

Neolithic Age of western Tibet: a trans-Himalayan perspective

Hongliang Lü*

* Center for Tibetan Studies of Sichuan University, Chengdu, Sichuan 610064. E-mail: scottscu@gmail.com.

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Abstract

Based on the archaeological evidences from western Tibet and Swat and Kashmir Valleys, this paper argues that there were indeed local traditions of Neolithic cultures of the northwestern subcontinent, but its connection with outside areas, especially the Tibet of China could not be denied. The evidences showed trans-Himalayan transmission in small scale. Karub Culture in the eastern Tibet and Dingzhonghu Zhuzi Site in the southwestern Tibet might have been the connecting points of trans-Himalayan Neolithic interactions, and this small scale cultural penetrating should be explained in the background of long-distance trans-Himalayan trade.

Introduction

Known Neolithic cultures on the Tibet Plateau include the Karub Culture represented by the Karub Site in Qamdo, eastern Tibet (5500–4000 BP), the Chugong Culture represented by Chugong Site in Lhasa, central Tibet (4000–3000 BP). Additionally, in the southeastern part of the lower reach of the Yarlung Zangpo (Brahmaputra River), there are a number of Neolithic sites that have been described as belonging to the “Nyingchi Type.” The late Neolithic sites in eastern and central Tibet have strong local characteristics and are very different from each other in cultural characteristics, a phenomenon that is likely closely related with their particular environments. The ecology of the western part of Tibet is again completely different from that of eastern or central Tibet, but apart from a few stone tool scatters collected from the surface so far no clear Neolithic remains have been found there. Therefore, Yongxian Li addresses the above-mentioned stone tool surface scatters as belonging to the western type of the Tibetan Neolithic cultures. But were the prehistoric people of western Tibet really nomads who evolved from hunter-gatherers without there being any Neolithic sites showing evidence of agricultural subsistence? This is a



Figure 1 Map of sites mentioned in this paper.

question in Tibetan archaeology that currently attracts a lot of attention.

These days, the high-altitude plateau of Ngari is a place where agriculture and herding are practiced side-by-side, with agriculture being especially important in the southern river valley of Ngari. The author of this paper suggests that this model may be extended to prehistoric times. Although the related archaeological evidence from the northwestern part of Tibet is not yet sufficient to answer this large question, there are already some preliminary indicators. This paper summarizes the results of fieldwork conducted in the northwestern part of South Asia and discusses this question from the “Trans-Himalayan” perspective (Figure 1).

Evidence from western Tibet

In 2001, at Dindun Site, the Department of Archaeology of Sichuan University discovered the remains of three houses as well as a number of important features and artefacts dating between the 4th century BCE and the 1st century CE (Center for Tibetan Studies 2007). This was the first time that an early settlement site had been discovered in western Tibet. From the site, evidence for barley (*Hordeum vulgare nudum*) has been retrieved. A few years prior to this discovery, at settlement sites in Mustang in Nepal, German archaeologists discovered that the early inhabitants had planted barley (*Hordeum vulgare nudum*) and buckwheat (*Fagopyrum esculentum/tataricum*) already in the early 1st millennium BCE

(1000–400 BCE), and a little later (400 BCE–100 CE) wheat (*Triticum aestivum*), millet (*Panicum miliaceum*), peas (*Lens culinaris*), and other plants appeared as well (Knörzer 2000). These findings all come from the early metal ages, but they suggest that early agricultural settlements may have been present in the western Himalayan region.

Unfortunately, to date no Neolithic sites in the strict sense have been found in western Tibet. This is mainly due to the low density and limited coverage of fieldwork as well as to the limited understanding of the finds. The most noteworthy site in this respect is Dingzhong Huzhuzi Site in Gar County (Li et al. 1993).

Dingzhong Huzhuzi Site is located about 5km southwest of Shiquanhe Town in Gar County; it belongs to the sand-dune area of the Sênggê Zangbo valley of Gyamug Village in the Zhaxigang Township, Gar County, located at an altitude of 4260m above the sea level. Surface collections furnished 123 lithic artifacts

(among them 84 microliths and one polished stone ax blank) and 30 potsherds (Figure 2). Among the sites discovered recently in western Tibet, this number of finds can count as rather limited. Phases 1 and 2 of Burzahom Site in Kashmir and all the early Neolithic sites in Swat furnished a considerable number of polished stone axes. In Ladakh and in the Indus River valley in Jammu, Indian archaeologists discovered dense distributions of Neolithic sites at altitudes of over 3000m asl, such as the sites of Kiari and Gaik. This evidence suggests that the river valleys of the high mountains of the western Himalayas may have held small Neolithic settlements.

The potsherds collected from Dingzhong Huzhuzi Site are very few and badly fragmented, so it is difficult to identify the original shape, but there is a piece of painted potsherd among them and a spindle whorl which are noteworthy. Spindle whorls have so far been very rare in archaeological assemblages of western Tibet, but some have been found in the Neolithic features of Burzahom site in Kashmir. Besides having been found at Dingzhong Huzhuzi, painted pottery appears frequently at sites in western Tibet, but all of these sites date to the early metal ages.

These findings show that this site may be an example of a Neolithic site with extensive use of microliths while polished stone tools were already present, as was a small amount of painted pottery, and small-scale textile production.

When extending the view to the western Himalayas, we can see that in the northwestern part of South Asia adjacent to western Tibet a very similar Neolithic culture was distributed widely in this region. Additionally, there are clear signs that this Neolithic culture was in contact with the archaeological cultures located west of the Himalayas. We have reason to believe that western Tibet and the Neolithic culture in the northwestern part of South Asia mentioned above interacted closely in some remote locations, and that cultural contact between the Himalayas and the western part of the Tibetan Plateau commenced already during the Neolithic Age.

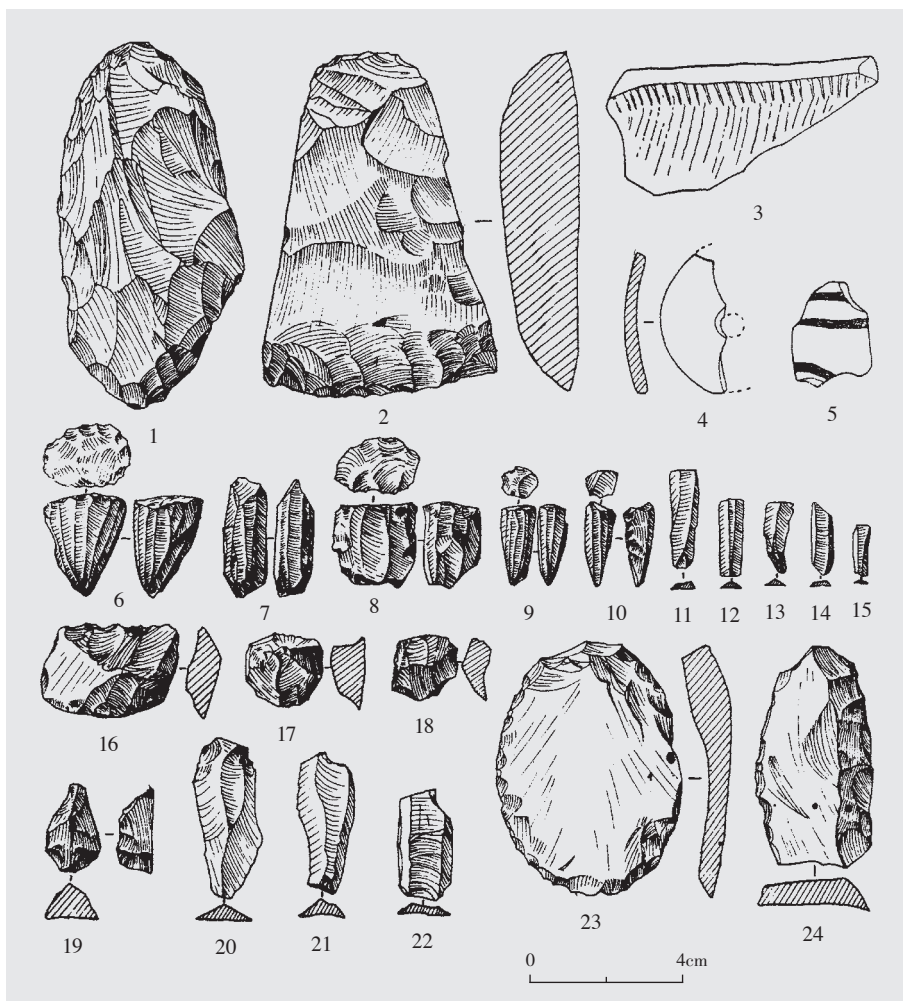


Figure 2 Artifacts collected at Dingzhonghu Zhuzi Site.

1 and 24. Scraper; 2. Stone ax blank; 3. Potsherd; 4. Pottery spindle whorl; 5. Painted pottery sherd; 6–10. Microcores; 11–15 and 20–22. Microblades; 16–19. Fragments of microcores; 23. Stone knife.

The Neolithic cultures of the northwestern part of South Asia

Archaeological work in northwestern South Asia commenced in the 1960s and 1970s. Archaeologists from Europe and India made important progress in the valleys of Kashmir in India and the Swat Valley in Pakistan, establishing a preliminary chronological sequence for the Neolithic of northwestern South Asia.

The Neolithic cultures of the Kashmir river valleys belonged to the northwestern and northern zones in the Neolithic cultures of India, and are represented by over 30 sites, among which the most important ones are Burzahom, Gufkral, and Kanishkapura discovered in 1998–1999 (Mani 2004). Based on the results of excavations conducted at these three sites, Indian archaeologists divide the Neolithic cultures of the Kashmir river valleys preliminarily into three phases. The first phase is the early Neolithic which is a pre-pottery Neolithic phase, and it is represented by Phase 1 (IA) of Gufkral and Kanishkapura Site, dating roughly to 3000–3400 BCE. The second phase is the middle Neolithic which is represented by Phase 1 of Burzahom and Phase 1B (IB) of Gufkral, dating to 2400–2000 BCE. The third phase is the late Neolithic represented by Phase 2 (II) of Burzahom and Phase 1C of Gufkral, dating to 2000–1600 BCE.

Since the 1950s, the Pakistan Mission of the Istituto Italiano per il Medio ed Estremo Oriente (IsMEO, now renamed “Istituto Italiano per l’Africa e l’Oriente”, IsIAO) commenced survey and excavation work in the Swat valley of northwest Pakistan. Important Neolithic sites discovered during this time include Ghaligai, Loebanr III, Aligrama, Kalakoderay, and Bir-Kot-Ghundai. G. Stacul (1969) and others established a prehistoric chronological framework for the Swat region based on the dating of these sites through stratigraphy and pottery typology (i.e., a chronological framework for the so-called pre-Buddhist period), distinguishing seven periods running from 3000 to 500 BCE. Among them, Phases 1–3 are believed to belong to consecutive stages of the local Neolithic culture; Phase 4 dates to the late Neolithic or Chalcolithic, a period that in the following will be addressed as early historic period (or “Gandhara grave culture” period). The cultural remains of Phases 1–3 are not widely distributed in the Swat Valley but only appear at the Ghaligai rock shelter site, and Phase 4 remains occur throughout the whole Swat Valley.

As the regions are adjacent to each other, in discussions on the Neolithic of South Asia, the Neolithic cultures of the river valleys of Kashmir and Swat are often summarily referred to as “the northern Neolithic,” and it is assumed that the cultures of these two regions were closely related. For instance, layers 16 and 17 at the very bottom of the Ghaligai Site contained basket-impressed gray pottery very similar to the pottery from Burzahom; another example are the semi-subterranean houses, stone

knives (harvesters), and pottery vessel bottoms with basket impressions. Nevertheless, in terms of date and cultural characteristics there are many controversies. For instance, in the Swat cultural sequence, notched stone knives and semi-subterranean houses appear only in Phase 4, a time that in the Kashmir Valley already belongs to the final Neolithic phase, and Phases 1–3 in Swat are very different from Phases 1–2 in Kashmir. Therefore, the author believes that so-called “common culture” of Swat and Kashmir emerges only after 4000 BP.

In short, based on the chronological sequence of the northwestern Neolithic of South Asia it is not difficult to see that around 5000–4000 BP this area was dominated by two indigenous Neolithic cultures (Kashmir and Swat). Around 4000 BP, the Neolithic culture of the northwestern mountains of the Kashmir Valley may then have penetrated the more fertile Swat Valley, leading to Period 4 culture of Swat at which time the cultures of the two areas converged. From the pottery appearances it becomes clear that cultural contact took place in the form of long-distance trade. Based on various cultural elements we can see that this cultural change happened around 4000 BP and that it can be connected with the even more distant northern slopes of the Himalayas, i.e., the Tibetan Plateau.

The relationship between the Neolithic cultures of the northwestern part of South Asia and Tibet

The Neolithic cultures of the northwestern part of South Asia did not exist in isolation but there is evidence that they maintained cultural ties to surrounding areas. Based on the sites mentioned above, many scholars already have realized that there are some connections with Chinese Neolithic cultures as well. In other words, the above argument is based on the similarity of the following cultural characteristics: perforated stone knives, mat-impressed pottery vessel bottoms, bone implements (bone awls and bone needles with eyes), and semi-subterranean houses. The aforementioned scholars hold that these elements are similar in execution to practices of the northern Chinese Yangshao and Longshan Cultures. When considering the considerable differences in natural environment between the Yellow River Valley and the Ganges River Valley of India as well as the mountain ranges in between the two areas, the theory that the North China Neolithic moved west has to be substantiated by reliable intermediate links before it can hold up.

In fact, a series of important prehistoric archaeological discoveries made on the Tibetan Plateau since the 1980s provide evidence to solve the difficult problem of the Neolithic of Kashmir and Northern China, e.g., the similarity between the sites of Burzahom and Karub briefly mentioned by Enzheng Tong in 1985. Somewhat later, Wei Huo also held that the Neolithic cultures of Kashmir and the Neolithic cultures of the mountains of Southwest China, especially the Karub Culture were

connected, but he suggested a different connection route, i.e., “from the Lancang River Valley in southwestern China moving west to the Brahmaputra and then going in the opposite direction upstream, entering Kashmir by the Pangong Tso Lake.” This point of view has contributed to discussion on eastern Tibet, providing a more reliable explanation to the old question of the connections of the Kashmir Neolithic to the “Inner Asian Complex.”

In regards to the similarities in ceramics and house structures between Karub Site in Qamdo and Burzahom, Wei Huo (1990) and Chaolong Xu (1988) already conducted detailed comparison and their evidence will therefore not be discussed here, however, a few additional pieces of evidence shall be mentioned.

1. The similarity of jade beads and bone hairpins. Phase 4 of the Loebanr Site in the Swat Valley furnished a hook-shaped jade bead that resembles jade beads found in Phase 1C of Gufkral in the Kashmir Valley (Figure 3:1), and objects excavated at Karub Site in Qamdo (Figures 3:2 and 3:3). At Loebanr Site, an ax-shaped jade ornament was found (Figure 3:4) that resembles an object from Karub Site (Figure 3:5). So far, jade objects have been excavated from the Neolithic sites of Karub and Ngunda Sites in Qamdo, Chugong Site in Lhasa, Chênggo Gully Site in Shannan (Lhoka) Prefecture (Figure 4:11), Yunxing and Gyalhama Sites in Nyingchi and many other Neolithic sites. In Kashmir, they have been found at Burzahom and Gufkral, and they also appear in the Swat River Valley at Loebanr, Bir-Kot-Ghundai, Kalakoderay, and the sites of Pirak in Balochistan and even Sikkim (Stacul 2009). Based on absolute dates, this type of objects appears in Phase 3 of the Neolithic of Kashmir (2000–1600 BCE) and continues to be used until Phase 4 of the Swat River Valley (1700–1400 BCE), i.e., not earlier than 4000 BP; but on the Tibetan Plateau these objects can be dated back to as early as 5500 BP. It thus can be inferred that the perforated stone knives of the northwestern South Asia entered this area coming from the eastern part of the Tibet Plateau. Some of the perforations in the stone knives were bilaterally drilled, a technique that is very common in the Karub Culture.

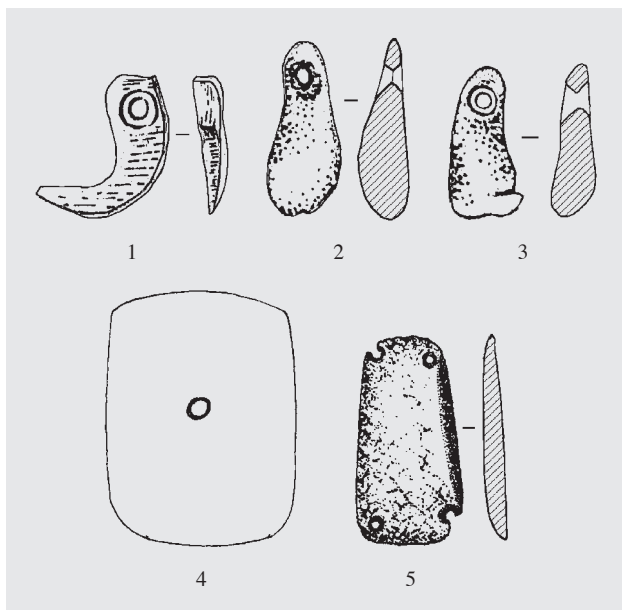


Figure 3 Jade objects.

1–3. Beads; 4 and 5. Plaques.

(1. Gufkral Site; 2 and 3. F22-29:200 of Karub Site; 4. Loebanr III; 5. T1 ② :7 of Karub Site)

found from Phase 4 sites in Swat has a rather special shape that is very rare at prehistoric sites in South Asia. It is interesting to note that bone hairpins in the similar shape have also been seen at Karub Site in Qamdo. The two types of ornaments mentioned above are portable goods and they also belong to the most popular items for long-distance trade. Based on this we can say that the interactions between the groups living in these two regions may not have been limited to the physical realm.

2. The similarity of the perforated stone knives (harvesters). Among the stone knives found in the Kashmir and Swat River Valleys (Figures 4:1 to 4:9), we can distinguish between two production techniques, one resulting in notched stone knives with one notch on each short side, the other being perforated knives, most of them with one or two holes. This kind of knives are a typical artifact of the Neolithic of western China, but similar artifacts have also been found in Tibet at Karub Site in Qamdo (Figures 4:12 to 4:14), Chugong Site in Lhasa (Figure 4:10), Chênggo Gully Site in Shannan (Lhoka) Prefecture (Figure 4:11), Yunxing and Gyalhama Sites in Nyingchi and many other Neolithic sites. In Kashmir, they have been found at Burzahom and Gufkral, and they also appear in the Swat River Valley at Loebanr, Bir-Kot-Ghundai, Kalakoderay, and the sites of Pirak in Balochistan and even Sikkim (Stacul 2009). Based on absolute dates, this type of objects appears in Phase 3 of the Neolithic of Kashmir (2000–1600 BCE) and continues to be used until Phase 4 of the Swat River Valley (1700–1400 BCE), i.e., not earlier than 4000 BP; but on the Tibetan Plateau these objects can be dated back to as early as 5500 BP. It thus can be inferred that the perforated stone knives of the northwestern South Asia entered this area coming from the eastern part of the Tibet Plateau. Some of the perforations in the stone knives were bilaterally drilled, a technique that is very common in the Karub Culture.

3. The Mongoloid people interred in the burials of Burzahom. According to physical anthropological studies, the human bones in one early Neolithic grave at the Burzahom Site belonged to a person with characteristics typical for Mongoloid race. The burial occupant was a 50-year old man and his burial was located somewhat far from the residential zone. The ten other skeletons unearthed from Burzahom are uniform in racial characters, indicating that the form of cultural interaction we see here is not one of immigration but one of long-distance trade.

4. The similarity in the range of cultivars. Based on paleoethnobotanical research, plants cultivated already since the middle Neolithic in Kashmir include wheat (*Triticum Compactum* and *Triticum sphaerococum*), barley (*Hordeum vulgare L. sensu lato*), and lentils (*Lens culinaris*), i.e., a distinctly “Near Eastern crop package.” Irrigated rice was added only in a later phase. On the Tibetan Plateau, at the Karub Site cultivated millet (*Setaria Italica L. Beauv*) has been found which is considered to be a result of the westward diffusion of the Majiayao

Culture in the Yellow River Valley. In pit H2 at Chênggo Gully Site in Gonggar, cultivated barley (*Hordeum Vulgare L. var nudum*), wheat (*Triticum aestivum L.*), peas (*Pisum sativum L.*), and millet (*Setaria italica L. Beauv*) have been found, the former three also being common crops in the “Near Eastern package.” Additionally, H2 held barley stalks, indicating processing of food within the site. Radiocarbon dates from Chênggo Gully Site place the site to around 3500 BP, i.e., to the late Neolithic and to the same period as Phase 3 of the Kashmir Neolithic. The author would suggest that the emergence of wheat agriculture along the Brahmaputra in the late Neolithic is the outcome of the eastward movement of the wheat agriculture of the northwestern part of South Asia. It is noteworthy that at Chênggo Gully Site, cultivated millet has been found; considering that millet cultivation at Karub dates back to before 5000 BP, the millet at Chênggo must have been introduced from Karub Culture in eastern Tibet (and Chênggo defines the western boundary of the spread of millet cultivation on the Tibetan Plateau).

5. The transitional nature of the Neolithic sites of the middle reach of Yarlung Zangbo River. In understanding the Tibetan Neolithic, especially the eastern Tibetan Neolithic, and its relations to Kashmir, the Neolithic cultures of the middle Yarlung Zangbo River play a key role, but the Chugong Culture represented by the Chugong Site and the Neolithic of the eastern Tibetan mountains are in fact not closely related, possibly because there may be a considerable time gap between the two sites. It is worth noting, however, that even though the type of pottery stemmed bowls found at Chugong Site is not very common in Tibet, such vessels appear at the Kanishkapura Site in Kashmir and in Phase 4 sites of the Swat river valley, the hollowed decor on the vessels being especially similar to those commonly found at Kanishkapura (Figure 5). Furthermore, in the opinion of the author, another type of Neolithic remains at the middle Yarlung Zangbo River can make up for the missing link for the westward diffusion of the Karub Culture to the northwestern part of South Asia mentioned above, e.g.,

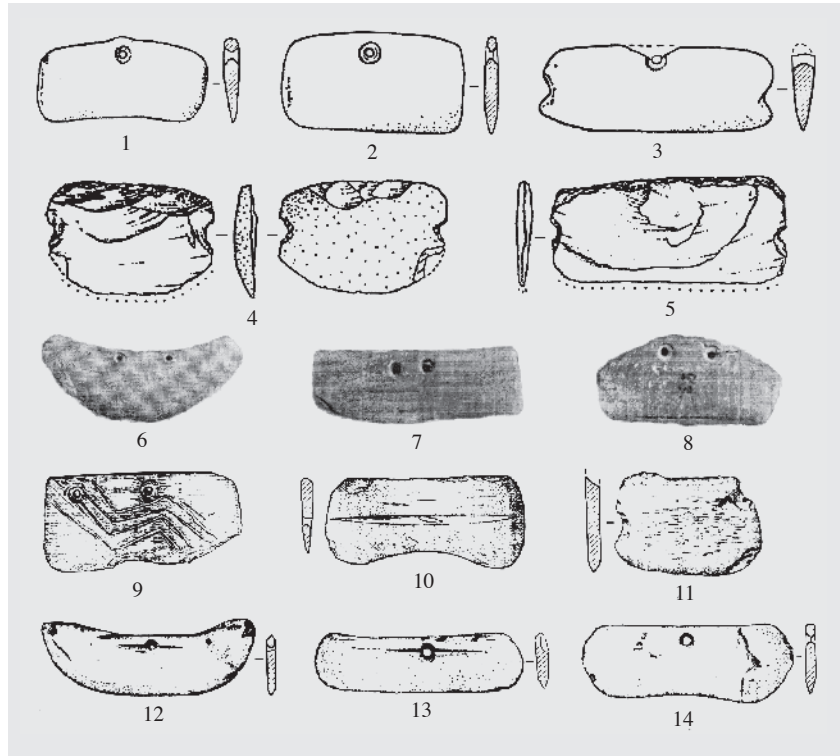


Figure 4 Perforated stone knives (harvesters).

1–3. Kalakoderay, Swat Valley; 4 and 5. Bir-Kot-Ghundai, Swat Valley (BKG922 and BKG1038); 6–8. Burzahom Site; 9. Gufkral Site; 10. T123 ① :31 of Chugong Site; 11. Gathered at Chênggo Gully Site; 12. F19:26 of Karub Site; 13. F17:77 of Karub Site; 14. F19:29 of Karub Site.

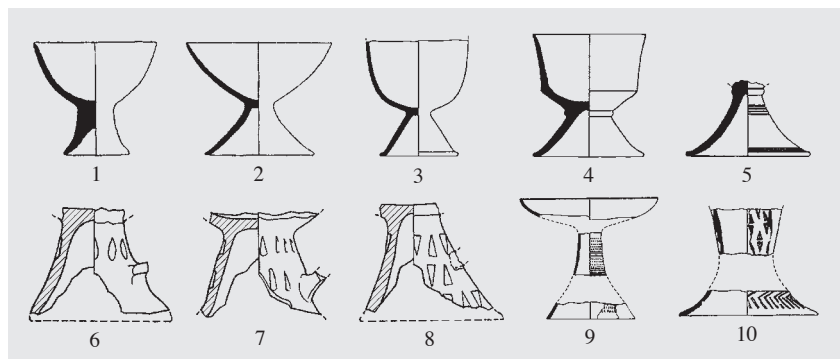


Figure 5 Pottery stemmed bowls.

1. Katelai KH8; 2 and 4. Loebanr III:36; 3 and 5. Bir-Kot-Ghundai, Swat Valley; 6–8. H7 of Chugong Site; 9 and 10. Phase 2 of Kanishkapura Site.

Qênba Site in Nêdong and Bang-khar Site in Qonggyai, both in Lhoka (Shannan) Prefecture.

Finally, another point to be added is the dissemination of buckwheat. Recently, taxonomists have identified the Tibetan Plateau as place of origin of cultivated buckwheat. Some scholars hold that there are wild and cultivated varieties of buckwheat in the western

Himalayas. According to their view, this cold-resistant crop with its high nutritional value crossed the South Asian subcontinent and entered the Eurasian continent via the Central Asia, continuing westward to Europe, appearing in northeastern Europe around 6000 BP. Other scholars argue that cultivated buckwheat originated from the eastern part of the Tibetan Plateau. If the hypothesis that buckwheat of all of Eurasia could be traced back to the Tibetan Plateau is not incorrect, then based on these two dates we can suggest that the cultivation of buckwheat on the Tibetan Plateau occurred no later than 6000 BP. At present, evidence for cultivated buckwheat is still lacking from archaeological contexts in Tibet, but it is very likely that a process of westward diffusion coming from Tibet took place during the Neolithic.

Conclusion

Although the Neolithic cultures of the Kashmir and Indus River Valleys had their own local cultural traditions, throughout their development they were connected with the outside world. Particularly connections with the Tibetan region of China are undeniable. There may not have been migratory movements between the two regions, but cultural influences may have occurred due to long-distance trade connections. We can assume that during the late Neolithic the Karub Culture which was influenced by the Majiayao Culture of the Gansu-Qinghai region had already expanded westward to the middle Yarlung Zangbo River region (as for instance the perforated stone harvesters and millet agriculture), and various kinds of influence emanating from the Kashmir River valley had already moved east toward the central Yarlung Zangbo River region (such as wheat agriculture). Although the middle Yarlung Zangbo River region is rather far from western Tibet, so far no clear evidence of Neolithic sites has been found to the west of Xigazê. But as the clear eastern Tibetan cultural elements in the Neolithic cultures of Kashmir show, some hot and dry river valleys in southwestern Tibet that are suitable for agricultural cultivation activities may have been located on the junctions of the Trans-Himalayan contact of the Neolithic cultures, such as the Neolithic features of Dingzhonghu Zhuzi Site that may be related to this. Following Sênggê Zangbo River to Kashmir from ancient times there ran an important transit route that traversed the South Asian subcontinent and the Tibetan Plateau. In future, early

sites such as Dingzhonghu Zhuzi thus urgently need to be scientifically excavated.

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Postscript

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