The World of Petroglyphs Part 39

The People of Iheren and Tahilahi

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About 4.000 to 5.000 years ago an ethnical group lived in the mountains of the central Tassili n'Ajjer (South Algeria) which we know up to now only by its paintings. These pictographs are among the most informative and aesthetically most beautiful ones we know from the neolithic of northern Africa.

Les hommes d'Iheren et de Tahilahi.

Il y a environ 4 000 à 5 000 ans, un peuple que nous ne connaissons jusqu'à présent que par ses peintures rupestres, vivait dans les monts de la Tassili (Algérie du Sud). Les peintures de ce groupe ethnique sont les plus informatives et les plus esthétiques qui nous aient jamais été transmises du Néolithique en Afrique du Nord.

Die Menschen von Iheren und Tahilahi.

Vor etwa 4.000 – 5.000 Jahren existierte in den Bergen der zentralen Tassili n'Ajjer (Süd-Algerien) eine Gruppe von Menschen, die wir bisher nur von ihren gemalten Bildern kennen. Ihre Malereien (Piktographen) gehören zu den informativsten und ästhetisch schönsten, die uns aus dem Neolithikum Nord-Afrikas überliefert sind.

In 1957/58 the Musée National des Arts Decoratifs in Paris presented the results of Henri Lhote's research in the Tassili Mountains. By this exposition a broad public realized for the first time which treasures of prehistoric art are hidden in the mountains of northern Africa. Lhote's book "The Rock Art of the Sahara" became a bestseller worldwide. (LHOTE 1957, 1958, 1963)

Lhote's investigations were basing on the extensive preliminary studies of lieutenant-colonel Charles Brenans. From 1934 to 1939 he was commandant of the desert-fort Charlet (today named Djanet), situated on the southern slopes of the Tassili mountains. Brenans was the first who payed attention to the region's prehistoric rock art. (BREUIL & LHOTE 1955)

At first Lhote had concentrated on the eastern central Tassili of the Ajjer. Two campaigns of field investigation lasted from february 1956 until july of 1957. Later on he investigated also the western and northern parts of the Tassili, i.e. the plateau of Tadjelahin or Tasedjebest/Tasegetest above Iherir (LHOTE 1972) and the Wadi Djerat (which also had been detected by Brenans). (LHOTE 1976:11)

In 1969 he came across (among others) some painted rock shelters on the plateau west of the Iherir oasis (between the wadis Iherir, Tasset and Tadjelamine). He described them: *"…un certain nombre d'abris peints dont un …,que je n'hésitai pas à considérer comme le plus beau qu'il m'ait été donné au Tassili."* Primarily he was excited about the Iheren rock shelter which he also named « Dr. Khen rock shelter ». (LHOTE 1972)

His extremely high estimation of this rock shelter is confirmed until today by every visitor: the almost innumerable small-sized paintings of this Iheren rock shelter stand every comparison with other sites ! Since then Iheren represents (together with the neighbouring Tahilahi rock shelter) the art of a specific neolithic group which can be defined easily by their paintings. It was called "the art of the Iheren-Tahilahi-group" after these two rock shelters, recently also named "the art of Iheren". (LE QUELLEC 2009)

The art of Iheren represents numerous human figures of the tall, pale-skinned and longhaired europid/mediterranean type presenting conspicuously full hair, clear-cut faces and profiles and shortened beards. In all these respects they differ clearly from persons who belong to other groups showing negrid or negroid features.

Their technique of painting is at first hand the thin and steady line of the contours drawn with dark paint of ochre. The bodies itselves are painted in different colours which are mostly of a light tint. The human figures use to show a great number of details like coiffures, body-paintings, decorations, weapons and different kinds of instruments. The way they are represented is a very realistic and naturalistic one, even in details, the hair-ornaments and dressings – especially the women's – sometimes may be called to be fashionable.

The paintings of the Iheren-people show them in scenes with all kind of every-day-life activities: building of huts, destruction of the camp, "being on the way", tending the cattle, actions around the hut, dancing and hunting, celebrating and taking care of the children etc. By this wide range of motives especially the paintings of the Iheren people have given us an extensive imagination about the world of the nomads and hunters of the 3rd millenium BC. Probably this world did not differ very much from that of the preceding millenia. (LE CORRE 1984; MUSEEN der STADT KÖLN 1978: a.o. 366, 417-421, 424-431, 435-447)

The fauna displayed on the paintings is rather limited. It comprises representations of elephants, of lions and ostriches and sometimes even large groups of giraffes and antelopes, but most of the representations of animals show (sometimes large) herds of cattle or sheep.

In the course of years our knowledge of the art of the Iheren people has increased considerably by numerous findings of new sites. These were found at first hand in the western central Tassili (see below), but also in the Djado- (HALLIER & HALLIER 1999: fig. 72a; s.fig. 55/55a) and the Hoggar-mountains (Assabai: MUZZOLINI 1995: fig.335). Most of them show single figures, but often also small groups of pictures or scenes. Rarely the paintings cover whole rock shelters like those of Iheren and Tahilahi or also of Ouan Derbaouen.

In this paper we present a collection of new findings and re-editions of the recent years. Some of them represent "classical" Iheren-technique, some of them show paintings which are closely related to "proper" Iheren-style. Some of the sites were – as indicated – published before in other periodicals.

Upper Tasset I

The very naturalistic cow on **fig.1** does not need any further explanation. In any case the artist (male or female?) was a very scrupulous observer. This is proven by details like the



animal's dewlap, the wrinkles of its breast and their fine hairs, but especially also by the way the hoofs and their shrunk toes are exhibited.

Fig.1 Splendid cow of Iheren style. 30 cm. Upper Wadi Tasset/W-Tassili, Algeria

The animal shows clearly a characteristic of the presentation of cows in these times, a slim, almost elegant head: we do not know, if this factually was a racial feature at that time or if we maybe have to understand this as a

kind of mannerism. In any case there is a great difference in comparison to the actual breedings of cattle. (HALLIER & HALLIER 2004; 2005/2006) Besides also the way of presenting the horns is very characteristic. (**fig.2**) The beauty of their cattle and above all of splendid horns probably played an important role (and do this until to-



day!) for cattle-keeping people. Some of them, as e.g. the Wollo of the Ethiopian highlands, are still breeding cattle with tremendous horns (**fig.3**). Some others developed techniques of artificial horn alteration like horns which are directed forward or

hanging at the side (so-called pendant horns). We find these practices until today especially with the Dinka and the Nuer, living along the Bahr el Jebel, the upper White Nile in southern Sudan.

Fig.2 Section of fig.1.



Fig.3 Ethiopian Wollo-cattle, bred for horn-size.

[To achieve this, one has to scrape off the horn's outer horny sub-stance on that side, where the horn is wanted to bend to. Already Herodotus knew this custom; he wrote: "*The garamants keep cattle which have to walk backward when grazing; they do that because their horns are bent forwards and downwards*." (HERODOTI HISTORIAE, lib. IV, 183, 2: descriptio Libyae)]



We find these horn alterations – the transcontinental migrations explain it – not only in Egypt since the Vth dynasty, but also on the rock pictures of the Sahara. (**fig.4** = HALLIER 1990 = FII: T.96A). (comp.also figs.11, 27, 44, 47)

Fig. 4 Pecked cow (65 cm) with pendant horns, halter, saddle-bag (?). N-Djado/Niger.

The cattle of the Iheren people exhibit this artificial horn-alteration, too, but not regularly. But – as our example shows – the cows are mostly

presented in a side-view, with the exception of the horns which are presented almost always – somewhat turned around – in a more impressive direct view. This way of presentation is a kind of an "iconic turn", as this old Egyptian – but probably much older (Saharan ?) – manner of representation was named.

Upper Tasset II

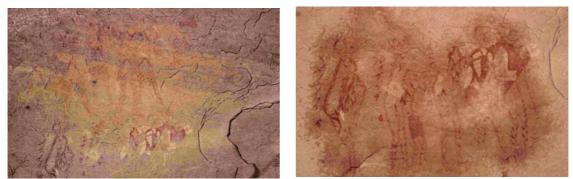


Fig. 5.1 + 5.2 wo rows of Iheren people (ten adults, one child; each 12-13 cm). Lower row: adults bearing "guirbas", leather container for water transport. Upper Wadi Tasset.

Another interesting example of a painting representing lheren people sized 12 to 13 cm (**fig.5**) should draw attention to the fact that not all paintings of the Stone Age can be recognized and interpreted as easily as the cow of fig.1: only the careful drawing of the group (**fig.5-a**) mediates an idea how difficult it is often to get a result with the help of different photographic techniques and magnifying glasses. Sunlight and weathering often have injured the paintings badly, sometimes have destroyed them almost totally.

The scene, painted in red and white colour, shows two rows of alltogether ten adults and a child(?) above eachother. In spite of its today's bad state of preservation one can easily recognize the body paintings of the men. Some of them bear bows, others have throwing sticks.



The adults of the lower row bear – something very unsual – on their backs "guirbas", i.e. water containers made out of animal-skins. Some of these guirbas still show the form of an animal body and the animal legs detached by ligatures. The containers are decorated with tassels – this is a kind of guirba decoration which one may find until today in the sahel of western Africa, e.g. in Burkina Faso. (HALLIER & HALLIER 2002 a, c)

Subsequently we present the representations of two large cattle herds, to demonstrate the stylistic and technical bandwidth within the Iheren group and related groups and to show that almost every painting exhibits the handwriting of a particular artist.

Fig.5-a Drawing of fig.5.

Ifedaniouène Mountains

The first example is a site in the Ifedaniouène Mountains (western central Tassili). It is espe-



cially interesting because it presents several small side-scenes which are not part of the mainscene, i.e. the herd (**fig.6/6-a**). Besides this example elucidates the danger of a misinterpretation: at first sight the painting shows a herds-man driving cattle to pasture (on fig.6-a, dotted). But a closer scrutiny of the superimpositions within the painting makes clear that the herds-man (35 cm) does not belong to the cattle herd but is a shepherd of 1-3 sheep around him. (**fig.6b**)

Fig. 6 Shepherd (35 cm) with 1-3 sheep; in subposition to a marching cattle herd, led by two women riding on cows. Ifedaniouène mountains, W-Tassili, Algeria.

This is certain with regard to the animal which follows him and possibly also with regard to the two sheep(?) to the right of him. This scene of a shepherd and his sheep was in later time painted over with a nomadic cattle herd.

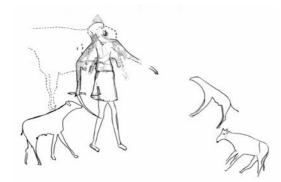
Fig.6-a Drawing of the marching cattle herd of fig.6 and of several side-scenes; superimposed shepherd: dotted lines. Scale see fig.6.



One (or two?) women on the left side, sitting on cows, are – faintly visible – driving and conducting this herd. (**fig.6c**)

One of the side-scenes possibly represents a milking scene; but its bad state of conservation does not allow a definite estimation if the man under the cow really is busy with the cow's udder. (**fig.6d/6d-a**)

Another one of the side-paintings shows a very intimate representation of a mother with her child, a motive which is not rare in Iheren paintings: a sitting woman (15 cm), dressed in a loose robe, reaches out her arms towards a child which leans towards her and reaches out his arms for her. (**fig.6e/6e-a**)



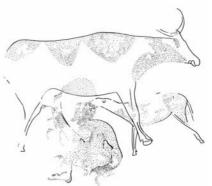


Fig.6d-a Drawing of fig.6d. Scale see fig.6. Today the woman's head is weathered and can be reconstructed only in part. Originally it seems to have been elaborated very neatly, with curls hanging down and a hairdressing which may have been covered by a cap(?).

The small crouching figure directly below the cattle is not part of the cattle herd and seems to have been added later to the scene. (See fig.6-a)

Fig. 6b Drawing of the shepherd (35 cm) and sheep of fig.6.

A third side-scene which certainly is not part of the moving herd either presents two men, drawn with very thin lines. These men move bowed or rather crouching like sneaking hunters. They both hold in their left hands a sort of a long, slightly bent and pointed



weapon for stinging or throwing (?). This weapon of 9 cm on the painting must have been about 50-60 cm in reality. (**fig.6f/6f-a**)

Fig. 6c Drawing of a section of fig.6:2 (?) women riding on cows, leading the marching cattle herd Scale see fig.6.



Fig. 6d Side-scene of fig. 6: Milking(?) scene; (comp. fig. 6-a). side-scene of fig. 6 Scale see fig.6.



These weapons are very much a like the one, the shepherd holds in his right hand on fig.6 and which also gives the impression to be a stinging weapon.



Fig. 6e Side-scene of fig.6: sitting woman (15 cm) with child. Scale see fig.6.

Fig.6e-a Drawing of fig. 6e. Scale see fig.6.

In both cases these weapons can not at all be interpreted as throwing-sticks which we find often on paintings of this era. (See below: "Weapons and Tools of the Bovidian Period")

The attitudes of both hunters(?) are exactly identical, like synchronous. This rather gives an impression of gymnasts than of hunters. Maybe one of the figures can be understood as a copy of the other one.

The clothing of both men is rather scanty – it just consists of a belt and a penis sheath. The hunter in front superimposes a sheep which exhibits a peculiar running attitude. The upper one of the two is superimposed by a crouching archer; this prooves that this archer is a later addition, i.e. he is younger than the two "gymnasts".



Fig.6f Side-scene of fig.6: two crouching hunters (?), an archer and a sheep. Scale see fig.6.

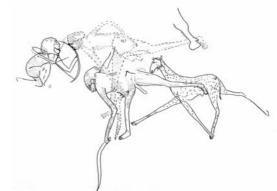


Fig.6f-a Drawing of fig.6f. Scale see fig.6.

Upper Tasset III

It is interesting to compar this cattle herd of Ifedaniouène (which does not represent a "classical" Iheren painting) and another cattle herd of the upper Wadi Tasset **(fig.7/7-a**): on both



paintings the cows are displayed very naturalistically – nevertheless they both exhibit clear differences in style and technique, in colouring and coat design, in the arrangement, the liveliness and the individualization of the animals: two different handwritings, two different artists and probably also two different times !

Fig. 7 Splendid cattle herd with herdsman behind a cow of 36 cm. Upper Wadi Tasset/W-Tassili, Algeria.



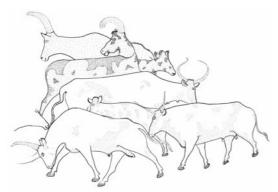
The second cattle herd presented here was found in a rock shelter near the upper part of the Wadi Tasset.



Fig. 8 Front part of fig.7. Scale see fig.7.

Fig.7-a Drawing of the complete cattle herd of fig.7

It is apparently the work of an outstanding artist. This is shown by the arrangement and the very different attitudes of the animals. Each of the cows displays different colours and coat design. (fig.7/7-a) This herd was perceptibly "composed" to present each one of the animals strikingly. Especially the animals in front are individuals and mediate the impression to be perfect "studies of movements". (fig.8/8-a)



The artist perfectly knew the "art of gradation in the depth" of a painting and he knew how to avoid intersecting and overlapping among the animals in the first row, i.e. to avoid that essential details like head, tail and horns were not concealed !

But even the second row of animals is planned and thought out carefully: look at the large animal which turns its head to make the young animal visible between the old ones.

Fig.8-a Drawing of the central part of fig.7. Scale see fig.7.

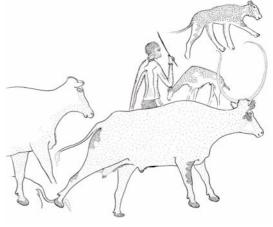


The small animal in front of the herdsman seems to be a sheep, the one above apparently seems to be a young calf. (fig.9-a) At the left the painting is somewhat damaged. Therefore the animal behind the cow which is turning around cannot be reconstructed totally. The small figure of a hunter at the lower left was added later and is not part of the scene. (fig.7-a)

Fig. 9 Section around the herdsman of fig.7. Scale see fig.7.

This herd is clearly driven by a herdsman. Only his trunk (12,5 cm) is visible, the lower half of his body has disappeared behind the "splendid cow" (36 cm) in front of him. (**fig.9/9-a**)

Fig. 9-a Drawing of fig.9. Scale see fig.7.





This herdsman (**fig.10**) is interesting in several aspects. He displays – like the guirbabea-

rers – distinct body- and face-painting (or tatoos). The design is different, almost like that of clothes, but most certainly these designs were different, but not voluntary from group to group in former times. Until today we find this importance of certain designs, different with different groups and villages, e.g. in south Ethiopia/southern Sudan.

Fig. 10 Visible part (12,5 cm) of the herdsman on fig.7.

Certain characteristics of the herdsman's outward appearance do not fit in with the picture we have of the lheren people – it is the herdman's clearly non-europid appearance: his short-curled hair, his rather dark complexion and the somewhat knobby nose rather suit a negrid or negroid type. Unfortunately his face does not reveal further anthropologic details like prognathism and the shapes of lips and nose.

Considering the (few) facts which we can verify it is probably too far-fetched, but: we certainly cannot exclude that in those days members of defeated ethnical groups were "kept" to execute inferior services. We know this from the past (and partly until today !), e.g. from the Berber Touareg and their serfs !

Insertion I: Body Painting, Tattooing and/or Scarifications

In default of adequate archaeological findings we do not know since when man started to paint. Corresponding findings prove that painting started at least in the Upper Paleolithic, possibly earlier. The oldest paintings of the Chauvet Cave (Ardèche/France) are dated to 33.000 to 30.000 years BP. (LORBLANCHET 1997, VALLADAS et al. 2001, CLOTTES 2007, 2008)

E.Anati assumes that part of the rock art of Tanzania goes back to "The First Stage of Archaic Hunters and Gatherers", i.e. to 40.000 BP., but this hypothesis is not reliable since its basis is a comparison of styles which could not be verified by exact datings. (ANATI 1986)

The oldest African paintings which were exactly dated hitherto were found in 1969 and 1972 by E.Wendt: he excavated painted slabs which he found in C14-datable layers of the "Apollo 11"-grotto in Namibia. These slabs are from the African "Middle Stone Age"; they were dated to 27.500 to 25.500 BP. Additionally Wendt found fragments of mineral pigments in layers which were dated to >48.000 BP. These pieces of pigments apparently were imported into the grotto and partly showed traces of abrasion. (WENDT 1974/75)

Certainly such findings of pigments do not lead us automatically to the oldest rock paintings ! The colour may have been used for body painting, too – actually with a certain degree of probability ! We may assume that body decoration started far back in palaeolithic times, very probably at least in the Middle Palaeolithic or African Old Stone Age. (BEDNARIK 1995) For example archaeologists recently found an oceanic sea shell which was perforated and coloured with mineralic pigment. It is attributed to the Iberian *homo neanderthalensis* and was dated to about 50.000 BP. (ZILHÃO 2010)

[On the other hand R.Bednarik even assumes that the beginnings of palaeo-art reach far back to the Old Palaeolithic or Middle Pleistocene and to *homo erectus*. (BEDNARIK 2003; 2008)

This assumption was confirmed in a certain way by excavations which latly (2008) were made in the Blombos cave (Southern Africa): in this place the scientists found two shells of *Haliotis midae* which apparently had been served as mortars. It could be proven that these mortars were used to produce ochre powder of different colours – red and yellow – which had been mixed with water. The age of these "mortars" used for colour-production was dated to >100.000 years. This paste of colour may have been used (a.o.) for (body-)painting or even for the purpose of skin protection. (HENSHILWOOD et al. 2011)]

Considering the findings made up to now it could be very well that body painting even was prior to body decoration using ornaments like pearls, perforated and coloured shells and snail-shells, manipulated stones and bones.

In the Tassili mountains rock paintings of numerous and different groups show many examples of body paintings. Above we already have presented several findings which display people with body paintings or tatooings: see the group of arcs- and guirba-bearing lheren people and the herdsman of the herd of splendid cows of the upper Tasset.

In pursuit we will present more people of the Iheren group (or of groups closely connected to them according to their manner of painting). They all exhibit specific, characteristic kinds of body painting or tatooing. See: Rock Shelter "Iheren II" (figs.19, 20), the butcher-scene of Aharhar Tasset (fig.49/49-a) and especially the rock shelters Talmoust (figs.33 - 35) and Tidder/Tedar (figs.30, 31) and the "recess of birth" (figs.40, 41) (See also HALLIER & HALLIER 2002 a, c; 2003; HALLIER 2009) On the plateau Tadjelahin above the oasis of Iherir and also in the upper Tasset region not far away several sites of rock art exist which were not investigated with thoroughness and were published only in part. A few of these paintings are presented here – some Iheren pictographs, some related to them with regard to style and time.

Rock Shelter "Iheren II"

About 1 Km northeast of the very famous rock shelter lheren and beyond the Wadi lheren another rock face exhibits some very fine drawings of the "lheren group" from the middle of the 3rd millenium approximately. The natives call it "lheren II".

Since this rock face is much more exposed to the sun than the main rock shelter lheren his pictographs have much more turned pale; in large part they have become almost indiscernible. Some of the small isolated scenes showing different motives can be reconstructed. As a help for the reader some of them were drawn additionally.

Figs.11, 11a, 11b exhibit the drawings of two of these small scenes: the upper scene depicts a section of a wandering nomadic cattle herd, the lower one shows several persons, painted in superimposition.



Fig.11a Lower, more detailed part of fig.11

Fig. 11 Drawing of several Iheren-scenes, some in sub- or superimposition. Above: marching cattle herd, led by a woman. Below: sitting persons, in subposition to two running archers and a bent person. Site "Iheren II", Wadi Iheren, plateau Tadjelahin, W-Tassili/Algeria.



The wandering cattle herd moves to the left. It consists of about a dozen of animals, but the



drawing exhibits only the heads or the front-parts of the cows which are arranged above and behind each other. (**fig.12**) Only the leading animal in front is shown almost completely. On its back a woman is riding and leading the herd. Apparently her head is wrapped in a cloth which does not only serve as a kerchief but protects also the trunk. Very distinct is her clear-cut europid face with a prominent nose. (**fig.13**)

Fig.11b Sitting(?) group (couple ?) of fig.11, more detailed and without superimpositions.

The riding woman is sitting on a very patterned saddle. As well as several objects or vessels also the bridle, leading to the bridoon are fixed to the saddle. (A.Muzzolini has published a small section of the scene which is also shown on fig.12: see MUZZOLINI 1995: fig.28.)

The cows exhibit different shapes of horns and also artificially bent horns and pending horns (see above).

The smaller scene below which is still more faded exhibits



clearly – even if it is not the uppermost layer of paintings – two (sitting ?) persons. The right one seems to hand over a small object to the left person. (**figs. 11**, **11b, 14**,)

Fig. 12 Main part of the marching cattle herd of fig.11.



Fig. 13 Centre of fig.12 around the cattle herd-leading riding woman.



This person to the right certainly is a man. This is made clear by the bow in his left hand and by his clearly visible painted face. His clothing seems to be a kind of a patterned cape.

According to her build (bosom) and hair-style the left figur seems to be a woman.

Both persons exhibit clearly recognizable europid profiles and pointed noses. (**figs. 11b**,)

Fig. 14 Painting of fig. 11a



Fig. 16 Drawing of three indipendent scenes of the site "Iheren II" (see fig.17).

Both figures are superimposed by later – i.e. younger – figures of the same ethnic group: at the left it is a running archer, at the right side there is a halfways kneeling(?), somewhat bowing man who exhibits clearly body- and facepaintings. Below them there is another superimposing running (?) archer, turning his head. (fig.11a)

In subposition to these 3 or 4 layers of paintings some indistinct remainders of horned animals can be seen which do not belong to the lheren people described above.



Fig. 17 Upper part of fig.16: a hanging(?), undressed man (appr.25 cm) with mask(?) and an archer, running at top speed.

The next drawing (**fig.16**) exhibits – drawn in a correct position to each other – three small,neatly drawn scenes which are indipendent of each other: Upmost an undressed person (about 25 cm high) with highly extended arms is standing – as if it was hanging on a tree. (**fig.17**) The outline of his body is drawn with a fine and brownish-black line, the inner part of the body is shaded with very light reddish-brown colour.

The most interesting part of his body is the head which either is painted all over or – the muzzle-like profile could fit to this interpretation – is wearing a face mask. (Similar strange faces or face-masks were presented recently in a small paper on "The Warriors of Wadi Oumashi": HALLIER 2009 a) Therefore A.Muzzolini's characterization of the profile to be *"faux-prognathe"* is not correct in any case. (MUZZOLINI 1995: fig.98)

Below this "hanging" man an archer, running to the right at top speed, can be recognized. He is turning his head to the left, looking back. Although his voluminous hair-do (which is recognizable only faintly) almost could be interpreted as a woman's, his attribute, a bow, clearly is pointing to a man. Obviously in this case again it seemed to be of importance to show distinctly the clear-cut europid profile of the person.



Finally at the bottom an archer is "running on the knees", looking out for an aim on the upper left whilst laying an arrow on his bow. (**fig.18**) Easily as well his painted face and a tuft of hair with feathers(?) can be recognized as also the belt with some objects fastened to it. Behind this hunter(?) the frontpart of an animal resembling an antelope can be recognized.

Fig. 18 Kneeling archer: lower part of fig.16.

Figs.19/19-a show a figure, running fast to the left. It wears a loin cloth and its whole body seems to be tattooed or painted. To the left of the figure's head its europid profile with a pointed nose was drawn enlarged and more in detail.

Fig. 19 Running Iheren-man; Site "Iheren II" (see fig. 11)



Fig.20/20-a displays a very agitated group (about 40 cm long) of four warriors rushing or fighting against each other – or maybe presenting a "dance of war" ?

Fig.19-a Drawing of fig.19; to the left of his head: enlargement of his face.

Very striking is their uniform body painting, consisting of brownish-black dots. Again the europid faces with pronounced noses are remarkable which appear under the men's head-wrappings (or paintings and hair-dos ?), reminding the riding woman

on fig.13. The men's head-wrappings which reach down to their necks (see the figure to the right) are additionally adorned by feathers. Also ornaments like bangles or bracelets are discernible. Fixed to their belts the men wear a kind of *"cache-sexe"*.





Fig.20 Group of four fighting (or dancing ?) men (about 40 cm) with body-painting. Site "Iheren II"

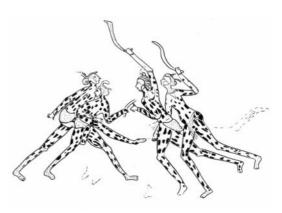


Fig. 20-a Drawing of fig. 20.

The weapons which the men whirl round are no boomerang-like throwing sticks (as explained in MUZZOLINI 1995: fig. 132), but rather pointed, rapier-like weapons which must have had in natura a length of about 50-60 cm. Such slender, long and pointed weapons probably did not serve as throwing sticks, but rather as pointed weapons for stinging purposes.



Fig. 21 Two theriocephalous figures running at top speed. Site "Iheren II" (see fig.11)

Finally this rock face "Iheren II" displays two theriocephalous figures running at top speed which surely do not belong to the pictographs of the Iheren people. (fig.21/21-a)

[Below (see "Insertion II") we discuss these objects and other kinds of weapons or knives and their distinction to throwing sticks (as we have done before: see above and HALLIER & HALLIER 2001-2002: 121; 2002 a: 107ff.; 2002 b: 5, Abb.31, 33 - 44.



Fig. 21-a Drawing of fig. 21.

Their heads exhibit blunt muzzles and short, roundish animal-like ears. Originally they seem to have been painted in flat darkbrown colour. Their state of preservation does not allow a further differentiation, but maybe they wear a kind of loin-cloth or a "queue postiche".

Iheren Rock Shelters on the Plateau Tadjelahin (Amarasouzi, Tahountarvat, Talmoust) and west of Wadi Upper Tasset (Tidder/Tedar)

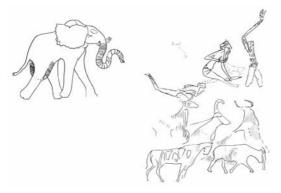
On the plateau Tadjelahin and in the region around the name-giving lheren Rock Shelter more sites exhibiting paintings of the Iheren group are found. One of them is the Amarasouzi Rock Shelter, situated in the Wadi Oumashi. This rock shelter exhibits some very agitated and naturalistic paintings of Iheren style. We presented them earlier in another paper



(HALLIER 2009 b):

Fig.22 shows an elephant of about 35 cm length. The painting is very naturalistic - see e.g. the transverse wrinkles of its trunk and the fine little hairs at the end of its tail.

Fig.22 Elephant (35 cm), chasing a hunter. Amarasouzi rock shelter, Wadi Oumashi. (Plateau Tadjelahin, W-Tassili/Algeria)



The animal is shown in vivacious motion because it persues a hunter. This hunter is shown on **fig. 22-a**. In his hands he possibly is holding a throwing stick (or a knife) and a bow. Whilst running he turns his head, looking back anxiously to his persecutor. (**fig.23**) It is this look back to the pachyderm which discloses a whole story. The topic "elephant persueing a hunter" is narrated throughout the whole "Hunters' Period", from the "Ancient Hunters" on till the hunting half-nomades of the "Bovidian Period".

Fig.22-a Drawing of the scene around the elephant of fig.22.

Below this scene of pursuit the rock face exhibits the paintings of several cows. With regard to their style they belong to different periods. One of the cows in subposition (i.e. older) can be ascribed to the Iheren painters according to its technique of painting, its agitation and naturalism. (**fig.24**)



Fig.23 The chased hunter, looking back to the elephant.



Fig.25 Iheren people with sheep and gazelle. Amarasouzi rock shelter.

Above this main scene one of the side-scenes exhibits two very vivacious human figures, followed by a sheep and a gazelle. This side-scene probably belongs to the Iheren paintings, too. (**fig.25**) More to the right on this narrow rock face another small group of Iheren people is discernible:



Fig.24 Iheren-cow of the Amarasouzi-scene on fig.22-a (lower right corner).



Fig.26-a Drawing of fig.26.

three walking women in vivid movement, dressed in long robes which are decorated with fringes. (fig.26/26-a)

Some more examples of Iheren paintings are found in the same area on the rock face at a site called **Tahountarvat**. (HALLIER 2009 b)



Fig.27/27-a shows the centre of a densely painted and good preserved part of the rock face. It shows a larger number as well of domesticated animals (cows, sheep) as also of wild animals like giraffes and gazelles. Unfortunately the marginal parts of the painting are very weathered and mostly destroyed.

Very interesting is the way how a larger number of cows were represented on a rather small part of the painting: the artist painted only the heads and the front-parts of the animals. Densely arranged one behind the other one has the impression of a cattle herd which is pressed together.

Apparently it was the idea behind this technique of representing the cows to show all kinds of different horns, even pending horns. In total the painted wall gives the impression that at this site the artist(s) practised different designs.

Fig.26 Three walking Iheren women. Amarasouzi rock shelter





Fig.27-a Drawing of fig.27.

and wild animals. (Plateau Tadjelahin, W-Tassili/Algeria).



The two following figures do not only show two sections of these "designs of cows" (**fig.28**) and "designs of hunted animals" (**fig.29**) on this painted wall, but also two spots where the Iheren paintings later were painted over with darkred paint: neither fits this colour to the careful drawing technique of the Iheren artists nor is it a sign of high artistic quality how the neat lines of the Iheren drawing were painted over !

Fig.28 Section of fig.27: different types of cow horns.

Before painting the rock face the Iheren painters seem to have prepared it: in some parts older paintings were covered with white colour, to get a neutral undercoat for these new Iheren paintings – a sort of a palimpsest.

Fig.29 Section of fig.27: different species of wild animals.





In an earlier paper we already have presented another good example of vivacious and close-tolife painting within the Iheren period, found in the **Tidder** or **Tidar Rock Shelter**. (HALLIER 2009 b)

Fig.30/30-a and a section of it on **fig.31** display the escape of a number of unarmed men fleeing a lion which is attacking the group.

Fig.30 Lion, chasing unarmed men. Tidder rock shelter. (Plateau Tadjelahin, W-Tassili/Algeria)





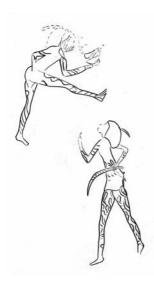
Fig.31 Section of fig.30.

Fig.30-a Drawing of fig.30.

This escape was painted by the artist in an almost choreographically constructed way – a moment of highest tension was "frozen" with extreme artistry ! (The cow of **fig.32**, another painting of the Tidder Rock Shelter, probably must be ascribed the Iheren people too.)



Fig.32 Cow, painted in an Iheren-like style. Tidder rock shelter (see fig.30).



Further examples of – at least part of them – abundantly painted or tattooed men who at least seem to be close to the Iheren people are found among the paintings on the ceiling of the **Talmoust Rock Shelter**. These are single figures which do not belong together. The figures almost give the impression of isolated "studies" or even of an artist's "studies how to move". The paintings are – monochrome – partly only faintly visible. Apart from their body paintings some of the men are interesting also because of the tools which they hold in their hands. This theme we shall discuss later: see "Insertion II".

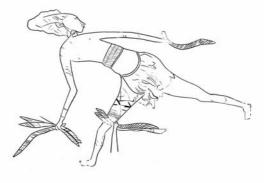
Fig.33a shows two vivacious persons which exhibit especially careful body paintings. Both are adorned with feathers(?) on their heads, one of them is holding a curved and pointed object in his hand.

Fig.33a Iheren figures with body paintings. Talmoust rock shelter. (Plateau Tadjelahin, W-Tassili/Algeria)

The body painting of the two persons on fig.33b is only faintly visible, but very evident are

their very europid profiles. These persons wear feathers on their heads, too, one of them is holding in each hand a bent weapon(?). Both apparently wear still discernible sandals on their feet.

The running man on **fig.34** exhibits interesting details: certainly his body painting is only partly visible, but undoubtedly he is wearing an apron and also – besides a normal belt – also an unusually highly positioned belt which seems to be manufactured very artistically. Certainly the high position of the upper belt indicates that it is more than just a belt.



of Fig.34 Iheren figure with different kinds of weapons(?). Talmoust rock shelter.



The man shown on fig.35/35-a exhibits an especially rich body painting. He is wearing feathers on his head and holding pointed weapons in both hands. Moreover he seems to wear a belt; several objects are hanging from the belt they are fixed to.

Fig.35 Iheren man with rich body painting and weapons(?). Talmoust rock shelter.

> Fig.35-a Drawing of fig.35.



Fig.33b Iheren figures alike fig.33a.

He is looking back whilst running. Remarkable is above all a coiffure which is piled up highly. He, too, is holding pointed objects in both hands which can be interpreted only as weapons – one in his right hand, at least three in his left hand.

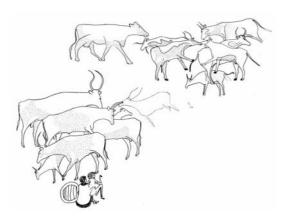
This left hand on fig.34, holding several weapons, is extended – as also the left leg – to the man of **fig. 35/35-a**. Which of the persons is in sub- and which in superimposition cannot be decided clearly, not even at the point of intersection between the leg of the man on fig.34 and the weapons which the man fig.35 is holding in his hand.



Tissebouk Rock Shelter, Irekam Aharhar

A particularly beautiful example of careful lheren painting is exhibited at the site of painted rock art named Tissebouk. One of the painted walls shows a cattle herd. A more scrutinized investigation of the – at first glance – homogenous herd makes clear that this herd in reality is composed of two groups of cows, painted by different artists and probably derived from different periods also. (**fig.36**) Only the lower group of cattle – probably six animals – is unequivocally lheren painting, whereas the upper cattle group of probably seven animals

seems to represent rather "late lheren painting", i.e. a (not very much) later addition to the wall painting.



Below the "classical" Iheren-herd a man and a woman are sitting. Beside of them lies an interwoven mat(?) which maybe represents a saddle-cloth as we know them very well from the nomadic scenes of Uan Derbaouen or of In-Goubba. (MUSEEN DER STADT KÖLN 1978: 420; HALLIER & HAL-LIER 2011: fig.43)

It is not unlikely that the couple and the lower group of lheren cattle belong together – but this is not absolutely sure since the man's tuft of hair collides with the hoof of the cow next to him.

Fig.36 Iheren couple with cattle. Site Tissebouk (Irekam Aharhar, W-Tassili / Algeria).

But such small faults are rather rare on lheren paintings: just compare the figs.7 – 10 of this paper displaying the "splendid herd" of the upper Wadi Tasset which is composed so carefully. Therefore we cannot exclude that the young couple and the herd were not painted by the same artist at the same time.



On the drawing (fig.36) another figure was left out intentionally because it is evident and proven by of its superimposition that it was added later to (a part of) the Iheren scene. (**fig.37**) This man exhibits clearly body painting; he belongs to the ethnical group of Ti-n-Abañher people (LE QUELLEC 2009), before called "people of Abaniora resp. of Tin Aweinheir".

The members of this ethnical group are « ... quelques rares types négroïdes vrais, mais surtout des Noirs de types non negroïdes ... » (after MUZZOLINI 1995: 127).

This group gives the impression of being determined by a style «sui generis» ... « ...chronologiquement ... vaguement contemporain de l'école d'Iheren-Tahilahi ou à peine antérieur.» (MUZZOLINI 1995: 126)

Fig.37 Ti-n-Abañher man, bending over the Iheren couple.

This latter statement is – considering the situation of superimpositions at Tissebouk – probably wrong as we want to explain further down.

The most important part of the paintings is the affectionate and precise presentation of the young, sitting couple. (**fig.38**) This is true especially for the woman and her vestment which exhibits particularly at its hem neat details like frillings and decorations. But also the part of the dress around her neck is formed almost fashionable by a manifold collar.



Fig.38 The Iheren couple without the superimposition of the Ti-n-Abañher man.

The young lady displays - just as her companion does - a europid profil with a slightly pointed nose. Additionally the man has whiskers and a well-groomed pointed beard. The

coiffures of both are exhibited very carefully. The man's hair is in two parts: the frontpart is combed forward.

Of highest interest – and rendering possible further conclusions – is the fact that apparently the man is absolutely nude. In these times this must not necessarily have been unusual albeit the presentations of lheren men as a rule display them dressed.

In most cases men wear an apron or just a "*cache-sexe*" and (often, not always) sandals on their feet. Bare parts of their bodies are mostly painted or tattooed.

But in this case at Tissebouk the nakedness of the man seems to have been understood as an offence (maybe because of his nearness to a dressed young woman ?): the Ti-n-Abañher man is clearly bending down to the naked young Iheren man and he (respectively his painter) "dresses" the nude with five strokes of exactly the same colour, the Ti-n-Abañher man was painted with !

Apart from the cultural-historically interesting situation which seems to have been presented here, the scene allows additionally a relative dating of the painted rock face: since the Ti-n-Abañher man "dresses" the nude Iheren man (because he perceives him as being "scandal-ous" ?) apparently the Iheren couple was the first element of the painted scene which the Ti-n-Abañher man "reacted on".

He – the Ti-n-Abañher man – on the other hand was painted over by the hind feet of the lowest of the Iheren cows, as fig.37 shows clearly. This means that the Iheren cattle are a later addition and this is a proof for a sequence "Iheren-couple - Ti-n-Abañher man – Iherencattle". This means that here we have evidence that both groups, the Iheren people and the Ti-n-Abañher people were contemporal and that originally the Iheren-cattle did not belong to the Iheren couple!

By this observation and its interpretation we correct a paper we published earlier. (HALLIER & HALLIER 2003: 151)



Among the nicest scenarios of Iheren paintings which we found in the course of time is – apart from the herd of "splendid cows" of the upper Wadi Tasset – undoubtedly a touching sene of the Irekam Aharhar: in a small recess in the rock of about 85 by 110 cm a manyheaded herd of cattle, calves and goats is arranged in a refined way into the roundness of the niche, shoving around a family scene. (fig.39)

Fig.39 Iheren family scene around a newborn baby; 85 x 110 cm. Irekam Aharhar, W-Tassili/Algeria.



Fig.40 Section: Upper part of fig.39.

In the centre of the group a nomade father has – as it seems – taken his (first-born ?) son(?)



out of a little basket to present him proudly to his neighbours or relatives: from the left four sitting and kneeling men look at the baby with astonishment. (figs.40/40-a, 41/41-a)

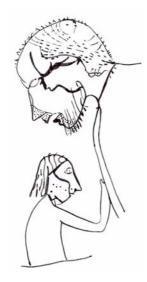
On the right side of the group a young woman with a tidy hair-do is sitting, probably the mother. She is wearing a wide robe which shows the bossom. This dressing exhibits particularly at its hem an edging of frillings(?). The woman is holding her right hand like a protection for the baby in case it would fall down off his father's hands. (**fig.41/41-a**)

Fig.40-a Drawing of fig.40.

From behind a sort of screen or wind-breaker between father and mother a hand reaches out towards the baby. This hand and to which person it belongs to is difficult to explain – maybe it belongs to the real mother or to the nomade's second wife or maybe this is just the rest of the first version of the painting which became altered ? We do not know !



Fig.41-a Enlargement of the central group around the child.



The woman and also the visitor in front wear nice sandals on their feet. The artist did not even forget the boot-laces !

The representation of the four visitors of the new-born-baby is very different and displays many details concerning their aprons, the painting of the trunk of one of them, their hair-dos, beards and face-paintings. (fig.41/41-a)

Fig.40-b Father(?) and newborn son(?) of figs.39, 40.

Apparently it is especially the coiffure which plays an important role: three of the four visitors exhibit how important it is that the shorttrimmed hair covers only the back of the head, like a cap, whereas the frontpart of the cranium remains hairless. We know this kind of "coiffure" e.g. from the Hamar of the Omo region (S-Ethiopia).

In this area men exhibit it very proudly because it demonstrates that the owner is a "hero" who has accomplished something extraordinary, a special deed. This may be e.g. the killing of a big cat or also an enemy.

Fig.41 Section of figs.40, 40-a.

As a protection against the aggressive sun the "heroes" of the Hamar and Banna people use to put a layer of clay on this bare frontpart of their skull. This layer has to be renewed now and then



since the growing new hair makes the clay burst off the head. (figs.42, 43)

Selfevidently it has to be questioned if one is allowed to think about cultural relations between an ethnic group which exhibits all kinds of phaenotypic indications of an europid origin and a region of E-Africa and the cultural customs right there....





Fig.43 "Hero"- "coiffure" of the Hamar (Omo region, S-Ethiopia).

Fig.42 "Hero"- "coiffure" of the Hamar (Omo region, S-Ethiopia).

Irekam Edjedjèle

Not very far from the Irekam Aharhar the middle part of Wadi Tasset is zigzagging to the north. One of its southeastern tributaries is Wadi Tin Edjedjèle. The "rock cities" (Irekam) above this wadi which is deeply cut into the plateau were till now never scrutinized systematically for rock art.

In one of these "rock cities" north of the old track (which today is a motor road) between Illizi (formerly Fort de Polignac) and Zaouatallaz (today Bordj el Houaz, formerly Fort Gardel) exist some lheren paintings, too, e.g. the small rock face on **fig.44/44-a**: a sneaking hunter with a bow, held ready for shooting. Behind him an imposing cow with pending horns and below them a gazelle, either in position at rest or in full flight.



Fig.44 Iheren-sketches: hunter, gazelle, cow. (Irekam Edjedjèle, W-Tassili/Algeria)

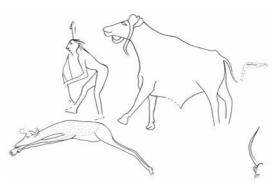


Fig.44-a Drawing of fig.44.

The same reddish-brown colour which was used for several inscriptions in Tifinagh on this rock face (the writing of the berber language Tamaschek or Ta-Mascheq, used by the Touareg of the southern Sahara) unfortunately was smeared over the headpart of the gazelle. (**fig.45**)

Fig.45 The sleeping (or leaping ?) gazelle of fig.44.





On **fig.47** the enlarged headpart of the large cow with two pending horns is displayed. We have discussed these artificial alterations of cattle horns at the beginning of this paper. (fig.4)



A similar counterpart of this lying or running gazelle can be found under the Iheren rock shelter of Wadi Tikadiouine. (**fig.46**)

Fig.46 A corresponding Iheren-painting to fig.44: gazelle from the Tikadiouine rock shelter. (W-Tassili / Algeria)



Fig.47 Enlargement of the cow's head of fig.44.

The cow or antelope which partly can be seen on fig.44/44-a down at the right cannot be ascribed to the Iheren artists. (**fig.48**) Its stiffness and colouring do not point towards an Iheren painting.

Fig.48 Cow or antelope of fig.44 (right, down).

Insertion II: Weapons and Tools of the Bovidian Period

An important topic which was discussed earlier (HALLIER & HALLIER 2002 a) and also was mentioned several times in this paper shall be dealt with somewhat more intensively in this insertion II. It is the question how the various weapons and tools can be interpreted which are represented on Saharan rock paintings. We find them especially frequently on paintings originating from the Bovidian period. In the literature they so far have been discussed only roughly and often they were misinterpreted.





Fig.49 Iheren butchering scene. (Upper Wadi Tasset, W-Tassili/Algeria)

Fig.49-a Drawing of the scene on fig.49.

In the region of the upper Wadi Tasset we found an Iheren style painting displaying the dissection of a large antelope(?). (**fig.49/49-a**) The animal lays on its back, extending the legs upwards. The painting is very weathered, therefore the animal cannot be identified easily, but the discernible extremities point rather towards a larger antelope than to a cow. Three Iheren people which can easily be recognized are rushing to the hunted game. The painting still allows to identify the figure on the top as a man with long hairs, whiskers and goatee and a europid profile. The figure below him clearly exhibits body painting – this points towards a man, too. He is wearing a long apron which reaches down to the knees and apparently is held by a waistband; its end is floating in the wind. The third figure is very weathered, only its head is preserved to some extent.



The man on top is holding with his left hand the middle of a twofold bent tool which is twofold(!) pointed at its top. A line is running over its whole length which possibly could be understood as a line of separation. Therefore it cannot be excluded that he is actually holding two tools in one hand. But since we have found a number of such tools displayed on other rock paintings which look like double-tools we guess that it is likely that they are in fact single and specific tools.

Fig.50 Butchering scene of Tikadiouine, similar to that on fig.49.

This guess is confirmed by a comparison with a very similar scene of game- or cattledissection in the Iheren rock shelter of Wadi Tikadiouine. (**fig.50**) Again there are three people (two men and a woman) occupied dissecting a large animal, but each person uses another type of knife.

The man at the right is working with exactly the same type of a double-pointed tool like that on fig.49. He, too, is holding this tool in its middle. This tool also displays not only the same line of separation, the man is also holding it in the same way in its middle like the man on fig.49 and additionally he shows us, how this tool has to be used to cut a piece of meat from the animal's leg: necessarily it must be a tool for cutting, i.e. a tool with a sharp edge !

The question remains what kind of tool the second europid man, the left one on fig. 50, (exhibiting a rich body painting) is holding in his right hand: his tool is very clearly different from that of his companion. This difference consists not only in many diagonal lines on it but also in the way he is holding it, namely at its end, not in the middle.

That there are in fact two different types of tools depicted on the painting is shown by the tool in his left hand – its shape as well as also the way it is kept in the hand are exactly the same as with its counterpart, the companion's knife !

Interesting is also the double-pointedness of the "cutting-tools" mentioned above which is found on the Tasset-scene of fig.49/49-a as well as also on the scene of Tikadiouine (fig.50) because exactly this particularity is found with the double-pointed Negade-knife of fig.53 ! This means that this shape of knives was favourable for the purpose they were used for – but: why was it favourable, what was it used for ? We (still) do not know.

It is very regrettable that the Tikadiouine rock shelter which displays a great number of small scenes, painted very scrupulously, up to now was not investigated as thoroughly as for example the "Iheren I" rock shelter (HOLL & DUEPPEN 1999), albeit it is well-known since twenty years and also is easily accessible. This rock shelter's paintings certainly could answer a whole number of open questions concerning the every-day-life of the Iheren people ! There exist two papers about this rock shelter but unfortunately they are incomplete and their drawings are not sufficiently exact. (MUZZOLINI & BOCCAZZI 1991; HOLL 1994)

Considering the connections – which certainly have existed in these times ! – between the central Sahara and the Nile it is obvious to look for corresponding findings and pictorial proofs in Egypt.

Scenes of everyday life, displays of fighting, hunting and cult exist in an almost countless num-



ber on the walls of Egyptian tempels and tombs.

For instance the motive of a dissection of a cow and next to it the dissection of an antelope (an *oryx* antelope) of the Vth dynasty can be found on a wall relief of the upway to the funeral temple of pharaoh Sahure (2428 - 2416 BC) at Abusir. (**fig.51**)

Fig.51 Animals' dissection scene on the wall of the upway to the funeral temple of pharaoh Sahure (2428 – 2416 BC) at Abusir/Egypt.

A very similar scene is found inside the funeral temple itself, the pyramidal temple of Sahure.

An almost exactly similar representation of this motiv exists – from the Vth dynasty as well – on a wall relief inside the funeral mastaba of princess Idu close to Saqqara. (**fig.52**)

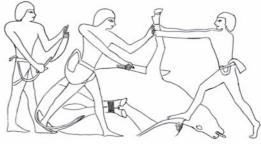


Fig.52 Animals' dissection scene on the wall of the mastaba of princess Idu; near Saqqara/Egypt.



On all these scenes apparently the joints of the animals are beaten through or sawn through to separate the legs from the carcasses of the animals. This is done always with broad-bladed and apparently heavy knives which are handled like axes and/or saws.

Fortunately we know at least one of these knives: in the Egyptian Museum at Cairo a silex-knife is exhibited (Inv.no.JE 34210). Its blade is 30,6 by 6 cm and it originates from predynastic, i.e. pre-pharaonic time, more exactly from the second third of Negade II, from approx. 3370 to 3240 BC ! (**fig.53**)

[Bronze Age knives appear – as far as we know – only in the New Kingdom, during the 18^{th} dynasty, around 1350 BC.]

*Fig.*53 Egyptian ritual flint knife; blade 30,6 x 6 cm, 2.third of Negade II, about 3370 – 3240 BC.

It is interesting what the reliefs can tell us about the technical side of the dissection of large animals: fig.52 displays clearly how the sacrificing servant cuts off the front leg of the victim at the joint with a broad-bladed knife. He is supported by an assistant who pulls the leg towards his side to help making the joint accessible.

Behind of the sacrificing servant another assistant is sharpening another knife. He is holding the necessary tool in his right hand; it is connected by a line with his belt.

Most certainly the knife is made from flint. The stone blade has to be sharpened at first by knocking off fine lamellae on one side or on both sides.

Finally the real sharpening process of the tool is done by squeezing off fine and precise "retouchings". This will lead to a saw-like edge of the knife. For the "squeezing off" (done tenderly, with much "feeling") one does not use a stone, but a semi-elastic material like horn from the horny process of antlers.

In principle fig.51 shows the same scene and procedure like fig.52 but the finer relief of the upway to the Sahure temple allows us to distinguish more details: certainly the three persons in the middle of the picture work in the same way and have the same distribution of duties like those on the Idu relief of fig.52, but here on fig.51 it is for example clearly distinguishable that the "sharpener" has stretched a skin or a leather over his thigh. (This support serves as a protection for his leg when he is "retouching". Certainly this work has to be done sitting and not standing like on the picture ! And certainly the object which is supposed to be sharpened has to be pressed to the thigh during being "retouched", it cannot be held freely in the air when being worked on!)

The auxiliary tools for "retouching" are tied to the protecting leather to be always at hand. This is shown by the way the leather is pulled upward when the "sharpener" is working with one of the auxiliary tools as on fig.51. The sacrifying servant also seems to have stretched a leather of protection over his thigh when he is working with his sharp knife-blade.

Several very similar scenes of butchering and dissection of cows and antelopes can be found also on the reliefs of the burial chamber within the mastaba of Merib (around 2450 BC). These reliefs are exhibited in the Egyptian Museum of the State Museums at Berlin.

These scenes are part of the usual representations for the supply of the deceased in the next world. They are idealized and reduced to a norm and nevertheless they allow a deep insight into the everyday life of the old Egyptians.

In this context a paper is interesting which appeared recently. It presents a subterraneous flint-stone quarry in the eastern Egyptian desert, where apparently the Egyptians have been quarrying chert since the end of prehistorical (= predynastic) times and especially during the Old and the Middle Kingdom. (NEGRO & CAMMELLI 2010) This site was found in the late 19th century and published in 1898 by H.W. Seton-Karr. Besides a pre-dynastic bifacial knife which is fit with a handle the re-discoverer present a large number of pre-dynastic raw flint-knives and a lot of proofs for the production of knives *in loco*.

Only to a limited extend we can compare the wall reliefs from Egypt which were presented above, with the rock art scenes of figs.49 and 50, although they probably all belong to approximately the same period. Above all it is important that evidently the Iheren men on the paintings do not work with heavy broad-bladed knives like the Egyptians do. Probably this has to be understood in a way that the Iheren people's slender and pointed tools were solely tools for cutting. They could have been saw-like "retouched" stone blades, but they can have been also wooden objects with glued-in microlites, sharp stone fragments as known from sickles of the Neolithic.

[In Africa this microlitic technique is well-known since the Late Stone Age (= Upper Paleolithic) and was especially frequent in the north african Capsien. In sub-Saharan Africa much older microlites are found, partly they are 80 – 70.000 years old. In Europe microlites appear during the Aurignacien and in higher numbers especially in the Late Magdalenien and in the Mesolithic.]

Apparently a totally different kind of tools is what the men of Talmoust are holding in their hands. (figs.33a, b) In both cases they could be boomerangs, but for a more scrutinized investigation their state of conservation is too bad.

Also on fig.5/5-a one can recognize – but much better than on figs.33a, b – besides the bows also boomerang-similar rotating(?) throwing sticks (for hunting small animals and birds?). They are similar to boomerangs only because of their shape – to be real, returning boomerangs, they lack the broad blade and the flat and slightly bent form (which is determining the aerodynamics) with a certain cross-section which is similar to that of a wing of an aircraft.

On fig.34 things are different because the running man of the Talmoust rock shelter is holding in his left hand a whole bundle of "knife-like" objects. This great number of objects in the left and the single object in his right hand lead to the presumption that they all rather are pointed throwing knives which are thrown one after the other with the right hand. A characteristic of these throwing knives(?) seems to be the oblique structure on them which we cannot explain so far, but which certainly has a special meaning, so often, as it appears on different paintings.

In Africa throwing knives have a long tradition, it would not be surprising if this tradition reached far back into the Stone-Age.

The left leg of the running man on fig.34 superimposes another hand which likewise is holding several "knives". This is the right hand of the abundantly tattooed man of fig.35/35-a. He, too, seems to hold in his right hand two "knives", in his left hand one "knive" – very probably all pointed throwing knives. Otherwise the multitude of objects kept by the two men of figs.34 and 35/35-a could not be explained without difficulties.

Similar to them appear the long, pointed objects which as well the herdsman of fig.6b (together with a small, not identifiable object) as also the two sneaking men of fig.6f/6f-a hold in their hands: in both cases it may be a pointed weapon for defense or also for hunting which easily can be understood as a thrown weapon, if it is held at the end. (The herdsman of figs.9 and 10 certainly is holding only a shepherd's staff in his hand, not a proper weapon.)

The four fighters or dancers on fig.20/20a are swinging long, double-bent objects. If these are pointed throwing-objects which maybe have an edge, too, is not discernible. But surely these are no throwing sticks (or *"bâtons de jet"*, as Muzzolini wrongly interpreted them: MUZZOLINI 1995: fig.231). These mostly have the shape of a hook or a sickle and do not rotate when they fly. They kill, hurt or daze small animals or birds which are hit by the throwing stick's knob. (see HALLIER & HALLIER 2002 b: Abb.36-39)

This hooked or sickle-like type can be found at different sites in the Tassili of the Ajjer, e.g. also in Tahilahi (STRIEDTER 1984: 124), in Iheren, where a shepherd and a hunter both are bearing them (MUSEEN DER STADT KÖLN 1978: 430/431: fig.15), in the Wadi I-n-Teral of the Immidir (GAUTHIER et al.1996: fig.77), but also – pecked – in the Tibesti Mountains (MUZZOLINI 1995: Fig.485) and at different sites of the Djado (HALLIER & HALLIER 1992: F XLVIII A: T.238A), in certain cases maybe shown by the artist with the meaning "hunting symbol" (HALLIER & HALLIER 1992: F XLV: T.277A).

The objects which the fighters/dancers on fig.20/20-a are swinging are no boomerangs either. This is shown by their shape: a boomerang which has failed to hit his destination and is supposed to return to the projecting person is flat and has only one curvature, mostly a bend of 90° to 150°. Because of its special design a returning boomerang flies a complicated line – almost like an « ∞ » – and either hits an object or returns in a curve to the throwing person. (But we have to remember that there are also non-returning boomerangs !)

The best examples of real, returning boomerangs (and also of throwing sticks) are found in the rock shelters of Ti-n-Abañher on the plateau Tadjelahin. (HALLIER & HALLIER 2002 b: Abb.40-43)

[Boomerangs certainly have a long history: the oldest specimen we know dates back to the Gravettien (about 23.000 BP) ! It was found in the Oblazowa Cave (Carpathian Mountains, Polonia) and was made of mammoth-ivory. Numerous findings of boomerangs in Europe date back to the Late Neolithic Period and to the Bronze Age. Many specimens of returning boomerangs were found in Egyptian tombs, especially of the New Kingdom. Frescoes within the tombs show that these instruments were used mainly for hunting waterbirds like ducks and geese.]

Maybe these long, slender and sharply pointed objects which we discussed above were used as stinging or thrusting weapons, as "rapiers". This would mean that they may have been used like swords for stabbing.

If we compar them with other objects or details on the paintings whose size can be estimated, some of these objects can be calculated to have had a length of 50 to 60 cm. Moreover it is important to note that these objects are always held at their end. This also allows conclusions with regard to their handling. (HALLIER & HALLIER 2002 a)

These weapons are wide-spread in the Tassili region, too – e.g. in the Tassedjebest (KUNZ 1977: Abb.4) and in Iheren, where a group of dancers(?) are holding them (MUSEEN DER STADT KÖLN 1978: 430/431: fig.15), in Tikadiouine and (probably) in Ti-n-Ressou (MUZ-ZOLINI 1995: Figs.265, 507) and possibly also in Tahilahi. A good example – location not mentioned – was published also in the Sahara-Catalogue (MUSEEN DER STADT KÖLN 1978: 438)

We tend towards an interpretation of these long, pointed and rapier-like tools as wooden(?) stinging weapons or maybe as a kind of wooden(?) "throwing knifes". We think that its main characteristic, the clear point, represents the weapon, whereas when hunting with a true throwing stick the decisive effect is the blow of its heavy hook hitting the hunted (small) animal or bird.

Result: Obviously at least three or four similar, but clearly different types of weapons or tools were used for different purposes at that time. These are shown mainly on the Tassilipaintings of the Iheren people but also on pictures of other people of the 3rd millenium B.C.

Wadi Aramat

At the far northeastern limit of the Tassili mountains, in the Libyan Wadi Aramat an isolated painting of a running or sitting(?) person was found which – as we think – belongs to the Iheren paintings, too, concerning the drawing and painting technique.



Fig.54 Running or sitting Iheren person; about 15 cm. (Wadi Aramat, Libyan E-Tassili)

The figure (about 15 cm) seems to be nude. (**fig.54/ 54-a**) We have published it some years ago: HALLIER & HALLIER 1999: 285; SW-Abb. III/I and drawing FIG. III/6 b.



Fig.54-a Drawing of fig.54.

Northern Djado



One site in northern Djado exhibits on the ceiling of the rock shelter besides different Roundhead paintings also a group of six cows (each about 30 cm) which are to be ascribed to the Middle Bovidian Period. These paintings are very close to Iheren paintings, especially concerning the artistic capability to express the lively movement of the animals.

Fig.55 Iheren-like painting of a cow (30 cm). (*Northern Djado/Niger*)

The shelter is very low and therefore not reached by the sun. For this reason the colours (yellow and red ocre) are exceptionally well preserved. (**fig. 55/55-a**) (The site was published before: HALLIER & HALLIER 1999: 171; FIG.72b.)

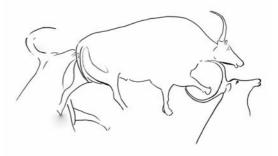


Fig.55-a Drawing of fig.55.

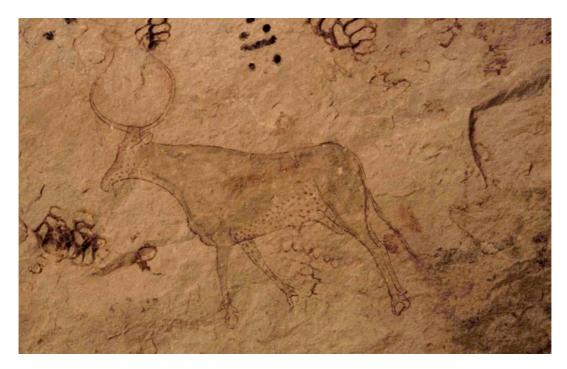


Fig.1 Splendid cow of Iheren style. 30 cm. Upper Wadi Tasset/W-Tassili, Algeria.



Fig.2 Section of fig.1.



Fig.3 Ethiopian Wollo-cattle, bred for horn-size.

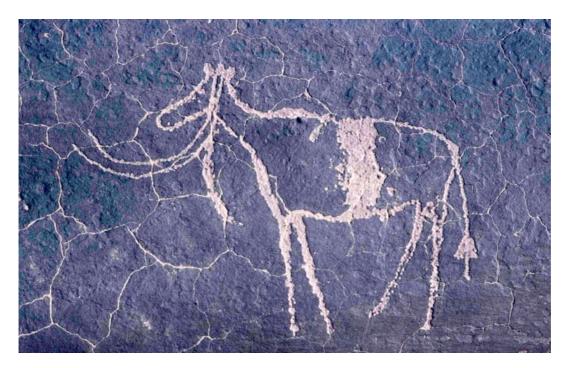


Fig.4 Pecked cow (65 cm) with pendant horns, halter, saddle-bag(?). N-Djado/Niger.



Fig.5.1+5.2 Two rows of Iheren people (ten adults, one child; each 12-13 cm). Lower row: adults bearing "guirbas", leather container for water transport. Upper Wadi Tasset.

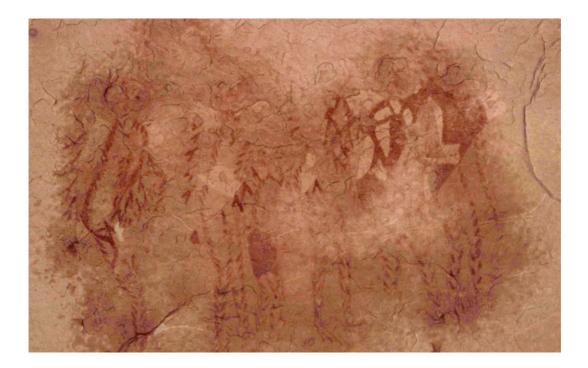




Fig.5-a Drawing of fig.5.



Fig.6 Shepherd (35 cm) with 1-3 sheep; in subposition to a marching cattle herd, led by two women riding on cows. Ifedaniouène mountains, W-Tassili, Algeria.



Fig.6-a Drawing of the marching cattle herd of fig.6 and of several side-scenes; superimposed shepherd: dotted lines. Scale see fig.6.

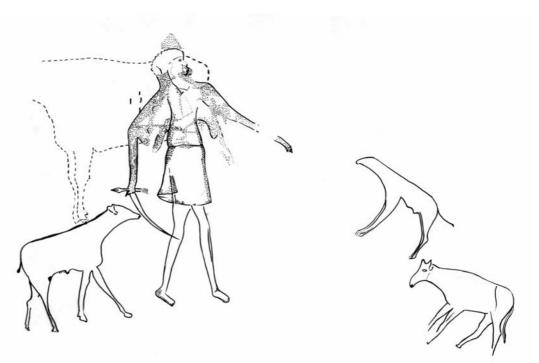


Fig.6b Drawing of the shepherd (35 cm) and sheep of fig.6.

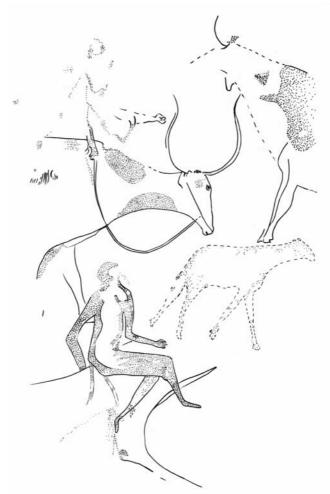


Fig.6c Drawing of a section of fig.6: 2(?) women riding on cows, leading the marching cattle herd. Scale see fig.6.



Fig.6d Side-scene of fig.6: Milking(?) scene; side-scene of fig.6. Scale see fig.6.

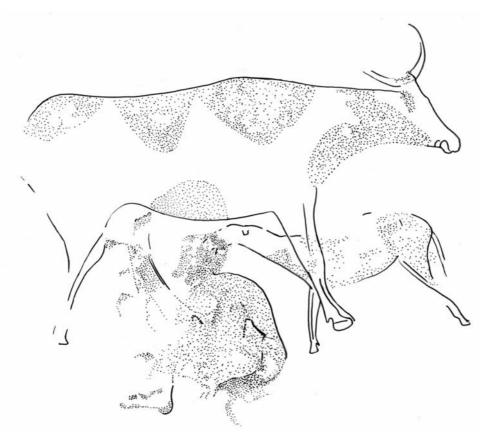


Fig.6d-a Drawing of fig.6d. Scale see fig.6.



Fig.6e Side-scene of fig.6: sitting woman (15 cm) with child. Scale see fig.6.



Fig.6e-a Drawing of fig.6e. Scale see fig.6.



Fig.6f Side-scene of fig.6: two crouching hunters(?), an archer and a sheep. Scale see fig.6.

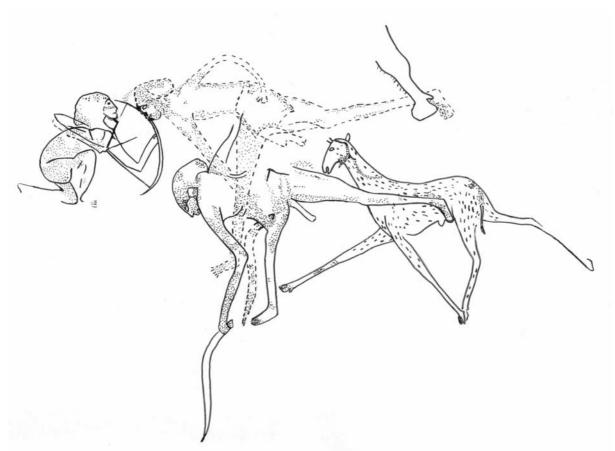


Fig.6f-a Drawing of fig.6f. Scale see fig.6.



Fig.7 Splendid cattle herd with herdsman behind a cow of 36 cm. Upper Wadi Tasset/W-Tassili, Algeria.

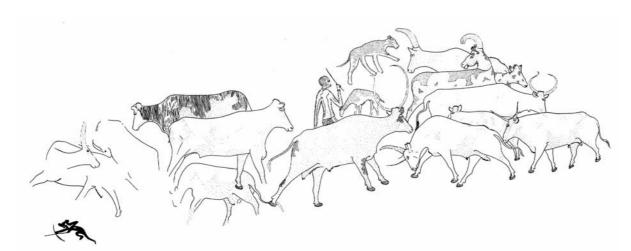


Fig.7-a Drawing of the complete cattle herd of fig.7.



Fig.8 Front part of fig.7. Scale see fig.7.

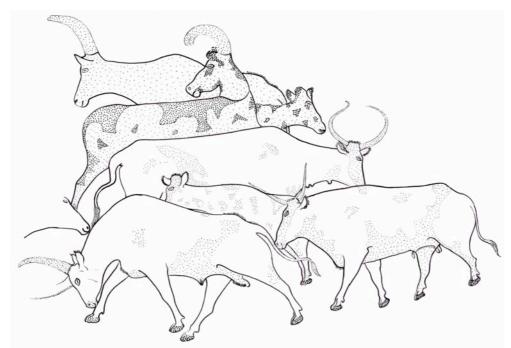


Fig.8-a Drawing of the central part of fig.7. Scale see fig.7.

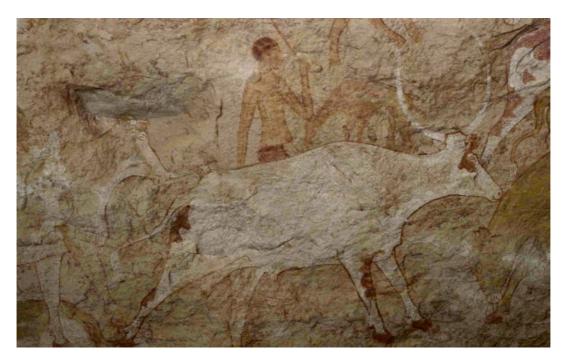


Fig.9 Section around the herdsman of fig.7. Scale see fig.7.

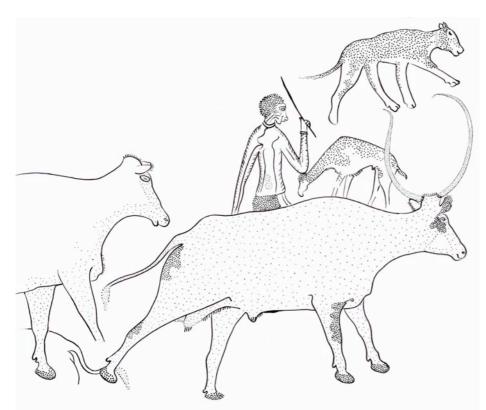


Fig.9-a Drawing of fig.9. Scale see fig.7.



Fig.10 Visible part (12,5 cm) of the herdsman on fig.7.



Fig.11 Drawing of several Iheren-scenes, some in sub- or superimposition. Above: marching cattle herd, led by a woman. Below: sitting persons, in subposition to two running archers and a bent person. Site "Iheren II", Wadi Iheren, plateau Tadjelahin, W-Tassili/Algeria.



Fig.11a Lower, more detailed part of fig.11.

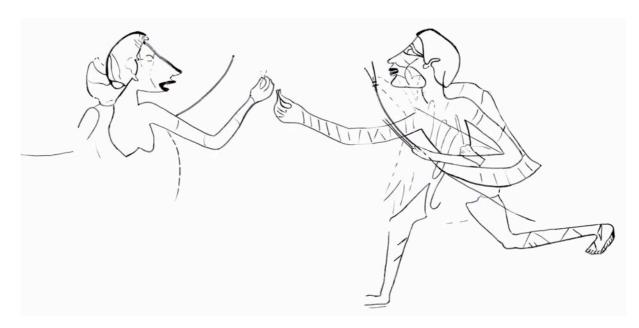


Fig.11b Sitting(?) group (couple ?) of fig.11, more detailed and without superimpositions.



Fig.12 Main part of the marching cattle herd of fig.11.



Fig.13 Centre of fig.12 around the cattle herd-leading riding woman.

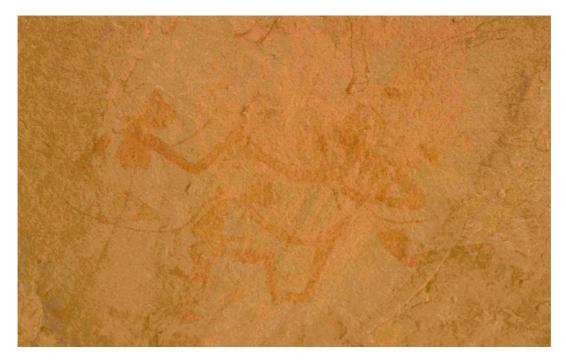


Fig.14 Painting of fig.11a.





Fig.17 Upper part of fig.16: a hanging(?), undressed man (appr.25 cm) with mask(?) and an archer, running at top speed.



Fig.18 Kneeling archer: lower part of fig.16.

Fig.16 Drawing of three indipendent scenes of the site "Iheren II" (see fig.11).



Fig.19 Running Iheren-man; Site "Iheren II" (see fig.11).

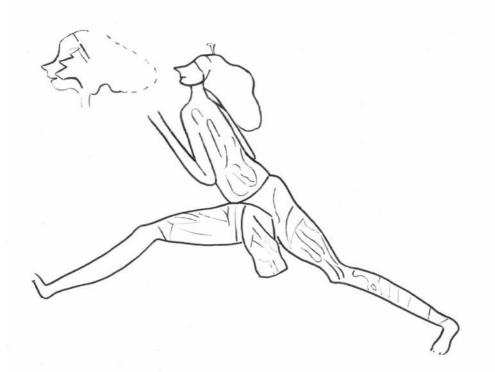


Fig.19-a Drawing of fig.19; to the left of his head: enlargement of his face.



Fig.20 Group of four fighting (or dancing ?) men (about 40 cm) with body-painting. Site "Iheren II" (see fig.11).

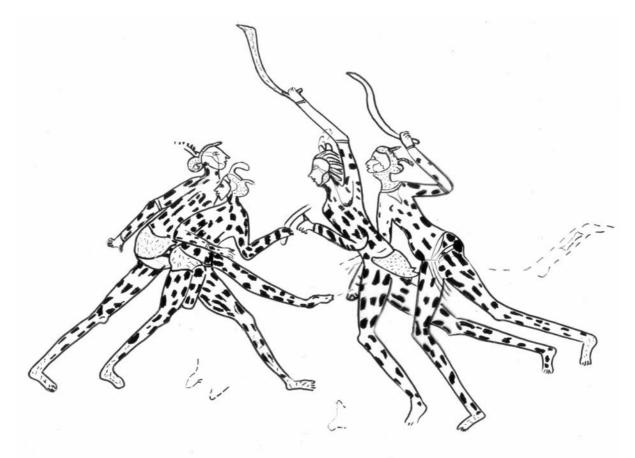


Fig.20-a Drawing of fig.20.



Fig.21 Two theriocephalous figures running at top speed. Site "Iheren II" (see fig.11)

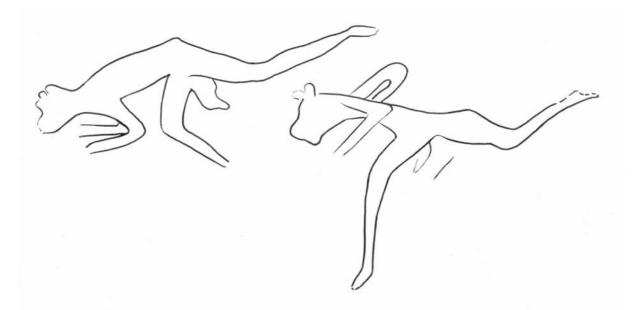


Fig.21-a Drawing of fig.21.



Fig.22 Elephant (35 cm), chasing a hunter. Amarasouzi rock shelter, Wadi Oumashi. (Plateau Tadjelahin, W-Tassili/Algeria)

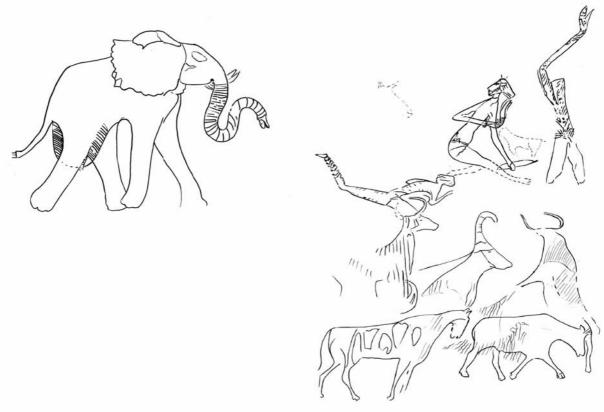


Fig.22-a Drawing of the scene around the elephant of fig.22.



Fig.23 The chased hunter, looking back to the elephant.

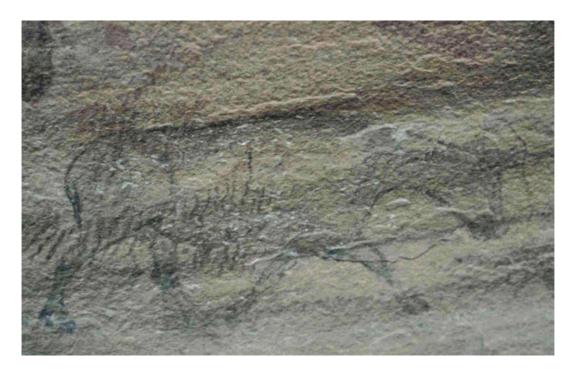


Fig.24 Iheren-cow of the Amarasouzi-scene on fig.22-a (lower right corner).



Fig.25 Iheren people with sheep and gazelle. Amarasouzi rock shelter.



Fig.26 Three walking Iheren women. Amarasouzi rock shelter.



Fig.26-a Drawing of fig.26.



Fig.27 Tahountarvat rock shelter: domesticated and wild animals. (Plateau Tadjelahin, W-Tassili/Algeria)



Fig.27-a Drawing of fig.27.

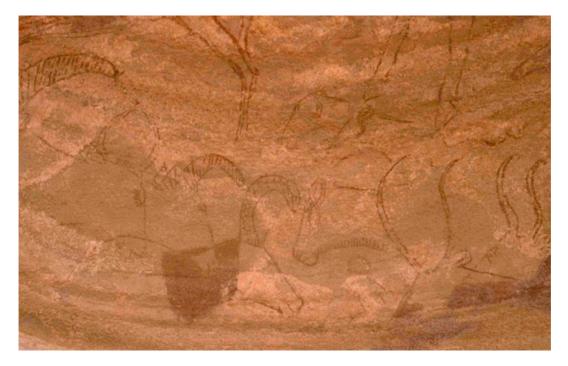


Fig.28 Section of fig.27: different types of cow horns.



Fig.29 Section of fig.27: different species of wild animals.



Fig.30 Lion, chasing unarmed men. Tidder rock shelter. (Plateau Tadjelahin, W-Tassili/Algeria)



Fig.30-a Drawing of fig.30.



Fig.31 Section of fig.30.



Fig.32 Cow, painted in an Iheren-like style. Tidder rock shelter (see fig.30).

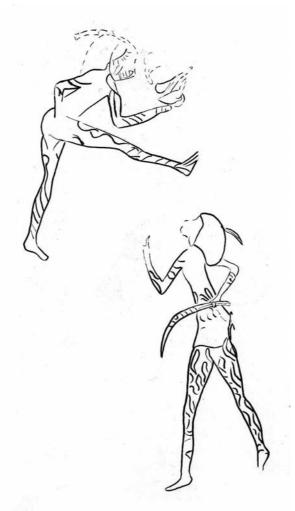


Fig.33a Iheren figures with body paintings. Talmoust rock shelter. (Plateau Tadjelahin, W-Tassili/Algeria)



Fig.33b Iheren figures alike fig.33a.



Fig.34 Iheren figure with different kinds of weapons(?). Talmoust rock shelter.



Fig.35 Iheren man with rich body painting and weapons(?). Talmoust rock shelter.



Fig.35-a Drawing of fig.35.

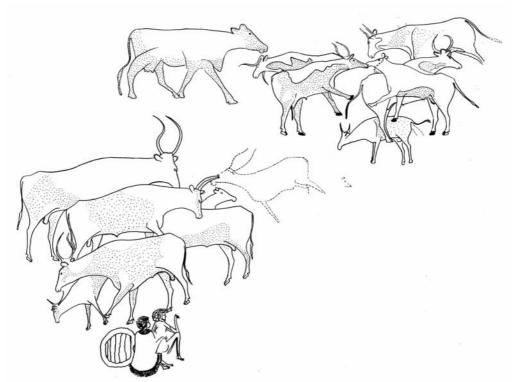


Fig.36 Iheren couple with cattle. Site Tissebouk (Irekam Aharhar, W-Tassili/Algeria).



Fig.37 Ti-n-Abañher man, bending over the Iheren couple.



Fig.38 The Iheren couple without the superimposition of the Ti-n-Abañher man.



Fig.39 Iheren family scene around a newborn baby; 85 x 110 cm. Irekam Aharhar, W-Tassili/Algeria.



Fig.40 Section: Upper part of fig.39.



Fig.40-a Drawing of fig.40.

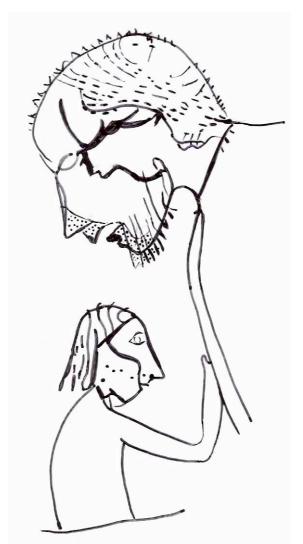


Fig.40-b Father(?) and newborn son(?) of figs.39, 40.



Fig.41 Section of figs.40, 40-a.



Fig.41-a Enlargement of the central group around the child.

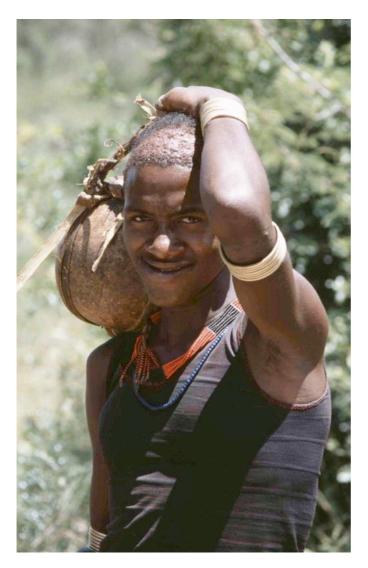


Fig.42 "Hero"- "coiffure" of the Hamar (Omo region, S-Ethiopia).

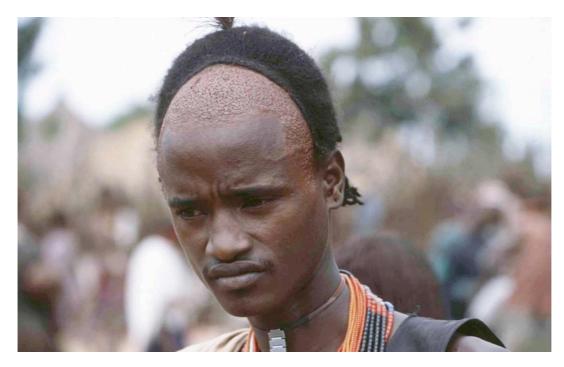


Fig.43 "Hero"- "coiffure" of the Hamar (Omo region, S-Ethiopia).



Fig.44 Iheren-sketches: hunter, gazelle, cow. (Irekam Edjedjèle, W-Tassili/Algeria)

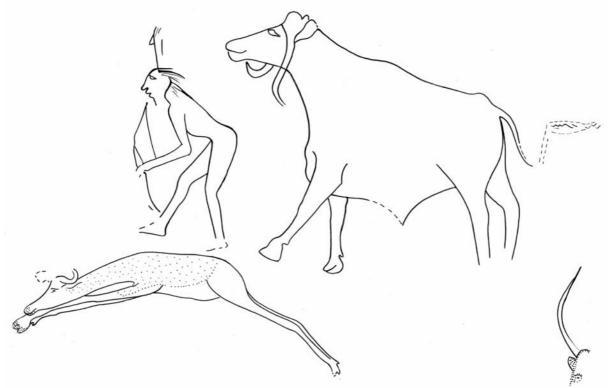


Fig.44-a Drawing of fig.44.



Fig.45 The sleeping (or leaping ?) gazelle of fig.44.

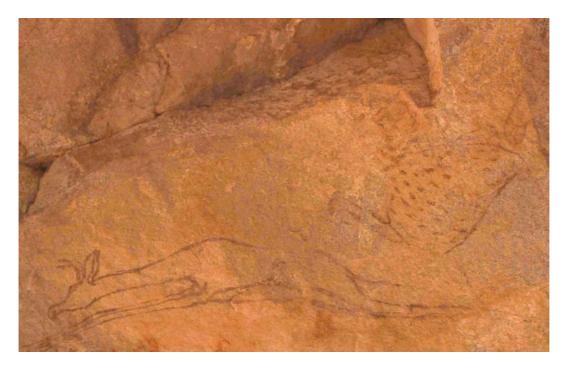


Fig.46 A corresponding Iheren-painting to fig.44: gazelle from the Tikadiouine rock shelter. (W-Tassili/Algeria)



Fig.47 Enlargement of the cow's head of fig.44.

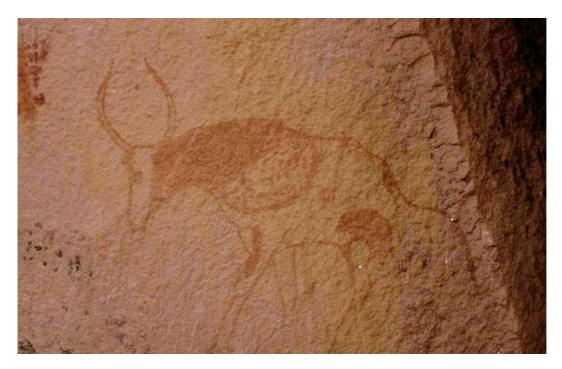


Fig.48 Cow or antelope of fig.44 (right, down).



Fig.49 Iheren butchering scene. (Upper Wadi Tasset, W-Tassili/Algeria)



Fig.49-a Drawing of the scene on fig.49.



Fig.50 Butchering scene of Tikadiouine, similar to that on fig.49.



Fig.51 Animals' dissection scene on the wall of the upway to the funeral temple of pharaoh Sahure (2428 – 2416 BC) at Abusir/Egypt.

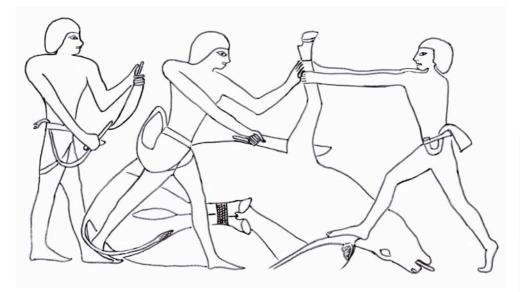


Fig.52 Animals' dissection scene on the wall of the mastaba of princess Idu; near Saqqara/Egypt.

Fig.53 Egyptian ritual flint knife; blade 30,6 x 6 cm, 2.third of Negade II, about 3370 - 3240 BC.





Fig.54 Running or sitting Iheren person; about 15 cm. (Wadi Aramat, Libyan E-Tassili)





Fig.55 Iheren-like painting of a cow (30 cm). (Northern Djado/Niger)

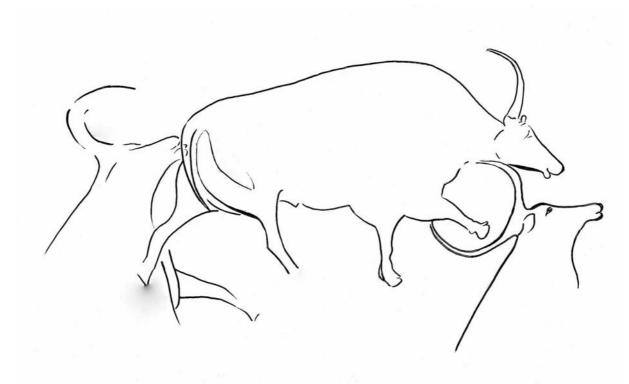


Fig.55-a Drawing of fig.55.

Literatur

ANATI, E. (1986) Die ersten Maler. Internat. Forum f. Kunst u. Wissenschaft (ed.): Humanis 1986 / 1:39 – 49.

BEDNARIK, R. G. (1995) Towards a better Understanding of the Origins of Body Decoration. Anthropologie, XXXIII / 3: 201 – 212. Paris.

BEDNARIK, R. G. (2003) The Earliest Evidence of Palaeoart. Rock Art Research 2003, Vol.20, Nr. 2:89 - 135. Caulfield South.

BEDNARIK, R. G. (2008) The Origins of Symboling. Rock Art Research 2008, Vol.20, Nr. 2:82 - 113. Caulfield South.

BREUIL, H. & H. LHOTE (1955) Les Roches Peintes du Tassili-n-Ajjer d'après les relevés du Colonel Brenans. Panafrikanischer Prähistorischer Kongreß in Algier 1952. Paris.

CLOTTES, J. (2007) Als die Kunst entstand: Neu entdeckte Höhlenmalereien. In: Entdeckungen ! Neue Schätze der Archäologie (B.M.Fagan ed.): 114 - 119. Zweitausendeins Frankfurt am Main.

CLOTTES, J. (2008) CAVE ART. London.

GAUTHIER, Y. & C. GAUTHIER (1996) Peintures de l'Immidir et des Tassilis du Nord ouest (Algérie). SAHARA 8: 82 – 85. Segrate (Milano).

HALLIER, B. C. (2009 a) The warriors of Wadi Oumashi (western central Tassili-n-Ajjer, South Algeria). SAHARA, 20: 177 – 180 + Pl. I 1+I2. Segrate (Milano).

HALLIER, B. C. (2009 b) Les Abris de Tin Amarasouzi, de Tahountarvat et de Tedar/Tidder (Plateau Tadjelahin et Haut Tasset, Tassili-n-Ajjer centrale, Algérie du Sud). STONEWATCH. The World of Petroglyphs: Teil/part 34. Warmsroth.

HALLIER, U. W. (1990) Die Entwicklung der Felsbildkunst Nordafrikas. Untersuchungen auf Grund neuerer Felsbildfunde in der Süd-Sahara (1). Steiner Stuttgart.

HALLIER, U. W. & B.C. HALLIER (1992) Felsbilder der Sahara. Untersuchungen auf Grund neuerer Felsbildfunde in der Süd-Sahara (2). Steiner Stuttgart. HALLIER, U. W. & B.C. HALLIER (1999)

Rundköpfe als Punzer und Maler – die ersten Felsbildkünstler der Sahara ? Untersuchungen auf Grund neuer Felsbildfunde in der Süd-Sahara (4). Steiner Stuttgart.

HALLIER, U. W. & B.C. HALLIER (2001-2002)

New paintings in the central Tassili (south Algeria).

A) The "Cascade Shelter". The Middle Cattle Period in the southeast mountains of Ifedaniouène.

B) The "Tasset Shelter". A herd of "splendid cows" in the upper Wadi Tasset. SAHARA, 13: 121 - 127+PI.R-Z. Milano.

HALLIER, U. W. & B.C. HALLIER (2002 a)

Following the tracks of Henri Lhote: New paintings in the Tassili-n-Ajjer (South-Algeria).

AARS (Les Cahiers des Amis de l'Art rupestre Saharien), no.7: Hommages à Henri Lhote. Ithyphalliques, Traditions orales, Monuments lithiques et Art rupestre au Sahara: 107 - 118 + 234 - 236. Saint Lizier 2002.

HALLIER, U. W. & B.C. HALLIER (2002 b)

Felsbild-Neufunde im Bergland von Ifedaniouène (Tassili / Süd-Algerien), Teil I. New Paintings in the Ifedaniouène Mountains (Tassili / South Algeria), part I. STONE WATCH. The World of Petroglyphs: Tassili - Nord-Afrika, CD-Atlas, Teil/part 23. Warmsroth.

HALLIER, U. W. & B.C. HALLIER (2002 c)

Felsbild-Neufunde in den Bergen des Aharhar Tasset (Tassili / Süd-Algerien), Teil I. New Paintings in the Mountains of the Aharhar Tasset (Tassili / South Algeria), part I. STONE WATCH. The World of Petroglyphs: Tassili - Nord-Afrika, CD-Atlas, Teil/part 24. Warmsroth.

HALLIER, U. W. & B.C. HALLIER (2003)

The rock shelters of Tissebouk and Irrekam Aharhar (central Tassili, Algeria). SAHARA, 14: 151 – 154 + PI.Q-R. (Segrate) Milano.

HALLIER, U. W. & B.C. HALLIER (2004)

Some New-found Rock-Paintings (Upper Wadi Tasset / Tassili of the Ajjer. South Algeria)

Bull.de l'AARS ; Les Cahiers de l'AARS, no.9: 7 - 9 . St.Lizier.

HALLIER, U. W. & B.C. HALLIER (2005 / 2006)

Felsbild-Neufunde in den Bergen des Aharhar Tasset (Tassili / Süd-Algerien), Teil II. New Paintings in the Mountains of the Aharhar Tasset (Tassili / South Algeria), part II. STONE WATCH. The World of Petroglyphs: Tassili - Nord-Afrika, CD-Atlas, Teil/part 32. Warmsroth.

HALLIER, U. W. & B.C. HALLIER (2011) Les « Têtes Rondes » d'In-Goubba (Tassili centrale, Algérie du Sud). SAHARA, 22 : 134 - 148, Pl. E1 – E3. Segrate (Milano). HENSHILWOOD, C. S. et 7 al. (2011)

A 100.000-Year-Old Ochre-Processing Workshop at Blombos Cave, South Africa. Science, t. 334, 6053, p. 219 - 222. [consulté le 2011.10.21]

HOLL, A. (1994) Pathways to Elderhood Research on Past Pastoral Iconography: The Paintings from Tikadiouine (Tassili n'Ajjer). Origini XVIII: 69 – 113. Roma.

HOLL, A. & S. DUEPPEN (1999) Iheren I. Research on Tassilian Pastoral Iconography. SAHARA, 11: 2 – 34. Segrate (Milano).

KUNZ, J. (1977) Neue Felsbildfunde in den westlichen Tassili-n-Ajjer. Paideuma 23: 1 - 17. Wiesbaden.

LE CORRE, F. (1984) Le vetement dans l'art rupestre nord-africain et saharien. Trav.LAPMO, 8: 1 – 56. Aix-en-Provence.

LE QUELLEC, J.-L. (2009) À propos du nom donné à quatre styles de peinture rupestre au Sahara central. Les Cahiers de l'AARS, No. 13: 183 – 188. St-Benoist-sur-Mer.

LHOTE, H. (1957) Peintures Préhistoriques du Sahara. Musée des Arts Décoratifs: Mission H.Lhote au Tassili. Expos. Nov.1957 – Janv. 1958. Paris.

LHOTE, H. (1958) À la découverte des fresques du Tassili. Paris 1958.

LHOTE, H. (1963) Die Felsbilder der Sahara. Entdeckung einer 8000jährigen Kultur. Würzburg. (= À la découverte des fresques du Tassili. Paris 1958 – 1973 - 1988.)

LHOTE, H. (1972) Note sur les peintures rupestres de la region d'Iherir. Libyca XX: 187 - 194. Algier.

LHOTE, H. (1975/76) Les Gravures Rupestres de l'Oued Djerat (Tassili-n-Ajjer). Mém. CRAPE, vol. I + II, t. XXV. Alger.

LHOTE, H. (1976) Vers d'autres Tassilis. Paris. LORBLANCHET, M. (1997) Höhlenmalerei. Sigmaringen.

MUSEEN DER STADT KÖLN (1978) SAHARA. 10.000 Jahre zwischen Weide und Wüste. Köln.

MUZZOLINI, A. (1995) Les images rupestres du Sahara. Éd. par l'Auteur, Toulouse.

MUZZOLINI, A. & A. BOCCAZZI (1991) The Rock-Paintings of Tikadiouine (Tassili n'Ajjer, Algeria) and the Iheren-Tahilahi Group. Proc. Prehist. Soc. 57, part 2: 21 - 34. London.

NEGRO, G. & M. CAMMELLI (2010) The flint quarries of Wadi El Sheikh (Eastern Desert of Egypt). SAHARA, 21: 107 - 116. Segrate (Milano).

STRIEDTER, K.H. (1984) Felsbilder der Sahara. Prestel München.

VALLADAS, H. et 10 al. (2001) Radiocarbon AMS Dates for Paleolithic Cave Paintings. Radiocarbon, vol. 43, Nr. 2B: 977 – 986. Tucson.

WENDT, W.E. (1974 / 1975) "Art mobilier" aus der Apollo 11-Grotte in Südwest-Afrika. Acta Praehist. et Archaeolog., Vol. 5 / 6: 1 – 42. Berlin.

ZILHAO, J. et 16 al. (2010) Symbolic use of marine shells and mineral pigments by Iberian Neandertals. Proc. Nat. Acad. Sci. USAmerica: online-public. jan.11th, 2010 Washington.