

## Cultural Interactions between Prehistoric Societies of the Central Iranian Plateau with Residents of the Central Zagros, Fars, and Southwestern Iran during the 5<sup>th</sup> Millennium BCE

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### The North Central plateau and Central Zagros regions during the 5<sup>th</sup> millennium BCE

The North Central Iranian Plateau (see Fig. 1) is a vast area, with an average elevation of 1200 meters above sea level, which was inhabited by modern humans from ca. 7200 BCE onwards. It is bounded to the north by the Alborz Mountains, the Zagros Mountains to the west, at its eastern limit by

mountains in eastern Iran, and by the hot and dry Dasht-e-Lut and Dasht-e-Kavir regions to the south (Badiei 1994, 93). This area, through the Shamshirbor Pass northeast of Bastam, includes all of the Gorgan plain, and some of the southern parts of Turkmenistan and northeastern Iran (Malek-Shahmirzadi 2003, 317). Numerous plains are enclosed by the southern limits of the Alborz, each of which has its own cultural history; among the most important plains are the Tehran, Qazvin,



Fig. 1. Map showing the locations of the most important 5<sup>th</sup> millennium BCE sites mentioned in the text. Map by the authors.

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Qom, and Kashan plains. The Qazvin plain, with an area of 443,000 hectares, is located in the northwest corner of the Central Iranian Plateau and is surrounded by the southern slopes of the Alborz Mountains to the north, by the parallel mountains of Chargar to the west, and by the Ramand Mountains to the south. The Qazvin plain opens at its east and ends in the Savojbolagh plain in Tehran. It has links to the coast of the Caspian Sea through the Manjil and Karaj passages, and to Qazvin, Zanjan, and Hamedan through two passages along Abharrood. The Qazvin plain in its southeastern direction is connected to the central desert of Iran unrestricted by any natural barriers (Varjavand 1998, 3).

One of the most important aspects of the Central Iranian Plateau is its natural and environmental resources and capacities which have likely affected the habitats, settlements, development of human societies, and inter- and intra-regional relationships in pre-historic times. Investigations into the degree of intra- and inter-regional interactions with neighboring cultural areas, which has a direct relationship with the relative chronology of the pre-historic sites, shows that the Qazvin plain has always been a good place for communication and it links the northwestern, western, and eastern parts of Iran's central Zagros. In addition, the center, and western margin of the Iranian plateau have mineral resources that would have had a high potential for mining in ancient times. The Qazvin plain, except for its eastern part where it is bounded by the Karaj plain, and its southeastern side bounded by the central desert of Iran, is surrounded by natural features that are geologically related to the tectonic phenomena of the central and western Alborz Mountains. Therefore, the mineral deposits of the central Alborz mountains and the southern mountains of the Qazvin Plain have played a major role in providing the people of the Qazvin Plain with metallic and non-metallic minerals in pre-historic times (Darvishzadeh 2010, 256).

The Chalcolithic Period is an evolutionary step in post-Neolithic technical developments and covers the period from the late 6<sup>th</sup> to the late 4<sup>th</sup> millennium BCE. This period is largely characterized by specific technological features and developments, which have been identified in different areas of the Iranian plateau to varying degrees. Important changes such as permanent settlement, organized agriculture and livestock, economic advances, and the development of commercial networks, technical specialization such as specialized production of pottery, metal, and stone tools, and, in general, the transition from the simple social structures of the Neolithic period to more developed social and cultural intricacies occurred during this period (Matthews and Fazeli Nashli 2004; Vidale et al. 2018).

For the first time, Yousef Majidzadeh discovered a ceramic type known as "Plum Ware" assemblages in the earliest layers of Tepe Ghabristan in the Qazvin Plain (Majidzadeh 2008; 2010). He considered this type of pottery to be evidence of the collapse of prehistoric cultures in the region and put forward the hypothesis of the migration and arrival of new ethnic group(s) into the center of the Iranian Plateau, especially its western part (Majidzadeh 1981, 161). He also noted similarities between the "Plum Ware culture" and the Dalma and Godin VII pottery. As we will discuss below, the central plateau "Plum Ware" can be considered to be similar to the Godin VII pottery tradition.

After the 1960s, with the advent of modern archeology and the emergence of scientific reactions to novel ideas, issues such as migration were neglected in archaeological studies and were replaced by hypothetical concepts such as cultural and social interactions. Therefore, Majidzadeh's views on the "Plum Ware People" were also criticized by many, including Hassan Fazeli Nashli, who opposed Majidzadeh's theory of a "Plum Ware People". He regarded the emergence of "Plum Ware" as evidence for the development of

innovative pottery technological techniques in the period 4300–4000 BCE (Fazeli Nashli 2001; Fazeli Nashli et al. 2005; 2009). Based on recent assessments and studies of material culture and evidence obtained from new archaeological investigations in the Central Plateau, and excavations in the eastern parts of Kurdistan it is clear that there is no relationship between the abandonment of Chalcolithic settlements at the end of Sialk II (Transitional Chalcolithic) and the emergence of a “Plum Ware People” in the last quarter of the 5<sup>th</sup> millennium BCE. Furthermore, there is no evidence of conflict or forced abandonment of settlements at post-Sialk II abandoned prehistoric villages such as Zagheh, Sialk, Yan Tepe Ozbaki, and Cheshmeh Ali. In our literature review, ranging from Varamin in the Tehran plain, and in the Qom plains to the east of the Kurdistan and Zanjan provinces, cultural materials and pottery vessels like the pottery of Sialk III<sub>1-3</sub> were observed along with “Plum Ware” at sites such as Tepe Pardis, Ghabristan, Soha Chai, and Tepe Karvansara. The “Plum Ware” at Tepe Pardis, Tepe Ozbaki, Shizar, Ismail Abad, Ghabristan, Soha Chai, and Karvansara not only had no similarity to those from the Cheshmeh Ali period in terms of form, style, design, and pattern, but they also were quite different from them in terms of technological manufacture. Thus, while it may be admitted that there may be some apparent similarities in the pottery of these two periods, their underlying differences are quite clear. Therefore, “Plum Ware” should be considered to be the pottery indicating a new stage of communication with the central Zagros that spread to some parts of the Central Plateau, intermixed with local pottery traditions.

From 5500 BCE onward – which corresponds to the beginning of the Chalcolithic period in the central Zagros and to the Late Neolithic period 2 in the Central Plateau – each region has their own cultural contacts and different of cultural trajectories. In fact, we should

view the end of the 5<sup>th</sup> millennium BCE as important because of the emergence of “Plum Ware” – which was common to parts of the western margin of the Central Plateau of Iran to Kangavar and Nahavand. This testifies to the movement of people and material culture, and even trade and communication networks in the broader perspective of Iran as a whole. The number of villages increased during the Early Chalcolithic pointing to a rapid and dynamic population growth in the central Zagros (Henrickson 1988). New data from the heartland of the central Zagros, and survey data carried out by Niknami in the Sarfirouzabad valleys reveal a sudden and marked increase in the number of settlements during the Chalcolithic period (Niknami and Askarpour 2015, 137). There is no evidence of hierarchy in settlement pattern, and the majority of the 122 surveyed sites are around 1 ha; possibly indicating that they are nomad pastoralists’ campsites in pioneer locations. Other landscape surveys in the Gamasiab basin in Nahavand, Kangavar, Sahneh, and Harsein were performed by Mohammad Reza Saeedi Harsini (2007). His research indicates a total of 169 sites datable to the Early, Middle, and Late Chalcolithic periods, and further supports an increase in population, as these settlements do not have Neolithic foundations. Mohammadi Ghasrian’s (2012) settlement survey in Bisutun, in the central Zagros region, addresses population increase during the Chalcolithic period and supports the idea that most parts of the central Zagros region were populated, which represents a different picture to that of the Late Neolithic period.

The emergence of Godin VII pottery in the central Zagros is observed in the Dalma period, which dates to the early 5<sup>th</sup> millennium BCE (Young and Levine 1974; Voigt and Dyson 1992). The Dalma period saw the development of increased social ‘complexity’, relative to the more simply organized societies of the previous chronological periods. The tradition of Godin VII pottery in the northwest actually

dates back to 5000 BCE, according to the most recent determination of Iran's pre-historic chronology (Abedi et al. 2015, 332). According to both Voigt and Dyson (1992, 160), and more recent studies (Balmaki 2013, 76); the Dalma pottery style (Godin X) was present in modern Kurdistan, north and east of Alvand, Nahavand, and the Khaveh and Kakavandi valleys. Horn-handled, impressed, and the so-called husking tray vessels that are characteristic of the Dalma pottery tradition have been recovered at the sites of Dalma, Godin, and Seh Gabi Tepe (Young 1967; Young and Levine 1974). Simple Dalma-type red-slipped pottery also continued after the Godin X period in the Godin IX and VII periods (Voigt and Dyson 1992, 160; Young and Levine 1974, 71), and after the Seh Gabi period, once again in Godin VII, it was used throughout the Hamadan Plains, east of the Central Zagros, Kurdistan, the Zanzan Corridor, and parts of the western Central Plateau (this is more commonly known as "Plum Ware") (Alibaigi et al. 2012). Due to the previously known interactions between the eastern part of the central Zagros and the western part of Central Plateau in the Neolithic period, and the presence of Late Chalcolithic pottery types of the Central Iranian Plateau in the eastern sites of the central Zagros, we can hypothesize a relationship between these areas during the Early and Middle Chalcolithic periods. However, an important issue is the consistency of the dates presented with the obtained archaeological evidence. In recent years, excavations at Tepe Qeshlaq Talvar have demonstrated that this mound, occupied from 5500 to 3600 BCE, provides evidence for Dalma material culture that is actually older than the site of Dalma itself (Motarjem and Sharifi 2018, 98). According to the presented date for Tepe Qeshlaq, we have to concede that no Dalma-culture site in the area of Lake Urmia dates back earlier than 5000 BCE (Abedi et al. 2015, 330). In their work on the prehistoric

chronology of Northwestern Iran, Abedi and colleagues relied on the new findings from Kul Tepe Jolfa and Davah Goz Khoy, both located north of Lake Urmia, to define the transitional phase from "Haji Firouz" Late Neolithic period to the Early Chalcolithic or the Dalma period – which is, stylistically, considered to be in between the two periods (Abedi et al. 2015, 332, Tab. 2). Interestingly, the pottery from these sites, while having similarities to the Dalma pottery tradition, also exhibits significant differences from the pottery of Kurdistan (Abedi et al. 2015, Fig. 5, 9). Firstly, the decoration on pottery at Kul Tepe Jolfa and Davah Goz Khoy resembles those of Haji Firouz rather than those from the site of Dalma. Secondly, the pottery decorations are only made in black on red. Thirdly, the Dalma-culture pottery of these sites, unlike the widespread and filling lines from southern Dalma sites (Tepe Dalma and Tepe Qeshlaq Talvar) which leave little space on the container, is decorated with fine, thin lines leaving many empty spaces. However, the similarity of the transitional period pottery of that region to that of Haji Firouz is quite relative. From this point of view, it can even be said that the Haji Firouz pottery, due to the presence of repetitive elements such as filled triangular chains which is characteristic of the Dalma pottery of Tepe Dalma and Tepe Qeshlaq, is more similar to the southern Dalma Tepe than the northern Dalma tradition (Kul Tepe Jolfa and Davah Goz Khoy). As such features can be important criteria for recognizing inter-regional interactions, and given the inconsistency between the pottery north and south of Lake Urmia in the Dalma period, and the similarity of pottery south of Lake Urmia to that of Tepe Qeshlaq, it is doubtful that we can consider the Lake Urmia basin as the source of Dalma pottery. Dalma pottery is more likely to have a southern origin and, according to the authors, the Dalma culture may have originated in the northern, or central Zagros.



While sites such as Kul Tepe in north-western Iran contain evidence for the beginning of the Dalma period from the early 5<sup>th</sup> millennium BCE (Abedi et al. 2015), sites such as Tepe Gheshlagh and Nad Ali Beig in the central Zagros Dalma-culture heartland demonstrate the introduction of Dalma-culture ceramics from the late 6<sup>th</sup> and early 5<sup>th</sup> millennium BCE (Bahranipour 2018; Motarjem and Sharifi 2018). The Dalma horizon at Tepe Gheshlagh is comprised of a nine-meter-thick deposit, four architectural phases, and the entire range of Dalma type ceramics such as streaky, impressed, and painted Dalma. Therefore, Tepe Gheshlagh represents the best example of this period. Semi-husking trays were discovered in phase II of Tepe Gheshlagh, which are reminiscent of the Hassuna types, all of which suggests a high level of interaction with Upper Mesopotamia during the early 5<sup>th</sup> millennium BCE.

Nad Ali Beig is located in the north-eastern part of Kermanshah province which is important with regards to the Dalma ceramic tradition. The site is adjacent to the main Bijar-Zanjan road and to the north and northwest of Mesopotamia. Chronologically, the site covers the first half of the 5<sup>th</sup> millennium BCE (4950–4700 BCE) and is comparable with the Godin X period. The site is 180x150 m (less than three hectares) and the average height of the mound is approximately six meters higher than the surrounding area. Hana Bahranipour carried out two seasons of excavation, 2016–17, on the Nad Ali Beig Tepe (Bahranipour 2018). A number of horizontal and vertical (for establishing stratigraphy) trenches were opened across, and into the mound to establish the chronology and uncover architectural remains. Nad Ali Beig is an agricultural village with rectangular houses and the excavations revealed substantial evidence of architectural remains including buildings with a large room and adjoining smaller rooms, platforms, clay walls, floors, ovens,

and ceramic paving. The geometric stamp seal found at Nad Ali Beig is comparable with the ones from Dalma period She Gabi (Henrickson 1988, Fig. 2, 3), Tepe Gheshlagh (Motarjem and Sharifi 2018), and Bakun A (Alizadeh 2006). Also, a number of tokens were found at Nad Ali Beig from the Dalma period, which is indicative of administration during the first half of the 5<sup>th</sup> millennium BCE. Evidence of obsidian, agate beads, and torques from Nad Ali Beig highlights evidence for long distance trade and the exploitation of semi-precious materials by the inhabitants. The two seasons of excavation at Nad Ali Beig produced 20107 ceramic sherds, of which 9% are painted. Based on the C<sup>14</sup> date, it is likely that the site is one of the main centers of the Dalma tradition in the central Zagros. The Dalma-culture ceramics includes Dalma Painted, Impressed, Monochrome and Bichrome, and Streaky wares. The ceramics of Nad Ali Beig also reveal the relationship with Dalma-Ubaid Painted (DUP), and Black on Buff (BOB) wares, which indicates relationships between Urmia, Kangavar, Mahidasht, southern Lurestan (Cheshmeh Rajab), and sites in Mesopotamia such as Tal-e Abada, Hama Altorkaman, and Ras Alaymeh.

Although the Central Plateau was a conduit for trade during the first half of the 5<sup>th</sup> millennium BCE, linking the Central Zagros with sources of material culture (e.g. in pottery traditions), true cultural contact and interaction, likely through population movement and mobility, is more visible during the last quarter of the 5<sup>th</sup> millennium BCE, in the Godin VII period. “Plum Ware” assemblages have been discovered in an area extending from the Varamin Plain in the eastern parts of the Central Iranian Plateau to Tepe Ghabristan, Tepe Shizar, and Tepe Ismail Abad in the Qazvin Plain, Tepe Ozbaki and Tepe Gazarsang in the west, and Tepe Soha Chai, Tepe Karvansara, Tepe Qeshlaq, Tal 11 Talvar, and Tepe Kalnan in the northwestern part of the Central

Iranian Plateau. This indicates a relatively widespread distribution for this type of pottery. There is no comprehensive frequency, structure, morphology, or typology across the area, and pottery technology and manufacture seems to have been influenced by native and other pottery traditions in this period. For example, at Tepe Shoghali, which is considered to be the limit of the “Plum Ware” culture in the eastern part of the Central Iranian Plateau, this type of pottery has been found alongside the native pottery of the plateau region (Sialk III pottery; Hesari et al. 2007, 140). The examples of “Plum Ware” at Tepe Ghabristan and Maral Tepe Ozbaki are very similar, and, hence, have been attributed to a single pottery tradition. These pottery vessels are handmade, rough and characterized by an organic temper, inadequate firing, and the color is dark and light red, thick reddish-brown, and reddish-purple; tomato- and plum-like purple colors. “Plum Ware” vessels are generally simple, often with an incised rope-like design below the rim with geometric shapes in the form of fine broad strips below the rim, zigzag patterns, and inverted triangles on the inside of the vessels (Majidzadeh 2008; 2010). The “Plum Ware” of Tepe Karvansara is comparable with the “Plum Ware” of Tepe Ghabristan and Soha Chai in terms of form, slips, construction, firing, and decorations (Khosravi 2015). The examples from Tepe Shizar (Valipour 2006) and Gazarsang (Momeni 2014, 408) not only have geometric patterns, but also “Plum Ware” with an added handle with impressed motifs. Handled “Plum Ware” vessels were also discovered at Tepe Kalnan (Moucheshi Saed et al. 2011). At Tepe Kalnan, Tepe Qeshlaq, and Tepe Ozbaki (Majidzadeh 2010, 37), containers with handles in the form of animal horns, characteristic of the Dalma period, were discovered. It should be noted that this handle is characteristic of the Godin VII period (Young and Levine 1974, 14; Young 1969, 3–13) and is common in the Tepe Qeshlaq (Sharifi 2015, 115), Tepe Seh Gabi (Levine and Young 1986, 34, No. 2–3,

Fig. 16), Tepe Ghabristan (Majidzadeh 2008, 236), and Tepe Kalnan (Moucheshi Saed et al. 2011, 111) ceramic assemblages.

Unlike the previous types, the “Plum Ware” vessels at Tepe Soha Chai and Tepe Qeshlaq had two mud coverings; the lower one being cream-colored and the other red (Rahimi Sarkheni 2008; Sharifi 2015). At Tepe Qeshlaq, the incised rope-like motifs, unlike those in Tepe Ghabristan which are beneath the rims of vessels in a single row, are in two or three rows (Sharifi 2015). As mentioned, “Plum Ware” has been manufactured at various centers due to changes resulting from the influence of native pottery traditions and all should be considered to be local products. Noteworthy is the origin and timing of its spread in different parts of the Iranian Plateau. So far, it has been found that the abundance of “Plum Ware” at Tepe Ghabristan and Maral Tepe Ozbaki suggests local pottery production, and it is unreasonable to assume that this type of pottery was produced elsewhere and that its technology or idea was possibly transferred by potters. However, regarding the origin of this type of pottery, it should be noted that due to its similarity to the red clay-covered pottery of Dalma and the extension of the Dalma pottery style (Godin X) to the central Zagros region, known as “Pottery Godin VII” in the late 5<sup>th</sup> millennium BCE to 3950–3050 BCE (Rothman and Badler 2011, tab. 4.1), and its subsequent extension to the east, central Zagros, the Zanzan Corridor and Kurdistan and the western parts of the Central Iranian Plateau under the name of “Plum Ware”, we may say that the Dalma-type red slip pottery was widely distributed in different regions in the late 5<sup>th</sup> millennium BCE. However, it was named differently in different regions. It was called “Plum Ware” in the Central Iranian Plateau because of the purple color of its outer slip. Carolin Hamlin conducted a study on the red slip pottery of Tepe Dalma and stated that, “*The color of most of these pottery vessels is maroon, but they sometimes turn into dark and*

*plum colors. The color changes and stains on this type of pottery are related to their oxidation during cooking or their function as cooking utensils*" (Hamlin 1975, 119). Therefore, the difference in the color of the pottery cannot indicate the specific style of the pottery; rather, other technical and utility features of the pottery must also be taken into account. The chronology of the "Plum Ware" layers of Maral Tepe Ozbaki date to 4249–3966 BCE (Majidzadeh 2010, 49), contemporary with Layer I of Tepe Ghabristan, dating to a period from 4200 to 4000 BCE (Fazeli Nashli et al. 2005), and is contemporary with Godin VII.

Given the existing archaeological data, it seems clear that the Qazvin Plain was always a crossroad of cultures, and could therefore be regarded as part of the broader framework of cultural and social interaction and relationship. In the late 5<sup>th</sup> millennium BCE, archaeological evidence such as the distribution of "Plum Ware" provides an indication of such cultural and economic interaction. Also, evidence of ancient copper works at Tepe Zagheh demonstrate the presence of smelting processes during the first half of the 5<sup>th</sup> millennium BCE at the site, and for the Early Chalcolithic/Sialk III<sub>1-3</sub> period evidence of larger scale copper production such as slags, crucibles in areas such as Tepe Ozbaki, Tepe Cheshmeh Ali, and the copper workshop at Tepe Ghabristan indicate how small workshop centers became more industrial in the later period (Matthews and Fazeli Nashli 2004). This, together with findings related to metalwork at Tepe Qeshlaq, Tepe Kalnan, Tepe Karvansara, and Tepe Soha Chai highlight the presence of highland producers and consumers during the 5<sup>th</sup> millennium BCE. Current evidence, particularly the proximity and accessibility of copper resources in the Qazvin Plain and the high areas of the western margins of the Central Iranian Plateau, and the presence of casting tools, objects, and molds in most settlements with "Plum Ware" such as Tepe Ghabristan, Maral Tepe Ozbaki, Tepe Godin, Tepe Qeshlaq,

and Tepe Karvansara undeniably help to confirm the copper production process in these areas. The metalwork specialization of the Plum/Godin VII people reinforces the hypothesis that a group of static or moving communities scattered along the Central Plateau to the northern and central regions of the Zagros had interactions in the late 5<sup>th</sup> millennium BCE and were specialized in the production and processing of copper products.

### **Cultural interactions of the South Central Iranian Plateau with Fars and southwestern Iran**

So far, we have proposed a model of cultural interaction between the communities of the central Zagros and northwestern Iran with the societies of the north Central Plateau (the Tehran, Qazvin, and Karaj plains) during the last quarter of the 5<sup>th</sup> millennium BCE. However, the Central Plateau became very important during the 5<sup>th</sup> millennium BCE in its relationships and communications with the Fars region and southwestern Iran. We also propose that the Fars region was an intermediate location linking the Central Plateau with southwestern Iran during the 5<sup>th</sup> millennium BCE. Such a hypothesis confirms that the populations of the Central Plateau were not isolated during the 5<sup>th</sup> millennium BCE, and also address how and when some societies of Iran became dynamically inter-linked through the exchange of commodities, and also the sharing of ideology throughout the 5<sup>th</sup> millennium BCE.

To understand the cultural cycle of interaction on the Iranian plateau, we need to look at aspects such as the archaeological evidence from Qomrud. Qar-e Tappeh Qomrud with a size of 320x275 m (eight hectares) and eleven meters in height is one of the largest sites located on the ancient road which connects Qom with the ancient city of Rayy. Kaboli opened a large trench, 20 by 20 meters, and was able to record ca. 1000 years of occupation

at the site. In the whole sequence of the site, both Bakun potteries of the Fars province were found with the typical Sialk II and III<sub>1-3</sub> (Transitional and Early Chalcolithic period) ceramics. This reveals a definitive connection between the societies of Fars and the Central Plateau during the 5<sup>th</sup> millennium BCE. **Tab. 1** provides an overview of the occupation of the prehistoric phases of Qomrud; showing that it began in around 5200 BCE and continued until 4000 BCE, with some gaps in the latest layers which probably belong to the Bronze Age contexts. Painted Black on Buff pottery has been obtained from Layers VII to II of Qar-e Tapeh Qomrud (Kaboli 2015) and are similar to the Middle Bakun period (phase Gap: 4990–4688 BCE) and late Susiana I (4700–4400 BCE) pottery. This coincides with the development of complex societies in southwestern Iran in general, and Fars in particular, and demonstrates the presence of similar cultures and social structures in two different geographical regions. The Bakun period, which has been dated mainly to the 5<sup>th</sup> millennium BCE, was one of socio-economic transformation for the village-based societies of highland Fars (Alizadeh 2006, 58). W. Sumner (1994, 60) argues that the Bakun period is marked by evidence for the dramatic growth of a settled population engaging in subsistence agriculture, the appearance of a simple two-tiered settlement hierarchy, a clear shift

towards specialized production in certain crafts, the use of sophisticated administrative practices involving sealing, and an increased scale of socio-economic integration. The Middle Bakun Pottery is defined by the earliest deposits in Bakun A, levels AI–II23, and Tol-e Gap IIa, levels 12–10. This phase is considered as a transitional phase from Bakun B2 (Early Bakun) to Bakun A (Late Bakun). Motifs characteristic of the phase are mainly geometric, but with some highly stylized anthropomorphic representations; caprids, ticks, flying birds, fish, and plants. Some designs include dotted motifs, and these are popular in the Middle Bakun periods. There are a variety of circular Maltese cross patterns (Egami and Masuda 1962, Fig. 6–17). The vessels carry designs composed of motifs set in one to three horizontal registers, covering one-half or more of the exterior (Langsdorff and McCown 1942, 59–60).

The best archaeological evidence for craft activities have been recorded at sites such as Rahmatabad and Darre-ye Bolaghi during the first half of the 5<sup>th</sup> millennium BCE (Bernbeck et al. 2005; Marghussian et al. 2009; Helwing and Seyedin 2010). Rahmatabad is contemporary with Tepe Pardis in the Tehran Plain and is dated to the Middle Susiana phase, and has yielded evidence of ceramic workshops dating to 4909–4688 cal. BCE;

Qumrud	Pardis	Cheshmeh-Ali	Sialk South	Sialk North	Ghabristan	Zagheh	Period (BCE)
Layer II	*	*	*		*		Early Chalcolithic 4300–4000
Layers III IV V	*	*					Transitional Chalcolithic II 4600–4300
Layers VI VII	*	*		*		*	Transitional Chalcolithic I 5200–4600

Tab. 1. The comparative chronology of Qomrud with the other sites of the Central Plateau of Iran. Table by Hassan Fazeli Nashli.



the Middle Bakun period (Gap Phase). Three large trenches, 10 by 10 meters in size, were opened in the southern part of Rahmatabad. Several rounded kilns/kiln remains as well as waste materials and slags provide direct evidence for ceramic production. Based on chemical analysis, we know that the pottery was fired at a temperature between 950–1050°C, which indicates a knowledge of fire and heat control and the ability to produce high fire temperature during the 5<sup>th</sup> millennium BCE. Close to Rahmatabad, at sites 91, 73, and 131 in the Darre-ye Bolaghi, more evidence of ceramic production such as kilns and artifacts related to ceramic production were recorded. The evidence from these three sites, as with those from Rahmatabad, are likely to be workshop areas for large scale pottery production. At site 131 the team recorded evidence of domestic activities such as floor levels, a collapsed fireplace, a hearth, and pits but no evidence of any building structures.

The fine painted Black on Buff pottery vessels of Tepe Qomrud are unknown in terms of shape and role on the Central

Plateau of Iran, and are apparently similar to those of southwestern and southern Iran, especially in the Susiana Plain (Alizadeh 2008) and at the sites of Bakun, Rahmatabad, and Tal-Gap (Azizi Kharanaghi et al. 2012). These pottery vessels generally have a geometrical shape with broad strips, ladder designs, and successive triangles often filled with dot motif designs. To create a motif on the pottery, dark brown, black, and (in one case) red colors were used for engraving (Kaboli 2015, tab. 66.1). The pottery from the late Susiana phase I at Tepe Qomrud continued until about 4000 BCE with little changes up to the abandonment of Tepe Qomrud. However, during the late Susiana II period (Susa I: 4400–4100 BCE), dot motif pottery was replaced by the pottery of Susa I in Khuzestan and by local pottery styles in the Zagros valleys (Alizadeh 2008).

Tepe Qomrud pottery can be divided into three distinguishable types: 1) Transitional Chalcolithic and Early Chalcolithic ceramic types (Sialk II pottery/Sialk III<sub>1-3</sub>), 2) in some ceramics the decoration and grammar

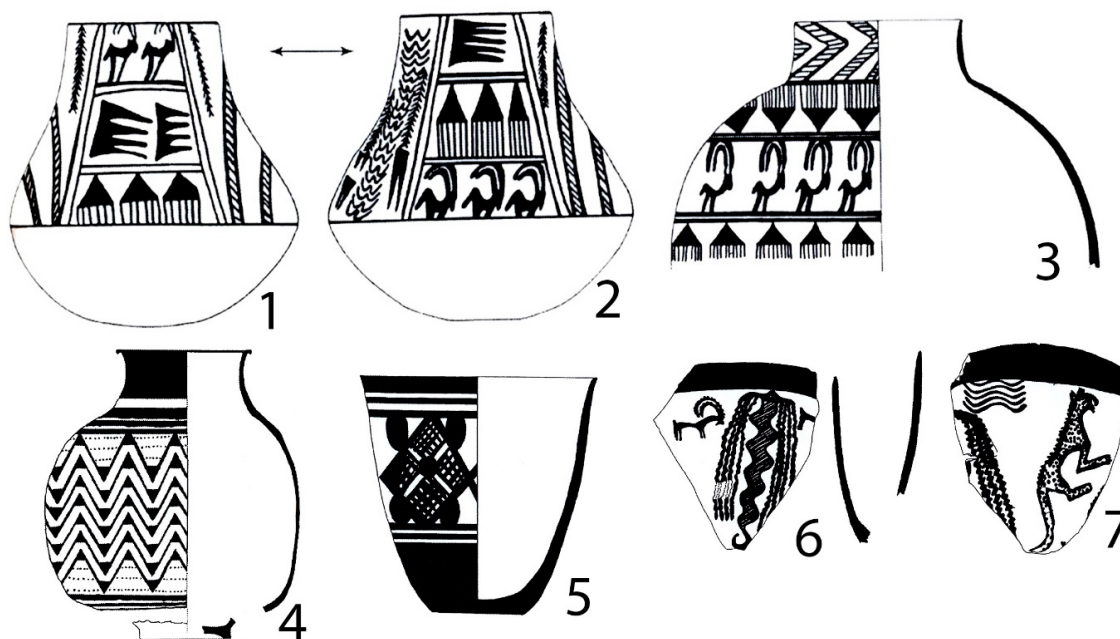


Fig. 2. Ceramics from Qar-e Tappeh: 1,2,3, and 4: Sialk II culture (Transitional Chalcolithic); 5: Middle Bakun, Fars (Tol-e Gap); 6: goat with a snake motif; and 7: snake with leopard motif, Sialk III<sub>1-3</sub> (Early Chalcolithic). After Kaboli 2015.

of the pottery is similar to the Transitional Chalcolithic and Early Chalcolithic ceramics type but the form is the local Qomrud type, 3) the third group which is most similar to the Bakun ceramics types which can be found from the whole layers of the site (**Fig. 2**). The third pottery group of Tepe Qomrud has clear differences in their design grammar compared to the other potteries. These include broad strips at the rims of the vessels and their symmetry at the base, which is indicative of the pottery of southwestern Iran and Fars (**Kaboli 2015**, tab. 2, 4, 6, 12 and 15). However, the Sialk II and III periods featuring pottery in other regions either lacks the ornamental strips at the rims of the vessels or the strips are much thinner. Other motifs include those which resemble clusters of dates (**Kaboli 2015**, tab. 80, 90, and 98), or consist of three or four rows of wavy lines extending from the inner edge of the vessel to its bottom (**Kaboli 2015**, tab. 35, 81 and 103), or a combination of triangles that are divided into three small hachured triangles (**Kaboli 2015**, tab. 12, 81 and 108). All of these ornamental elements are influenced by the pottery traditions of Fars and southwestern Iran, whose combination with the local pottery designs of the Central Plateau created a special style of Qomrud-ware that has, so far, not been reported anywhere else.

Since the painted Black on Buff with dot motif pottery of Late Susiana phase 1 has no background in Fars and is present in the region probably due to the migration or settlement of pastoral nomads already familiar with this pottery style (**Alizadeh 1992**, 35–55), the low frequency of painted Black on Buff pottery and its combination with local pottery patterns in the Central Iranian Plateau created a special style in Qomrud. This is an indication of the dynamic intercultural relations of its inhabitants with those of southwestern Iran in general, and Fars in particular. Moreover, Tepe Qomrud was a key area for the trade of copper in the 5<sup>th</sup> millennium BCE. Excavations at other Chalcolithic

sites in the Central Iranian Plateau, such as Tepe Cheshmeh Ali, Tepe Ghabristan, Tepe Shizar, and Ismail Abad, have also obtained important evidence for metalwork processes like those from the archaeological excavations of Tepe Qomrud (**Kaboli 2015**), and all provide clear indications of copper-related activities in this region. Evidence of ancient metalworking at Tepe Zagheh, as well as the discovery of copper slags at Tepe Ozbaki, and a crucible at Tepe Cheshmeh Ali, as well as metal workshops associated with copper production elsewhere highlight copper craft activities such as smelting of copper ore and metal casting (**Matthews and Fazeli Nashli 2004**; **Fazeli Nashli 2001**). There is also evidence of using administrative seals at Tepe Qomrud (**Fig. 3**), which reflect the management, and presence of trans-regional communication activities because the seal impressions are most similar to those of Fars and southwestern Iran. Furthermore, the mythical and cross motifs on the seals from Tepe Qomrud are similar to those identified in the Central Iranian Plateau and are therefore comparable to those of Gian V, Susa A, and Bakun A (**Hesari and Kaboli 2015**, 303). All of this evidence shows that the residents of Tepe Qomrud were involved in trans-regional communication networks, most probably influenced by the copper trade in these areas. Copper was so important in the late 5<sup>th</sup> millennium BCE that in southwestern Iran there is also evidence of the exchange of commodities with geographically distant regions and the possession of non-local commodities such as other metals, marble, agate, and obsidian which may have held roles in social expression, exaggerated symbolization for some social classes, and may reflect the shifting nature of local politics in areas such as Susa, Chogha Mish, and Chega Sofla (**Moghaddam 2018**, 8). All of this evidence provides an indication as to the social and political development of prehistoric societies. The metallic objects found at Tepe Chega Sofla are similar to those found at Susa A, Hissar I, Sialk III, and Tell Bakun A



Fig. 3. An Early Chalcolithic (Sialk III<sub>1-3</sub>) stamp seal from Qar-e Tappeh (1) compared with those found at other sites; Arslantepe (2 and 3), RasalaymehUbaid (4), Ubaid (5), Susa A (6), and Giyan 5 (7). From Hesari and Kaboli 2015.

(Moghaddam 2018, 314), and we assume one of the main centers for consuming the copper of Chega Sofla was the Central Plateau of Iran.

This widespread distribution of copper products at Tepe Chega Sofla points to the increasing importance of metal, especially related to cultural interactions between societies during the 5<sup>th</sup> millennium BCE. It is

noteworthy that the large Hakalan and Dum Gar, and Parchineh cemeteries in the Zagros Mountains (Vanden Berghe 1970; 1973) contain the most prominent archaeological evidence related to pastoral nomads in these regions for the late 5<sup>th</sup> millennium BCE. This is because no evidence of settlements associated with these cemeteries has been identified yet, which is why many believe that these two cemeteries belong to pastoral



nomad tribes that crossed the mountainous areas (Vanden Berghe 1987; Hole 1989, 170; Alizadeh 1992, 57). The objects found in both cemeteries include pottery vessels and stone beads. Pottery vessels are the most easily identifiable objects because they were made and decorated in various styles from different areas, including Mesopotamia, the Susiana Plain, and Fars. The difference in types and frequencies of burial gifts in the graves

suggests that a hierarchy existed within the mobile communities of the 5<sup>th</sup> millennium BCE (Haerinck and Overlaet 1996). This collection of cultural material from the site of Chega Sofla, and the cemeteries of Hakalan and Dum Gar, and Parchineh supports the theory that the central Zagros, the Fars region, southwestern Iran, and the Central Plateau were integrated and interacted with each other through both time and space.

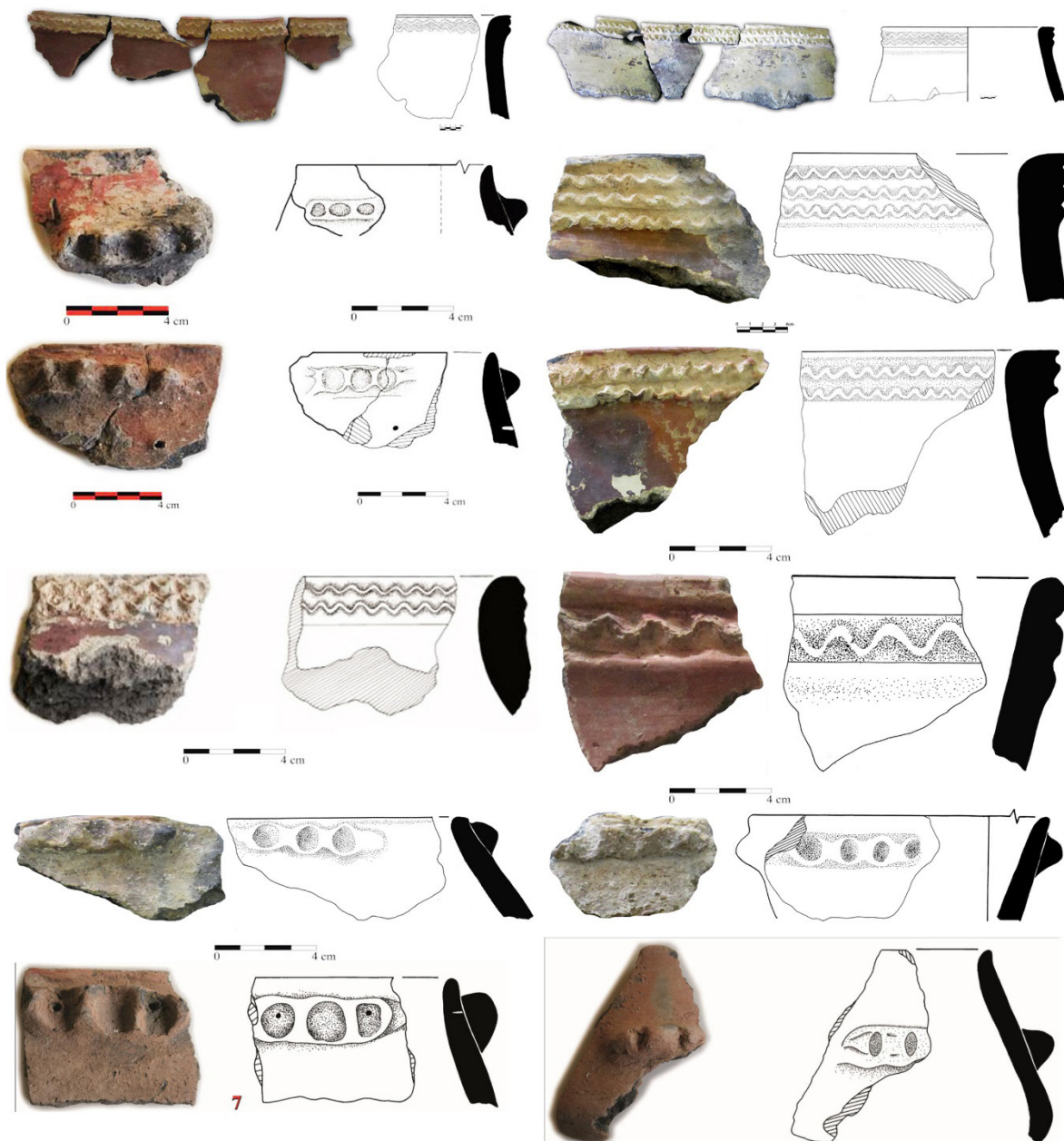


Fig. 4. "Plum Ware" from Tepe Geshlagh. Illustration: Mahnaz Sharifi.



## **Discussion and conclusion**

With some caution it can be said, however, that “Plum Ware” (**Fig. 4**) is a part of the technological and cultural innovations of the late 5<sup>th</sup> millennium BCE, although its origin is still controversial. Steve Renette and Sirvan Mohammadi Ghasrian (2020) have recently proposed that the Zanjan-Qazvin region is a good candidate for identifying the origins of those vessel types typical of the Godin VII tradition. We know that such a ceramic tradition is visible in some north Central Plateau settlements dated to ca. 4200 BCE, and based on the current data, it can be said that this tradition began in the Godin VII period. We observe that if the origins of the “Plum Ware” originate in the Zanjan-Qazvin region, then (likely) by the movement of people this ceramic tradition made its way into the technological and material culture assemblages of many settlements in the Central Plateau and central Zagros region in less than a few generations. Although, to locate the origins of “Plum Ware” is an interesting issue, the most important issue is to map the degree of societal complexity during the last quarter of the 5<sup>th</sup> millennium BCE and to understand what happened in Iran within the framework of cultures during the 5<sup>th</sup> millennium BCE.

In her influential paper, Elizabeth Henrickson (1988) evaluated that the Dalma period is an example of political hierarchies with a simple economic structure without any evidence for long-distance trade and commodity exchange (in the first half of 5<sup>th</sup> millennium BCE). However, she proposed that during period VII of Seh Gabi (3700–3500 BCE) we encounter the initial stages of socio-economic hierarchy in the central Zagros. The houses become much larger, with well structures and evidence for storage facilities and, thereby, surplus. The stamp seals provide evidence for connections between Mesopotamia and the central Zagros during this period. Based on the current data, we suggest that such societal

complexity developed earlier, during the 5<sup>th</sup> millennium BCE, rather than during the 4<sup>th</sup> millennium BCE, when we have evidence for definitive cultural connections between the people of the central Zagros and some parts of north Central Plateau. We assume that there is no parallel evidence for the transformation of staple goods into status goods (from staple to wealth finance), nor for the presence of skilled craftsmen in the central Zagros during the Dalma period of the 5<sup>th</sup> millennium BCE. Social heterogeneities in the Transitional Chalcolithic societies were replaced by hierarchical communities of the Early Chalcolithic in the last quarter of the 5<sup>th</sup> millennium BCE in the North Central Plateau of Iran. This cultural transformation also affected the nature of societal complexity for the inhabitants of the Iranian central Zagros, with regards to the process of trade and craftsmanship.

Some excavated sites, such as Tepe Karvansara and Seh Gabi, in the central Zagros region have produced direct evidence of copper production within the domestic spaces. Therefore, the exchange of commodities and the trade of copper is a good example of a process which stimulated cultural integration between the 5<sup>th</sup> millennium BCE communities of the central Zagros region and the Central Plateau. In a recent paper, Vidale and colleagues (2018), suggested that technological centralization/standardization and the specialization of ceramic and copper production can be considered to be the main characteristics of Central Plateau commonalities during the 5<sup>th</sup> millennium BCE. The functional and organizational changes that occurred during the Middle Chalcolithic period in the Central Plateau of Iran in regions such as the plains of Qazvin, Kashan, and Tehran emerged more independently between the populations of the central Zagros, and the Central Plateau of Iran between 4000–3700 BCE. Between ca. 4000 and 3700 BCE the connections between the networks of the

Central Plateau are more visible through the existence of Middle Chalcolithic/Sialk III<sub>4-5</sub> ceramics at a number of central Zagros sites (Moghaddam and Javanmardzadeh 2013). In fact, we should consider that, throughout the 4<sup>th</sup> millennium BCE, a strong network of communication was established between a number of areas within Iran, including the central Zagros, the Central Plateau, southwestern Iran and Fars, and also between these regions outward with Mesopotamia. During the Middle Chalcolithic period (4000–3700 BCE) and the Late Chalcolithic period (3700–3400 BCE) a number of sites, such as Arisman (Chegini et al. 2000; Stöllner 2005; Helwing 2011; Vatandoust et al. 2011), Tepe Ghabristan (Majidzadeh 1978), Sialk (Nokandeh 2010), and Tepe Shoghali (Nezafati and Hesari 2017), have evidence for large-scale copper production and direct evidence for craft activities such as furnaces, slag, ore-processing tools, litharge cakes and fragments, silver-rich lead ingots, and crucibles. Matthews and Fazeli Nashli (2004) suggested that the main consumers of copper products were the settlers of the Iranian Highlands, which addresses the cycle of production and communication networks of the Iranian highland communities between 5000 to 3400 BCE, before the emergence of relationships with Mesopotamia.

In this paper we have also examined the dimension of cultural contacts between the societies of the Central Plateau and those of southwestern Iran and the Fars regions during the 5<sup>th</sup> millennium BCE. Excavations at Qar-e Tappeh on the Qomrud plain have changed our view on the nature of interaction in the North Central Plateau with the other societies of Iran during the 5<sup>th</sup> millennium BCE (Kaboli 2015). Kaboli has suggested that there was increasing contact between Fars and southwestern Iran with the Iranian Central Plateau during the last quarter of the 5<sup>th</sup> millennium BCE. The amount of copper tools (pins, nails, and needles) from Qara Tepe, in conjunction with

the evidence for pottery kilns and slags, all support the presence of specialized craft activities at Qomrud.

Furthermore, large numbers of copper goods were found in the cemetery at Tol-e Chega Sofla in the Bebahan region (Moghaddam 2018). Tol-e Chega Sofla also links Fars with Khuzestan (southwestern Iran), and we assume that sites such as Qar-e Tappeh and Chega-Sofla are a good example for how, and when the societies of the Iranian Plateau became more interconnected with regards to obtaining raw materials, and the exchange of goods and information – particularly in the last quarter of the 5<sup>th</sup> millennium BCE. A large monumental building which was well-laid out and well-constructed with several rooms (much more complex than the one at Zagheh) and ovens is another key discovery from Qar-e Tappeh. The walls have exterior supports, are generally plastered and, in some cases, painted with red ochre. Kaboli also reported that the walls and floor in room 4031 were plastered and painted with red ochre, and the presence of a bench and fireplace provide evidence for the elaboration of architectural decoration. He also mentioned that at the end of the 5<sup>th</sup> millennium BCE in layer 3 the site was destroyed by either an earthquake or a fire.

The storage of agricultural products is one of the main characteristics of both Transitional and Early Chalcolithic farming communities of the Central Plateau (Vidale et al. 2018). Kaboli reported the discovery of a large storage jar at Qar-e Tappeh (it is difficult, though, to determine whether the jar belongs to the Transitional and Early Chalcolithic period). Such storage jars, perhaps also having a ritual role, were finely constructed and painted with elaborate designs. It seems likely that these large, and visible, ceramic vessels would have been used for the public storage, and distribution, of foodstuff or liquids. Morteza Hesari and Mir-Abedin Kaboli (2015) reported evidence of stamp seals from layer 2 of Qomrud

(the Early Chalcolithic period) which is contemporary with examples from Susa A, Lurestan, Gian V, Ubaid, and Arslantepe (**Fig. 3**).

Evidence of door sealings found at Tall-e Bakun A date to 4400 BCE, an administration technology that emerged before the Uruk period ([Alizadeh 2006](#)). The Bakun people provide an example of Chalcolithic period highland culture for comparison with contemporary lowland Mesopotamian societies ([Weeks et al. 2010](#), 249). The Bakun people lived in villages with rectangular houses, large scale pisé constructions, craft activities, metallurgy, interregional trade, and the presence of other exotic materials. Regional variation exists in the settlement patterns of the Bakun society, and their economy was mainly based on agropastoralism, supplemented with hunting. At Tall-e Bakun hundreds of spindle whorls were found, which suggests the exploitation of animal ante-mortem products, such as wool/hair, and the processing and spinning of this. Excavations at the Bakun sites in the Fars region did not yield any evidence of ritual activities or religious centers but valuable evidence of craft activities, long distance trade, the earliest examples of administration, and evidence for sophisticated nomad pastoralist life in the Fars highlands.

Sanctification and chieftdom are two of the main aspects of the Susa A society in southwestern Iran. It seems that the shift from individual ritual activities to communal cults can be observed in Susa during the second half of the 5<sup>th</sup> millennium BCE. The 10–12 m high platform at Susa which was constructed from ca. 570,000 mud bricks and covered an area of one hectare reveals the major role that religion played in Susiana society at the end of the 5<sup>th</sup> millennium BCE. In the cemetery of Susa, 2000 interments with 4000 pots and other objects

such as 55 copper axes, eleven copper disks, a copper needle, a burin, and a chisel were found ([Hole 2010](#)). From such elaborate ceramics in the cemetery of Susa, Susan Pollock suggested the use of these objects as prestige goods ([Pollock 1983](#)). Not only the cemetery and platforms suggest and provide evidence for ritual activities, but also stamp seals and impressed figurative designs provide another source of information for the ideological aspects of Susa during the 5<sup>th</sup> millennium BCE and 4<sup>th</sup> millennium BCE ([Alizadeh 2016](#)). Frank Hole suggested elements such as a person handling a snake or bull reveals his ability to communicate with supernatural forces; for example, as seen in the human stylized form named as *namash*. The seal impressions from Susa indicate a “master of snakes”, and shows the style of dress, and the use of beakers and bowls similar to the ceramics found in the cemetery of Susa. A horned master holds two lions, and these probably represent symbols of *namash* and religious rites. The seals of Qomrud, and even the drawing of snake on the potteries of Sialk III-1/3/Early Chalcolithic period can be considered to be evidence for a connection between the ideological lives of Susa I and central Iran during the 5<sup>th</sup> millennium BCE. The stamp seals of Qomrud from layer 2 (Early Chalcolithic period) which have strong stylistic similarities with those of Susa A, further indicate the idea for shared ritual practices and economic complexity in this period (**Fig. 3**).

Finally, we conclude that for the first three quarters of the 5<sup>th</sup> millennium BCE, most parts of Iran were in an infancy with regards to cultural complexity, and it was only in the last quarter of the millennium that we clearly observe evidence for the first examples of simple chieftdom societies with centralized authority, and with socio-economic integration and dissemination and commonality of ritual and spiritual components.

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