

The Zodiac and *Nakṣatras* (?) in Kucha: The Extraordinary Paintings of Kizilgaha Cave 31

Rana BRENTJES, Sonja BRENTJES and Monika ZIN

Abstract: The murals in Cave 31 at Kizilgaha (Kucha region) depict a previously unknown combination of Zodiac signs and associated deities, likely representing the *nakṣatras* (lunar mansions). This integrated astral scheme – comprising 27 figures alongside 12 Brahmin ascetics – is unique to Kucha and as it can be tentatively dated to the 8th–9th century, it possibly makes one of the earliest surviving examples of this iconography. Several features of the cave, including donor representations, are without parallel in Kucha and suggest either a distinct, possibly Mahāyāna or Tantric interpretive framework, or influences from other regions. The material is therefore particularly valuable for comparison with other Central Asian zodiac representations in order to clarify patterns of transmission and local adaptation.

Keywords: Kucha, Kizilgaha, wall paintings, zodiac, *nakṣatras*

Rana BRENTJES, University Hamburg, Hamburg, Germany; Rana_Brentjes@hotmail.com.

 0009-0002-9067-4369

Sonja BRENTJES, retired, Germany; sbrentjes@yahoo.de.  0000-0002-8205-8550

Monika ZIN, Saxon Academy of Sciences and Humanities, Leipzig, Germany; m.zin@t-online.de.

 0000-0002-3539-5773



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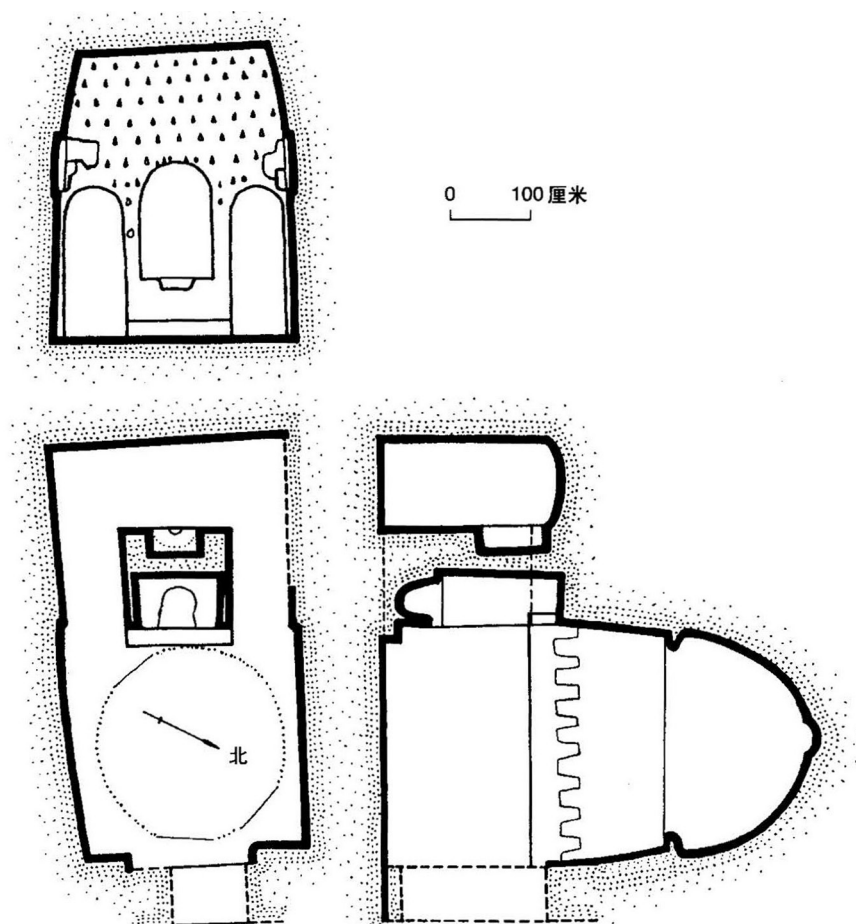
At the monastery complex known as Kizilgaha in the Kucha region on the Northern Silk Road (Xinjiang, People's Republic of China), in Cave 31, hitherto unknown paintings of Zodiac signs and attendant deities, which we believe represent the *nakṣatras* ("lunar mansions"), have been found. The combined representation of the two sets of astral figures is unique to the Kucha region. In this article, we discuss the extant remains of the 27 pictures as well as the 12 Brahmin ascetics, who appear together with the Zodiac signs. The paintings in the cave can be tentatively dated to the 8th or 9th century; as we shall see, their date is important because some of the elements appear to be the oldest surviving representations of the theme discussed here, not only in this locale.

Moreover, several other elements of the paintings, including the representation of donors, in Kizilgaha 31 are unique and cannot be explained through comparisons with other depictions in Kucha and may need a different interpretive paradigm, perhaps one rooted in Mahāyāna or even Tantric Buddhism, or they should be treated as adopted from another region. A detailed description of the paintings is necessary as – to our knowledge – the only two reports featuring them (both in Chinese), by Jia Yingyi 贾应逸 from 1991 and in the *Kezi'ergaha shiku neirong zonglu* (2009: 73–74), do not draw the reader's attention to all the details.

Kizilgaha 31: architecture, murals and (now lost) sculptures

Kizilgaha Cave 31 is a central pillar cave with a square main chamber and rear corridors that form a circumambulation around the now lost central Buddha figure originally in the cult niche (**Drawing 1**).¹ The antechamber in the cave's front part has not survived. JIA (1991: 92) and the *Kezi'ergaha shiku neirong zonglu* state that the cave was remodelled, and the rear corridors were added to the original square cave. This is highly possible in view of the fact that the main chamber is not covered with a barrel vault – as is common for central pillar caves – but with a dome (?; see below, fn. 2). It should be noted, however, that there are other caves with domes and rear corridors, such as the famous "Cave with the Ring-Bearing Doves" (Kizil 123), with a sophisticated set of depictions giving no reason to conclude that it was remodelled at a later date. Neither Kizil 123 nor Kizilgaha 31 contain a depiction of the Buddha's *parinirvāṇa*, typically situated in rear corridors of multiple central pillar caves, and both contain the representations of Indra's visit to the Buddha meditating in a cave, on the main wall opposite the entrance. While in the Cave with the Ring-Bearing Doves (ZIN 2023a: 369), around a statue of the Buddha (in the cult niche), the murals display Indra visiting the Buddha together with his *vīṇā* player Pañcaśikha, and the scene is framed with mountain scenery populated by deities. The main wall in Kizilgaha 31 was covered with three-dimensional models of mountain scenery indicating the event. Nothing of this decoration has survived

¹ From *Kezi'ergaha shiku neirong zonglu* (2009: 73).



Drawing 1. Kizilgaha, Cave 31, plan and sections (c) Kucha Research Institute; Saxon Academy of Sciences and Humanities, Information System of the Project “Buddhist Murals of Kucha on the Northern Silk Road”, <https://kucha.saw-leipzig.de/cave/363>. The CC BY-NC-ND 4.0 licence does not apply to this picture.

today, but the holes in which wooden “mountains” were once installed – and which have survived in other caves (see, for instance, Kizil 13, 171 and 196) – confirm this beyond any doubt.

The style of the murals in Kizilgaha 31 is somewhat perfunctory, though the execution does reveal a degree of proficiency, indicated in the rendering of details through simple lines and anatomically correct depictions of the human body. The pictorial programme of the cave differs significantly from those “typical” of the so-called Second Indo-Iranian Style, which suggests a rather late date. However, the murals do not show any characteristics of the Uyghur

style, often visible in Kuchean paintings from the second half of the 9th century. Therefore, dating the Kizilgaha paintings to the 8th or first half of the 9th century is plausible.

Such conclusions were also reached by JIA (1991: 95–96), who considers the cave and the neighbouring ones to have been created during the second Tibetan occupation of Kucha (787–850). As we shall see, some of the female deities depicted on the ceiling of the rear corridor do indeed bear certain similarities to Tibetan *dākinīs*. It should be noted, however, that Jia’s arguments, which are intended to point to direct similarities with Tibet, are not tenable: none of the figures depicted in the narrative paintings are wearing boots, and the donors (see **Fig. 12**, **Drawing 21** below) cannot possibly be explained as Tibetan lay people, as their shaven heads of the monastics are clearly visible. Nevertheless, Ms Jia’s observation that the paintings show certain similarities with Tibet, i.e., perhaps reflecting another Buddhist tradition, is very valuable.

Sculptures must have played an important part in the decoration of Kizilgaha 31, but today only empty niches and holes remain where they were once mounted. For example, there are rows of mounting holes on both side walls of the main chamber. The focal cult sculpture was installed in the bottom of the main niche, indicated by a deep depression. Despite the elaboration of the main wall as a background suitable for the narrative of the Buddha meditating in the cave, the high niche suggests rather the presence of a standing Buddha or perhaps a seated figure on a high pedestal. There is also a niche for a statue in the rear corridor, in the centre of the inner wall, i.e., on the back wall of the “central pillar”.

Regarding the state of the murals in Kizilgaha 31, only a fraction has been preserved, and, in several places, it can be seen that parts had been deliberately cut out. On the surfaces of the preserved paintings, series of scored lines comprising squares can be observed in several places, as if they had been prepared to be cut out. Among the painting fragments in the Musée Guimet, where several removed from the Kizilgaha caves by the French expedition are housed, no fragment appears to originate from Cave 31.

Murals in the main chamber

Not much remains of the murals in the main chamber, but in the remnants on the left wall underneath the sculpture mounting holes, one can recognise the outline of the Buddha’s nimbus and the faces of some monks next to it, which suggests that the walls were once covered with sermon scenes. Above the niches for mounting sculptures, there is something unusual: on the straight wall below the ceiling are depictions of lozenges with *jātaka* scenes, which are usually placed in barrel vaults. Easily recognisable is the typical illustration of the Viśvantara story.

The central part of the ceiling is completely destroyed, but the paintings on the squinches (or perhaps they are the outermost stepped zones of the lantern ceiling?)² are partially preserved: on a light green background, which suggests water, given the presence of lotus flowers and ducks, there are depictions of Garuḍa (**Drawing 2**; see ZIN 2023a: 225). The raptor god is shown frontally and with outspread wings; he probably had two heads turned to either side, as there are snakes surrounded by clouds on either side of him, which he must have held in his two beaks.³



Drawing 2. Kizilgaha, Cave 31, main chamber, corner of the ceiling, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.

Murals in the side corridors

The pictorial programme of the side corridors of the cave can be determined, although murals only on two walls have survived: the outer wall in the left corridor and the inner wall in the right corridor. These two surfaces contain large multi-scene depictions of the *jātakas*, the narrative of Viśvantara in the left corridor (**Fig. 1**, **Drawing 3**) and of Vyāghrī in the right (**Drawing 4**). We can assume with a fair degree of certainty that the walls of the corridors that are today destroyed also depicted *jātakas*. Such large-scale representations of *jātakas* on the side walls of corridors appear to be a later development in Kuchean

² The description in the *Kezi'ergaha shiku neirong zonglu* assumes the dome as proven; it should be noted, however, that the central part of the ceiling is completely destroyed and the lines of the corner bays from the side of the centre of the ceiling are not arched but straight; therefore, perhaps the cave was not covered with a dome but a corbelled ceiling (Laternendecke).

³ There are many depictions of Garuḍa on the ceilings of Kuchean shrines, including a variety of types with one, two and even three heads, cf. ZIN (2023a: 112, 177–180, 223–225).

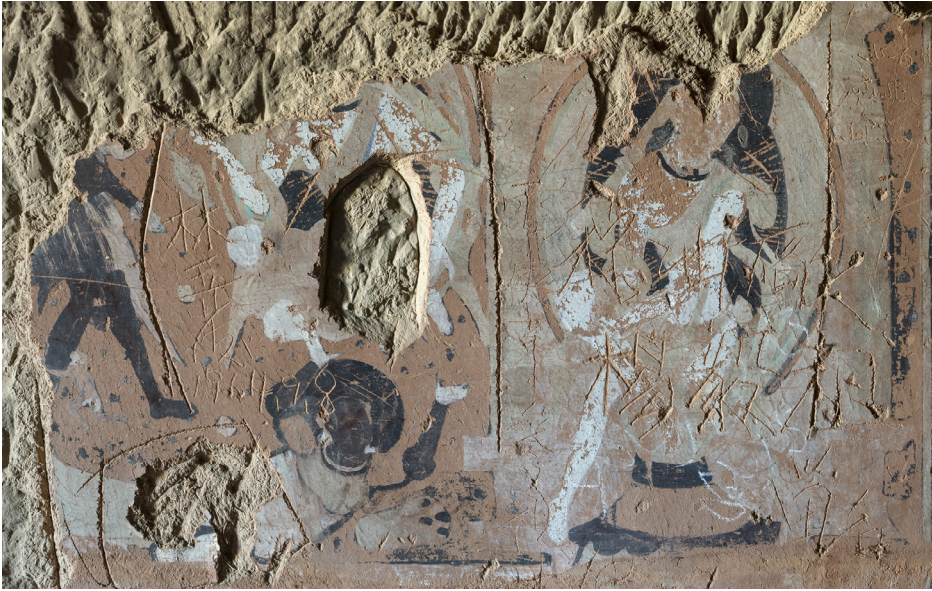


Fig. 1. Kizilgaha, Cave 31, left corridor, outer wall, *in situ*; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.



Drawing 3. Kizilgaha, Cave 31, left corridor, outer wall, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.



Drawing 4. Kizilgaha, Cave 31, right corridor, inner wall, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.

painting programmes. We encounter such depictions in several caves: Kizilgaha 13, 14, 16, 30; in Simsim 1, and Tograk-eken 15. In Kizil 198, depictions of the large multi-scene *jātakas* are located on the barrel vaults of side corridors.⁴

Large-scale illustrations of the Vyāghrī narrative appear on the side walls in the corridors of Kizilgaha 14 and 16, as well as in Tograk-eken 15 and on the barrel vault of Kizil 198. Viśvantara is depicted in Kizilgaha 16 and Kizil 198, whereby the painting in Kizilgaha 16 contains an element also shown in the left corridor in Kizilgaha 31 (**Drawing 3**): a diminutive monkey tries to prevent a Brahmin from leading away the children of Viśvantara. The *jātaka* paintings on the walls of the corridors thus have counterparts in other caves in the Kucha region, but the painting of Viśvantara in Kizilgaha 31 contains an element not seen anywhere else: Viśvantara is surrounded by a mandorla. This is extremely surprising, as the body nimbus in Kucha is an attribute reserved for the fully enlightened Buddhas and the “great Bodhisatvas” (i.e., Maitreya and Siddhārtha before enlightenment). As pointed out elsewhere (e.g. ZIN 2023b), among the *jātaka* Bodhisatvas in the lozenges of the vaults, it is exclusively Saṅjāli (also Śaṅkhācārya and Jājvalin, cf. ZIN 2025a: 31–33), the ascetic in whose long hair the birds nested and who remained motionless until the chicks were fledged, who is shown with a body nimbus. Since the iconography of the Brahmin ascetic encircled by a body nimbus is highly reminiscent of Avalokiteśvara, it may have been an allusion to this Mahāyāna saint. Viśvantara in Kizilgaha 31 is the other instance of a *jātaka* Bodhisatva surrounded by a body nimbus. In this image

⁴ The painting is illustrated in *Mural Paintings in Xinjiang of China* (2009, vol. 3: 222, 224–225, pls 199, 201–202).

too, the personage is represented as a Brahmin ascetic, thus possibly again alluding to Avalokiteśvara, who symbolises a boundless willingness towards sacrifice. As we shall see, the iconography of the paintings in Kizilgaha 31 is exceptional in several other respects and the allusions to Mahāyāna seem likely.

Murals on the rear corridor walls

As already mentioned, the paintings in the rear corridor do not show images from the *parinirvāṇa* cycle. The surviving fragments indicate that at least three rows of scenes were present on the walls. A well-preserved fragment on the rear wall (**Drawing 5**)⁵ displays simplified but clearly legible illustrations of the descent of the Buddha from the Trāyastriṃśa heaven: King Udayana kneels to show the Buddha his image, which he had commissioned during the Buddha's absence from earth. Further to the right, the Śrāvastī miracle was once depicted: Vajrapāṇi attacking opponents of the Buddha is still visible.



Drawing 5. Kizilgaha, Cave 31, rear aisle, outer wall, *in situ*; drawing by Monika Zin.
This picture is used under CC BY 4.0.

The two scenes presented on the rear wall are simplified and abbreviated (the two episodes were otherwise not shown in the rows of scenes but usually placed on exposed surfaces in the lunettes or on the sides of the door),⁶ but there is no question that they depict episodes from the life of the Buddha as would

⁵ The painting is illustrated in *Mural Paintings in Xinjiang of China* (2009, vol. 5: 201, pl. 186).

⁶ The Śrāvastī miracle is depicted on the main wall in Kizil 80 and 97; the descent of the Buddha from the Trāyastriṃśa in the lunette above the entrance in Simsim 48; and several times on a side of the door, like in Kizil 184 and 189, and Kuntura 23.

have been familiar to Kuchean audiences, even when their placement is unusual and the iconography simplified.

Murals on the rear corridor ceiling

This statement does not apply to the painting on the flat ceiling of the rear corridor, of which both the composition and the depicted details have no counterparts in the Kuchean artistic repertoire. The explanation in the *Kezi'ergaha shiku neirong zonglu*, that these are celestial musicians and depictions of the *jātakas*, can be safely rejected. This interpretation probably stemmed from the depiction of a horseman shooting with a bow, recalling the iconography of the *Śyāmajātaka* (see below no. 20 in **Drawing 6**).

The mural (**Fig. 2,⁷ Drawing 6**; the inserted numerals, in normal font and in italics, correspond to the numbering in the description below) is of a figurative character and consists of three registers, the lateral rows show figures, mostly seated, on colour backgrounds spotted with tiny rosettes, each row is to be viewed from the side of the adjacent wall; the central, narrower register displays a white background that presents images placed one above the other, each with a head on the side of the right corridor. The figures in the middle register, framed by upper and lower bands, are smaller than the figures in the side registers, which is apparently a result of the fact that this register had to represent an entire row of 12 elements.

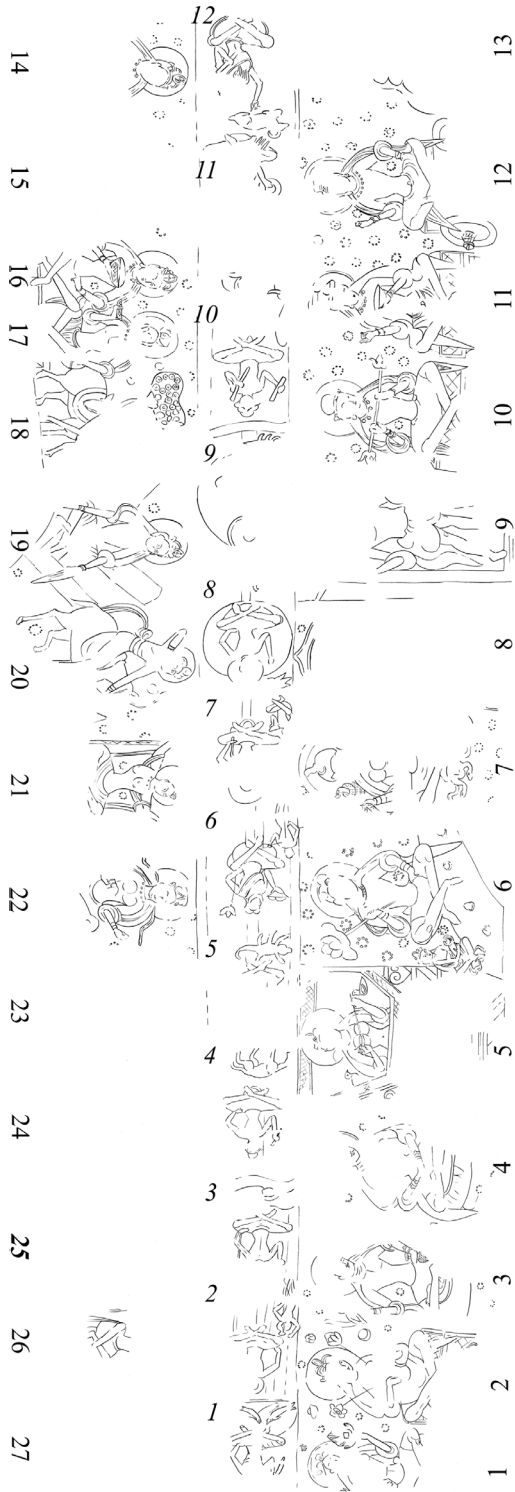
Ceiling, lateral registers

While the central register can be explained with certainty – a row of Zodiac signs (see below) – the interpretation of the individual deities in the lateral registers cannot be interpreted on the basis of the current state of knowledge. However, their number – 27 – and arrangement on the sides of the Zodiac signs encourage us to associate them with the 27 “lunar mansions”, the *nakṣatras*.

According to Indian astral sciences, the orbit was divided into 27 (or 28) *nakṣatras*, visualising the movement of the moon against a background of stars (see FALK 2018, with references to earlier research). As already recognised by Sir Aurel Stein and Albert Grünwedel, depictions of the *nakṣatras* in this region were found in paintings in Sengim 6 “Constellations Cave”,⁸ Toyok 6 and Shorchuk 5b. Further pertinent evidence comes from Uyghur and Chinese manuscripts found in the Turfan region. RUSSELL-SMITH (2022: 313–314) emphasises that the number of stars differs significantly between the Chinese

⁷ The painting is illustrated in *Mural Paintings in Xinjiang of China* (2009, vol. 5: 202–207, pls 187–191).

⁸ For detailed descriptions of the cave, compilation of available material and reconstruction of the painting, see DREYER (2022).



Drawing 6. Kizilgaha, Cave 31, rear aisle, ceiling, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.



Fig. 2. Kizilgaha 31, rear aisle, ceiling, *in situ*; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.

and the Indian systems of the *nakṣatras*, which can lead to serious challenges when dating Kuchean paintings. It seems that this statement can be applied not only to the number of stars, which play no role in Kizilgaha 31, but might hold true also for the character of the deities in the lateral registers. That the knowledge of *nakṣatras* was familiar to the people of Kucha is confirmed by several texts in Sanskrit and local Tocharian B discovered in the area.

A Sanskrit manuscript found at Duldur Akur⁹ lists various scholars and titles of their works (like Ātreya, author of the *Āyurveda*; or Brahmā, author of the *Nāṭyaśāstra*) and mentions also a star manual (*nakṣatraśāstra*) and its author by the name of Gārga (ZIN and SCHLINGLOFF 2022: 45), which shows that the tradition known in Kucha was connected with India.

More interesting is a local textual source from Subashi, written in Tocharian B.¹⁰ We quote below the translation of the surviving fragments, although they do not provide any information for interpreting the paintings of Kizilgaha 31. However, they do show that knowledge of the lunar mansions was familiar and used in the area in magic rituals. The fact that the months of the calendar are not specified seems to suggest that it was known which lunar mansions fell in which month.

PK AS 8A

- b4** The practice of the magic of that one [= the Brahmadanḍa] [is] somehow the following:
- b4+** in the lunar mansion Kṛttikā [= the Pleiades], a horse hoof [has to be] finely ground [and] to be dissolved with ass blood.
- b5** In whosever name one makes an oblation in the fire, that one before long [will be] „lost” [= Skt. naṣṭaḥ].
- b5** In the lunar mansion Rohiṇī [if] one intends to make subject the king or [his] ministers, one should remain a day [and] a night without food [= Skt. anāhāraḥ],
- b5** but nevertheless a grain of *Clerodendron siphonantus* [is] to be put [lit. made] as an oblation into the fire,
- b5** [and] these ones will become subject.
- b5** 2.
- b5+** In [the lunar mansion] Mṛgaśīras [if] one intends to bring a man under one’s control, as much barley in his name [is] to be put [lit. made] as an oblation into the fire, [and] he will become subject.
- b6** 3.

⁹ Paris, Bibliothèque Nationale, Ms. Pelliot Skt. Rouge 5.1–3.

¹⁰ Paris, Bibliothèque Nationale, Mss. PK AS 8A and 8B; Pelliot Koutchéen Ancienne Série 8A; M 1. We would like to thank Mrs Olga Choi-Kienzler for bringing this manuscript to our attention.

- b6** In [the lunar mansion] Ārdrā [if] one intends to bring a woman under one's control, to make [her] nipples excited, a hair (?) of [her] domain (?) [is] to be put [lit. made] into the fire as an oblation,
- b6** [and] she will become subject.
- b6+** In [the lunar mansion] Punarvasu [if] one intends to bring a man or a woman under one's control, a moroška flower [is] to be put [lit. made] into the fire as an oblation,
- b7** [and] these ones will be subject.
- b7** In the lunar mansion Puṣya [if] one intends to bring whomever under one's control, a sumo [flower?] [is] to be put [lit. made] into the fire as an oblation
- b7+** [and] this one will become subject.
- b8** In [the lunar mansion] Aśleṣa, a foot of a pigeon, Dalbergia sisu [and] oil, [all that is] to be put [lit. made] in the fire as an oblation.
- b8** In whose name one does [it], this one will not live long.
- b8** 7.
- b8** In [the lunar mansion] Maghā, head hair of an enemy [and] from the very same one a (nail) of his foot [is] to be put into the fire as an oblation.
- b8+** In whose name one makes [the oblation], this one has equally trouble for the rest of his life.
- b9** 8.
- b9** In [the lunar mansion] Phalguṇī, for the sake of selling the bought [goods] bdellium [is] to be put [lit. made] into the fire as an oblation,
- b9** [and] the bought [goods] are sold.
- b9** In exactly the same way [it] should be done in [the lunar mansion] Uttaraphalguṇī.

PK AS 8B

- a1** A... flower [is] to be put [lit. made] into the fire as an oblation,
- a1** [and] the bought [goods] are (so)ld.
- a1** 10.
- a1** In [the lunar mansion] Hastā [if] one intends to make subject living beings, any kind of cereal, any kind of..., (any kind of flo)wer [is] to be put [lit. made] into the fire as an oblation,
- a1** [and] the living beings be(come) subject.
- a1** (11).
- a1+** In [the lunar mansion] Svāti (who) should be careful with wine, a piece of the madana fruit [= *Randia dumetorum*] [is] to be mashed in the door,
- a2** [and] the wine will disappear.
- a2** 13.

- a2** In [the lunar mansion] Suśākhā a piece [thorn?] of khadira [wood] [= Acacia catechu] [is] to be crushed in the door,
- a2** in whose name one does [that], this one will be destroyed.
- a2** [If] one pulls [it] out, [it means] release [= Skt. mokṣaḥ].
- a2** 14.
- a2+** In [the lunar mansion] Anurādhā powder of human bones [is] to be made
- a3** and then a puppet [is] to be fashioned.
- a3** Thereupon the head of this puppet should be cut off with a sharp knife.
- a3** In whose name one does [it], this one before long will [lit. goes to] perish.
- a3** 15.
- a3+** In [the lunar mansion] Pūrvāṣādhā [if] one dis(plays?) gall from the..., one has to cast [lit. make] a spell seven times.
- a4** In whose names one strews [= the gall] in the door, in this house the people become [like] the Licchavi [people].
- a4** 17.
- a4** In [the lunar mansion] Śrāvana a splitter of human bones [is] to be made;
- a4** it has to be crushed on the passage of the enemy,
- a4** [and] his strength will recede.
- a4+** But if one pulls [it] out, [it means] release [= Skt. mokṣaḥ].
- a5** 21.
- a5** In [the lunar mansion] Śatabhiṣā, in whose name one puts [lit. makes] grain of Michelia champaka [= magnolia] in the fire as an oblation, this one will never be able to do any evil to anyone.
- a5** 23.
- a5+** In [the lunar mansion] Pūrvabhādrapadā, [aiming] at the perishing of an enemy one should grind a flower from the garland of a dead one.
- a6** And then a puppet has to be fashioned,
- a6** one should cast a spell 108 times [over it]
- a6** and [it] should definitely be thrown into the fire.
- a6** In whose name one does [it], before the end of one week he perishes [lit. goes to perishing].
- a6** 24.
- a6+** In [the lunar mansion] Aśvinī, oil [and] morośka [plants] [are] to be put [lit. made] into the fire as an oblation.
- a7** In whose name one does [it], he will keep his life with pleasure.
- a7** 27.
- a7** In the Brahmadatakalpa [ritual] the anterior section is finished.
- b4+** This invocation of Māladaṇḍī [has] to be spoken seven times from the beginning.

While the interpretation of the *nakṣatras* at Sengim or Shorchuk (see DREYER 2022; RUSSELL-SMITH 2022) is reinforced by the accompanying schematic images of the constellations or inscriptions, no such schemes were implemented in Kizilgaha 31. It is evident that an attempt was made here to develop the iconography in order to make the presented deities recognisable. Several elements, well-established in Kuchean iconography, were employed, which the observer could certainly understand with ease. In general, however, the series of deities with depictions of female ones reminiscent of *ḍākinīs* is categorically unique in Kucha – equally unique is the depiction of nuns in this cave (see discussion below, **Fig. 12** and **Drawing 21**).

In this study an attempt is made to explain the individual deities in the registers framing the Zodiac signs (**Drawing 6**), as a preliminary discussion to invite the participation of fellow experts. Some of the figures should be understood as protective deities, as one of the images suggests (see below, no. 6). In front of the deity is a diminutive figure: a woman with a newborn infant in her arms, which might indicate her petitioning the deity for protection for her child.

The deities are depicted alternately with white and black complexions, although it should be noted that the present black is possibly a result of oxidation and that the original colour could have been red or containing a red pigment. All the preserved deities, without exception, are characterised by a head nimbus; they are wearing only a scanty loincloth and a scarf behind their backs. Jewellery, simple bracelets and neck straps are visible in several cases, as well as headdresses with a single disc in the front.

Register adjoining the inner wall of the rear corridor, left part, on a blue background (six deities):

1. The first deity is a seated dark-skinned figure whose bare upper body shows that this is a female. In her left hand, the deity carries a jewel encircled by rays on a very thin stick. The attribute held in the right hand is not preserved.
2. The female (?) deity appears to differ from the previous one only in skin colour, here white. The deity sits on a cube-shaped throne and holds a white lotus across the right shoulder.
3. The gender of this dark-skinned deity is not recognisable. The figure sits on a lotus flower and holds a bottle in the left hand and an object (a bird?) in the right.
4. A white-skinned deity of unknown gender is sitting on a lotus flower with both hands folded on the lap in an attitude of meditation.



Fig. 3. Kizilgaha, Cave 31, rear corridor, ceiling, *in situ*, detail, next to the inner wall; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.

5. A female deity with grey skin (**Fig. 3**) is holding an arrow horizontally with both hands. The figure is seated inside a fortress with characteristic white defence walls covered with ornaments (see below **Drawing 7**). The inside of the fortress, however, is to be imagined as filled with water, evinced by the two ducks swimming in it.
6. Like all the deities described so far, this one is also facing slightly to the (viewer's) right. This is a male deity with a large lotus flower across the right shoulder (**Fig. 3**), sitting on a riverbank. On the lower left is a small female figure without a nimbus holding an infant in her arms.

Register adjoining the inner wall of the rear corridor, right part, on a red background (seven deities):

7. The beginning of the second half of the register is indicated by the fact that the first figure is facing (the viewer's) left. This is a female deity with dark skin (**Fig. 4**). Her face is destroyed but the surviving pointed right ear allows us to recognise her demonic character. The deity sits above several white snakes and holds a white spotted snake in her right hand. The headdress is painted in light green, with a tip that was apparently also meant to represent a snake.



Fig. 4. Kizilgaha, Cave 31, rear corridor, ceiling, *in situ*, detail, next to the inner wall; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.

8. The surface is destroyed, only an architectural arch on the upper edge indicates that a (standing?) figure here was shown inside a building.
9. A dark-skinned male figure, oriented to the (viewer's) right, stands in a frame (in a door?). The head and possible attributes held in upraised hands are destroyed.
10. A white-skinned male deity is seated on a cube-shaped throne, facing slightly to (the viewer's) right. The headdress contains a spherical, white object, quite possibly a skull. The deity holds a shaft horizontally in front of the chest, which terminates at both ends with forms reminiscent of a trident (*triśūla*, see below **Drawing 13**).
11. A dark-skinned deity is seated on a cube-shaped throne; the gender is not recognisable due to the bowl held in front of the chest. The right hand is raised; thumb and index finger hold together. It is not clear whether the hand is holding a small flower (a rosette above) or whether the gesture indicates a conversation with the figure further to the right.
12. A white-skinned male figure with a raised right hand signalling conversation sits on a vehicle with wheels on the sides (see below **Drawings 8 and 9**).
13. Only small parts of the arm and knee of a dark-skinned deity are recognisable, as well as part of a green shawl and a cube-shaped throne.



Fig. 5. Kizilgaha, Cave 31, rear corridor, ceiling, *in situ*, detail, next to the outer wall; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.

Register adjoining the outer wall of the rear corridor, left part, on a green background (seven deities and a scene with two animals under a tree):

14. Only the head of a dark-skinned figure turned slightly to the (viewer's) right is preserved.
15. Destroyed.
16. A dark-skinned male (?) deity holds a bowl in front of his chest, slightly facing the figure further to the right.
17. A white-skinned male with a bowl in front of his chest. This and the previous figure appear to be seated on a shared cube-shaped throne.
18. Two animals stand under a tree: the one on the back is a white saddled horse facing right, the one in front is perhaps a black cow, or a deer, facing left.
19. A white-skinned male (?) deity sits above white, rather broad intersecting strips (**Fig. 5**). The figure holds both outstretched arms downwards. From the preserved left hand, a stream is coming, apparently of water.
20. A dark-skinned horseman aims his bow downwards (**Fig. 5**); neither the target nor the bow itself are preserved. A white object on the right might perhaps be part of the white strips from the previous image.
21. A thin, brown object rises vertically in front of the next deity, perhaps meant to be a right-hand column of a pavilion roof which has not survived. The white-skinned deity sitting inside is female. The deity is looking in the direction of the person further to the right while holding her arms outstretched upwards; the hands and the objects she may have been holding are not preserved.

Register adjoining the outer wall of the rear corridor, right part, on a red background (six deities; only the first and the fifth are partially preserved):

22. A female, dark-skinned deity (**Fig. 6**) sits with her face turned slightly towards a now missing figure on the right. She holds both hands raised in front of her breast, seemingly holding no object. Behind her back is a white bow positioned horizontally.
23. Destroyed.
24. Destroyed.
25. Destroyed.
26. Only the legs and abdomen of the dark-skinned seated figure are preserved.
27. Destroyed.



Fig. 6. Kizilgaha, Cave 31, rear corridor, ceiling, *in situ*, detail, next to the outer wall; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.

As we have seen, the deities in the lateral registers on the ceiling, flanking the middle white register with Zodiac signs (for further discussion see below), are not completely preserved, but their order can be reconstructed to some extent. Due to the different colours of the background, the registers are divided into halves of approximately equal length. The number of deities in the halves varies, possibly to reach the odd total of 27. It is important to note that no females as

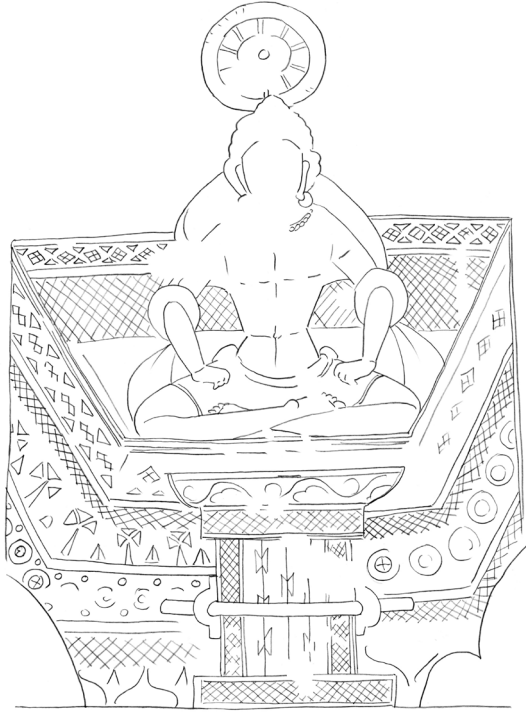
described above are shown elsewhere in Kucha, as women are never depicted so scantily clad. Although sometimes, reflecting Indian iconography, women in the Buddha legend are shown with their breasts bare, they wear a great deal of jewellery or their legs are covered with cloth: minimal fabric wraps, which do not even cover the knees, are not shown as female clothing in Kucha and seem to be significant here. Especially deity no. 7 – a black-skinned female (see **Fig. 4**) sitting on snakes and carrying a snake – appears to be reminiscent of a Tantric terrible *dākinī*. The sparse clothing of the female deities in the paintings might perhaps be an allusion to their status as *yoginīs*.

However, given the uniqueness of the female deities in the depiction, it can be also stated that the painters drew on a number of iconographic details familiar to the Kuchean audience. Some of the figures are seated on cube-shaped thrones, others on lotus flowers (nos. 2 and 3; which in other representations is reserved only for Buddhas or Bodhisattvas); one (no. 6) on the riverbank; some – namely those on the sides of the “central” deities (nos. 6 and 7) opposite the wall niche – in an architectural setting (nos. 5, 8, 9), whereby the motif of the fortified city (no. 5, **Fig. 3**) is used quite often in the Kuchean paintings (cf. KONCZAK-NAGEL 2020: 60–66) (**Drawing 7**).¹¹ The seat of deity no. 12 is certainly to be understood as a vehicle. Among the paintings in Kucha, Sūrya and Candra (see below **Drawing 15**), the Buddha (**Drawing 8**)¹² and the monks on their way to the *nirvāṇa* city (**Drawing 9**)¹³ are depicted on a similar cart. Among the attributes of the deities appears a shining jewel (no. 1), which is also shown elsewhere in the paintings (**Drawing 10**); a bottle (no. 3) (**Drawing 11**; cf. ZIN 2023a: 234); and lotus blossoms (nos. 2, 6) are often repeated in the murals; while drinking bowls (nos. 11, 16, 17) do not occur frequently (cf. Zin 2023: 255, 257–258) (**Drawing 12**). A trident on both ends of a shaft (no. 10, one end has been erased) was possibly depicted in the hands of a multi-armed demon (**Drawing 13**; cf. ZIN 2023a: 256). Other attributes, however, such as an arrow held in front of the chest (no. 5); snakes (no. 7); horizontally positioned bow behind the back of a person (no. 22, **Fig. 6**); water (?) emerging from the hands (no. 19, **Fig. 5**); as well as the white strips behind this figure, are not to be found elsewhere in Kucha, according to all accounts. Although some attributes appear in the other paintings, the sequence of the 27 deities, with several goddesses following the iconography of *yoginīs* among them, makes the mural quite unique in Kucha, which is further emphasised by the depictions in the white central register.

¹¹ The painting represents the narrative of Maitrakanyaka.

¹² The Buddha sitting on such a vehicle is also depicted in Kumtura, Cave 63, main chamber, left side of the barrel vault, *in situ*; illustrated in *Mural Paintings in Xinjiang of China* (2009, vol. 4: 79, pl. 76).

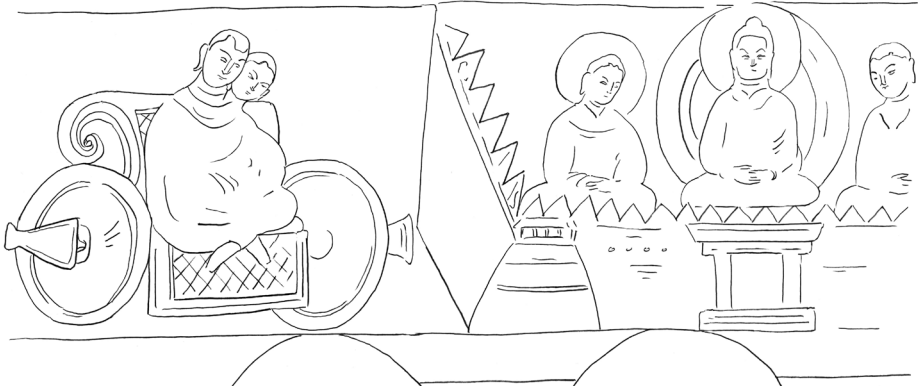
¹³ Two heads of the monk indicate the state of meditation in which the monk can multiply his body; similar depictions appear also in median strips of Kumtura Caves 28 and 29; cf. KONCZAK-NAGEL (2020: 49–55).



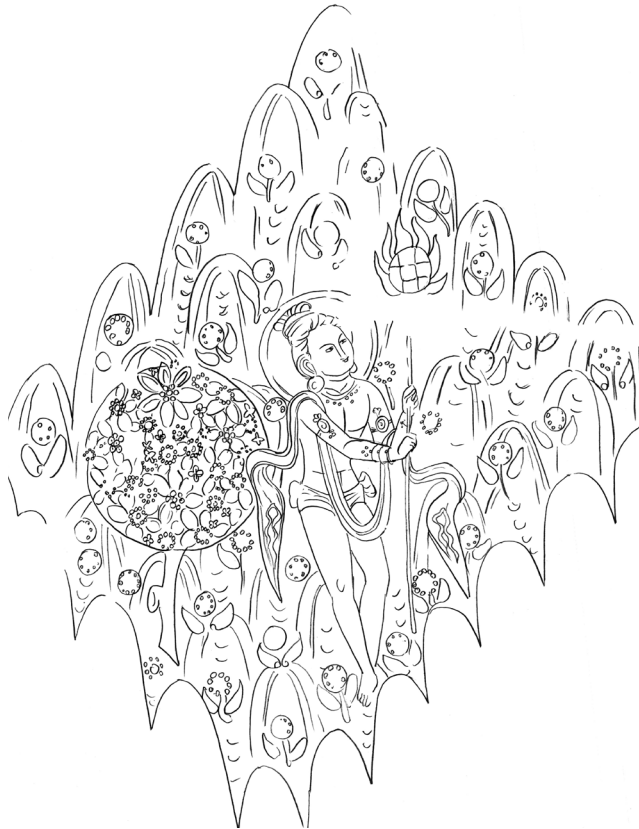
Drawing 7. Simsim, Cave 48, main chamber, barrel vault, right side, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.



Drawing 8. Kizil, Cave 175, main chamber, barrel vault, right side, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.



Drawing 9. Kumtura, Cave 50, main chamber, median strip of the barrel vault, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.



Drawing 10. Kizil, Cave 114, main chamber, barrel vault, right side, partially *in situ*; reconstructed drawing, together with a fragment housed in the Museum für Asiatische Kunst, Berlin, no. III 9131 by Monika Zin. This picture is used under CC BY 4.0.



Drawing 11. Kizil, Cave 123, main chamber, part of the paintings inside the dome; Museum für Asiatische Kunst, Berlin, no. III 9063; drawing by Monika Zin. This picture is used under CC BY 4.0.

Before we move on to the tentative explanation of the deities, it is perhaps pertinent to remind the reader of the uniqueness of the Kuchean milieu (ZIN 2023a: 528), where artists occasionally took Sanskrit designations literally and depicted them accordingly. For example, the *gandharva* Pañcaśikha (lit. “five tops”) is depicted with five tufts of hair, and the *kumbhakarṇa* demons (lit. “pot-eared”) are shown with pots instead of ears. We may be dealing with comparable phenomena in the case of the mural on the ceiling of Kizilgaha 31.

The assumption that the 27 deities on the sides of the Zodiac in Kizilgaha 31 do indeed represent the *nakṣatras* cannot be entirely proven here, but a comparison with designations of *nakṣatras* allows us to draw some parallels.¹⁴

¹⁴ *Taittirīya-Saṃhitā* 4.4.10.1–3; *Sūrya-Siddhānta* (BURGESS 1935: 205); for explanations by Burgess, including philological aspects, see *Sūrya-Siddhānta* (BURGESS 1935: 211–230).



Drawing 12. Kizil, Cave 135, main chamber, part of the paintings inside the dome, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.



Drawing 13. Kizil, Cave 175, main chamber, right side wall, socle; Museum für Asiatische Kunst, Berlin, no. III 8871; drawing by Monika Zin. This picture is used under CC BY 4.0.

The female deity no. 1 holding a jewel could correspond to the 18th *nakṣatra*, Jyeṣṭhā, whose symbol is described as a circular amulet.¹⁵ The deity no. 3 sitting on the lotus could correspond to the 17th *nakṣatra*, Anurādhā, whose symbol is

¹⁵ There are different orderings of the *nakṣatras* which result, for instance, in the case of Revatī in two significantly different numbers, namely 27 and 5. We follow here the list given by RAIKAR and PRESTON (2025).

the lotus flower. The goddess no. 5, shown in a citadel filled with water, could correspond to the 27th *nakṣatra*, Revatī, whose symbol is either one or two fish. The woman with the infant beside the male deity no. 6 can perhaps be associated with the 8th *nakṣatra*, Puṣya, because the name signifies “the one who nourishes” as expressed by its symbol, a cow’s udder. The black-skinned female with snakes, no. 7, can be associated with Āśleṣā, the 9th *nakṣatra*, although Āśleṣā is not of a demonic nature, which seems to be strongly implied in the painting. Deity no. 9, shown surrounded by architecture, may possibly be associated with the 16th *nakṣatra* Viśākhā, whose symbol is a triumphal archway or a pair of scales. Deity no. 12, shown in a chariot, may perhaps represent the 4th *nakṣatra*, Rohiṇī, who is symbolised by a chariot or cart. Even if the current state of preservation of deity no. 18 suggests that one of the animals depicted there is more likely a cow, or a deer, it could refer the



Drawing 14. Kizil, Cave 114, main chamber, barrel vault, right side, Museum für Asiatische Kunst, Berlin, no. III 9103; drawing by Monika Zin. This picture is used under CC BY 4.0.

1st *nakṣatra* *Aśvinī*, who is represented by twin horses. Deity no. 19, a male above the intersecting strips, may possibly be associated with the 3rd *nakṣatra* *Kṛttikā*, symbolised by a knife or more generally a sharp blade. Deity no. 20, the horseman with the bow, can be associated with the 7th *nakṣatra* *Punarvasu*, whose symbol is a bow and quiver. As we can see, our tentative identification of the deities with the *nakṣatras* does not correspond with the sequences given, for instance, in the *Taittirīya-Saṃhitā*, the *Sūrya-Siddhānta*, or the *Bṛhajjātaka* of Varāhamihira.¹⁶

Despite these striking variations with regard to the ordering of the figures that resemble the *nakṣatras* in Sanskrit texts, 15 out of 22 preserved deities on the ceiling of the rear corridor possess attributes supporting the idea that the 27 spaces on the ceiling were indeed dedicated to the *nakṣatras*. Moreover, Tocharian B manuscript fragments offer clear evidence for the knowledge of all 27 lunar mansions in the north-eastern Tarim Basin appropriated from Sanskrit sources.¹⁷

Ceiling, middle register: the Zodiac

The majority of the Zodiac signs described above (**Fig. 2, Drawing 6**) are located between depictions of Brahmin ascetics, presented with the iconography very well known in Kucha: naked except for loincloths, furs across the left shoulder, hair piled up and often bearded (**Drawing 14**).¹⁸ In two cases, in place of the ascetics, the sun and moon deities are shown. Their iconography was common in Kucha; the deities are very often depicted in the median strips of cave vaults (**Drawing 15**).¹⁹ The sun and moon are shown with round body nimbi, which also represent the discs of the heavenly bodies. The gesture of an arm pointing upwards is part of the iconography, while the vertical spear held in the hand is seldom depicted (ZIN 2023a: 117). Both deities have the same appearance and differ only in the colour of the disc at the back; the moon is light and the sun red, which can be often very dark due to oxidation.

As already mentioned, all the figures are positioned in the middle register one above the other with their heads from the side of the right corridor. The sections of the strip are roughly the same for each of the 12 signs. It cannot be determined why the first two, Aries (1) and Taurus (2), appear above the ascetics, while the others seem to be placed below them.

¹⁶ *Taittirīya-Saṃhitā* 4.4.10.1–3; *Sūrya-Siddhānta* (BURGESS 1935: 205); *Bṛhajjātaka* (SASTRI 2013: 127–130).

¹⁷ See fn. 10; *nakṣatras* are also mentioned in other texts: PK AS 13D (*Ikṣvākujātaka*); THT 428; THT 508; A 395; PK AS 16.3 / (*Aggaññasutta*). We thank Prof. Melanie Malzahn, Vienna, for her help.

¹⁸ The painting represents the narrative of *Ṛṣipañcaka*.

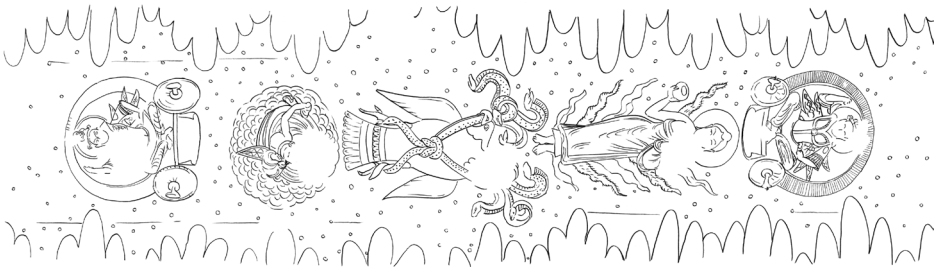
¹⁹ For drawings in the median strips of Kuchean caves, see ZIN (2023a: Appendix; 2024).



Fig. 7. Kizilgaha, Cave 31, rear corridor, ceiling, *in situ*, detail of the middle register; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.



Fig. 8. Kizilgaha, Cave 31, rear corridor, ceiling, *in situ*, detail of the middle register; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.



Drawing 15. Kizil, Cave 163, main chamber, median strip of the barrel vault, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.

Of the original 12 Zodiac signs, three are recognisable without doubt: Aries (*I*), Scorpio (*8*) and Pisces (*12*). Four further signs are also relatively clear, despite some having sustained damage or deviating from their conventional appearance (BRENTJES et al. 2024): Virgo (*6*), Libra (*7*), Sagittarius (*9*) and Aquarius (*11*).

Virgo (*6*) (**Fig. 7**) was drawn as a male figure holding a flat bowl in his left hand.²⁰ Libra could also be a male figure holding an equal-armed balance in his left hand. Sagittarius (*9*) is possibly presented by a feline, maybe a tiger (**Fig. 8**).²¹ Four legs, one with a paw, and a long tail on the right side, all painted black, are clearly visible, though the animal's head is missing. Enough is preserved to recognise that the artist used white pigment here to represent, instead of an animal's head, the torso of a man and part of his right arm. Although the bow and the arrow seem to be missing, this figure possibly presents the earliest known image of Sagittarius with a feline body (for further discussion see below). Aquarius (*11*) appears relatively clearly as an upright standing male, raising his right arm above his head and grasping a black pot. This type of vessel and how it is carried over the shoulder is documented repeatedly in Kuchean paintings (**Drawing 16**).²²

The other five signs are heavily damaged. They are Taurus, Gemini, Cancer, Leo and Capricorn. Of Taurus (*2*) (**Fig. 9**, bottom), one of the two horns, today black coloured, survives on one of the two remaining pieces of plaster. Connected to the horn is a field of white colour framed by two black lines, which is obviously

²⁰ Nine objects from the Roman Empire show only four cases of women that can be considered as a representation of Virgo. One of the four shows Virgo with wings on her back (Archaeological Museum of Naples, 6374), another one holds a branch with leaves (Martin von Wagner Museum of Würzburg). The two figures hold palm leaves in their hands (The British Museum, EA6705; Musée du Louvre, E 13048 / CM 33). Two of the women placed between Leo and Libra cannot be identified with certainty because they are empty-handed (Musée du Louvre, AO 22255; Villa Albani, 684 / 33.130, DAI-Rom).

²¹ Depending on the angle from which the photo is taken, the appearance of the depicted animal differs. In the image published here, some features seem to point to a horse: the end of the tail and the proportions of the standing legs. Other features, such as the length of the body and raised foreleg with the bent paw, in contrast, speak for a feline.

²² The painting is illustrated in *Mural Paintings in Xinjiang of China* (2009, vol. 3: 156, pl. 137).

part of the head. The other fragment of remaining plaster shows several faded black lines surrounding an area in pink with white patches, suggesting that the pink was applied first with the white on top. These remains indicate that Taurus was painted over the entire register, perhaps with the head looking backward.



Fig. 9. Kizilgaha, Cave 31, rear corridor, ceiling, *in situ*, detail of the middle register; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.



Drawing 16. Kizil, Cave 186, main chamber, barrel vault, left side, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.

Gemini (3) (**Fig. 9**, middle) can be identified, beneath the right knee of an ascetic, by three surviving black lines surrounding a pinkish area, which on the right is covered with a white band directly underneath the outline. Patches of white indicate that the entire pink area was once covered with white.

The sign for Capricorn (10) is an animal with a black body and light brown head, its mouth wide open, set against a turquoise background (**Fig. 8**, top). According to the widespread iconography of *makara*, including some *makara* boats in Kucha (see **Drawing 17**),²³ the head may have originally had a widely open mouth. In the *makara* mid-section, the remainder of the picture has disappeared, leaving only the straw-filled plaster base. This depiction of the Zodiac sign provides a hint that the source of these 12 signs must have been inspired by an Indian motif, which replaced the Mesopotamian amphibious creature Capricorn by the amphibious creature *makara*.

²³ The painting illustrates a simile of the land-spotting bird, see ARLT (2026: 15–18).



Drawing 17. Kizil, Cave 80, main chamber, barrel vault, right side, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.

The remaining two signs of Cancer and Leo deviate from the patterns of the 10 other signs. As noted above, only small fragments of Leo (5) remain. Cancer (4) survives as a body contour with a tail and three black strokes for legs in a green river above the figure, which in all likelihood is linked to Gemini (**Fig. 9**, top). The two figures, sitting where Cancer and Leo are placed in the sequence of the Zodiac signs, carry head and body nimbi. The figure with some remnants of Leo below it should represent the sun god and the solar disk (compare **Drawing 15**), but its nimbus' colouration poses a challenge we will discuss below. It might indicate that Leo was considered as the house of the sun and therefore is endowed with astrological meaning. A unique representation that most likely denotes Leo is found in a painting in Cave 179 in Kizilgaha (**Drawing 18**);²⁴ the painting is located on the barrel vault, but in the lowest row of the diamond-shaped fields.

Cancer (4) on the ceiling of Kizilgaha 31 (**Fig. 9**, top) is arguably an analogous case for the moon. However, here too the colouration poses a challenge to its identification, which we will address below. It is not impossible that astrological interpretations of Zodiac signs were known in the Tarim Basin at the time when the ceiling in Kizilgaha 31 was decorated.

²⁴ The painting is illustrated in ZHAO et al. (2020, vol. 2: 476–477).



Drawing 18. Kizil, Cave 179, main chamber, barrel vault, right side, lowest register, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.

One of the partially damaged signs, Sagittarius (9) (**Fig. 8**), may provide a partial answer to a riddle that has remained unresolvable so far. On some late 12th-century metal objects from the eastern Islamicate world (possibly Herat) and in one Georgian translation of an Arabic astrological text with hybrid depictions of the Zodiac signs from 1188, Sagittarius is portrayed with a feline lower body, a long tail ending in a dragon's head, and the male human torso shooting backwards at the dragon's head (**Drawing 19**; AMIRANASHVILI 1996: fig. 56). While the tail, the dragon's head and the male torso's backward shooting posture have regularly been explained as signifying a depiction of the eclipse dragon and its presence in the sign of Sagittarius, the feline body has remained unexplained. In some cases, the feline seems to be a lion, in others a leopard or a tiger. The sign of Sagittarius in Kizilgaha 31, as it is preserved, possibly shows a feline with a human torso instead of a cat's head. Since there is no evidence of a hybrid figure combining a male archer and a feline east of the Tarim Basin, and since the painted scroll MIK III 520 with Tocharian notes (**Fig. 10**)²⁵ presents

²⁵ The illustrations were previously published in HÄRTEL and YALDIZ (1982: 214–215, no. 152; not recognised as a representation of the Zodiac signs); GRENET and PINAULT (1997: fig. 1) and GRENET (2018: fig. 16.8); see also RUSSELL-SMITH (forthcoming 2026).



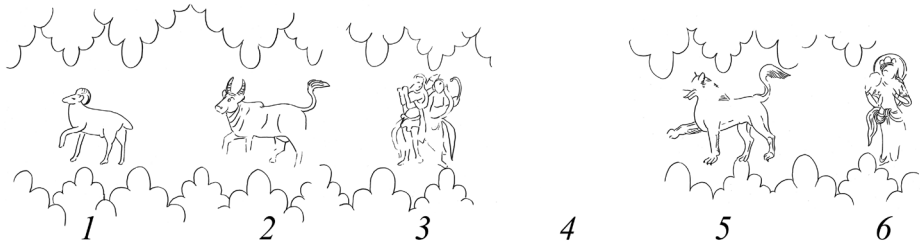
Fig. 10. Painting on paper, probably from the Turfan region, 10th century; housed today in the Museum für Asiatische Kunst, Berlin, no. MIK III 520 © Museum für Asiatische Kunst, Staatliche Museen zu Berlin, CC BY-NC-SA.

Sagittarius by two separate figures – a man and a tiger – it seems possible to assume that the north-eastern Tarim Basin may have served as a region from which the image of Sagittarius with a feline body was transmitted westward. Whether it was created in this region or came from northern India remains an open question.

The series of Zodiac signs in Kizilgaha 31, in which Taurus (2), Gemini (3) and Leo (6) are largely damaged, is related to two other representations of these signs from the north-eastern Tarim Basin (BRENTJES and BRENTJES forthcoming). The first encompasses five remaining signs from an unknown cave in Tograk-eken, today housed in the Hermitage, St. Petersburg (**Drawing 20**; ZIN 2024: 182). The other is a depiction of the entire set of signs, of which now only 10 can be seen in scroll MIK III 520. The iconography of the five signs from Tograk-eken (**Drawing 20**) differs visibly from that in Kizilgaha 31 for Aries, Leo and Virgo. The fragments from Tograk-eken show an upright ram with a raised right front leg, i.e., Aries (1) is walking; Leo (5) appears as a majestic animal with his front leg and tail raised; Virgo (6) in this painting is clearly female. In Kizilgaha 31, Aries (1) rests on the ground and Virgo (6) – as stated previously – seems to be a man holding a flat bowl in his left hand. A comparison of Gemini (3) in both caves is impossible due to the almost complete destruction of this sign in Kizilgaha 31.



Drawing 19. MS Tbilisi, Korneli Kekelidze National Centre of Manuscripts, A65, f. 189r; drawing by Monika Zin. This picture is used under CC BY 4.0.



Drawing 20. Tograk-eken, cave indeterminable at present, State Hermitage Museum, St. Petersburg KU-812a-b; drawing by Monika Zin. This picture is used under CC BY 4.0.

The two missing signs in scroll MIK III 520 (**Fig. 10**) are Aries (1) and Cancer (4) – in all likelihood they were on those parts of the scroll that are now lost.²⁶ The depiction of Scorpio (8) in the scroll and in Kizilgaha 31 are quite similar. Virgo (6) and Libra (7) show similarities in the symbols with their corresponding signs in Kizilgaha; while Capricorn (10) and Aquarius (11) are significantly different in their representations. MIK III 520 depicts Capricorn with a beautiful dragon's head;²⁷ while Aquarius follows the translation and transformation of Sanskrit texts as *kumbha*, the “pot”.²⁸ This transformation as depicted in the scroll is one of the more fascinating variants of the representation of this sign.

Further pictorial variations of Aquarius are preserved across other cultural contexts: Aquarius holds a pot in each hand and water flows from the pot to the ground (Mediterranean and Near East); in other variants, he holds just one such pot (very often in Roman, Byzantine, Arabic and Persian iconography). There are also depictions in which he carries a pot on his shoulder upside down with water flowing to the ground. The figure is mostly standing and less often walking. On a coin minted for Antonius Pius (r. 138–161), Aquarius either flies or swims. He can also be absent entirely with only the vessel shown. In such cases, the pot is typically standing upright with no water flowing out of it. In a few cases, all that remains of the pot seems to be a lid.

The representation in Kizilgaha 31 seems to combine the two traditions, i.e., an upright standing Aquarius and an upright pot, here placed on his shoulder

²⁶ GRENET and PINAULT (1997: especially 1006–1007). In this scroll, the sequence of the Zodiac signs begins with Pisces and ends with Aries. In this article, however, we adopt the numbers of the Mediterranean sequence for each sign, beginning with (1) for Aries.

²⁷ While this may point to an Uyghur relationship, it is difficult to determine because it is unclear which sources Uyghur art in Kucha draws upon.

²⁸ See also the representation of the specific form of the *kumbha* on the so-called “Star Mandala” (Museum of Fine Arts, Boston, no. 11.7123 [<https://collections.mfa.org/objects/26176>]) and on the Taizōkai (*Garbhakośadhātu*) mandalas, as, for instance, in the “Womb Realm Mandala” (*garbhakośadhātu* or *taizōkai*), Shingon Tantric Buddhist school, Heian period (794–1185), Tō-ji, Kyōto, Japan (https://www.tnm.jp/modules/r_free_page/index.php?id=1938&lang=en).

with no water flowing out. The vessel in scroll MIK III 520 (**Fig. 10** [11]) shows a single upright standing pot above which a gemstone necklace hangs. Between the two objects is an inscription in Tocharian B, which according to GRENET and PINAULT (1997: 1010) signifies a *kumbha* (pot). The specific form of the pot, also noted in many other (later) East Asian sources, and its decoration suggest identifying it as one of the eight Buddhist treasures. The gemstone necklace probably represents a second of these Buddhist symbols. Among East Asian examples, the pot has the same form, similar decoration (one or more lotus flowers), and occasionally also a (flaming) jewel.²⁹

Despite these variations, the depictions of the Zodiac signs in scroll MIK III 520 and the mural in Kizilgaha 31 are connected in four ways – the linear arrangement of Zodiac signs; the flat bowl in the hand of Virgo (6); the depiction of Libra (7) as a male figure holding an equal-armed balance; and the combination of the signs with other figures.

The linear representations of the Zodiac signs from the northern Silk Road lost their connection to the ecliptic, the path of the sun, and consequently their scientific significance as a mathematical device. In Kizilgaha 31 and Tograk-eken (**Drawings 6** and **20** respectively), the linearity of the sequence is a consequence of the commissioners' desire to connect the Zodiac signs with the scenes of the *parinirvāṇa* (Tograk-eken) or with two registers of deities, proposed here to be the *nakṣatras* (Kizilgaha 31). The architectural form of Kizilgaha 31's corridors only lends itself to a linear representation, which is perhaps to be understood as a visualisation of the immutability of Buddhist teaching.³⁰ This explanation corresponds to what Sanskrit sources contain about the Zodiac. In the *Vṛddhayavanajātaka* of Mīnarāja (4th century) or the *Brhājātaka* of Varāhamihira, for instance, the Zodiac is defined as representing personified time (MAK 2017: 20; SASTRI 2013: 10). Being acephalous, the *Yavanajātaka* of Sphujidhvaja nonetheless refers explicitly to the same image of time found in the *Brhājātaka*, since Aries is here named as the head of *kāla* (time).³¹ This is a representation of the primordial or cosmic man identified with

²⁹ This is in all likelihood an appropriation from the *Vairocanābhisaṃbodhi*. Chester Beatty, Dublin, CBL J 1216.2; Museum of Fine Arts, Boston, 11.7123. A further example of the *kumbha*: Taizō Zuzō, Nara National Museum, H060146.

³⁰ Perhaps worth mentioning here is the fact that the images of the *nakṣatras* in Sengim and the Turfan region (see DREYER 2022 and RUSSELL-SMITH 2022) are grouped around the scene showing the Bodhisatva leaving home. This “great departure” was considered as the central moment in the life of the Buddha, or of each Buddha, as the scene was depicted already in much earlier art, not only as an episode from the life of the Buddha Śākyamuni but also of other Buddhas (ZIN 2025b). The repetition of this key moment was apparently of fundamental importance in the Buddhist world for centuries.

³¹ *Yavanajātaka* (PINGREE 1978, vol. 2: 1).

time in Hinduism.³² In the case of Kizilgaha 31, the entire set of personified astral deities, including the Zodiac signs, apparently constitutes a protective spell, i.e., an occasion for the believer to pray for divine protection.

In 2023, Russell-Smith pointed out that the Tocharian annotation added to Virgo in scroll MIK III 520 (see **Fig. 10** [6]) identifies the bowl as one containing some liquid, perhaps to be used for medical purposes.³³ Assuming the veracity of this identification, the Tocharian annotator might not have been particularly familiar with the symbolism of the figure in its Mediterranean context. There, Demeter could replace Virgo holding a torch.³⁴ Demeter herself is also portrayed with a torch and a bowl or with an oil lamp.³⁵ Another possibility is that the Kuchean artist identified the female figure with a flat bowl with Hygieia, a Greek goddess of health, whose symbol is also a bowl often linked with her father Asclepios's symbol, the snake.³⁶

The clear division of the ancient sign of Scorpio into two, i.e. Libra (7) and Scorpio (8), in the three representations of the north-eastern Tarim Basin suggests that their source material was objects produced after the middle of the 2nd century.³⁷ In the star catalogue of Ptolemy's *Almagest* both signs are tabulated separately, but the description of the parts of Libra still reflects its earlier inclusion in the constellation of Scorpio (TOOMER 1984: 370–371). In 964, the Persian astrologer 'Abd al-Raḥmān al-Šūfī reported on the basis of an unidentifiable late antique source that some astrologers after Ptolemy had depicted Libra as a man holding an equal-armed balance (SCHJELLERUP 1874: 166). Indeed, this iconography is shown in numerous surviving objects from the Roman Empire depicting the Zodiac.³⁸ In most cases, the human figure holding

³² The concept of *kāla* is complex. Its interpretation differs between the different schools and authors. In the quoted astrological texts, it is used to designate a human figure along whose body the Zodiac signs are placed, beginning with Aries on the head.

³³ Presentation at the Max Planck Institute for the History of Science in 2023; for the reading and interpretation of the Tocharian notes by Pinault, see GRENET and PINAULT (1997: 1009–1022).

³⁴ Three objects from Roman Africa, Egypt and Palestine seem to show Demeter or Athena instead of Virgo. The goddess either holds a torch or a long staff (J. Paul Getty Museum, 83.AA.327; Hammat Tiberias; Bardo National Museum).

³⁵ See The British Museum, 1836,1008.2; for objects with Demeter holding a torch and a bowl, see Musée du Louvre, Ma 752 (the torch held by Demeter in her raised left hand is attributed to her daughter Kore in the French description), Ma 756, Bj 684.

³⁶ See Musée du Louvre, MA 566, Ma 2598, Gy 0284.

³⁷ The separation of Scorpio's pincers into a separate constellation is already documented in Aratos of Soloi's *Phainomena* (245 BCE). Its reconfiguration as Libra happened apparently after Hipparchos (190–120 BCE) and before Ptolemy (after 160).

³⁸ One object shows a female (Münzkabinett, Staatliche Museen zu Berlin, 18212840), holding a pair of scales in the right hand. Seven objects show a male figure holding a balance, one of which holds it in front of the body (J. Paul Getty Museum, 83.AA.327), six on the side – four in the right hand (Bardo National Museum, Hammat Tiberias, Villa Albani, 684 / DAI-Rom

the scale is a man but occasionally a woman can also be found.³⁹ This pictorial representation is also described in the previously mentioned northern Indian astrological works of Sphujidhvaja and Varāhamihira.⁴⁰

Thus, northern Indian Sanskrit astrological sources may have informed the depictions of some Zodiac signs in Kizilgaha 31, Tograk-eken (**Drawing 20**) and scroll MIK III 520 (**Fig. 10**). Indicators for such Indian intermediaries are the replacement of Capricorn by *makara* (10) and Aquarius by *kumbha* (11) in scroll MIK III 520, or in later murals at Dunhuang.⁴¹ The case of Taurus' depiction as a full-bodied standing or walking bull (2) instead of a protome in Central, South and East Asian sources is less unequivocal. Numerous Mediterranean objects also show Taurus as a full-bodied bull.⁴² However, another indicator suggesting an Indian route of transmission is the depiction of Pisces (12) swimming in water, since this is the description provided, for instance, in the *Yavanajātaka* of Sphujidhvaja (PINGREE 1978, vol. 2: 2). In contrast to signs with some relation to Indian sources, the image of Aquarius (11) in Kizilgaha 31 shows a closer affinity to Mediterranean iconography than to Indian or East Asian depictions.

The strong impact of Indian sources on ideas about celestial bodies is also emphasised by words in a fragmentary Tocharian B text. For the lunar mansions as a group, the term *nikṣāttār*, derived from Sanskrit *nakṣatra* is used. The terms *muhūrttā* and *hor* derived from Sanskrit *muhūrta* and *horā* have more than one meaning, although their basic meaning is in each case a specific time unit.⁴³ As for the Mediterranean Zodiac signs, according to Melanie Malzahn, none of their names can be found in the extant Tocharian fragments (personal communication). This is supported by a search for general astral terminology in the Tocharian digital dictionary CEToM. It contains no words referring to

33.130; Musée du Louvre, AO 22255) and two in the left hand (Mithraeum, Ponza; Martin von Wagner Museum of Würzburg University).

³⁹ MS. Bodleian Library, Oxford, Or. 133, fol. 13b.

⁴⁰ *Yavanajātaka* (PINGREE 1978, vol. 2: 1); *Bṛhajjātaka* (SASTRI 2013: 11).

⁴¹ MS, Berlin, MIK III, 520. See GRENET and PINAULT (1997, especially 1006–1007, fig. 1); Dunhuang, Mogao, Cave 61; for depictions of some Zodiac signs in the cave, see *Zhongguo Dunhuang bishu quanji* (2006, vol. 10: 141–146, pls 180–187).

⁴² Fourteen material objects (coins, mosaic, coffins, marble reliefs etc.) from different regions of the Roman Empire show a full-bodied Taurus in four postures: jumping (3), walking forward (3), lying down (2), and charging / bowing (6) – American Numismatic Society, 1944.100.60338; Münzkabinett, Staatliche Museen zu Berlin, 18212836; Musée du Louvre, AO 22255; Musée du Louvre, E 13048 / CM 33; Musée du Louvre, MNB 517 / Ma 1833; Archaeological Museum of Naples, 6374; Antikensammlung, Staatliche Museen zu Berlin, Sk 1050; J. Paul Getty Museum, 83.AA.327; The British Museum, EA6705; Martin von Wagner Museum of Würzburg University; Bardo National Museum; Mithraeum, Ponza; Hammat Tiberias).

⁴³ We thank Prof. Melanie Malzahn, Vienna, very much for her kind help in this matter. The text is PK AS 16.3, a3+.

asterisms or constellations of Greek or Iranian origin. All relevant terminology is linguistically and conceptually of Indian origin.

Mediterranean objects with the Zodiac present a surprising variety in their depictions of the individual signs. While none of those known to us is a direct ancestor of any of the three series from the Tarim Basin, several of these objects are nevertheless iconographically connected to them. In two cases, Aries (*I*) appears like in Kizilgaha 31 lying on the ground.⁴⁴ Since this is a posture also found very often in copies of ‘Abd al-Raḥmān al-Ṣūfī’s book, this image was widespread in Byzantium and the Islamic world since at least the 10th century.⁴⁵ In contrast, on known objects from the Roman Empire, Aries is predominantly depicted as standing, walking or jumping.⁴⁶

Ceiling, middle register, figures accompanying the Zodiac signs

A second major challenge in the analysis of the representation of the Zodiac signs on the ceiling of Kizilgaha 31 is their combination with 12 other figures, many of them much larger than the Zodiac signs themselves and sitting cross-legged on the ground. The space occupied by the figures is crossed by two black lines which run through the middle of the white background. They appear to be auxiliary lines. One way to understand the figures is to identify them as Brahmanical ascetics, as their depictions correspond with similar representations in Kucha murals (see **Drawing 14**).

The figures on the middle register are differentiated: some are shown with their upper body completely bare, some with a fur across their left shoulder, some bearded and some not. Three of the figures have nimbi, and two of them lack the iconography of Brahmanical ascetics; they feature parts of the iconography of the sun and moon deities (compare **Drawing 15**). The first sits above Leo (5) who is barely visible (**Fig. 7**, bottom). It is a figure wearing a black robe and a green garment covering his knees. Its face, arms, and legs are white. The

⁴⁴ On the objects from the Roman Empire, Aries appears twice lying down, looking forward in one case (Musée du Louvre, MNB 517 / Ma 1833) and looking backwards in the other (Musée du Louvre, E 13048 / CM 33).

⁴⁵ MSS Gotha Forschungsbibliothek, Memb II 141, f. 24a; Dublin, Chester Beatty, Persian 175, f. 70a; Sülemaniye Library, Istanbul, Fatih 3422, pp. 198–199 and Lalaisma’il 318, f. 26b; British Library, London, Or. 1407, ff. 47b–48a.

⁴⁶ Out of 13, seven are jumping / running / rearing – two looking forwards (Musée du Louvre, AO 22255; Hammat Tiberias) and five looking backwards (Münzkabinett, Staatliche Museen zu Berlin, 18212835 & 2362038; Musée du Louvre, E 31886; Archaeological Museum of Naples, 6374; Hammat Tiberias; Bardo National Museum) – six walking with two looking backwards (The British Museum, EA6705; J. Paul Getty Museum, 83.AA.327; Sk 1050, Antikensammlung, Staatliche Museen zu Berlin; Villa Albani, 684; Martin von Wagner Museum of Würzburg University; Mithraeum, Ponza). Standing examples seem to exist primarily on Islamicate objects.

head nimbus is today dark in colour, formerly some kind of red. The body nimbus shows in different parts patches of black and white. According to the astrological sequence of the Zodiac signs, this figure should be the sun god, but the colouring of the body nimbus contradicts this identification. Rather, this colouring suggests that the figure here is the moon god. A similar issue arises in the field below Leo (5), delimited by a figure made up of three legs and one tail representing Cancer (4). Hence, the figure painted in this field should be the moon god according to the conventions of Mediterranean astrology. However, the two nimbi of this figure appear to originally have been painted in different hues of red, defining this figure as the sun god. Today the head nimbus looks almost maroon, while the body nimbus is a strong black (oxidised red). Of this second figure, part of the head and the left knee survive.

The third figure with a head nimbus (**Fig. 7, top**) shows no body nimbus and displays the iconography of a Brahmanical ascetic; of his body, parts of the torso, the lower left arm and the face are preserved today. The figure's head nimbus is also black, while the loincloth is grey. Next to its right knee is the Zodiac sign of Virgo (6). In addition to the two astral deities – sun and moon – the third, related to Virgo, may also have astral meaning. The other nine figures, portrayed as ascetics, may therefore also have celestial connotations.⁴⁷ The presence of altogether 27 spaces to the left and right of this set of figures, which are probably *nakṣatras*, is a further hint that the 12 figures accompanying the Zodiac signs are also astral deities.

The combination of the Zodiac signs with other figures can also be found in numerous objects from the Mediterranean to Japan. As a rule, these accompanying figures are deities of the local or regional culture. In northern India, the oldest known object with Zodiac signs is a lion capital dated to the 5th century. It combines them with the Ādityas, 12 minor solar deities, and possibly symbols of the decans (**Fig. 11**). The latter are a contribution of Egyptian astral practices to the mathematical division of the ecliptic (see QUACK 2018; MENDEL 2024). A single Zodiac sign includes three decans of 10 degrees each. In eastern Asian depictions of Zodiac signs with other figures on tomb ceilings, in mandalas, Tangut or Daoist paintings, or Buddhist scrolls, these are often single Buddhas or Bodhisattvas, the lunar mansions, the nine planets, and the seven stars of the Big Dipper.⁴⁸

An important but still poorly understood example of Zodiac signs presented together with other figures is found in the aforementioned scroll MIK III 520 (**Fig. 10**). Twelve compartments are reserved for the Zodiac signs, although two

⁴⁷ Two of the figures have no heads preserved. Thus, it cannot be determined whether they were painted with a head nimbus or not. None of the nine, however, has a body nimbus.

⁴⁸ State Hermitage Museum, St. Petersburg, Oriental Collection, XX-2424, see SEN (1999); YANO (2019); MCCOY (2017).



Fig. 11. Lion capital, with Ādityas, Zodiac signs and perhaps the Decans; Udayagiri, Madhya Pradesh, circa 5th century, Gurjari Mahal, Central Archaeological Museum, Gwalior; photographs © Gudrun Melzer; from MEVISSSEN (2012: 120). The CC BY-NC-ND 4.0 licence does not apply to this picture.

signs, Cancer (4) and Aries (1), are lost. In 11 compartments, one or two other pictures are added to the Zodiac signs. The one without such additions is the compartment of Gemini (3), which is badly damaged on its left side. Nine of these compartments contain male figures with jewellery. In one case (Aries [1]), a barely recognisable remainder of an arm seems to indicate that on the badly

damaged right side of this compartment the original had also contained such a figure. It is not implausible to assume that these figures represent astral deities. A comparison with the *Yavanajātaka* (PINGREE 1978, vol. 2: 1–11) suggests that the male figures could even be planetary deities. The second type of composition presents six examples of a human figure in an earthly setting (a pond, a fire, an ambos, a bed). In one case, a tiger and a harp fill the compartment of Sagittarius.⁴⁹ These depictions resemble in some cases one or two specific items listed in Chapter 4 of the *Yavanajātaka* (PINGREE 1978, vol. 2: 19–21), as related to the *vargas* (divisions, sets) or *dvādaśāṃśas* (*bhāgas*; division into 12 parts) of the respective Zodiac signs.⁵⁰ If this interpretation can be verified by further source material, this offers the possibility of reading the figures in the register with the Zodiac signs on the ceiling of Kizilgaha 31 also as astral deities.



Fig. 12. Kizilgaha, Cave 31, right corridor, inner wall, lowest register, *in situ*; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.

As for the 12 Zodiac signs in Kizilgaha 31 (**Drawing 6**), their size and position differ visibly, as does their respective colouring. Aries (1), Scorpio (8), Sagittarius (9) and Pisces (12), as well as possibly Taurus (2), Leo (5) and Capricorn (*makara*) (10) extend across the registers below or above the sitting figures. All other Zodiac signs are placed below the right knees of the Brahmanical ascetics and are of much smaller size. Thus, the painter of Kizilgaha 31 treated the zoomorphic signs differently to the anthropomorphic ones. This approach is unique when compared to other known representations, not only in Kucha. Moreover, the variability of the specifics of the Zodiac signs on the ceiling of Kizilgaha 31 in comparison to the other representations in the

⁴⁹ See the same kind of image of the instrument in MS London, British Library, Add. 7697, f. 43a, image in the lower half, identified as *ṣanj*, the Persian harp, which represents the constellation *Lyra*.

⁵⁰ *Yavanajātaka* (PINGREE 1978, vol. 2: 19–21).

Tarim Basin (**Drawing 20** and **Fig. 10**), in Sanskrit astrological literature, and in the Mediterranean suggests that the painter or painters of the ceiling did not simply draw on one specific source. Rather, they were familiar with numerous different representations, which they creatively adapted to the cultural program of Kizilgaha Cave 31.

Unique representations of donors

As demonstrated in this paper, the ceiling of the rear corridor in Kizilgaha 31 poses many questions concerning iconography not seen elsewhere in Kucha. It is all the more important to present them here for further discussion and comparison with other regions. Thus, as a final point, one more element will be highlighted that is also entirely unique to Kucha: the clothing of the depicted donors.



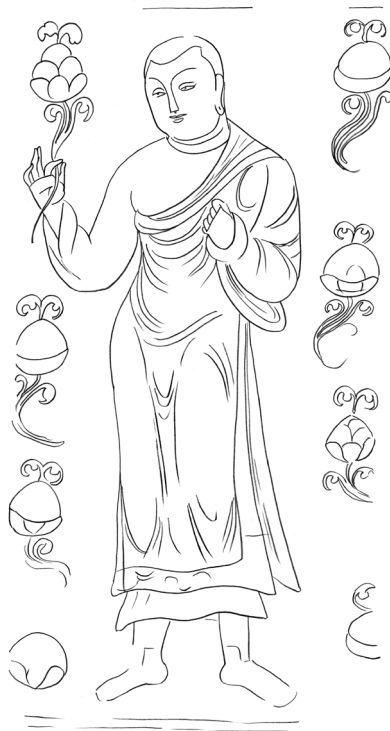
Drawing 21. Kizilgaha, Cave 31, right corridor, inner wall, lowest register, *in situ*; drawing by Monika Zin. This picture is used under CC BY 4.0.

On the right corridor's inner wall, below the depiction of the story of the Bodhisatva's sacrifice to the hungry tigress (**Drawing 3**), the remains of the six figures standing next to each other have been preserved (**Fig. 12** and **Drawing 21**). Parts of their torsos are still clearly visible: the mural further down is destroyed but the outlines of the heads and the hairlines are visible, allowing their identification as monastic figures. Parts below the heads are easily recognisable: the round neck lines of the reddish-brown robes. The iconography has many comparative depictions – such as, for example, in the paintings in Kizil Cave 13 (**Drawing 22**) – which leaves no doubt that the persons in Kizilgaha 31 are nuns, as only they wear a gown below the robe; the monks, when their robes are arranged asymmetrically, are shown with their right arms bare. The colours of the robes, reddish-brown for the inner robe and black for the outer robe, also correspond to the colour scheme used to depict most nuns in Kucha (**Fig. 13**).

What is unusual about the nuns in Kizilgaha 31 is that the dark robes over the left shoulder are patterned; the scrollwork on them is unmistakable and

on one figure both the robe worn over the shoulder and the lower garment are patterned. The dots around this figure's neckline doubtless indicate a necklace.

It should be emphasised once again that the row of figures in the left corridor of Kizilgaha 31 is not an image of lay donors, as the robes have no collars and are asymmetrical because of the robes being hung over the left shoulder, which leaves no doubt that these are monastic figures, while the covered right shoulders indicate their status as nuns. The patterned robes of the nuns and the necklace are unique in Kucha. They could perhaps indicate a high social status, the fact that the women only stayed at the convent temporarily, or perhaps the painter wanted to indicate that the nuns in question represent foreign women.



Drawing 22. Kizil, Cave 13, one of the side corridors, Metropolitan Museum of Art, New York, no. 42-49.1; drawing by Monika Zin. This picture is used under CC BY 4.0.

The unusual and inexplicable clothing of the nuns corresponds to the other unusual depictions in Kizilgaha 31. This includes Viśvantara, who is never otherwise depicted in Kucha, surrounded by the body nimbus of a Buddha or a Mahābodhisatva (**Fig. 1, Drawing 3**), but above all the deities on the ceiling of the rear corridor (**Figs 2–9, Drawing 6**) discussed in this paper. Among the

figures that we have identified as *nakṣatras* due to their number – 27 – and their placement on the sides of the Zodiac, many are female and feature iconographic traits reminiscent of Tantric *yoginīs* or terrible *ḍākinīs*, and as such have no equivalent in Kuchean paintings.



Fig. 13. Kizil, Cave 224, main chamber, barrel vault, left side, 5th register, no. 8, *in situ*; photograph © Ding, He. The CC BY-NC-ND 4.0 licence does not apply to this picture.

The uniqueness of various aspects of the decoration in Kizilgaha 31 presented here for the first time in a Western language highlights the complexity of the cultural, economic, religious and ethnic relationships in Kucha. The adaptation of introduced elements to local forms of expression and the preservation of foreign modes was perhaps not limited to pictorial idioms only but also extended to social mores, as seen in the unique and unexplained depiction of the nuns. However, the most important achievement of this study is the discovery and characterisation of the Zodiac, whose signs, accompanied by Indian deities and Brahmin ascetics, point to Kucha's connection with South Asia, while at the same time clearly showing that the local painters were familiar with Zodiac signs from not one but several different traditions, and created something new that was repeated in other cultures. This can perhaps be taken as a general quality of Kuchean culture – an idiosyncratic and rich tradition developed from its receptiveness to and distillation of diverse influences.

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