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Bronze Age and Iron Age decorated megaliths and funerary complexes in Mongolia and Southern Siberia

Abstract: Mongolia and southern Siberia are rich in funerary, ceremonial and iconographic remains of Bronze Age and Iron Age nomadic civilizations. Part of this archaeological heritage, in a cultural and funerary context, could be classified as megaliths. Among the oldest menhirs (2500-1800 BC), the stelae of the Okuniev culture are found across most of the territory of the Republic of Khakassia. Russian archaeologists have catalogued nearly 600 monuments, the largest of which was reused in the Iron Age in the large Tagar tomb at the site of Salbik. Other more recent megaliths appear in the Bronze Age, mainly in Mongolian territory, where about 1240 decorated stelae have been recorded by the Archaeological Institute of Ulaanbaatar. One of the stelae from the Ulan Tolgoi site is almost 5 m high. During the Final Bronze Age, High Asian populations erected granite menhirs, called 'deer stones' on account of their deer carvings. This megalithism is associated with highly codified funerary complexes, consisting of individual aristocratic tombs in the form of large tumuli surrounded by hundreds of mounds, each of which contains the deposit of a horse's head. The joint Monaco-Mongolian archaeological mission is carrying out research in the Upper Tamir Valley, where abundant remains of this culture are found. This valley lies in the centre of the country and has more than 800 tombs, 115 deer stone stelae and a rock art site with more than a thousand petroglyphs. At the beginning of the Iron Age, a new type of megalithic structure emerged in Southern Siberia: aristocratic burial mounds delimited by large standing stones and enormous retaining slabs. Tomb no. 1 of the Royal Necropolis of Salbik contains a 50-ton retaining slab.

Keywords: *adorned stelae, petroglyphs, menhir, Bronze Age, Iron Age, deer stone, Tagar, Okuniev, Mongolia, Siberia*

Fig. 1 – Distribution map of the Okuniev stelae and the deer stones (J. Magail).

1. Introduction

Since 2006, the Museum of Prehistoric Anthropology of Monaco has conducted archaeological missions to investigate the Bronze Age and Early Iron Age nomadic populations of High Asia. Agreements have been signed with the Mongolian Academy of Sciences, Research Institute for Language, Literature, and History of the Republic of Khakassia, the Institute of Social Sciences of the Republic of Tuva and the Museum of Minusinsk. Some of the studied remains can be classified as megaliths and menhir statues. These are essentially stelae which are either constituent elements of tombs or elements implanted in sacred and/or funerary sites. Thanks to a partnership with the ARTEHIS laboratory of the University of Burgundy, a corpus of about 100 3D models of menhirs and a substantial number of digital terrain models and orthophotographs have been produced (Magail *et al.* 2017; Monna *et al.* 2018, 2020; Rolland *et al.* 2019). This article, which does not claim to be exhaustive, deals with objects from a period that begins with the Okuniev culture in the 3rd millennium BC, continues into the Bronze Age with the deer stone' stelae culture and ends in the 5th century BC with the Tagar culture. The majority of these menhirs bear engraved or even sculpted – sometimes painted – iconography (**Fig. 1**).

2. The Okuniev stelae

Between 2500 and 1800 BC, a society of sheep, cattle and horse breeders erected the oldest menhirs in High Asia. The Okuniev archaeological sites are mainly funerary and religious places, so the documentation of daily life is still very partial. Copper and bronze objects, ceramics and representations of chariots attest to the inclusion of these items in the cultural assemblage following the earlier Afanasyev culture. The singularity of the Okuniev stelae is to be found in the carved and engraved art on surfaces that were often pre-prepared (Leontiev 1976; Leontiev *et al.* 2006). These monoliths are mainly located in the Khakassia Republic; very few

are found in a primary context (Kyzlasov 1986; Esin 2010). They were often reused and eventually moved during the development of agricultural land during the 20th century. During the long Okuniev period, communities sometimes reused their own stelae and subsequent cultures continued this practice (Lazaretov & Poliakov 2018). The Tagar culture took Okuniev menhirs from sites of worship to integrate them into the construction of their princely tombs in the 5th century BC. One monolith, for example, was embedded in the passageway of aristocratic Tomb no. 1 at Salbik. The most exceptional of the 600 listed Okuniev stelae, in terms of size and iconography, are displayed in museums in the towns of the region, in Abakan, Minusinsk and Poltakov. Some are also curated at the State Historical Museum in Moscow and the Hermitage Museum in St. Petersburg. The iconographies observed on the menhirs are also recorded on more than 40 engraved and painted rocks. Not only is there an 'Okuniev style', but a codification of the figures and their combinations is also found on each monument. The aim here is to present an overview of the different types of Okuniev monoliths through a very succinct selection.

Some monoliths, such as that from the commune of Shira village, display rich iconographic groups of sculptures and engravings. On the narrowest side, the Shira menhir bears a representation of a chimeric half-animal, half-human creature with an anthropomorphic face (**Fig. 2a, b**). The engraved head of the animal at the base of the wider sides illustrates the chimeric composition of the represented being. Its eyes and muzzle correspond to the chest and belly of the anthropomorph. The legs of the beast are also

Fig. 2 – Stele of Shira: a. Photo Y. Esin; b-c. Survey of the stele with details of the iconography of the upper section, drawing by N. Leontiev and Y. Esin. Preserved in the Khakassia National Museum of Regional Research (Abakan). Reddish-brown sandstone, size: 290 x 80 x 25 cm.

the arms of the anthropomorph. Its open mouth, with sharp teeth and a pointed tongue, reinforces the mythological character of this wild beast, overhanging a circular Okuniev symbol with four triangular rays. The iconographic themes of the main side unfold in three parts, one above the other. In the central section, the large, ovoid, sculpted anthropomorphic face is divided into three parts by horizontal lines. Above this, in the top part of the stele, the vertical headdress of the creature is engraved, enhanced by the sculpture of a small, very realistic human face. All the images of this monument can be interpreted as the body and clothing of a single deity whose face is located in the centre of the stele. The vertical headdress schematically repeats the tripartite iconographic structure of the stele (**Fig. 2c**).

Another type of stele, often a thin slab, depicts an anthropomorphic figure evoking a solar deity together with animals. One of the broad sides of the stele in the village of Ankhakov (2.5 m high) depicts a being whose head is encircled by a halo of rays and whose body is surrounded by snakes (**Fig. 3a, b**). It was found in two pieces, reused in the structure of a Tagar culture tomb. The pieces were subsequently reassembled and the stele is currently displayed in the Abakan Museum. Traces of red paint are preserved on the engraved side. The entire surface of the stele seems to have been painted with ochre in the Okuniev period. A reconstruction of the monument in its context has been proposed (**Fig. 3a**) (Esin *et al.* 2014). A radiant face associated with snakes, but also with the head of a wild animal, is a theme also developed on a stele fragment discovered near the Tibik River (**Fig. 3c**). The open mouth with sharp teeth of the Okuniev mythological beast is placed under the anthropomorph's rounded head, echoing the themes engraved on the Shira menhir described above (**Fig. 2a, b**). Note that its bestial tongue touches the chin of the solar being, either to suggest its engulfment or regurgitation. On this stele, schematic representations of snakes contribute to forming the mouth of the beast. The reptiles seem to transmit their strength to the animal by suggesting a fatal bite. The number of five snakes appears

Fig. 3 – Stele from the village of Ankhakov: a. Reconstruction in its context; b. Drawing of the stele by Y. Esin. Preserved in the National Museum of Regional Research in Khakassia (Abakan). Reddish-brown sandstone size: 250 x 130 x 25 cm; c. Drawing of the Tibik stele by Y. Esin. Grey-green aleurolite, size: 55 x 38 x 12 cm.

to be significant as the same number of snakes are observed on the Ankhakov stele.

The record of representations of chimeric creatures is considerably enriched by a stele from the Askiz River, on which two animal figures are endowed with a bear's head, a snake's tongue, an ox's torso and horns, and finally with hawk's talons (**Fig. 4**). Is this the same Okuniev beast observed on the monuments of Shira and Tilbik? In **Fig. 4b** the chimeras are shown in black and overlie a representation of a typical Okuniev three-eyed anthropomorphic face (in blue), also with a large mouth and nostrils. A similar superimposition is found on the Kurgan stele of Chernovaya VIII, where the chimera has an elk torso and legs associated with a long feline tail, different from that of the stele of Askiz. The overlapping of iconographies from the same culture seems to be part of the syntactic code.

The iconographies of mythological predators in Okuniev art are distinguished from other themes by their wide variety of representations (Lazaretov 1997). In one category, the animal has the silhouette of an elk, bull, bear, wolf or dog. In another category, the beings are standing on their hind limbs and have a human figure. Despite the large number of variations, the images retain a coherence around a set of symbols. The oral tradition that transmits mythological stories from generation to generation

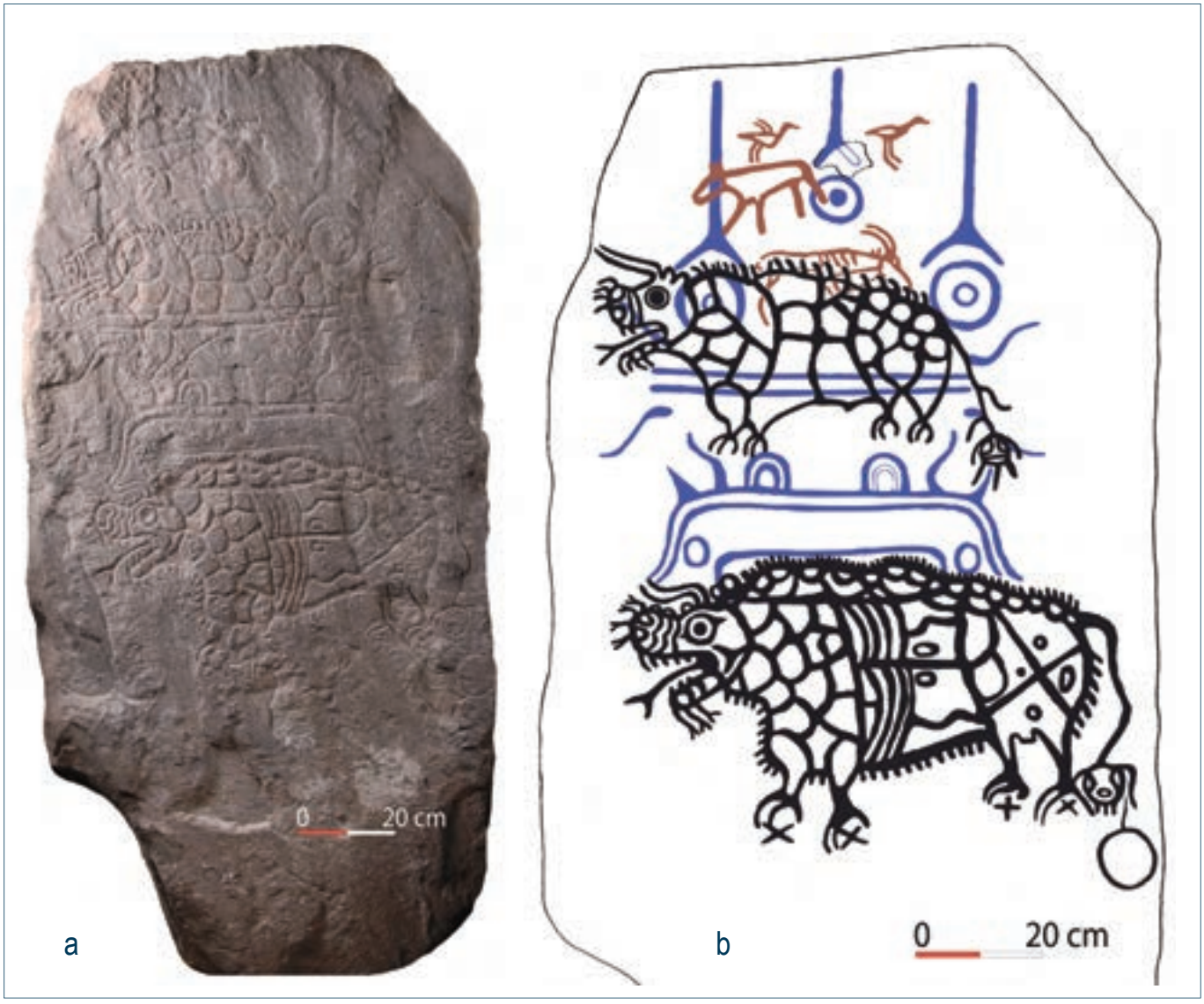

Fig. 4 – Askiz stele: a. Photo by B. Dolinin; b. Drawing by Y. Esin. Preserved in the National Museum of Regional Research in Khakassia (Abakan). Reddish brown sandstone, Size: 210 x 105 cm.

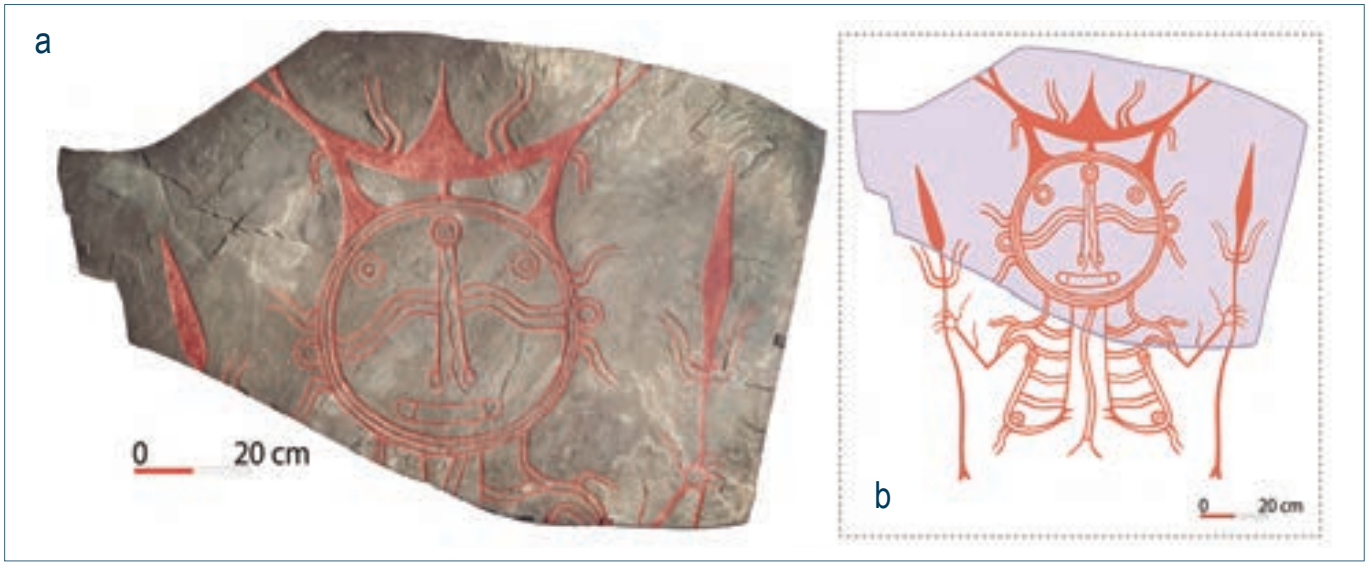

Fig. 5 – Stele from Chernovaya VIII (fragment) preserved in the Hermitage Museum in St. Petersburg: a. Photo with reconstruction of the pigments by Y. Esin; b. Drawing and proposed reconstruction by Y. Esin. Reddish brown sandstone, size: 130 x 85 cm.

could explain all these nuances around the same theme.

A whole image has been reconstructed from a fragment of stele found in the tomb of Chernovaya VIII (**Fig. 5**). On the preserved upper part, the representation of a deity holds, in each hand, an unknown type of weapon consisting of a spear point, curved bull horns and a serpentine handle. The details of the deity's face correspond to symbols that represent the different domains of the universe (Esin 2010). The three eyes could, for example, correspond to the positions of the sun during the day. Red ochre was found inside the hollowed and polished parts (Esin *et al.* 2014). The deity was therefore painted after being engraved onto the block of sandstone.

In the commune of Erbinskiy village, an archaeological excavation of an Okuniev sanctuary carried out in 1971 by L.R. Kyzlasov provided a better understanding of the religious context of the stelae (Kyzlasov 1986). Two stelae and two pits, intended to hold the blood of sacrificed animals, were discovered on the site, which extends along a north-south axis (**Fig. 6a, b**). Stele no. 1, of grey granite and 1.30 m high, was unearthed with its front side facing the rising sun. Stele no. 2, of pink granite, was found broken into two pieces, one overturned to the north of the site, the other covering the sacrificial pit to the south. The lower part of this stele has an ovoid carved shape without facial details (i.e., eyes and mouth), and relief evoking the shape of breasts. The two pieces together show that its original height was 3.16 m. The two sacrificial pits, elliptical in shape and 1.20 m and 1.48 m deep respectively, were filled with white limestone stones. Animal bones were found in the upper part of these pits and in the vicinity of the stele. These consisted mainly of horse bones, but also the remains of horned cattle and birds. This sanctuary was completely excavated; the stelae are kept in the Museum of History and Cultures of Siberian and Far Eastern Peoples in Novosibirsk.

A stele curated in the Poltakov open-air Museum is a sandstone slab 2.5 m high and 1.2 m wide, decorated with the largest known radiating Okuniev face (**Fig. 7**). In the middle of this face, a large triangle corresponds to the nose of the deity. The eyes and mouth are deeply carved into the rock. Different types of small faces and cup marks are engraved behind the large face. This monument was found in a Tagar culture tomb in a context of reuse. Traces of ochre were found on its surface, as on the Ankhakov stele. Archaeologists took a moulding of the entire surface of the stele and made two resin casts to show the public its present appearance and how it looked 4500 years ago when it was painted with red ochre (**Fig. 7a**) (Esin *et al.* 2014).

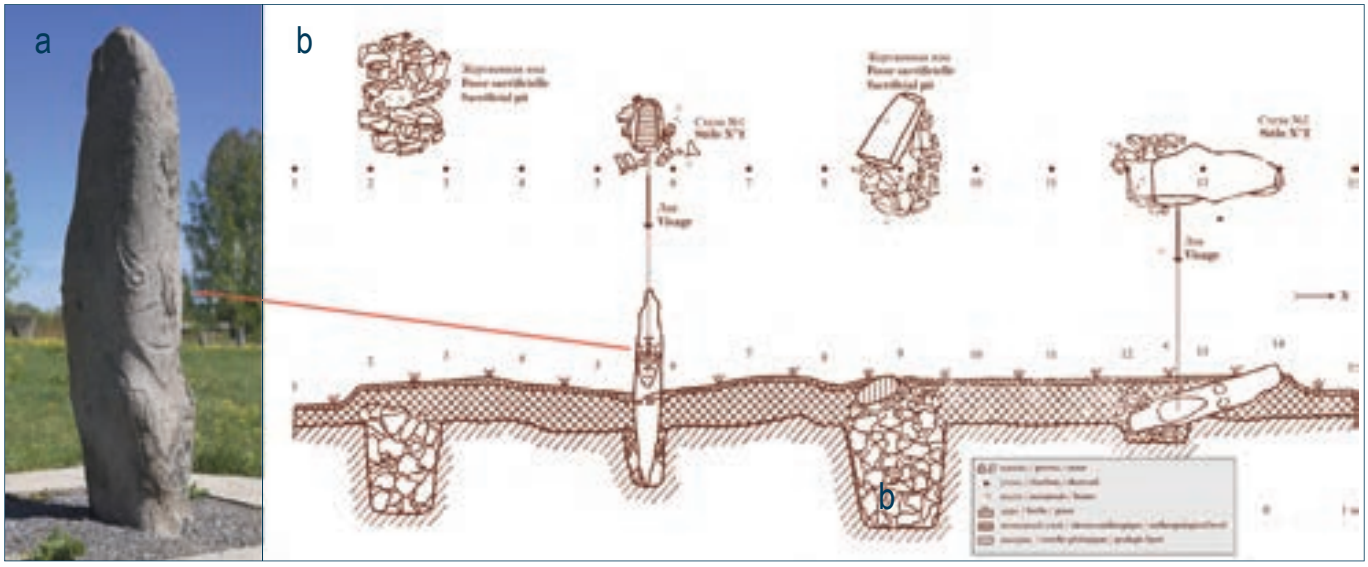

Fig. 6 – a. Stele no. 1 from the Erbinskiy sanctuary preserved in the Museum of History and Cultures of the Peoples of Siberia and the Far East in Novosibirsk. Grey granite, size: 130 x 55 x 27 cm (Photo: Y. Esin); b. Plan and cross-section of the Erbinskiy sanctuary (From the drawing by L.R. Kyzlasov).

Fig. 7 – Stele from the Poltakov Museum. Reddish brown sandstone, size: 250 x 120 cm: a. Photo of the cast of the stele, painted with the original colours; b. Photograph of the painted stele by J. Magail; c. Drawing by Y. Esin.

The surfaces of the most sophisticated Okuniev stelae were generally worked before the sculpture and engraving of the iconography. The 'sabre-shaped' stele in the village of Tazmin shows evidence of such surfaceworking (**Fig. 8**). The sculpted face at the base of the monument is fine and elongated and is of exceptional finesse. The Khakas called it *Apsakh oba*, 'the Old Stone Man'.

Fig. 8 – Anisim Kyrzanovich Tazmin, a villager, is standing next to the stele now kept in the Ethnographic Museum in St. Petersburg. The photograph, kept in the archives of the Minusinsk Regional History Museum, was taken in 1910 by N. Fyodorov. Reddish brown sandstone, size: 360 x 70 x 15 cm.

Sculpted faces are a recurring theme on Okuniev menhirs. In the region of the village of Beltyry, a menhir reused in the construction of the enclosure of a kurgan (tomb) of the Tagar culture bears three realistic faces carved one above the other on an angle of the stele. On the widest side of the monument, schematic human figures were added by Tagar artists.

3. Deer stone stelae

The decorated stelae known as deer stones have a distribution centred on Mongolia and extending over China, Kazakhstan and Russia (**Fig. 1**). The earliest studies of their engravings of leaping deer and weapons compared them to images from the Karasuk culture of the South Siberian Bronze Age (Okladnikov 1954; Novgorodova 1989). Numerous ^{14}C datings of animal deposits directly related to the erection of these menhirs confirm that they were made by a pre-Scythian culture existing between the 2nd and 1st millennia BC (Fitzhugh 2009). Indeed, the Saka, the Eastern Scythians of Siberia and Altai, inherited some of the weapons and art of these populations. The typology of the leaping deer, engraved in around 1200 BC on the Mongolian stelae, is known in the form of gold appliques among the West Scythians in the 4th century BC in Ukraine and Hungary. Approximately 85% of the 1500 deer stone monuments are in Mongolia. The Institute of Archaeology of the Mongolian Academy of Sciences lists 1240 examples (Turbat 2018), about 100 in southern Siberia in the republics of Altai, Tuva and Buryatia, and a few dozen in the north of the Chinese province of Xinjiang and in eastern Kazakhstan. The stones have been known since the end of the 19th century thanks to Grigory and Alexandra Potanin who took part in the expeditions of the Russian Geographical Society to Siberia, Mongolia, China and Tibet. During their visits to Mongolia in 1876 and 1877, they surveyed stelae and structures from the Bronze Age (Potanin 1881, vol. 2). Ten years later, Vassily Radlov, a famous Turkologist, included deer stones in his *Atlas of Mongolian Antiquities* (Radlov 1892). It should be noted that Bronze Age stelae were sometimes used as a support for Turkish runic writings in the 7th and 8th centuries of our era. The same phenomenon occurred with the Okuniev stelae discussed in the previous section. By documenting the runes inscribed

on the menhirs, Turkish scholars made the first surveys of the decorated stelae. After the Second World War, authors such as Alexei Okladnikov and Natalia Chlenova drew attention to deer stones by analysing the typology of their iconography as objects of Scythian culture (Okladnikov 1954; Chlenova 1962, 1984). Over the last 40 years, study of the stones has developed thanks to increasingly easy access to archaeological sites. Due to the vast steppe areas to be prospected, with no roads, and accessible only during the summer season, isolated sites remained hidden for a long time. The fall of the Soviet Union then contributed to the arrival of foreign archaeological missions which enriched discoveries, including the corpus of deer stones. In 1994, the number of stones was estimated at 700 (Savinov 1994). When a joint Monaco-Mongolian mission arrived in 2006 in the sector of the Upper Tamir Valley (province of Arkhangai), only about 40 stelae were listed. Today, 115 deer stones have been found and almost every survey leads to the discovery of new examples. In 2019, for example, the team uncovered three new menhirs. Some sites are particularly spectacular due to their concentrations of standing (and often aligned) monoliths. In Mongolia, the best-known sites are Ulaan Uushig (Takahama *et al.* 2003, 2006; Kovalev *et al.* 2016), Jargalant (**Fig. 9**) (Turbat *et al.* 2011) and Ulan Tolgoi (Fitzhugh 2003, 2004), which had already attracted the attention of the pioneers of steppe archaeology and led to the first scientific publications (Volkov & Novgorodova 1975; Volkov 1981; Novgorodova 1989; Savinov 1994). The site of Ulaan Uushig is also known for its deer stone with a carved face at the top, a feature of only about ten stelae out of 1500. In the heart of the immense steppe expanses, remote valleys still contain funerary complexes where engraved stelae remain buried in the sand. In 2019, at the source of the Khunnuin Gol valley, the joint Monaco-Mongolia mission used a drone to document a previously unknown necropolis containing more than 30 funerary complexes. On the western confines of the Mongolian plateau, the Altai is also a cross-border region very rich in archaeological remains, and is still being surveyed (Bayarsaikhan 2015; Tishkin 2020).

Fig. 9 – Deer stone stele from the Jargalant site, Arkhangai province, Mongolia. Quartzite, size: 386 x 56 x 35 cm (Photo: J. Magail).

Deer stones are part of a vast group of menhirs left by a mosaic of nomadic tribes from Mongolia to the Ukraine from the 2nd to the 1st millennia BC (Olkhovsky 2005; Tishkin 2013). The stelae in the eastern steppe have been classified into three categories based on the style of their iconography and their geographical distribution (east-west): Mongolian-Transbaikal, Sayan-Altai and Eurasian (**Fig. 10**). The Mongol-Transbaikal type is the most common and warrants the term 'deer stone', as it is distinguished by engravings of hordes of leaping deer (*Cervus elaphus*) (**Figs. 9**, **10a** and **11**). The legs of the deer are folded under their bellies, and their bodies and muzzles are outstretched like a bird in flight. The large antlers of the animals extend along their backs to convey additional movement. The fact that all the deer bear large antlers suggests that they are fully mature males depicted as they appear during the rutting season in early autumn.

When in primary contexts, the Mongolian-Transbaikal type stelae are always embedded in mounds of earth, a few dozen centimetres high, and associated with sites comprising dry-stone structures, with ritual deposits (Magail 2015). The height of these menhirs varies from 1 m to more than 5 m (Ulan Tolgoi site). They stand in the middle of mounds and stone circles that contain, respectively, deposits of horse heads and burnt bone splinters, and they

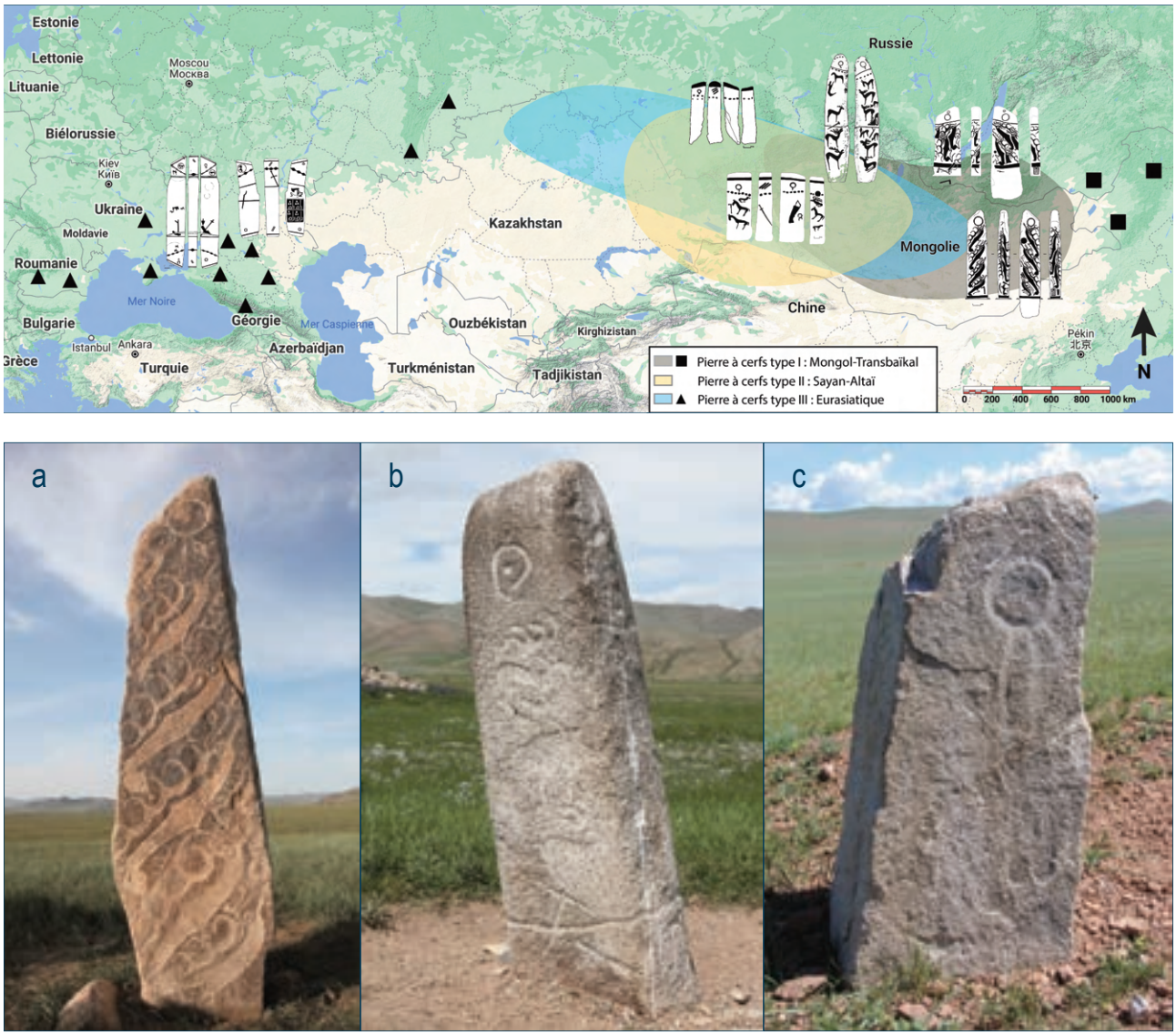

Fig. 10 – Map of distribution types of stelae (After Novgorodova 1989). Examples of the three types of stelae known as 'deer stone': a. Mongolian-Transbaikal type Shivertiin am stele, size: 252 x 28 x 50 cm; b. Sayan-Altai type Doroljiin am stele, size: 121 x 30 x 31 cm; c. Eurasian-type Khavtsalyn am stele, size: 86 x 34 x 35 cm (CAD & photos: J. Magail).

Fig. 11 – Stele from the Khunnu Gol valley: a. Survey of the four faces; b. Reconstruction (Survey and reconstruction by Y. Esin).

often belong to larger funerary complexes called *khirigsuur* (*хиригсуур*) in the Mongolian language (Allard & Erdenebaatar 2005; Broderick *et al.* 2014; Monna *et al.* 2020). The artificial mound, which may cover an area of a few dozen square metres, may be located on the periphery of an individual grave placed under a stone mound, itself surrounded by hundreds of small mounds. The size of the *khirigsuur* vary greatly, from 100 m^2 to several hectares. The two largest examples in Mongolia, measuring 12 and 14 ha respectively, are located in Urt Bulag in the province of Arkhangai (Houle 2010). By identifying the types of structures associated with the stelae, members of the joint Monaco-Mongolia mission uncovered many of the hundred or so stelae in the Upper Tamir Valley (Magail *et al.* 2010; Gantulga *et al.* 2013). Over time, some of the stones have fallen and have been covered by granitic sands.

The Sayan-Altai type stelae in primary context are also found in funerary complexes, but closer to the central burial mound than the Mongol-Transbaikal type stelae installed on their artificial mounds (Tishkin 2020).

About 90% of reused deer stones are found in Early Iron Age (700 BC) slab tombs. They were erected at the four corners of these structures or used in the construction of the sides of the grave along with other slabs set on their sides. Six deer stones were discovered during the excavation of the Tsatsyn Ereg A92 slab tomb (Gantulga *et al.* 2009). Four of these were erected in corners, one had been buried flat above the deceased, and the sixth formed part of the side wall. In 2014, in the same area, the team discovered a further six decorated stelae that had been moved several dozen metres from their primary location in a funerary complex to a set of four slab tombs (Magail 2015). Eight of the 115 menhirs found in Upper Tamir were reused in places of worship built by Turkish populations in the 7th century AD (Magail *et al.* 2010). This reuse has continued until the present day with some 20th century tombstones created from fragments of deer stones. Five such examples have been identified by the joint Monaco-Mongolia mission in modern Upper Tamir cemeteries (Gantulga *et al.* 2015).

In the Republic of Tuva (Russia), the archaeological excavation of the Arjan 2 tumulus uncovered deer stones of the Mongolian-Transbaikal type in Early Iron Age tomb architecture (650 BC) (Chugunov *et al.* 2010). Sayan-Altai type stelae were also sometimes reused; several were found in a Turkish Altai religious enclosure (Tishkin & Shelepova 2014). Engravings of leaping deer are also found on hillside rocks in the same geographical area as stelae and khirigsuur (Novgorodova 1984; Jacobson-Tepfer 2001; Jacobson *et al.* 2001). For example, a rock art site 5 km from Tsatsyn Ereg includes engravings of leaping deer associated with other animal themes, including the ibex (Gantulga *et al.* 2018). Interpretations of the significance of the decorated stelae must take into consideration the use of the image of the deer in all the iconographies of the steppe civilizations. Is this wild animal, which seasonally loses its antlers, a ferryman of souls to the beyond (Magail 2005, 2015)? Understanding the place of the stag in the bestiary and in the founding myths of nomads, hunters, shepherds and warriors will undoubtedly shed light on its megalithic context (Jacobson-Tepfer 2015).

The only anthropological certainty is the strong social coherence that gave rise to the constuction of hundreds of funerary complexes and deer stones using the same technical and religious protocols. Their standardized typology attests to the observance of rigorous rules reproduced over an area of more than a million km^2. The quality of the motifs engraved on materials as hard as granite and quartzite (**Fig. 9**) suggests that engraving techniques were transmitted from one generation to the next, perhaps even taught in workshops. While the decoration and layout of menhirs follow rules, the dry-stone *khirigsuur* structures, some of which extend over several hectares, also exhibit identical layouts despite being hundreds of kilometres apart (Wright 2007, 2014). The distribution of mounds and stone circles around a tumulus suggests a strict ritual, codified by oral tradition, perhaps dedicated to the deceased buried in the centre, who became a supporting spirit of the tribe. Analysis of the archaeological traces of the repetition of rites allows new hypotheses to be formulated regarding the chronology of various cults (Lepetz *et al.* 2019). The systematic deposition of a horse's head under each mound, from Khenti province to 1000 km further west in the Altai, evokes the same sacred gesture (Fitzhugh & Bayarsaikhan 2008, 2009; Makarewicz *et al.* 2018). The practice of uninterrupted nomadism for more than 3000 years explains the astonishing preservation of the remains. This greatly facilitates research on structures and monoliths using the latest methods. A programme of dating the many elements within the Tsatsyn Ereg burial complex, comprising 1023 mounds around the central burial mound, has been started to establish the construction period of the complex (Zazzo *et al.* 2019). Major photo-grammetry campaigns have also been carried out to record the complexes, stelae and iconography (Magail *et al.* 2017; Monna *et al.* 2018, 2020; Rolland *et al.* 2019). Observation of the stele surfaces revealed traces of ochre on deer stones from Arkhangai province (**Fig. 11**) (Esin *et al.* 2018). Research is also in progress to establish chronological relationships between all the successive cultures in the geographical area of deer stones and *khirigsuur* (Taylor *et al.* 2019).

4. The megalithic structures of Tagar aristocratic tombs

During the Iron Age, an aristocracy emerged in southern Siberia (Russia), with some tombs that can be described as megalithic. The valleys of the kings of Arjan and Salbik, located in the republic of Tuva and the republic of Khakassia respectively, are the necropolises with the most impressive kurgans in terms of size. Deer stones were discovered in the Arjan 2 burial mound (Chugunov 2010), but the most gigantic elements can be found in the funerary architecture of the Salbik necropolis. Tomb no. 1, excavated entirely between 1954 and 1956 by a team led by Sergei Kiselev, is one of the largest tombs of the Tagar culture (Marsadolov 2010, 2015). Its megalithic construction is still perfectly visible today thanks to the excavation that removed the whole mound of earth. The peculiarity of the Tagar tombs is their pyramidal shape, originally more than 12 m high, which gradually subsided over 2400 years of natural erosion. The mound is made of sediment but its quadrangular base is bordered by an alignment of slabs lying on their sides, each weighing several tonnes (**Fig. 12**). The base of tomb no. 1 is a 65-m square with an entrance on the east side opening

Fig. 12 – Aerial views of two large aristocratic tombs of the Salbik necropolis: a. Tomb no. 1 whose tumulus was excavated in 1954, size: 65 x 65 m; b. Tomb no. 7, never excavated with its tumulus, size: 55 x 55 m (Photos: F. Monna).

Fig. 13 – Aristocratic tomb at the Safronov site in the south of the Republic of Khakassia (Photo: J. Magail).

onto a path of about 15 m, marked on either side by two large menhirs.

Tagar necropolises with several dozen burials are very numerous in the vast steppe plains of the Khakassia Republic. As the perimeter of each tomb is made up of slabs lying on their sides and stelae, these cemeteries appear as large fields of standing stones (**Fig. 13**). Half of the stelae bear rock engravings that often belong to several protohistoric periods. The distribution of iconography is therefore much less organized than that of the Okuniev stelae and deer stones.

5. Conclusion

The mosaic of High Asian nomadic cultures developed several forms of megalithism from the middle of the 3rd millennium to the end of the 1st millennium BC. It is astonishing that these herding populations, whose way of life was not favourable for construction, nevertheless chose to spend a great deal of energy building monuments. A deer stone quarry, discovered 6 km from Tsatsyn Ereg (Magail 2015), and a slab extraction zone located 12 km from Salbik are evidence of the important logistics linked to the transport of menhirs. The large and ever-increasing number of recorded funerary and ritual structures shows that the organization of nomadic societies has probably been significantly underestimated. The prospects for research are immense.

The similarities between the megalithisms discussed in this article may shed light on the beliefs of these populations. The first is the funerary and ritual context of sites where the aid of the deceased individual was probably invoked through rituals performed on a recurring basis. The hundreds of deposited horse heads, arranged around the Arkhangai mounds and stelae, support this hypothesis. A second common denominator is the predominance of sculptures, engravings and paintings, which contribute to the symbolic success of the monuments. The iconographies of Okuniev menhirs and deer stones are also present in rock art used to mark sacred places which, although different from tombs, were perhaps permeated by or under the protection of the same divinities (spirits, supernatural beings, genies, etc.). Research into traces of paintings is still in its infancy and continued investigation promises future revelations.