Persian tribes and should be connected, therefore, with the spread of the Indo-Aryan groups who later emerge in history as the major population of the plateau. In this

instance we would have virtually for the first time in the long history of the Qadar a complete reversal of the major direction of influence, it being eastern rather than northern, or south and western.

In the following period the sources of influence are less easily identified. Around 1000 B.C. Hasanlu and presumably other major sites in the valley were turned into fortresses. Why? The ceramics, although employing a greater variety of shapes are, in terms of the wares being made, the same as those in the preceding period, and there is some carry-over of shapes. On the other hand the burial customs are altered—but again with some continuity. The same cemeteries continue in use and individuals are buried separately as before. But in the earlier period they are accompanied by a stemmed goblet, a bowl with flaring sides, and a jar with a free-standing horizontal spout. In the later period the goblet disappears, the bowl becomes a carinated one, and the jars are all made with attached horizontal spouts. The change within the tradition may be simple evolution, or it may represent a new but closely connected group arriving. One would tend to favor the former interpretation since the two kinds of graves are usually stratified one above the other. If the same population occupied the valley, then we must conclude that some significant event occurred around 1000 B.C. to cause them to organize themselves and go to extensive trouble to fortify their settlements. One can but wonder whether the cause of this activity didn't lie in the expansion of their larger neighbors, especially the Assyrians. In any event, by the end of the ninth century the valley was clearly under Assyrian influence and the local citizens allied with them against the Urartians in the mountains to the west and north.

With the eastward expansion of the Urartians in the early eighth century, the forts along the Qadar Valley were destroyed and probably much of the population as well, to judge by the mayhem in the ruins of Hasanlu. The valley now once again came under the general influence of northerners, and gradually sank into a local cultural pattern which seems to have been little influenced by the major centers which lay far away during the Achae-menian period.

Such limited historical, chronological, and cultural reconstructions serve as a brief indicator of the range of problems and the possibilities of analysis and interpretation which lie before the Hasanlu Project as it pursues its intensive study into the second decade. 