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Dashzeveg Bazargur[1]✉, Tsedendorj Bolorbat[1], Guunii Lkhundev[1]

[1]Institute of Archaeology, Mongolian Academy of Sciences
Ulaanbaatar, Mongolia,

Levallois Artifacts from the Paleolithic Sites of the Upper Tuul River

Abstract: From 2023 to 2024, the research project "Paleolithic Sites of the Upper Tuul River" was conducted in the Tuul River basin, which originates from the western slopes of the Baga Khentii Mountain range in Mongolia. As part of this project, numerous stone artifacts were collected from areas surrounding the Terelj and Gorkhi Rivers, which are tributaries of the Tuul River. Among these artifacts, Levallois cores, flakes, and points were identified, indicating the presence of Middle Paleolithic human activity in the region. This study compares these Levallois artifacts with similar finds from other Mongolian and regional Paleolithic sites.

Keywords: *Tuul River, Levallois technique, Levallois core, Levallois point, Lithic production*

Email: dbazaraa06@gmail.com, https://orcid.org/0009-0007-8450-9902

Introduction

To date, numerous archaeological sites associated with the Stone Age have been identified across the vast territory of Mongolia. The majority of these sites have been discovered as surface assemblages, with artifacts distributed across the ground rather than being stratified within the soil. The chronological assessment of these sites is primarily determined through comparative analysis with other well-dated archaeological findings, allowing for a more precise understanding of their temporal placement.

In the early stages of their technological development, early humans utilized a limited range of rudimentary stone tools. However, over time, lithic production techniques became increasingly sophisticated. By the late Paleolithic period, humans had mastered the fabrication of a diverse array of well-crafted tools, reflecting significant cognitive and technological advancements. A systematic examination of the progressive refinement of stone tool production-from simple fracture and flaking to more complex shaping techniques-provides crucial insights into the chronological framework of archaeological sites. Moreover, it contributes to a deeper understanding of the cognitive and physical evolution of early humans.

In recent years, research on the Stone Age has become increasingly refined, further clarifying the methods used for stone tool production during the Lower, Middle, and Upper Paleolithic periods. As a result, Levallois-type artifacts discovered in the upper reaches of the Tuul River are being analyzed in comparison with cultural layers from other archaeological contexts, as well as surface assemblages from open-air sites.

Research on the Paleolithic Sites of the Upper Tuul River

The initial archaeological investigation of sites in the upper reaches of the Tuul River was conducted in 1949 by the "Stone Age Archaeological Research" led by A.P. Okladnikov, as part of the Mongolian-Soviet Joint Historical and Ethnographic Expedition (Okladnikov 1954, 23). Subsequently, between 1960 and 1966, the "Mongolian Stone Age Archaeological Research" under the direction of A.P. Okladnikov and D. Dorj, carried out further research. During this period, a team of Mongolian and Soviet archaeologists systematically surveyed areas near Ulaanbaatar, including Songino Mountain, Buyant Ukhaa, and the terraces of Shar Khad, where they collected a limited assemblage of Paleolithic stone artifacts. D. Dorj and D. Tseveendorj provided a detailed analysis of the collected artifacts from the Songino Mountain and Buyant-Ukhaa terrace sites in their seminal work, The Paleolithic of Mongolia (Dorj and Tseveendorj 1978, 12). In 2018, researchers D. Bazargur and G. Lkhundev from the Institute of History and Archaeology at the Mongolian Academy of Sciences conducted a systematic survey along the terraces of the Tuul River and within the Övör Gorkhi in the Gorkhi-Terelj region. Their investigation confirmed the presence of Pleistocene-era stratigraphic layers along the riverbank. Furthermore, lithic artifacts were discovered within these layers during road construction activities, providing new evidence for the region's Paleolithic occupation and contributing to a more refined understanding of its prehistoric chronology. Subsequently, a limited test excavation was conducted at Aguit Khad (Zuun Lamiin Agui) Cave, located in the Övör Gorkhi Valley, confirming the presence of cultural deposits, thereby establishing it as a significant cave site (Bazargur et al. 2019, 22–26). In 2023, as part of the foundational research project "Stone Age Sites in the Upper Tuul River Basin," funded by the Science and Technology Fund of the Ministry of Education and Science, more than 20 previously undocumented archaeological sites were identified (Bazargur et al. 2023, 60–61). During the 2023–2024 field survey, Levallois-type artifacts were discovered on the river terraces of Öliin Tokhoi, an area characterized by rocky promontories near the confluence of the Tuul and Terelj Rivers.

Geographical Context and Site Distribution in the Upper Tuul River Basin

The Tuul River originates from the confluence of the Namyaa and Nergui Rivers, which flow from the southern slopes of Chislain Saridag and Shoroot Pass, part of the Khentii Mountain Range. It is fed by numerous tributaries before ultimately merging with the Orkhon River. The Khentii Mountains, the river's source region, are characterized by major fault systems running from the southwest to the northeast. From a tectonic perspective, the central part of the range consists primarily of Late Paleozoic (Devonian-Carboniferous) formations, while the northern section comprises ancient Riphean continental formations. The peripheral subranges are composed of Caledonian intrusive rocks and early continental carbonate formations. Geologically, the Khentii Mountains began forming during the Mesozoic era and underwent significant uplift due to Alpine tectonic activity, reaching their present configuration by the early Pleistocene. The region is predominantly composed of granite, basalt, clay shale, and sandstone. The upper Tuul River valley is initially narrow and confined within steep mountainous terrain. As the river progresses downstream, the valley floor gradually widens, reaching approximately 100–200 meters in width in the middle reaches. The valley walls are steep, with slopes ranging between 45 and

60 degrees. While the summits of the surrounding mountains are generally rounded, certain sections expose bedrock outcrops that form prominent cliffs, whereas other areas are densely forested. The Tuul River valley, from its headwaters to its lower reaches, represents an ancient landscape shaped by prolonged erosion and weathering, exhibiting a characteristic box-shaped cross-section. The flanking mountains exhibit varying relative elevations, typically ranging between 600 and 800 meters. Over extended periods of erosion, the slopes have been gradually smoothed and rounded. The width of the river valley varies depending on the orientation and geological structure of the adjacent mountain ranges. In the upper reaches, a well-defined valley is absent; it begins to emerge downstream from the confluence of the Namyaa and Nergui Rivers. At higher elevations, the valley extends deeply into the mountains, forming steep-walled gorges (Enkhtaivan and Narangerel 2007, 128-135). On the western side of the Tuul River, the mountains gradually decrease in elevation, whereas on the eastern side, steep slopes form abrupt cliffs that descend directly into the river valley.

The cultural and historical sites along the upper reaches of the Tuul River are distributed across river terraces and mountain slopes, extending from the confluence of the Tuul River and Terelj to Songino Mountain in Ulaanbaatar (Figure 1). In certain elevated sections of the Tuul River valley, the river meanders through gorges. One of the most significant sites is the Aguit Khad inscription, located in a narrow valley characterized by limestone formations. It is situated near a small spring called Gorkhi, which flows into the Tuul River from the west. Another notable landmark, Öliin Tokhoi, is enclosed by a series of prominent mountains: Ögöömör Mountain (1,949 m) to the west, Bayan Bulgyn Zoo (2,158.9 m) to the north, and Erdene Mountain (1,933 m) to the east, along with their subsidiary ridges. Positioned 5 km south of the confluence of the Tuul and Terelj rivers, Öliin Tokhoi rests on an elevated river terrace adjacent to the eastern foothills of Möst Mountain.

Levallois Artifacts in the Archaeological Sites

Excavations at the Aguit Khad site have yielded several Levallois artifacts across different stratigraphic layers. The first layer contained two Levallois preforms and one spall, while the second layer produced a pointed tool. The third layer yielded two additional pointed tools.

Among the two preforms from the first layer, one was specifically prepared for the production of a Levallois point. The core was shaped using bidirectional flaking, creating a convex central section, with one side refined into a sharp, tapered form. The opposite side was left suitable for use as a striking platform, with a flaking surface angle of 45°. The second preform was also prepared for Levallois point production. It was partially shaped through bidirectional flaking along the lateral surfaces, forming a convex core structure, though it remained unfinished (Figure 2. *4*).

Additionally, a single Levallois spall was recovered from this layer, featuring minor edge preparation along one of its lateral margins (Figure 2. *5*).

The pointed tool from the second layer was produced using the Levallois technique. It was crafted from a flake by transversely fracturing the striking bulb and preparing vertical edges along both lateral margins (Figure 2. *6*).

The two pointed tools from the third layer were also manufactured using the Levallois method. The first specimen exhibits parallel longitudinal flake scars on its dorsal surface, while its ventral side retains the striking bulb, indicating the flaking process. Its striking platform is bifacial (Figure 2. *7*). The second pointed tool was made from siliceous shale, shaped by modifying a Levallois flake into a refined implement.

The second excavation at Öliin Tokhoi yielded two Levallois points, while an additional four Levallois points and fragments were recovered from the surface near the excavation site.

The first Levallois point from the second layer of the excavation exhibits flake scars forming a symmetrical triangular pattern on its dorsal surface, followed by a subsequent transverse flake removal. Such point types are characteristic of the early Upper Paleolithic period (Figure 2. *8*). The second Levallois point was produced through a secondary flaking process from a small Levallois core, resulting in a symmetrical point. Its striking platform displays multiple parallel flake removals arranged in a semi-circular pattern. One of its lateral edges fractured post-flaking (Figure 2. *9*).

Four Levallois points were recovered from the vicinity of the excavation site, two of which are complete, while the other two are basal fragments. One of the complete points exhibits clear evidence of the initial flake removal on its ventral surface. The striking platform has been prepared through parallel flake removals, resulting in a beveled surface that slopes toward both lateral edges. The second complete point is triangular in shape, with its striking platform formed through an initial flake removal from a slanted residual core. The dorsal surface shows parallel flake scars, indicating the preparation process (Figure 2. *10, 11*).

Tne excavations at Bayantsagaan uul site Levallois artifacts II - IV stratigraphic layers. The III layer contained one side-scraper and levallois point, while the IV layer produced a single levallois core (Figure 2. *1-3*).

The Levallois Method of Stone Tool Production and Its Archaeological Sites in Mongolia

Researchers have identified several methods of stone tool production by analyzing the techniques used to create early lithic implements. These methods include direct flaking, indirect flaking, and pressure flaking [Whittaker, 1994: 36]. Within these methods, tools that exhibit specific techniques and patterns of manufacture are often named after the regions where they were first discovered. A prominent example of such a method is the Levallois technique.

The Levallois method, characterized by the production of blanks and cores, was first identified from artifacts found near Paris, France, which is why the technique is named after the region. This method is representative of the Middle Paleolithic cultures in Europe, yet some scholars also suggest that it has connections to stone tool production techniques from the Lower Paleolithic period [Wymer 1984, 112].

Levallois typology includes blanks, residual cores, points flaked from these cores, flakes, and blades. The Levallois core retains multiple production techniques within itself, suggesting the method's adaptability. The variation in the width and length of the core reflects the technological development and refinement of stone tool production methods.

The production process of the Levallois technique primarily involves direct flaking, with the flake removals occurring in a radial pattern around the lateral edges, directed toward the center of the core. When viewed from above, the resulting flaked surface resembles the shape of a turtle's shell. Consequently, this structure has been referred to as the "tortoise core" (Tatterwall and Van 1988). These cores exhibit a variety of shapes, including oval, round, elongated rectangular, and conical forms.

The Levallois flake is produced by utilizing the previously prepared surface to perform flaking. This process involves striking the prepared surface at an oblique angle, with the aim of obtaining a large flake in a single, controlled removal. The dorsal surface of the flake typically retains traces of the core preparation, while the ventral surface exhibits evidence of a single flake removal. An important feature of this manufacturing technique is that, following the initial flake removal, subsequent flaking on the dorsal surface may preserve traces from the first strike, particularly at the proximal part of the flake. Moreover, along the lateral edge of the flake, marks are retained from the core preparation, indicating that further flaking was directed toward the core's center. Studies have shown that such flakes were likely struck using tools made of wood or animal antler (Debenath and Dibble 1994).

The Levallois technique originated in Southern Africa and Europe, subsequently spreading across a vast expanse, reaching as far east as the Yenisei River in Russia. This method was employed over an extended period and evolved alongside the flake production technique during the early Upper Paleolithic. As such, the widespread adoption of the Levallois technique for blade production during this period is closely linked to both the physiological and cognitive development of early humans. Establishing a precise chronological framework for the development of this technique is essential for a deeper understanding of human evolutionary processes.

Levallois-related artifacts have been discovered in several regions of Mongolia, including the Altai Mountains, the Gobi-Altai Mountains, the Great Lakes Basin, the Khangai Mountains, the Khentii Mountains, as well as in the steppe and prairie zones. Among these areas, the Yarkh Uul site is regarded as significant in relation to the early Levallois period, as it is predominantly characterized by oval and round-shaped cores.

Levallois tools have been discovered across various regions of Mongolia, including the Altai Mountains, Gobi-Altai Mountains, Great Lakes Basin, Khangai Mountains, Khentii Mountains, as well as in the steppe and prairie zones. Significant sites where Levallois-related artifacts have been found include Olon Nuur, Barlagiin Gol, Uyench, and Mankhan in the Altai Mountains [Derevyanko et al. 1990, 254, 325, 366, 398-404, 428-435]; Yarkh, and Otson maanit in the Gobi desert [Okladnikov 1986, 27, 36, 59, 105]; Tsagaan Agui and Chikhen Agui in the Gobi-Altai region [Derevyanko et al. 1998: 136, 138; Krivoshapkin et al. 2011, 3-6; Khatsenovich et al. 2023]; and Arts Bogd's Mukhar Bulag and Ikh Bulag [Derevyanko et al. 2001, 22, 44]. Additional key sites include Khötöl Us [Mirosław et al. 2019, 479-491] and Tsakhiurt Valley [Derevyanko et al. 2002]. In the Great Lakes Basin, Levallois tools have been found at Orog Lake [Tserendagva et al. 2017], Nariin Gol [Derevyanko et al. 2000, 53-102], and in the Khangai Mountains at Orkhon-1 and Orkhon-7 [Derevyanko et al. 2010], Moiltin Am [Khatsenovich, Rybin et al. 2019], and Avdar Khad [Gantulga et al. 2023]. In the Khentii Mountains, important findings include Levallois tools at Rashaan Khad [Bazargur 2015, 39-53], Khanzat-1 [Izuho, Tsogtbaatar et al. 2007], and Tuul Gol's Aguith Khad [Bazargur et al. 2019], as well as at Öliin Tokhoi [Bazargur et al. 2023]. In the Gobi region, Levallois tools have been identified at Otson Maat [Okladnikov 1986, 13, tabl. 21-28], and from the steppe and prairie regions, notable sites include Yarkh [Okladnikov 1986, 13; Dorj and Tsevendorj 1978] and Otson Tsohio [Odsuren et al. 2023]. These sites represent the primary evidence of Levallois tool production in Mongolia.

In addition to the archaeological sites within Mongolia, Levallois tools have also been discovered in neighboring regions of Siberia, specifically in the northern part of the Altai Mountains. Noteworthy sites include Kara-Bom and Usti-Karakol [Belousova and Rybin 2013, 64-76], as well as Denisova Cave [Lbova 2011, 11-14], where Levallois-style stone tools have been recovered.

Discussion

In 2023, as part of a field survey conducted in the upper reaches of the Tuul River, Levallois stone tools were discovered at the Öliin Tokhoi site. These tools are being analyzed and compared, in terms of typology, with those from previously identified sites, to refine the chronological framework for their development.

The Levallois-related archaeological sites in Mongolia have been classified based on the types of artifacts found, with the remnants categorized according to their form and characteristics, as detailed below.

- Cores designed for the production of round-shaped flakes: This category includes cores from the following sites: Nariin Gol (Figures 3. *4*), Arts Bogd (Figures 3. *2*), Olon nuur (Figure 3. *1*), Mankhan (Figure 3. *3*), Barlagiin Gol (Figure 3. *5*), Uyench (Figure 3. *6*), Moiltiin Am (Figure 3. *7*) and Rashaan Khad (Figure 3. *8*).
- Cores intended for the production of short flakes: This category is represented by cores from the following sites: Chikhen Agui (Figure 3. *9*), Tsagaan Agui (Figure 3. *10*), Nariin Gol (Figures 3. *11*), Tsakhiurt Valley (Figure 3. *12*), Arts Bogd (Figure 3. *13*), and Moiltiin Am (Figure 3. *14*).
- Cores designed for the production of oval-shaped flakes: Cores in this category are found at the following sites: Chikhen Agui (Figure 4. *1*), Nariin Gol (Figures 4. *2*), Tsakhiurt Valley (Figure 4. *3*), Arts Bogd (Figures 4. *4*), Uyench (Figure 4. *5*), and Otson tsokhio (Figure 4. *6*).
- Cores intended for the production of triangular-shaped flakes: This category includes cores from the following sites: Chikhen Agui (Figure 4. *7*), Nariin Gol (Figures 4. *8*), Tsakhiurt Valley (Figure 4. *9*), Arts Bogd (Figure 4. *17*), Olon nuur (Figure 4. *11*), Möst (Figure 4. *12*), Uyench (Figure 4. *13*), Moiltiin Am (Figure 4. *14*), Otson Maanit (Figure 4. *15, 16*), and Yarkh (Figure 4. *10*).
- Cores designed for the production of long, pointed flakes: Cores from the following sites are included in this category: Chikhen Agui (Figures 5. *1*), Tsakhiurt Valley (Figures 5. *2*), Arts Bogd (Figure 5. *3*), Barlagiin Gol (Figure 5. *4*), Moiltiin Am (Figure 5. *5*), and Rashaan Khad (Figure 5. *6*).

These core types, specifically those intended for the production of oval and triangular-shaped flakes, have been found across various archaeological sites, extending from the northwestern Altai Mountains eastward along the Altai range and its subsidiary hills, as well as in the southeastern part of the Khangai Mountains and the eastern and southeastern sections of the Khentii Mountains. However, it is noteworthy that similar artifacts have yet to be discovered in the southern and eastern regions of Lake Baikal, making this area of particular interest for further research.

Levallois points have been discovered at several sites, including Tsagaan Agui, Chikhen Agui, Moiltiin Am, Rashaan Khad, Suuj, and Arts Bogd. These artifacts exhibit a consistent typological pattern, aligning with similar finds from Central and North Asia, suggesting a shared manufacturing tradition. Furthermore, the Levallois points from the Shuidonggou site in northern China [Chekha 2013, 89-92] exhibit a similar triangular shape to those from Rashaan Khad (Figure 5. *7*) and Suuj. In contrast, the points from Tsagaan Agui (Figure 5. *8*), Chikhen Agui (Figure 5. *9-11*), and Moiltiin Am are characterized by a more elongated form (Figures 5. *12*).

The oldest form of Levallois points has been preserved in artifacts discovered at various open-air settlement sites, including Yarkh Uul (to be illustrated), Nariin Gol (Figures 5. *13*), Arts Bogd (Figure 5. *14*), Barlagiin Gol (Figure 5. *15, 16*), and Uyench (Figures 5. *17*). These points typically exhibit crude craftsmanship, with most being small and derived from triangular-shaped cores. Remarkably, well-preserved, unweathered Levallois points have been found at the Arts Bogd, Uyench, and Nariin Gol sites. These points display striking similarities in both flaking technique and form with those from Chikhen Agui, suggesting continuity in manufacturing methods across these regions.

The Levallois-associated archaeological sites discovered within the territory of our country are dated to the Middle Paleolithic and Early Upper Paleolithic periods. Key sites from these periods include Tsagaan Agui (33,840±640, AA-23158) [Krivoshapkin et al. 2011: 3-6], Chikhen Agui [Derenvan et al. 2008, 12], Chikhen-2 (30,550±410, AA-31870) [Derenvyako et al. 2006, 109-111], Moiltiin Am (36,400–33,250) [Khatsenovich, Rybin et al. 2019], Avdar Khad (27,750 ± 120, Beta-308613) [Gantulga et al. 2023, 80], Rashaan Khad (35,630±180, IAAA-110745) [Yi Seonbok et al. 2012, 1-16], Otson Tsokhio, and Zuun Shovkh (38,200–36,200) [Odsuren et al. 2023]. In neighboring regions, such as the Denisova Cave Layer 11 (37,235 BP), Ust-Karakol, and Layer 9 of Kara-Bom (>42,000–44,000 years) [Belusova and Rybin 2013, 68], the findings are also attributed to the Early Upper Paleolithic period.

The final phase of the Levallois technique has not been precisely defined by scholars, but it is commonly regarded as corresponding to the transition between the Early and Middle Upper Paleolithic periods.

The Levallois points from the Aguit Khad site along the Tuul River exhibit similarities in terms of manufacturing technique, form, and style to those from Tsagaan Agui, Chikhen Agui, and Khanzat-1. In contrast, the points from the Öliin Tokhoi site are comparable to those found at several other significant sites, including Barlagiin Gol, Mankhan, Uyench, Tsakhiurt, and Arts Bogd in the Altai Mountains, Nariin Gol in the Ancient Lakes Basin, Moiltiin Am in the Khangai Mountains, Rashaan Khad in the Khentii Mountains, and Otson Tsokhio in the Steppe Region. These findings suggest the broad distribution and persistence of Levallois technology across a wide geographical area.

The distribution of Levallois-associated archaeological sites exhibits the highest concentration in the Altai Mountains and its subsidiary ranges, as well as in the Great Lakes Basin. In contrast, fewer sites have been identified in the central and southeastern parts of the Khangai Mountains, the eastern and southern sections of the Khentii Mountains, and the smaller mountain ranges of the southeastern region. Levallois artifacts found in the upper reaches of the Tuul River are generally attributed to the Early Upper Paleolithic period, serving as a key representative of this phase in the Khentii Mountains region.

Conclusion

In conclusion, the Levallois method, which emerged during the Paleolithic period, has been identified across a vast expanse, from the Anui Gol Basin in the northern Altai Mountains to the branch ranges of the Altai, extending to the Khangai and Khentii Mountains. However, it is evident that this technique did not spread to the southern and eastern areas surrounding Lake Baikal. In terms of lithic production, the initial phase of Levallois technology involved the preparation of round, oval, square, and elongated triangular blanks, from which short, robust points were struck. By the Early Upper Paleolithic, the technique evolved, yielding long, thin, and finely made points, which were directly used as tools. In some instances, after the initial flaking, the side edges were retouched or slightly polished for refined use.

Artifacts from sites such as Aguit Khad near the Tuul River and Öliin Tokhoi provide significant evidence for understanding the evolution of stone tool production in this region. These finds are crucial for reconstructing the technological advancements and cultural developments of Paleolithic societies in this area.

Contribution authors:

Tsedendorj Bolorbat - https://orcid.org/0000-0003-0176-7644

Guunii Lkhundev - https://orcid.org/0000-0001-6718-8026

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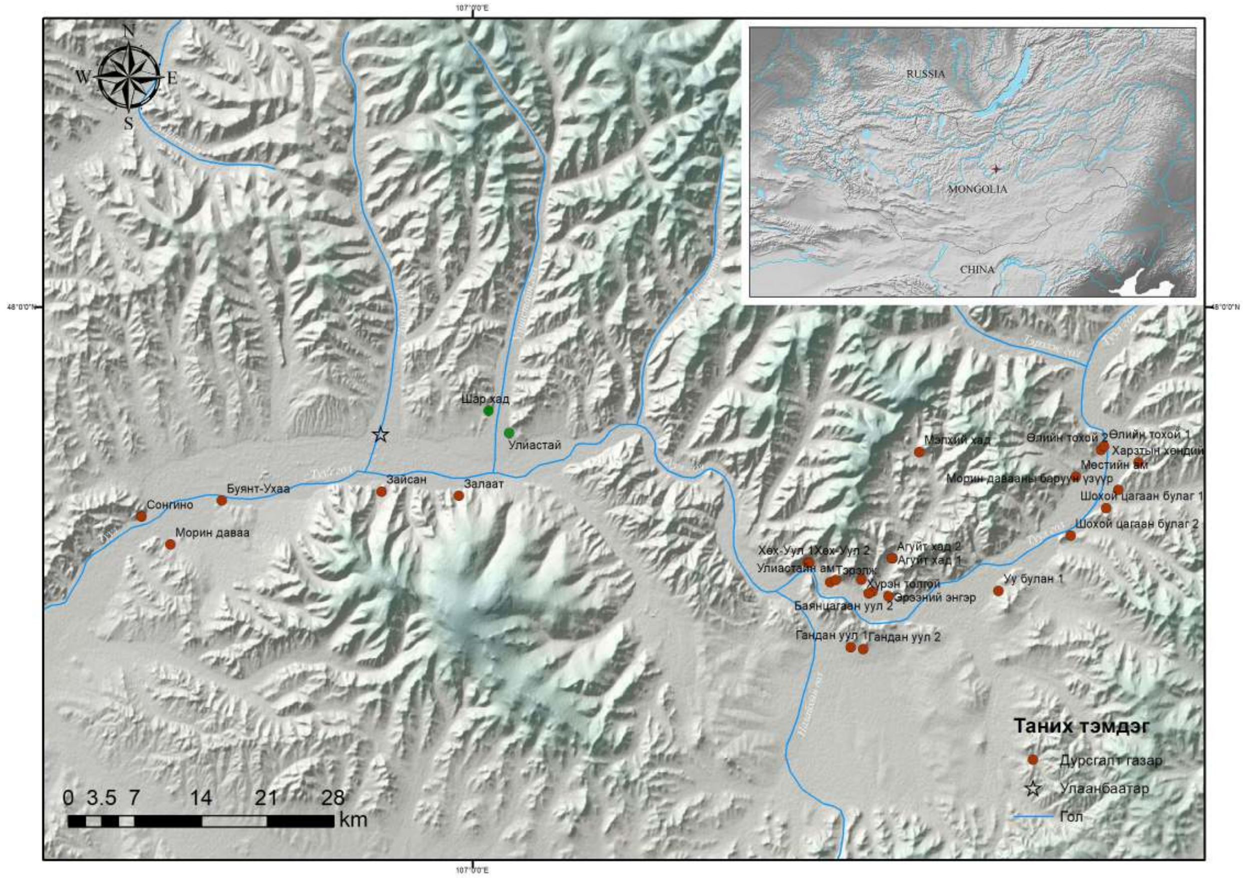

Figure 1. Paleolithic site's in Tuul River valley: 1-Songino, 2-Morin davaa, 3-Buyant Ukhaa, 4-Zaisan tolgoi, 5-Zalaat, 6-Khukh uul, 7-Urtuu uvuljuunii adag, 8-Del uul, 9-Khuren tolgoi, 10-Bayantsagaan uul, 11-Aguit khad, 12-Uvur Gorkhi, 13-Ereenii adag, 14,15-Gandan uul, 16-Uu bulan, 17,18-Seruun bulag, 19-Morin davaa, 20-Kharztyn am, 21-Mustyn am, 22-Uliin tokhoi, 23-Uliin bulan.

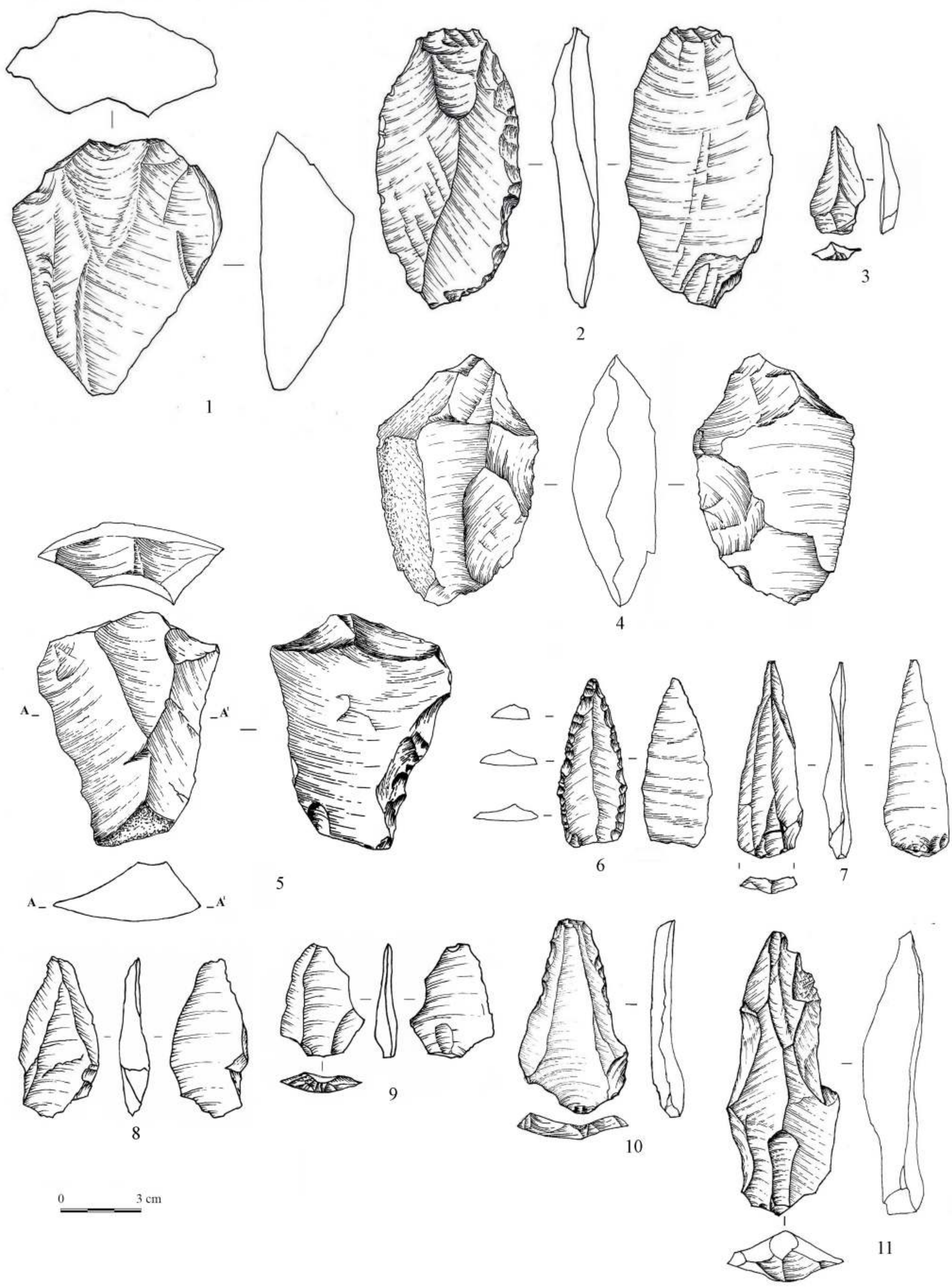

Figure 2. Bayantsagaan uul: 1-levallois core (layer 4), 2-levallois side scraper (layer 3), 3-levallois point (layer 3); Aguit khad: 4-levallois preform (layer 3), 5-levallois spall (layer 3), 6,7-levallois point (layer 3); Uliin tokhoi: 8,9-levallois point's (Pit 2, layer 2), 10,11-levallois point's (Pit 2 around survey).

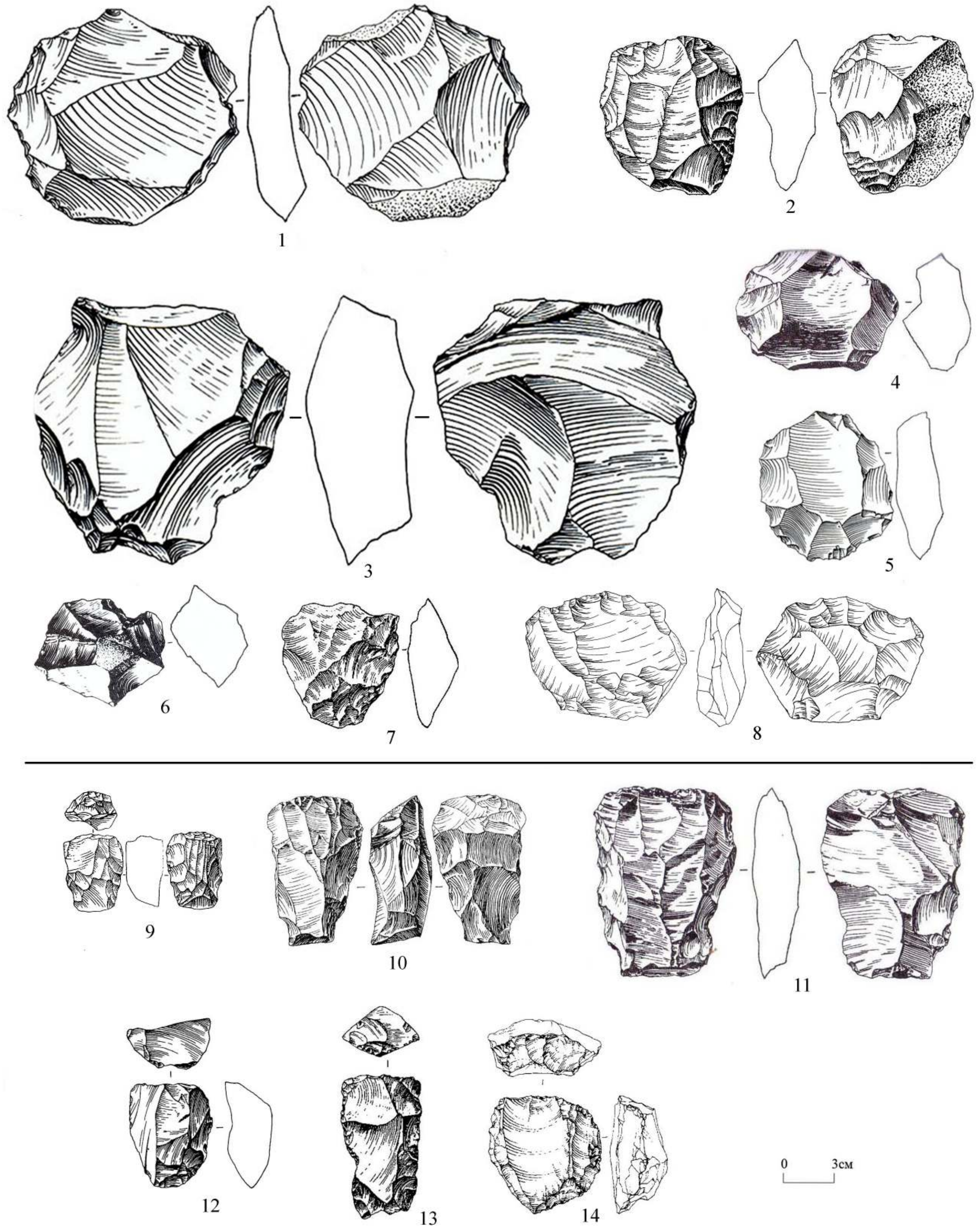

Figure 3. Cores designed for the production of round-shaped flakes: 1-Olon nuur, 2-Arts Bogd, 3-Mankhan, 4-Nariin Gol, 5-Barlagiin Gol, 6-Uyench, 7-Moiltyn am, 8-Rashaan Khad, Cores intended for the production of short flakes: 9-Chikhen Agui, 10-Tsagaan agui, 11-Nariin Gol, 12-Tsakhiurt valley, 13-Arts Bogd, 14-Moiltyn am

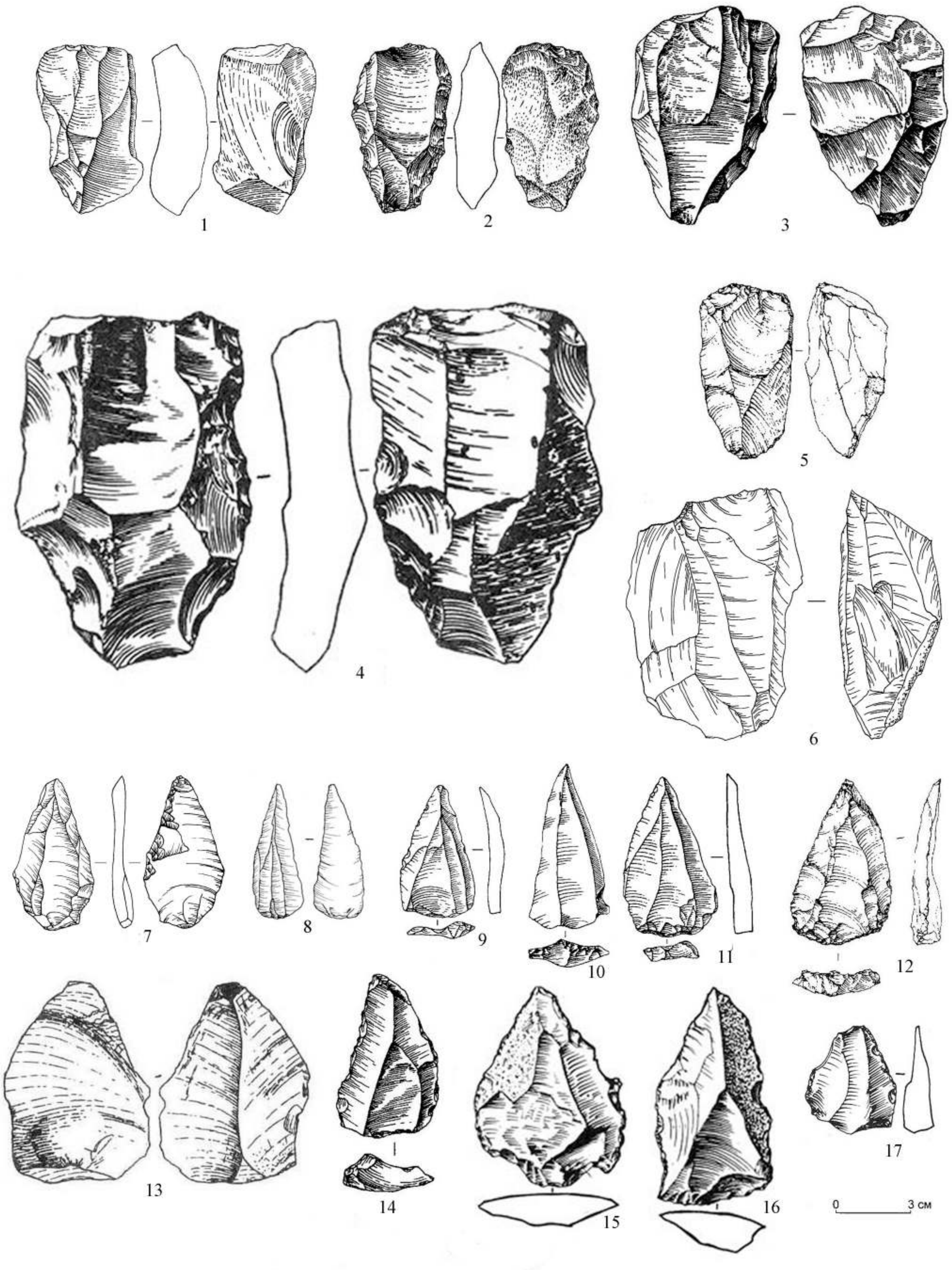

Figure 4. Cores designed for the production of oval-shaped flakes: 1-Chikhen Agui, 2-Nariin Gol, 3-Tsakhiurt valley, 4-Arts Bogd, 5-Uyench, 6-Otson tsokhio, Cores intended for the production of triangular-shaped flakes: 7-Chikhen Agui, 8-Nariin Gol, 9-Tsakhiurt valley, 10-Yarkh, 11-Olon nuur, 12-Most, 13-Uyench, 14-Moiltyn am, 15,16-Otson Maanit, 17-Arts Bogd

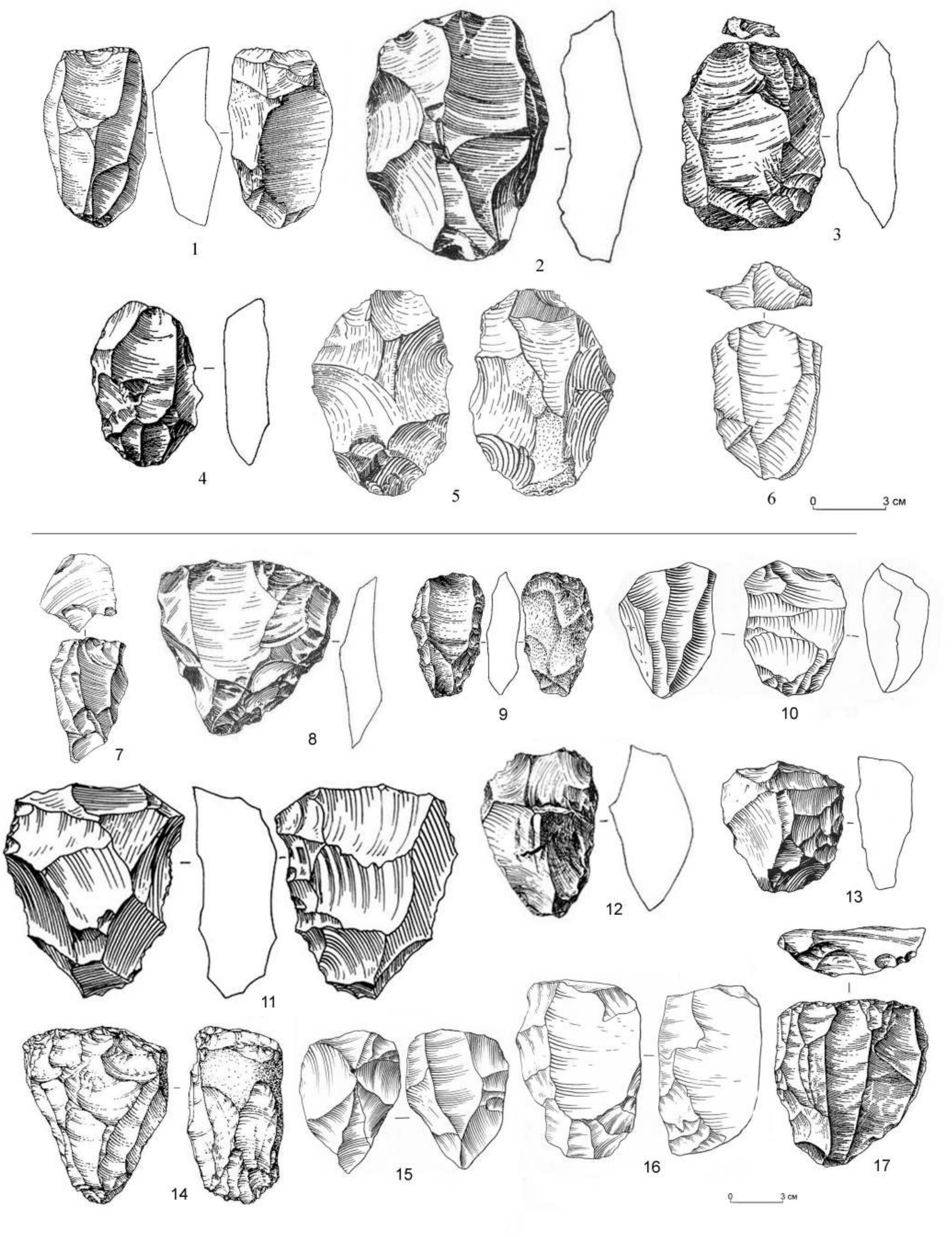

Figure 5. Cores designed for the production of long, pointed flakes: 1-Chikhen Agui, 2-Tsakhiurt valley, 3-Arts Bogd, 4-Barlagiin Gol, 5-Moiltyn am, 6-Rashaan khad; Levallois point's: 7-Rashaan Khad, 8-Tsagaan Agui, 9,10,11-Chikhen Agui, 12-Moiltyn am, 13-Nariin Gol, 14-Arts Bogd, 15, 16-Barlagiin Gol, 17-Uyench