

Discovery and investigation of the Yushuta North Site in Jungar Banner

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Abstract. The Yushuta North Site is a new discovery from the Fourth National Cultural Relics Survey. Located on the west bank of the southflowing Yellow River basin, the site covers an area of more than 20,000 square meters. A considerable number of cultural relics of various types are scattered on the site surface, and its cultural features are characteristic of the late Neolithic Age. According to preliminary judgment, the site can be roughly divided into early and late phases, and its main cultural affiliation is closely related to the Haishengbulang Type of the Miaozigou Culture. The new discovery of this site provides new physical materials for indepth research on artifact evolution, settlement patterns, and social structures from the late Yangshao Culture to the Longshan Period in the Yellow River basin of Inner Mongolia.

Keywords: new discovery, cultural relics, cultural analysis, late Neolithic

1. Introduction

In June 2025, the Jungar Banner Cultural Relics Census Team newly discovered a Neolithic site during the Fourth National Cultural Relics Survey, named the Yushuta North Site. The site is located in the central part of Jungar Banner, with a large scope and abundant surface cultural remains, serving as a relatively typical Neolithic settlement site within Jungar Banner. The cultural relics unearthed from the site are highly representative, reflecting the artifact characteristics of the late Neolithic Age. The discovery of this site provides new physical materials for further exploration of settlement patterns and social processes in the late Neolithic Age of Jungar Banner.

2. Geographic location

The site is situated on a mountain ridge approximately 1 kilometer due north of Yushuta Community, Yushuta Village, Shagedu Town, Jungar Banner. It is about 8 kilometers northwest of the Yushuta Village Committee (Figure 1). The site lies in the hilly and gully region of Jungar Banner, where gullies are highly developed, and the surface has been eroded by running water into a landscape of deep gullies and high ridges. The site occupies a relatively high ridge on the northern side of the Huangfuchuan River, about 2 kilometers north of the main channel of the Huangfuchuan River. It sits on a gently sloping high ground, generally higher in the

north and lower in the south. A large gully lies to the east of the site, and a gentle sloping ridge adjoins the west, beyond which is a larger gully; both east and west gullies flow southward into the Huangfuchuan River. A rural natural dirt road runs through the middle of the site (Figure 2).

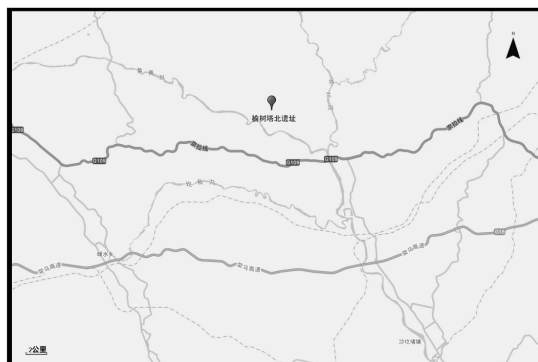


Figure 1. Schematic diagram of the site location



Figure 2. Aerial photograph of the site scope

3. Site overview

According to a preliminary survey, the site covers an area of over 20,000 square meters. Rows of *Caragana korshinskii* are planted on the site surface, together with scattered willows, elms and other naturally growing trees (Figure 3). The site is distributed on a gentle low ridge that is high in the middle and low on the east and west sides, with a gentle terrain and small elevation difference. A huge gully is located to the east of the site, where running water incision has cut the white bedrock into wide gullies. Two large gullies also exist within the central distribution area of the site. Cultural relics are relatively abundant on the site surface. A concentrated stone pile is found on the eastern halfslope, likely a stone tool processing site, with numerous flaked stone tools scattered on the surface. The western part of the site is also flat, with many pottery shards scattered on the surface. A concentrated accumulation of pottery shards is distributed near the southern boundary of the site. No obvious cultural layers are observed at the site. The site is covered with a loess surface layer of varying thickness on the east and west sides: the loess deposit is very thick on the west side, while it is thinner on the east side, about 20 centimeters thick, underlain by grayishwhite arsenic sandstone beds. According to the preliminary survey, no obvious remains are found within the site except for the stone pile and pottery shard accumulation.



Figure 3. Closeup view of the site (from north to south)

4. Typological analysis of cultural relics

The survey reveals abundant cultural relics visible on the site surface, all consisting of stone tools and pottery.

4.1. Stone tools

Stone tools are classified into flaked stone tools and polished stone tools, with flaked stone tools being more numerous. More than 40 pieces were collected.

4.1.1. Flaked stone tools

These include choppers, points, scrapers, arrowheadshaped tools, cores, flakes, and flake tools.

Choppers: 6 pieces, all made of quartzite. 2025ZYC:1 Large in size, nearly rectangular, retaining a large natural surface, flat proximal end, with the other three sides as split surfaces, and a thick blunt edge at the distal end. Length 11.5 cm, width 8.4 cm, thickness 7.9 cm (Figure 4-1). 2025ZYC:2 Slightly smaller, nearly trapezoidal, with the other three sides as chopping surfaces except for the retained natural stone surface. Length 7.6 cm, width 6.3 cm, thickness 4.4 cm (Figure 4-3). 2025ZYC:12 Brown quartzite, nearly circular, processed from a round pebble. Most of the natural platform is retained on the front, the back is a split surface, and one side has an arcshaped chopping surface. Length 11.4 cm, width 9.5 cm, thickness 4.1 cm (Figure 5-3). 2025ZYC:13 White quartzite, relatively finetextured. Nearly square overall, one side retaining the natural platform and the other as a split surface, with striking points and radial lines at the proximal end and a distinct Yshaped ridge. The right side and distal end are shaped into chopping edges, forming a sharp tip at the intersection. Length 9.1 cm, width 8.3 cm, thickness 4.2 cm (Figure 5-5).



Figure 4. Collected stone tools I.1. Chopper (C:1); 2. Core (C:6); 3. Chopper (C:2)



Figure 5. Collected stone tools II.1. Hammerstone (C:11); 2. Core (C:8); 3. Chopper (C:12); 4. Chopper (C:23); 5. Chopper (C:13)

Points: 3 pieces. 2025ZYC:3 Quartzite, nearly triangular, processed from a flake, with a prominent median ridge, striking marks at the proximal end, a pointed distal end, and sharp edges on both sides. Length 5.9 cm, width 3.9 cm, thickness 1.8 cm (Figure 6-4). 2025ZYC:14 Reddishbrown quartzite, nearly triangular, thick in the middle and thin and sharp on four sides. Proximal end oblique and straight, retaining a small part of the natural platform; distal end triangular, retaining a small platform. An inverted Yshaped ridge on the front and an Sshaped ridge on the back. One side has a concave edge. Length 10.4 cm, width 6.6 cm, thickness 3.9 cm (Figure 7-1).



Figure 6. Collected stone tools III. 1, 5, 6, 7, 8, 9, 10. Flakes; 2. Scraper (C:4); 3. Core (C:5); 4. Point (C:3)

Scrapers: 2 pieces. 2025ZYC:4 Quartzite, nearly semicircular, processed from a flake, straight proximal end, arcshaped distal end with a sharp thin edge. Multiple ridges retained in the middle, with a Yshaped median ridge. Length 5.3 cm, width 4.6 cm, thickness 1.9 cm (Figure 6-2).

Convexconcave Scraper: 1 piece. 2025ZYC:15 Brown metamorphic rock, hard and finetextured, nearly elongated oval, made from a flaked flake. Proximal end oblique and straight, retaining the natural platform; distal end arcshaped, with an arcshaped ridge on the front. One side has a convex edge and the other a concave edge, unmodified. Length 6.8 cm, width 5.3 cm, thickness 1.2 cm (Figure 7-2).

Cores: 3 pieces, all quartzite. 2025ZYC:5 Round, convex front, ridges converging at one point. Flakes struck inward from the periphery. Length 4.7 cm, width 4 cm, thickness 1.6 cm (Figure 6-3). 2025ZYC:6 Nearly trapezoidal overall, flat top and bottom. Length 7.9 cm, width 7.4 cm, thickness 4.1 cm (Figure 4-2). 2025ZYC:8 Nearly elliptical overall, with flake scars on all parts except for a small natural platform retained on the front, back and distal end; two flake ridges on the left and right sides. Height 11 cm, width 8.1 cm, thickness 6.9 cm (Figure 5-2).

Flake Tools: 3 pieces. 2025ZYC:16 Brown quartzite, nearly circular, proximal end straight and inwardsloping, distal end arcshaped, thick in the middle and thin at the edges. Most of the natural platform retained on the front with arcshaped flake scars; distinct striking points and radial lines on the back. Length 7.1 cm, width 6.5 cm, thickness 1.4 cm (Figure 7-3). 2025ZYC:17 Brown sandstone, nearly triangular overall, processed from a flake. Natural platform retained on the front, striking points and radial lines on the back. Proximal end curved, distal end sharp, one side with an arcshaped thin edge. Length 5.7 cm, width 3.6 cm, maximum thickness 1.2 cm (Figure 7-4). 2025ZYC:18 Cyan quartzite, nearly rhombic overall, made from a flaked flake. Proximal end thick and straight, distal end squarefolded and sharp, very thin and sharp. Herringboneshaped ridge on the front, striking points and radial lines on the back. Three edges very thin, likely used for cutting. Height 5.3 cm, width 6 cm, thickness 1.2 cm (Figure 7-5).



Figure 7. Collected stone tools V.1. Point (C:14); 2. Convexconcave Scraper (C:15); 3. Flake Tool (C:16); 4. Flake Tool (C:17); 5. Flake Tool (C:18); 6. Polished Stone Knife (C:20)

Flakes: 25 pieces, mainly quartzite, followed by sandstone and flint. Flakes are morphologically consistent, one end retaining the natural platform with clear striking points and radial lines, the rest thin and sharp, with a distinct median ridge. 2025ZYC:7 is special, thick in the middle and very thin around, with a slightly Sshaped median ridge and a small amount of edge modification, likely a flake tool. Length 4 cm, width 3.3 cm, thickness 0.6 cm (Figure 6-8).

Hammerstone: 1 piece. 2025ZYC:11 Yellowishbrown quartzite, nearly bootshaped overall, a basically complete pebble. Obvious hammering marks on the proximal, distal and lateral ends, surface mottled. Length 18.4 cm, width 5.2–9.1 cm, thickness 6.2 cm (Figure 5-1).

4.1.2. Polished stone tools

2 pieces: one grinding rod and one stone knife are as follows:

Grinding Rod: 1 piece. 2025ZYC:19 Made of sandstone, coarsetextured with dense small holes inside. Rodshaped, three sides polished with clear use traces, crosssection nearly arcshaped triangular, one end intact and the other broken. Incomplete length 9.7 cm, maximum width 5.4 cm, thickness 4.1 cm (Figure 8-7).



Figure 8. Collected pottery and stone tools. 1. Painted Pottery Hu (C:21); 2. Trumpetmouthed Pointedbottom Bottle (C:22); 3. Trumpetmouthed Pointedbottom Bottle (C:24); 4. Largemouthed Jar (C:46); 5. Li (C:37); 6. Flaredrim Jar (C:32); 7. Grinding Rod (C:19)

Stone Knife: 1 piece. 2025ZYC:20 Red gravel, relatively finetextured. Only two squarefolded edges retained, fold angle nearly 90°, surface processing marks not obvious. Incomplete length 4.7 cm, incomplete width 4.8 cm (Figure 7-6).

4.2. Pottery

Sandmixed gray pottery predominates, followed by sandmixed red pottery, finegrained gray pottery, sandmixed yellowishbrown pottery, finegrained red pottery, polished gray pottery, etc. Decorations include appliqué, applied relief, coarse corded impressed, fine corded impressed, broad basketimpressed, fine basketimpressed, and stamped patterns, with fine corded impressed being the most common. Painted pottery is also present. Recognizable vessel types include painted pottery bottles, red pottery bowls, foldedbelly bowls, trumpetmouthed pointedbottom bottles, flaredrim jars, largemouthed jars, flatmouthed jars, doublehandled bottles, li, zun, and basins. Judging from pottery shards, most vessels are irregular, uneven in thickness, crudely made, mostly handbuilt, with a small number wheelmade. Pottery displays strong chronological indicators and typical cultural characteristics.

Painted Pottery Hu: 1 piece. 2025ZYC:21 Finegrained red pottery, neck fragment. Four concentric black painted bands on the neck, with a loop handle below (lost). Incomplete length 8.1 cm, incomplete width 4.6 cm, thickness 1.1 cm (Figure 8-1).

Trumpetmouthed Pointedbottom Bottles: 4 pieces. 2025ZYC:22 Finegrained red pottery, fragment of trumpetshaped rim, round lip, everted, inwardcurved middle, everted lower part, plain surface. Incomplete length 7.8 cm, incomplete width 7 cm, thickness 0.5 cm (Figure 8-2). 2025ZYC:24 Finegrained gray pottery, fragment of trumpetmouthed rim, thick body, round lip, everted, short neck, inwardcurved middle. A week of clay strips applied near the rim, one end extending downward, with vertical lines pressed at intervals on the surface. Incomplete length 6.3 cm, incomplete width 4.9 cm, thickness 0.5 cm (Figure 8-3). 2025ZYC:31 Finegrained red pottery, fragment of pointed foot, tip missing. Thin wall, decorated with horizontal narrow basket impressions on the exterior. Incomplete height 2.4 cm, thickness 0.7 cm (Figure 10-15).

Largemouthed Jars: 7 pieces, coarse sandmixed, only a few rim fragments preserved. Basic features: square lip, contracted mouth, clay strips applied below the rim, very thick body mixed with abundant coarse sand. Classified into 4 types by rim details.

Type A: 3 pieces. Oblique square lip, fine corded impressions on the outer lip and body, two applied clay strips on the corded impressions, some with a large round appliqué on the clay strips.

2025ZYC:25 Sandmixed gray pottery, contracted mouth, everted square lip, fully decorated with fine corded impressions, two parallel clay strips applied just below the rim, plus one obliquely downward clay strip. Mouth diameter 26 cm, incomplete height 6.5 cm, thickness 1.5 cm (Figure 9-1). 2025ZYC:27 Sandmixed red pottery, contracted mouth, inwardsloping square lip, fine corded impressions as ground, one week of clay strips applied, plus one obliquely applied clay strip beside the vertical one. Mouth diameter 26 cm, incomplete height 4.1 cm (Figure 9-4).

Type B: 1 piece. 2025ZYC:26 Sandmixed yellowishbrown pottery, contracted mouth, square lip, fine corded impressions on rim and body, two weeks of clay strips and one large round appliqué on the corded impressions below the rim. Mouth diameter 26.5 cm, incomplete height 5 cm, rim thickness 1.5 cm (Figure 9-6).

Type C: 1 piece. 2025ZYC:28 Sandmixed gray pottery, contracted mouth, flat square lip, contracted neck. Fine corded impressions on rim, one week of broad clay strips applied about 1.5 cm below the rim, slightly flared below the clay strips. Mouth diameter 26.3 cm, incomplete height 3.7 cm, rim thickness 1.6 cm (Figure 9-5).

Type D: 2 pieces. 2025ZYC:29 Coarse sandmixed gray pottery, contracted mouth, flat square lip, very thick body. Two parallel broad clay strips applied about 2.2 cm below the rim, fine corded impressions below. Mouth diameter 28.1 cm, incomplete height 7.3 cm, rim thickness 1.9 cm (Figure 9-3).



Figure 9. Collected pottery I.1. 1. Type A Largemouthed Jar (C:25); 2. Type A Largemouthed Jar (C:9); 3. Type D Largemouthed Jar (C:29); 4. Type A Largemouthed Jar (C:27); 5. Type C Largemouthed Jar (C:28); 6. Type B Largemouthed Jar (C:26)

Flatmouthed Jar: 1 piece. 2025ZYC:30 Sandmixed gray pottery, jar mouth fragment, only neck and small part of shoulder preserved. Contracted neck, sloping shoulder, small round appliqué on the neck, corded impressions on the surface, indistinct on the shoulder. Incomplete height 4.9 cm, incomplete width 4.4 cm, thickness 0.95 cm (Figure 10-5).

Flaredrim Jars: 6 pieces, all sandmixed pottery, rim fragments. Classified into 3 types by rim details, as follows:

Type A: 2 pieces. 2025ZYC:32 Sandmixed gray pottery, pointed round lip, flared mouth, contracted neck, fully decorated with fine corded impressions, one week of clay strips applied on the corded impressions with vertical lines pressed at intervals. Obvious coarse sand in the body. Incomplete length 8.9 cm, incomplete width 3.4 cm, thickness 0.7 cm (Figure 8-6). 2025ZYC:33 Sandmixed gray pottery, pointed round lip, flared mouth, corded impressions on the outer lip, one week of clay strips with pressed marks applied on the neck. Mouth diameter 26.2 cm, incomplete height 4 cm, thickness 0.7 cm (Figure 10-1).

Type B: 2 pieces. 2025ZYC:34 Sandmixed gray pottery, pointed round lip, flared mouth, short collar, one week of narrow clay strips applied on the neck. Mouth diameter 16.2 cm, incomplete height 4.9 cm, wall thickness 0.6 cm (Figure 10-2).

Type C: 1 piece. 2025ZYC:36 Sandmixed grayishbrown pottery, squarefolded lip, flared mouth, contracted neck, very short collar, one horizontal and one oblique clay strip applied on the neck, corded impressions below the neck. Mouth diameter 10.2 cm, incomplete height 4.4 cm, wall thickness 0.6 cm (Figure 10-3).

Li: 1 piece. 2025ZYC:37 Fine sandmixed gray pottery, round lip, rolled rim, contracted neck, oblique corded impressions below the neck. Incomplete length 11 cm, incomplete height 6.7 cm, thickness 1.4 cm (Figure 8-5).

Doublehandled Bottle: 1 piece. 2025ZYC:38 Finegrained gray pottery, flared mouth, round lip, inwardsloping short collar, contracted neck, plain surface. Inner mouth diameter 10.1 cm, incomplete height 4.5 cm, thickness 0.7 cm (Figure 10-8).

Basins: 2 pieces. 2025ZYC:39 Sandmixed gray pottery, open mouth, folded rim, round lip. Mouth diameter 22.1 cm, incomplete height 4.5 cm, thickness 0.6 cm (Figure 10-7). 2025ZYC:40 Finegrained gray pottery, open mouth, broad folded rim, round lip, one week of concave string pattern near the lip, plain surface. Mouth diameter 26.3 cm, incomplete height 4.8 cm, thickness 1.2 cm (Figure 10-6).

Red Pottery Bowls: 2 pieces. 2025ZYC:41 Finegrained red pottery, open mouth, pointed round lip. Mouth diameter 27 cm, incomplete height 3.4 cm, thickness 0.7 cm (Figure 10-12). 2025ZYC:42 Finegrained yellowishbrown pottery, open mouth, pointed round lip. Mouth diameter 26.4 cm, incomplete height 3.5 cm, thickness 0.6 cm (Figure 10-13).

Foldedbelly Bowl: 1 piece. 2025ZYC:10 Finegrained gray pottery, contracted mouth, pointed lip, long collar, inward fold below the collar, plain surface. Mouth diameter 26.1 cm, incomplete height 4.2 cm, thickness 0.8 cm (Figure 10-14).

Zun: 2 pieces, finegrained gray pottery, open mouth. Classified into 3 types by details.

Type A: 1 piece. 2025ZYC:43 Finegrained gray pottery, thick body, square lip, slightly contracted neck, vertical corded impressions on the exterior. Mouth diameter 22 cm, incomplete height 3.4 cm, thickness 1.0 cm (Figure 10-9).

Type B: 1 piece. 2025ZYC:44 Finegrained gray pottery, thin body, open mouth, round lip, slightly contracted neck, seemingly polished, plain surface. Mouth diameter 24.2 cm, incomplete height 4.3 cm, thickness 0.7 cm (Figure 10-11).

Type C: 1 piece. 2025ZYC:45 Sandmixed grayishbrown pottery, open mouth, square lip, plain surface. Mouth diameter 24.1 cm, incomplete height 3.6 cm, thickness 0.8 cm (Figure 10-10).



Figure 10. Collected pottery II.1. 1. Type A Flaredrim Jar (C:33); 2. Type B Flaredrim Jar (C:34); 3. Type C Flaredrim Jar (C:36); 4. Type B Flaredrim Jar (C:35); 5. Flatmouthed Jar (C:30); 6. Basin (C:40); 7. Basin (C:39); 8. Smallmouthed Bottle (C:38); 9. Type A Zun (C:43); 10. Type C Zun (C:45); 11. Type B Zun (C:44); 12. Red Pottery Bowl (C:41); 13. Red Pottery Bowl (C:42); 14. Contractedmouth Bowl (C:10); 15. Pointedbottom Bottle (C:31)



Figure 11. Corded and basketimpressed pottery shards



Figure 12. Polished and plain pottery shards

5. Chronology and nature analysis

A preliminary survey shows that the newly discovered Yushuta North Site has no obvious stratigraphic accumulation or architectural remains, but abundant cultural relics were found, constituting an important harvest of this survey and serving as key evidence for determining the site's chronology and nature.

5.1. Stone tool analysis

Flaked stone tools dominate the stone assemblage, generally large, regular, with clear processing traces, indicating mature and stable stone tool production techniques. However, regular edge modification, especially alternating retouch, is absent; instead, flakes and flake tools are common. The stone tool assemblage is characterized by clustered cores, straightedged choppers, diskshaped choppers, round scrapers, and fully flaked cores. Overall, no typical Levalloislike tools are present, clearly distinguishing them from flaked stone tools of the Middle to Late Paleolithic.

5.2. Pottery analysis

All collected pottery is fragmentary, but the number of vessels is large and the characteristics distinct, providing important evidence for dating and cultural affiliation. The concentric black painted pattern on the doublelooped painted pottery hu (2025ZYC:21) is nearly identical to T10②:3 painted shards from Phase I of the Zhaizita Site in Jungar Banner [1], especially the concentric pattern below the rim. It is also very similar to painted shards from the Haishengbulang Site in Tuoketuo Banner [2]. The trumpetmouthed pointedbottom bottle (2025ZYC:24) is a typical cultural relic; its applied clay strip on the neck closely resembles those from the Kuiyinshengou Site [3], the Wayao Site [2] in Dalad Banner, and F7004:20 from Area VII of the Zhukaigou Site in Ejin Horo Banner [4]. Research shows that pointedbottom bottles from the Kuiyinshengou and Wayao sites date to the late Yangshao Culture, while F7004:20 from Phase I of Area VII, Zhukaigou Site is contemporary with Phase II of the Ashan Site. Thus, 2025ZYC:24 is dated to the late Yangshao Culture.

Largemouthed jars and flaredrim jars are the most numerous and representative remains. Largemouthed jars share a consistent decorative style: contracted mouth, square lip, thick body, applied clay strips on the outer rim. Type B (2025ZYC:26) is similar to T31 ②:3 flatli curvedbelly jar from the Hongshuigou Site in Jungar Banner [5].

Flaredrim jars feature round lips, rolled rims, short necks, and applied vertical clay strips, highly diagnostic. Type C (2025ZYC:36) is similar to sandmixed jar H7004:5 from Phase I of Area VII, Zhukaigou Site [4], especially the vertical plus oblique clay strips on the neck, though with a shorter rim. Reports indicate Phase I of Area VII, Zhukaigou Site postdates the Miaodigou Type of the Yangshao Culture and is contemporary with Phase II of the Ashan Site, dating to approximately 5,000 years before present [4]. Type B flaredrim jar (2025ZYC:34) matches the neck decoration of bulgingbelly jars H4:1 and H4:5 from the Zhoujiahao Site [6], resembles the rim of bulgingbelly jar H1 from the Zhanggedan Site [7], and is similar to Type I flaredrim jar IF11:6 from Phase II of the Nanhao Site [8] in Jungar Banner. Phase II of the Zhoujiahao Site predates Phase III of the Xiwang Culture and belongs to the Haishengbulang Type of the Miaozigou Culture, indicating a close date and cultural link. Type A flaredrim jar (2025ZYC:33) is very similar to Type A I sandmixed jar F1:1 from Phase I of the Zhaishang Site [9], especially the corded impressions and applied clay strips on the outer rim, indicating a close chronological relationship.

The small round appliqué on the corded neck of the flatmouthed jar (2025ZYC:30) resembles Type II flaredrim jar from Phase III of the Lujiapo Site [10] and the round appliqué below the rim of bulgingbelly jar H1 from the Zhanggedan Site [7]. Phase III of the Lujiapo Site belongs to the Haishengbulang Type of the Miaozigou Culture, so 2025ZYC:30 is contemporary.

Though only a small rim fragment survives, the doublehandled bottle (2025ZYC:38) has a contracted, inwardfolded rim similar to smallmouthed jar H3:5 from Phase III of the Lujiapo Site [10], pottery hu from the Hejiashabei Site in Xuejiawan Town, Jungar Banner [3], and Type I small doublehandled jar H6:6 from Phase I of the Zhaishang Site [9]. The Zhaishang Site is assigned to the Haishengbulang Type of the Miaodigou Culture, so 2025ZYC:38 is chronologically and culturally comparable.

Bowls, though few, are representative. Red pottery bowls are openmouthed with pointed round lips and gentle curvature. 2025ZYC:41 closely resembles Type B bowl H2:13 from Phase I of the Guandi Site [11] and Type F5:6 from Phase I of the Lujiapo Site [10], especially the squarerounded lip and slightly inward curve below the lip. Phases I of Guandi and Lujiapo are early, sharing features with the early Yangshao Culture, so the red pottery bowls date to a similar period.

Foldedbelly bowl 2025ZYC:10 is very similar to H30:5 from Phase III of the Guandi Site [11], especially the deeply contracted mouth, upper folded belly, and distinct fold line, and also resembles Type B bowl H12:13 from Phase III of the Lujiapo Site [10].

Type B zun (2025ZYC:44) is similar to cup H30:2 from Phase III of the Guandi Site [11], especially the large open mouth and slightly contracted neck below the rim, though the constriction is higher. Phase III of the Lujiapo Site is typical late Yangshao, belonging to the Haishengbulang Type of the Miaozigou Culture; Phase III of the Guandi Site is roughly contemporary with Phase III of the Xiwang Culture, later than the Haishengbulang Type. Thus, the foldedbelly bowl dates to around the Haishengbulang Type.

6. Conclusion

The Yushuta North Site is one of the new discoveries from the Fourth National Cultural Relics Survey in Ordos in 2025. Many Neolithic sites have been previously found in central Jungar Banner, and the cultural features of this new discovery are largely consistent with earlier surveys, providing new materials for studying Neolithic settlement societies in the southflowing Yellow River basin. Pottery comparative analysis shows the site contains at least early and late phases, generally belonging to the Haishengbulang Type of the Miaozigou Culture.

The early phase is characterized by red pottery bowls, Type A flaredrim jars, and Type A largemouthed jars. Its cultural features resemble those of Phase I of Guandi and Lujiapo sites, as well as counterparts from early Banpo and Hougang I cultures, dating to the middle Yangshao Culture. Culturally, it likely corresponds to the middle phase of the Bainiyaozi Culture.

The late phase constitutes the main body of the site, typified by foldedbelly bowls, painted pottery bottles, doublehanded bottles, flatmouthed jars, Type B and C flaredrim jars, Type B largemouthed jars, trumpetmouthed pointedbottom bottles, zun, and basins. These vessels closely resemble assemblages from Phase I of Zhaizita, Phase I of Area VII Zhukaigou, Phase II Nanhao, Phase I Zhoujiahao, and Phase III Lujiapo, and share numerous cultural links with Phase II Ashan and the Miaodigou Type of the Yangshao Culture. Thus, it is contemporary with these cultures and culturally belongs to the Haishengbulang Type of the Miaozigou Culture.

This discovery is based solely on surface survey; no obvious cultural layers or architectural remains were found, and no bone, antler, animal bone, or numerous polished stone tools were recovered besides stone and pottery artifacts. This poses new directions for understanding and researching the full cultural features of the site, requiring further investigation.

Authors' contributions

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