

Friedrich Berger

## Rock Art West of Dakhla: “Water Mountain” Symbols

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Bergmann discovered Djedefre’s Water Mountain (DWM) on 9 December 2000. Kuhlmann was one of the first whom Bergmann guided to the site. He interpreted the petroglyph shown at Figure 1 as “mountain of water” (Kuhlmann 2002: fig. 7) and as “Water Mountain” (Kuhlmann 2005: 270-278). The symbol “Water Mountain” is composed of two hieroglyphs, one for mountain, a rectangular area with two mountain peaks on top, and the other for water, the double zigzag lines. These double zigzag lines are expressed by colouring alternating spaces between the engraved lines. According to oral information by Bergmann the loose slab with the petroglyph was found face-up on the platform in front of the frieze shown at Figure 2. Probably it was originally in the upper right corner of the frieze. A documentation of the situation at the time of the discovery does

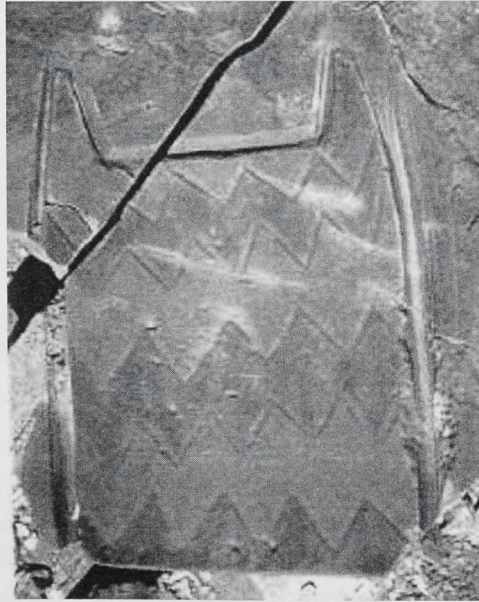


Fig. 1



Fig. 2

not exist or has not yet been published. The slab with the petroglyph was removed from the site.

The picture at Figure 3 is positioned in the upper left corner of the frieze visible on Figure 2. It is the name of Djedefre inside a hieroglyph for mountain (Kuhlmann, 2005:254). This petroglyph was the reason for calling the site “Djedefre’s Water Mountain”. On Figure 2 one can see that parts of the rock



Fig. 3

surface were polished and, perhaps, cleaned. Untreated parts of the rock surface are at the bottom, to the right above and under the petroglyph while the surface under the petroglyph was carefully smoothed. There are some traces of an earlier modifications of the rock surface in this place.. At the bottom, inside the frame of the mountain symbol there are two cupules, which may have been left over from an earlier petroglyph, or they may be naturally-occurring holes



Fig. 4

in the rock. It seems also that the V-shaped lines at the two mountain peaks were engraved before the final phase of polishing (Fig. 4). Kuhlmann apparently noticed this inconsistency, but he comes to the conclusion that the mountain-frame and the inscription were carried out at the same time, the frame first and the inscription thereafter. He has, however, the impression that the text was expanded during the process of writing and therefore the result is an asymmetrical, clumsy picture (Kuhlmann 2005: 254-257). Kröpelin and Kuper (2007: 222) have the impression that “water lines” were erased from the inside of the emblem, but there are



Fig. 5

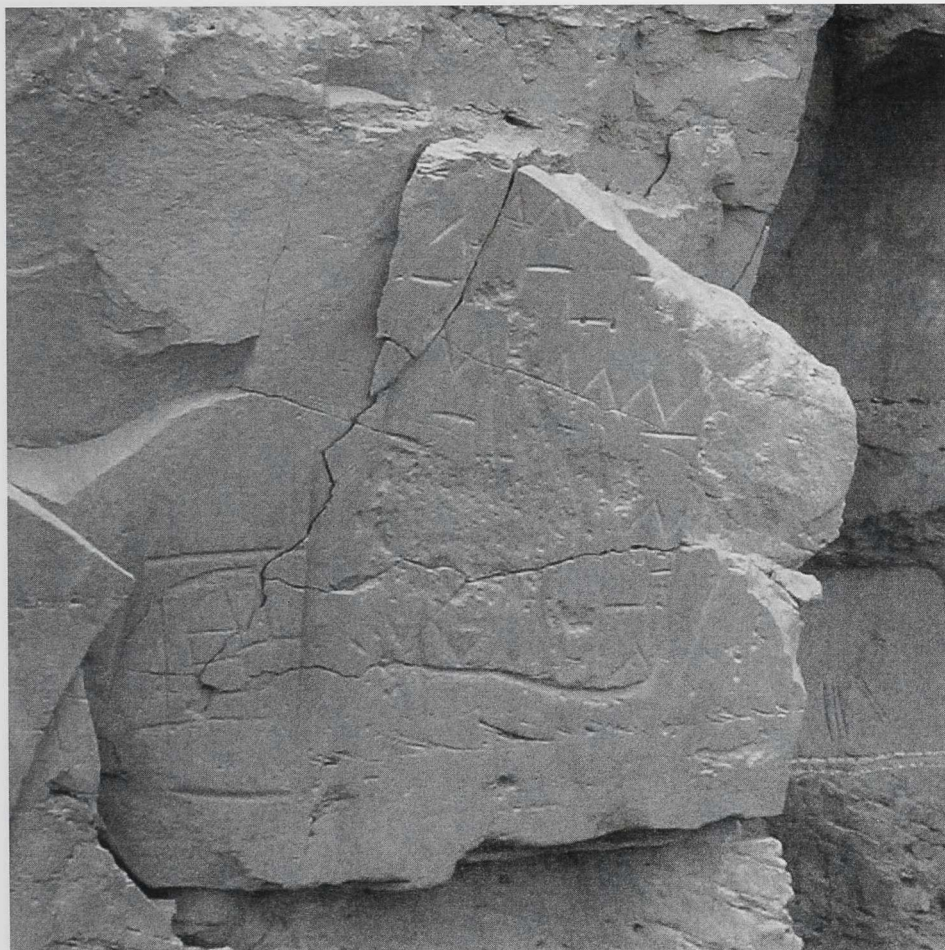


Fig. 6

no traces left of “water lines”. On the right side of Djedefre’s emblem, there are the remains of another water mountain symbol. So in total there were originally three of these symbols in the upper line of the frieze.

The “Water Mountain” symbol shown on Figure 5 (see also Le Quellec et al. 2005: fig. 57) was originally comparable to that on Figure 1, except that it had four single zigzag-lines instead of the double lines. The patina of the zigzag-lines is darker than the patina of the rest of the image. The frame of the mountain was worked-over at the same time, when two horizontal lines and three short vertical lines at the bottom were superimposed over the zigzag-lines. This re-working was probably carried out after the polishing of the rock surface, as the depth of the en-



Fig. 7

graved lines of the pictures around this water mountain symbol was also reduced. Much later the water mountain symbol was damaged by a pecked ostrich (?).

The petroglyph presented on Figure 6 is located to the right of that shown in Figure 5. Originally it also had two mountain peaks. They were found on the platform in the rubble. The rectangular area of the mountain-symbol here contains alternating zigzag-lines and crenellated lines. Kuhlmann interpreted the crenellated lines as small streams of flowing water, the meandering course of water, originally the zigzag course of a sailing ship on water (Kuhlmann 2005: 271). The petroglyph was also later damaged by pecking marks.

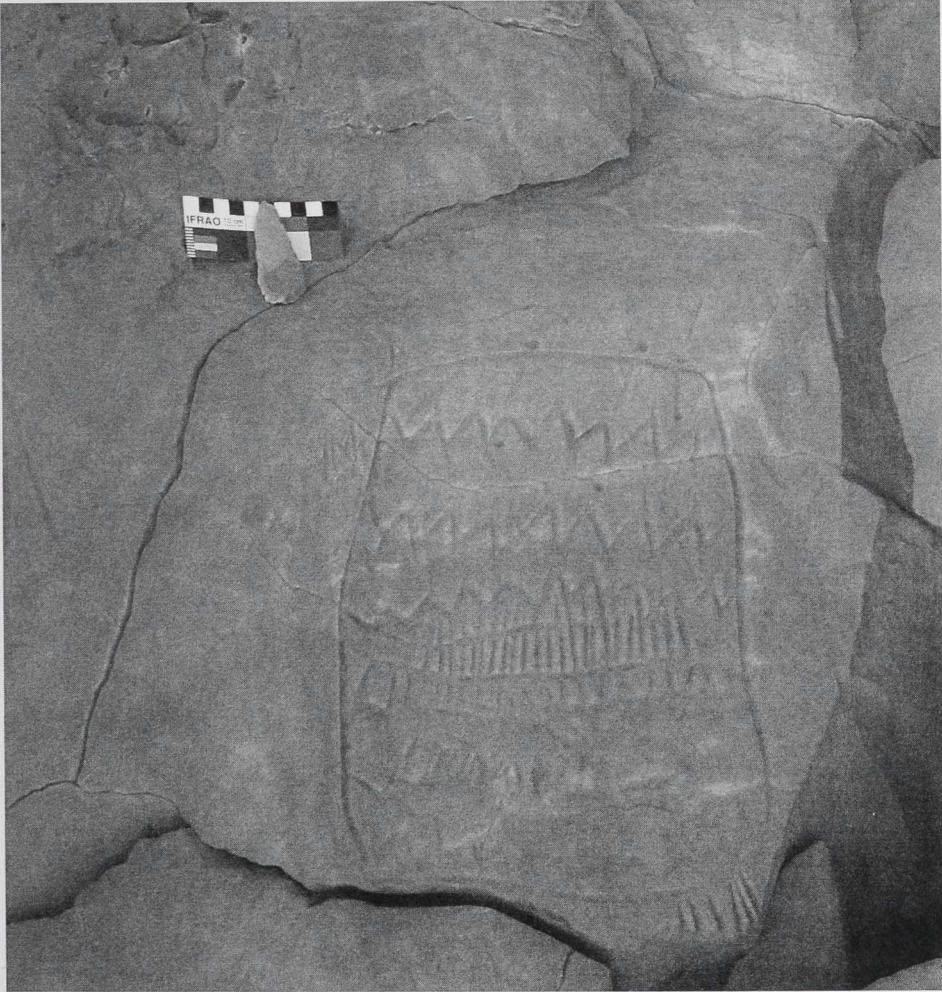


Fig. 8

The picture presented on Figure 7 is to be found on the platform of DWM, too. The rectangle does not have mountain peaks. The upper and lower extension of the left bounding line is probably the result of sloppy workmanship and does not have a specific meaning. Inside there is at least one zigzag line. The upper part was damaged by later pecking marks.

The petroglyph on Figure 7 is not a “Water Mountain“ symbol, but it represents one (or more) “water lines” in a rectangle. Bergmann termed all arrangements of horizontal zigzag and crenellated lines within any boundary as “Water Mountain Symbols” or simply as “Water Mountains”. He also transferred this term to



Fig. 9

the mountains on which the symbols occur. Kuhlmann discussed only a limited number of examples. He used the term “Water Mountain”, however, also for rectangles with “water lines” and unspecific marks on the top (Kuhlmann 2005: 271), e.g. those shown on Figure 8 and 20. In line with Bergmann and Kuhlmann all arrangements of horizontal “water lines” are called here “Water Mountain” symbols.





Fig. 10

Figure 8 shows zigzag-lines in the frame. The lower part may be interpreted as the hieroglyph for rain. Figure 9 presents a combination of crenellated and zigzag lines in a rectangle. In Figure 10 the upper lines of the two rectangles are represented by geological fractures in the rock. The example on the right side is only partly filled by “water lines”.



Fig. 11

On Figure 11 a shield-like rectangle is depicted which does not have any markings on the inside. Whether this petroglyph does belong to the category of “Water Mountain” symbols or whether it is merely a geometric design may be left open for the time being (see Fig. 25).

Figure 12 shows an oval enclosure filled with zigzag-lines. On Figure 13 a semi-oval boundary encloses zigzag-lines in relief. To the left and to the right are two parallel zigzag-lines, also partly in relief. Finally there is another frieze with five “Water Mountain” symbols (Fig. 14), two rectangles in the upper line, one oval form in the middle line and two irregular rectangles in the lower line. Some of them have markings on the inside i.e. combinations of zigzags and crenellations, others seem to be empty.



Fig. 12

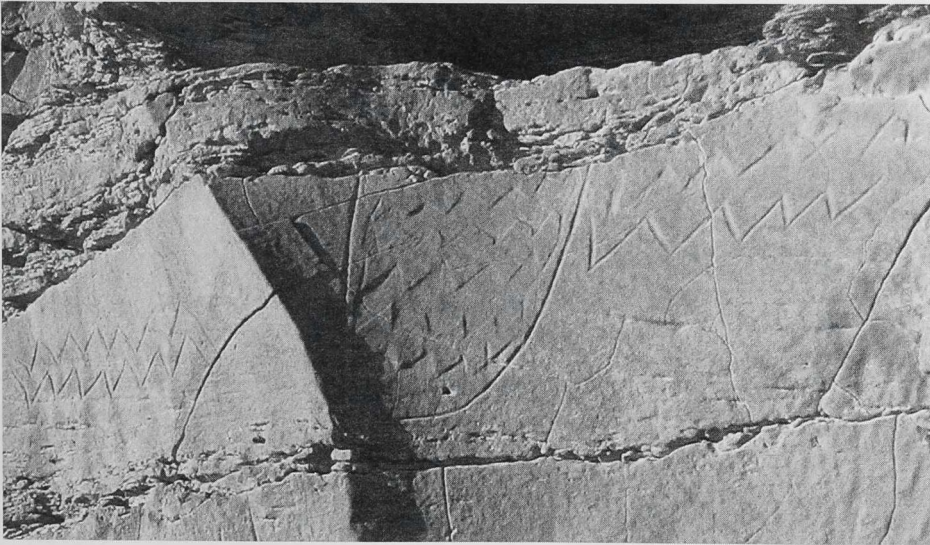


Fig. 13



Fig. 14

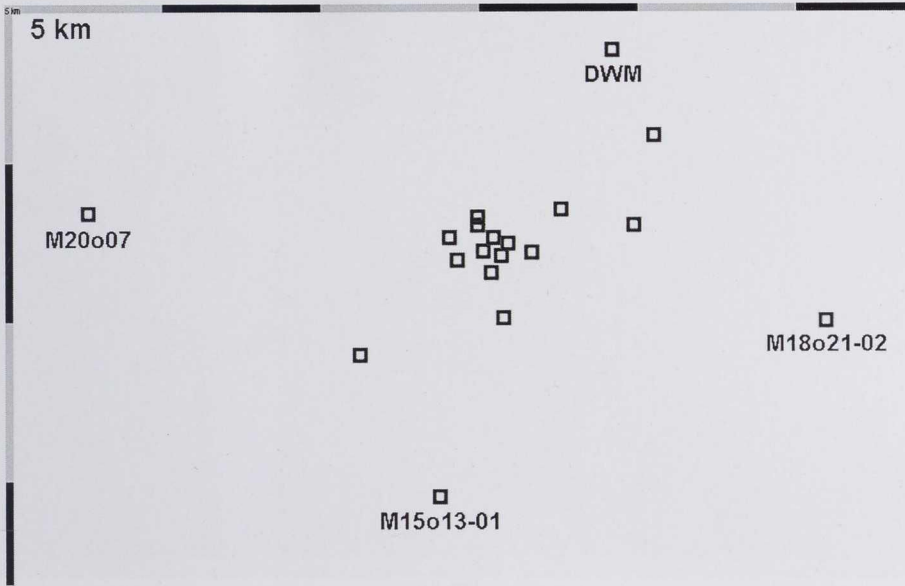


Fig. 15

In total Bergmann and I found more than fifty “Water Mountain” symbols, six of them with the proper mountain peaks on the rectangles. They are located at nineteen sites. The symbols with the proper mountain peaks are concentrated at two sites. Figure 15 gives an impression of the geographical distribution. This inventory is not complete, as other researchers have discovered additional examples.

For a further more general evaluation we may compare the two friezes presented on Figures 2 and 14. The upper part of Figure 2 ( see the petroglyphs depicted in Figures 1 and 3) belong clearly to the pharaonic culture of the Nile valley. The lower part of Figure 2, at least the first phase of the “Water Mountain” symbol on Figure 5, seems to be older than the petroglyphs of Figure 3. On the other hand, the “Water Mountain” symbols of Figure 14 certainly do not belong to the pharaonic culture of the Nile valley. The rock is heavily weathered, but weathering is subject to many parameters and thus the age difference between the petroglyphs of Figures 2 and 14 cannot be quantified.

In this context we also have to take into account the “Water Mountain” symbols published by Kröpelin and Kuper (2007) from a site called Gala El Sheikh. The location of the site was not shown in the publication but it seems to be somewhere in Wadi el Qa’ab or its neighbourhood west of Dongola. Wadi el Qa’ab is on the way from Selima to the Nile valley between the Third Cataract and Dongola,



Fig. 16



Fig. 17

a route which circumvents the cataract areas in the north. Shaw (1929: 67-70) believes that this route was the original version or an alternate version of the Darb el Arba'in as the early travellers used this route to Mushu opposite Argo, Poncet (1698), Krump (1701) and du Roule (1704). Browne was the first who reported about the route via Laqiya Arba'in from 1793 (Hinkel 1979: 11-12). The petroglyphs at Gala El Sheikh include "Water Mountain" symbols with the mountain

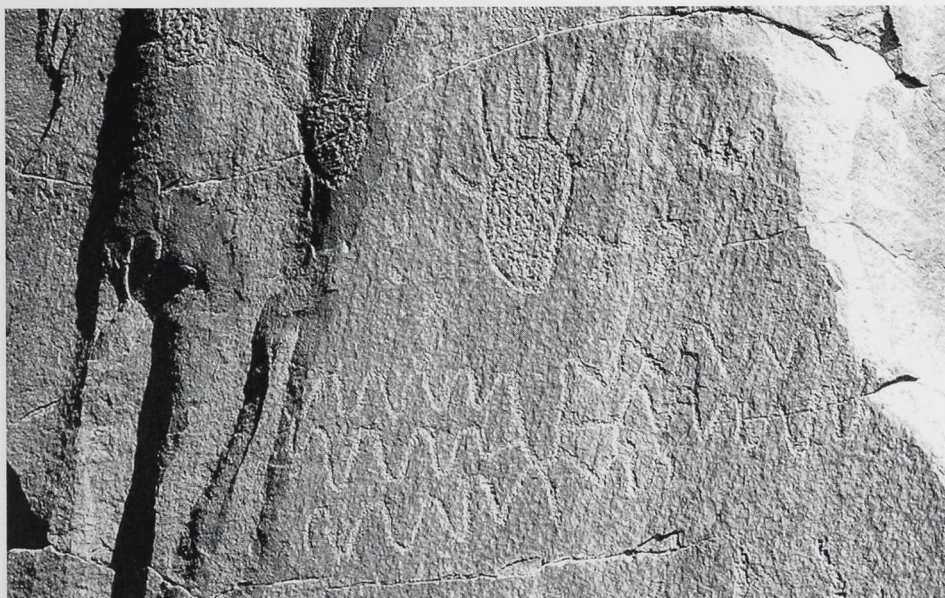


Fig. 18

peaks and with zigzag-lines, comparable to Figure 1, but without colour, and they were not polished. In addition there are petroglyphs with crenellated elements similar to the petroglyph in the centre line of Figure 2 (i.e. between the pictures shown in Figures 3 and 5). Similar types of petroglyphs are also to be found in the neighbourhood of DWM. Obviously there was a relationship between the people of DWM and of Gala El Sheikh as “Water Mountain” symbols have not yet been found elsewhere in the Sahara. From Gala El Sheikh hundreds of additional petroglyphs are reported, Demotic and Arabic inscriptions of different ages, open squares and rectangles, count marks and enigmatic engravings. None of them have been published. These geometric symbols may possibly indicate another connection to the north. We may remember the interpretation of Pichler and Negro for the petroglyphs at Selima (2005). Similar symbols are also reported from Dakhla and Kharga (Kleindienst et al. 1999: fig.1.47; Negro 2002: fig.18; Rowe and Schacht 2004). These petroglyphs are not related to the “Water Mountain” symbols; they may, however, document the same migration route.

There is a tendency to explain all other “Water Mountain” symbols through the pharaonic hieroglyphs (Fig. 1). Another way is to analyse the basic elements of which the “Water Mountain” symbols are composed. The zigzag-line is a symbol for water for the San in southern Africa. Figures 16 and 17 show two examples, (“two rain animals” and falling rain on Fig. 16 and a rain cloud and rain on Fig. 17). Figure 18 is an



Fig. 19

example of zigzag-lines from southern Algeria (rock near a guelta, location J52c22). Apparently the zigzag-line is a basic symbol to represent water. It was utilised for the hieroglyphic script. Zigzag or wavy lines are also used in other writing systems. Two horizontal zigzag-lines represent water in Sumer (Meißner and Oberhuber 1967: 19). Three vertical wavy lines mean a large river in Chinese (Haarmann 1990: 180). Petroglyphs of vertical water lines exist also west of Dakhla (Fig. 19; location M20o14-01).



There are several other naturalistic or semi-naturalistic pictures which were used in writing systems. The square means “earth” in Chinese, a subdivided square represents “field” (Haarmann 1990: 179). In Sumer the square is an “enclosure” (Jensen 1969: 78). This meaning can also be suggested for quadratic “fences” in rock art, e.g. at Mogoy, northern Mongolia (Okladnikov 1981: Tab. 21/4), in the Pamir mountains (Jasiewicz and Rozwadowski 2001) and in India (Chakravarty and Bednarik 1997: fig. 62). The square is utilised in the Egyptian hieroglyphs for “house” and “temple, palace” (Betrò 1996: 168, 192).

The early symbol for mountain has two peaks in Egypt (Betrò 1996: 159) and three in China (Jensen 1969: 166) and Sumer (Meißner and Oberhuber 1967: 19). In the Aztec writing system one peak represents a “mountain”, two or several are a “mountain range” (e.g. *Matricula de tributos*, 7r).

After having seen so many examples of naturalistic and semi-naturalistic symbols in the early versions of various writing systems we may conclude that the “Water Mountain” symbols west of Dakhla and at Gala El Sheikh represent information by people at a pre-script stage, for example “water between mountains” (Fig. 5 – 6), “watered field” (Fig. 7 – 10), “lake” (Fig. 12 – 13) or perhaps a “small river fed by rain” (Fig. 19).

What does this mean for the petroglyphs shown on Figures 1 and 3? Was the “Water Mountain” symbol taken over by the pharaonic Egyptians and the mountain frame adopted as a kind of cartouche for Djedefre? It is unlikely that the “Water Mountain” symbols are a direct source for the hieroglyphic script. Most of the inscriptions at DWM are older than Djedefre and many more symbols were needed to develop the hieroglyphs. It is more likely that the “Water Mountain” symbols and the hieroglyphic script have a common background. It would be more clear after direct dating of rock art, for example by a comparison of the ages of the petroglyphs on Figures 2, 5 and 14. In the Sahara a petroglyph was successfully dated directly by Huyge et al. (2001), and five paintings by Ponti and Sini-baldi (2005). The method of direct dating may run into problems at DWM as both Kuhlmann and the archaeologists from Cologne traced the petroglyphs on plastic foil with the risk of micro-damage to the petroglyphs and the risk of introducing modern foreign material into the skin of the rock.

### **Superimpositions and climate**

In two cases we found “Water Mountain” symbols superimposed by other petroglyphs. Figure 20 presents a giraffe in twisted perspective. It is produced in one of the typical styles of the area, the body is polished and the extremities are

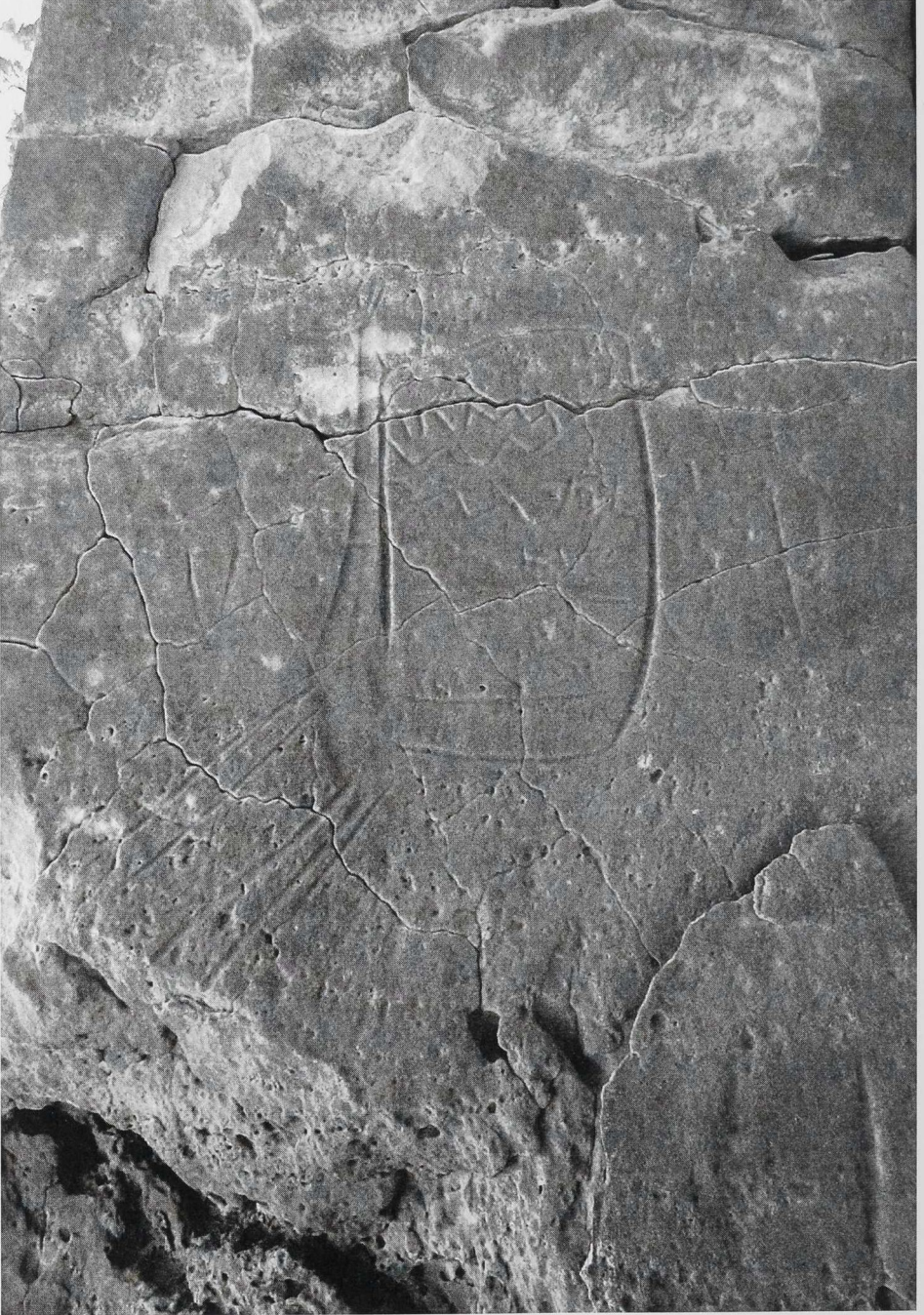


Fig. 20



Fig. 21

engraved. It was made after the “Water Mountain” symbol and cuts away a part of its left side. The time difference is, however, short as the patina is the same. In Figure 21 we see two “Water Mountain” symbols with zigzag-lines in relief. At the same level on the right side, there are several giraffes with polished bodies and engraved extremities. In the bottom line there are some pecked giraffes with lighter patina. They are superimposed over the older giraffes and the head of the left one is drawn over the corner of the “Water Mountain” symbol.

The most frequently depicted animals in the neighbourhood of DWM are the giraffe and oryx. Giraffes can live without water for several months, its main food is acacia; oryx does not need surface water and lives in semi-arid steppes (Murray 1935: 9; van Neer and Uerpmann 1989: 321-322). Even if these animals do not need water for drinking, they need food. That means there must have been occasional rain showers or a rainy season in that area.

Some of the “Water Mountain” symbols were created around the time of Cheops and Djedefre, i.e. around 2600 BC. Some others may be a few hundred years older, if the concept of the pre-script symbolism is correct. All of them fall into the so-called “Marginalisation phase (3500 to 1500 BCE) with only transient human activities in the Egyptian Sahara and prehistoric occupation restricted to Northern Sudan” (Kuper 2006: fig.2; Kuper and Kröpelin 2006a: fig. 2; 2006b).



Fig. 22

The “Marginalization phase” of Kuper and Kröpelin is a result of an interpretation of cumulative curves of calibrated radiocarbon dates from 150 archaeological excavations. The most recent date is from about 2700 BCE in the Abu Ballas Region (Kuper and Kröpelin 2006a: fig. 2). Kuper (2006: 265) warns that “some exceptionally well dated sites might lead to a distorted picture”. The opposite is valid, too. If the dates reported by Berger (2006:211) and the information about rain events by Pachur and Altmann (2006: 332-333) and Bagnold (1933: 211-212) were incorporated, the climate curve of Kuper should be extrapolated to a value above zero for modern times.

### Pecking marks on “Water Mountain” symbols

Figure 22 presents a panel with “Water Mountain” symbols, a variety of single and double zigzag-lines and petroglyphs of some animals. In the upper left corner there are five stacked zigzag-lines, Figure 23. They are accompanied by several pecking marks while the rest of the panel is nearly free of them. In Figure 24 two rectan-



Fig. 23

gles and in Figure 25 a shield-like area is pecked. The internal design is not visible after the pecking, if indeed there had been any before. Obviously the pecking was purposely restricted to the enclosures. The concentration of pecking marks on some “Water Mountain” symbols may indicate a ceremony connected with water.

There are some reports in the literature from other areas mentioning a connection between rocks and rain or rainmaking. Murray (1935:157) reports:

The Bisharin have still a few sacred rocks and cliffs, to which ceremonial visits are performed and sheep sacrificed. Such a place is Kanjar Aweib, “the runaway stone”, in Wadi Kajuj, a tributary of Wadi Ibid. Of this stone, the Bisharin relate that it fell from the mountain into Wadi Kajuj during or after a great storm of rain. Everyone was away at the time, and when they returned, they found the valley green with rich grazing, and this marvellous stone lying in the middle of it. Ever since its appearance it has afforded the occasion for an annual sacrifice.

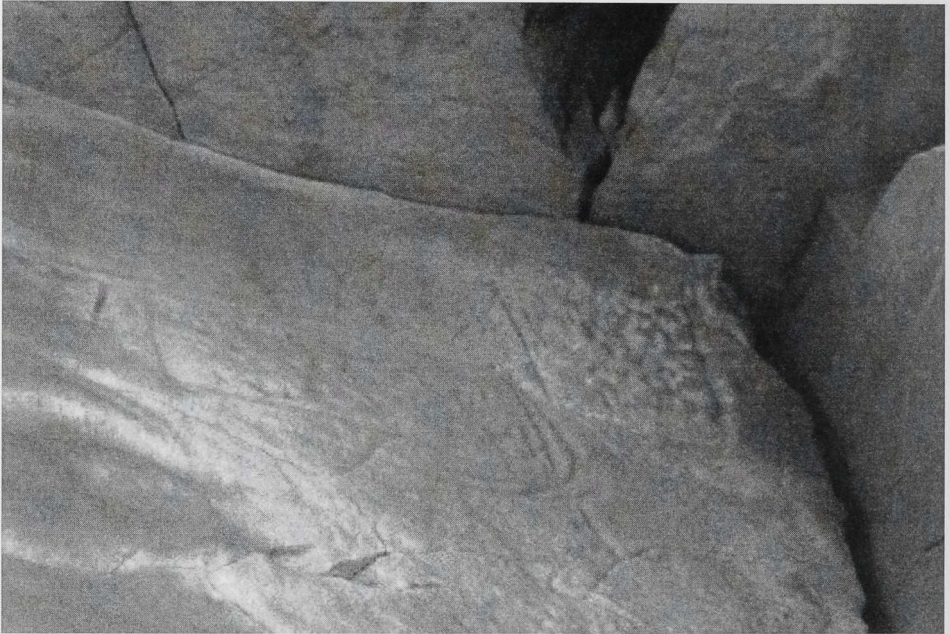


Fig. 24

On the Russian map F-36-B (Ash Sharqiyah) there is a Bir Kajuj located in a short wadi, a tributary to Wadi Ibid; this is in the Hala'ib Triangle north of 24°N, under administration of Sudan.

In Zambia specific geometric paintings are assigned to the women of the Twa. According to the description of their physical features they probably belonged to a Bushmen/San race. They are extinct now. At some sites with this art, there are ancient marks of stoning (Smith, 1997:43,49; Le Quellec, 2004:103). Weather divination was the work of Twa women. This practice was taken over by women of other peoples in several parts of southern Africa. At times of drought, they smeared dung over the paintings or threw the entrails of a sacrificial animal at the paintings and then brushed the signs over with fat from the sacrificed beast. The Twa-paintings extend into Kenya and Uganda and the rainmaking ceremonies have been carried out there until the nineteenth century or even later (Campbell et al. 2007).

Flood (1997:152; 2006:240) asked her informants in the Victoria River district, Northern Territory, Australia, about abraded grooves. She writes:

Kulumput, 'the most knowledgeable authority on Wardaman legends and ceremonies' in the 1950s, described the abraded grooves as 'rain cuts', and said that 'The old-fashioned way for making rain was to cut the Old Man Rain to make him bleed...



Fig. 25

The rain-making ceremony involved singing and dancing and then each man present cut a groove in the rock to make the Old Man bleed and bring rain’.

For the sphere of the Indo-Europeans in Central Asia, Rozwadowski (2004:53-54, 81) writes:

... in the Rig Veda the term ‘mountain’ (parvata) often refers to clouds and the word ‘rock’ (adri) is regularly used mythologically as clouds. These are in turn further identified with cows freed by Indra who (under the influence of soma) conquered the demon Vala and broke the rock in which Vala had imprisoned the stolen divine cows.

...

... According to the Rig Veda, the freeing of the cows imprisoned by the mythic snake Vritra in a cave occurred when Indra broke the rock, and this further freed the waters that had also been ‘closed’ into the rock by Vritra. ...

Figure 26 represents a bowman shooting at a zigzag. It is from Sarmish, Uzbekistan. Rozwadowski (2004:82-83) interprets the zigzag as a snake which in

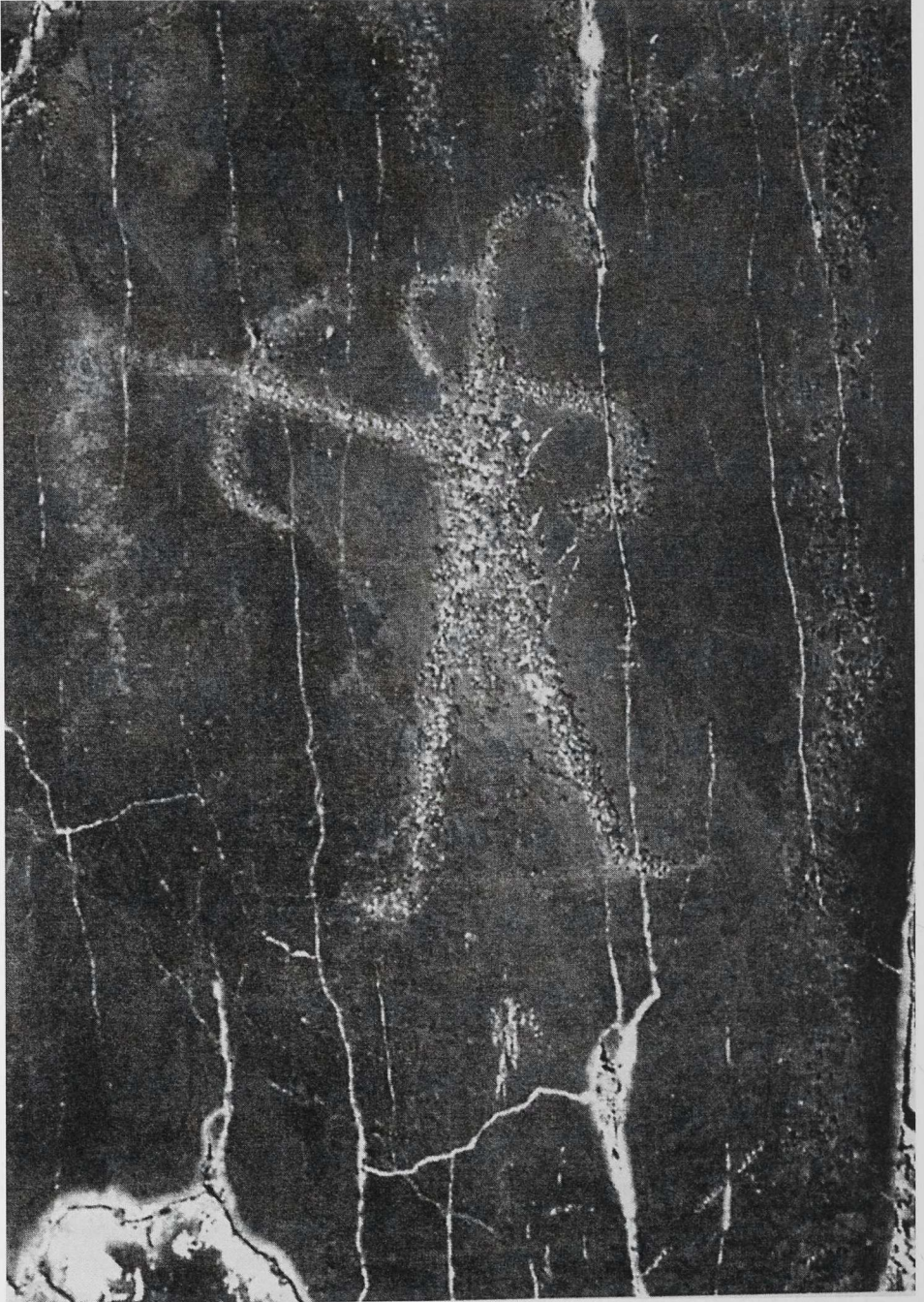


Fig. 26



the Indo-Iranian mythology represents the dragon, the demon of drought. This is another rain-making symbolism, but with a completely different meaning for the zigzag.

We may also remember the reports that Moses beat against a rock with his stick in order to produce water (The Bible, Exodus 17, 1-7).

### Acknowledgments

I am grateful to C. Bergmann who supplied the coordinates of many locations with rock art and also Figures 1 and 14, U. Steiner supplied Figure 18, B. Woodhouse permitted me to copy Figures 16 and 17 from his book, A. Rozwadowski allowed me to copy Figure 26, R. Kuper provided me with a copy of the article “More corridors to Africa”. The codes for the geographical locations are in line with the proposal by Gauthier et al. (1998). J.-L. Le Quellec supplied a proto-type programme to convert coordinates into codes. I am glad that K. Campbell improved the English.

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