

## THE ARCHAIC AND NIOLA DOA-LIKE PAINTINGS OF THE ELI-1 SHELTER (ENNEDI, CHAD)

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### SUMMARY

The area of the Amilianga pass in the Ennedi Highlands is dotted with decorated shelters testifying the frequentation by the people that produced the widespread rock art characteristic of the final Bovine and Camel periods. The Eli-1 shelter, a site located in a very dominant location, also preserves a few surviving pieces of evidence from an older past, including paintings referable to the Archaic Period and a group scene painted in the iconographic tradition of the famed Niola Doa petroglyphs. The paintings in the Niola Doa tradition represent an infrequent occurrence at the regional scale, attributable to the middle to recent Bovine Period.

### RIASSUNTO

L'area del passo di Amilianga nell'altopiano dell'Ennedi è costellata di ripari decorati che testimoniano la frequentazione da parte delle popolazioni che hanno prodotto la più diffusa arte rupestre della regione, caratteristica dei periodi pastorale finale e camelino. Il riparo di Eli-1, un sito situato in una formidabile posizione dominante, oltre a numerosi esempi di pitture schematiche lineari, conserva anche isolate testimonianze dipinte di un passato più antico, comprendenti una scena riferibile al periodo prepastorale e una scena nella tradizione iconografica dei celebri petroglifi di Niola Doa. Le pitture nella tradizione di Niola Doa, attribuibili con molta incertezza al periodo pastorale medio-recente, sono eccezionalmente rare nell'intera regione dell'Ennedi.

### INTRODUCTION

The semi-nomadic shepherds living in the Ennedi Highlands, credited of an excellent knowledge of the country, for their peculiar lifestyle tend to shift their settlements during the time within the vast region corresponding to northern Chad (CHAPELLE 1958, LE ROUVREUR 1962). Since each family has his geography in mind, place names in use can change, even in a short span of time. For this reason, the present day inhabitants do not always understand the official place names fixed on the topographic maps once for all by the Institut Géographique Nationale (1961). Thus, it is not surprising to read that Gauthier & Gauthier (2006), in a rock art report relying on the knowledge of a senior guide from the Ohui village, make mention of Ouadi Eli as the Enneri Dohué. According to the online database of official place names maintained by the US-based National Geospatial-Intelligence Agency, Ouadi Doué (NGA 2017, Unique Name Identifier: -1620452) corresponds to the northernmost right affluent of Ouadi Eli.

The ramified drainage system of Ouadi Eli expands to the southeast in a suspended plain (Fig. 1). The most comfortable access on foot to this plain from the populated southern fringes of the Ennedi is not by following the meandering Ouadi Eli but by crossing an entrenched pass, named Amilianga by the Ohui villagers.

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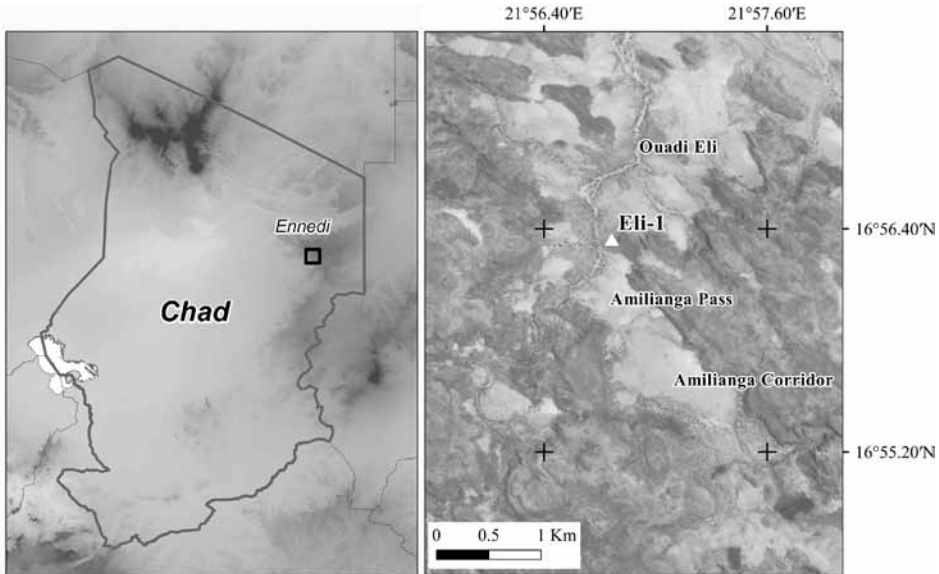


Fig. 1 - Location map of the Eli-1 shelter visited along the Amilianga trail in February 2017. The satellite image in the background is from Digital Globe - Google Earth©

Choppy (*et al.* 2002) reported the presence in the area of two painted rock art sites, named Doué 1 and Doué 2. While no description was provided for the art present in Doué 1, the Doué 2 paintings were published in the form of expedited hand drawings only. After checking on the field, the posted coordinates of these sites resulted wrong. Unfortunately, it was not possible to ascertain their right locations because no description was given about their natural context.

On February 2017, by hiking the camel trail from the Ohui village to the Amilianga pass with the escort of a guide appointed by Aba N'igai, the elder leader of the local community, six previously unreported painted sites were visited, being the shelter of Eli-1 the most valuable addition to the regional inventory.

All the acquired digital images were processed in DStretch (HARMAN 2017) to detect and enhance the existent faded painting. The complete photographic documentation of the surveyed rock art sites, comprehending the original pictures in RGB and the enhanced images in false colours, is available as a digital file on Zenodo, the open data repository service maintained by CERN (MENARDI NOGUERA 2017a).

These sites were documented exclusively in photography, as allowed by the Chadian authorities, who are promoting tourism in the Ennedi Highlands, a region declared “Intangible Cultural Heritage of Humanity” by UNESCO on 16<sup>th</sup> July 2016, under the auspices of the Chadian Ministry of Tourism. The digital pictures shot on site were acquired without physically interfering with the rock art or any visible archaeological remains, in full respect of the local laws and the deontological code established by the AARS Chart (AARS 2009).

In the following descriptions, the term “Bovine”, a deprecated term (DI LERNIA 2017), is maintained for easy reference to the English text of the regional rock art chronology published in a bilingual version (BAILLOUD 1997).

#### THE ELI-1 SHELTER

North of the Amilianga pass, beyond an imposing dune obstructing the Amilianga corridor, the vegetated streamlines of Ouadi Eli meandering between isolated sandstones knolls make varied the landscape (Fig. 1).

The Eli-1 shelter opens in a very commanding position, on the north-western edge of a towering rocky spur, overlooking the plain of Ouadi Eli from a height of 35 meters. A flat open terrace, 64 metres wide, faces the shelter (Fig. 2). The shadowed area corresponds to the overhang of a sandstone bed, some tens of meters thick, characterised by a cross-bedding depositional structure. This massive sandstone bed rests on a sequence of sub-metric sandstone beds carved in an uncomfortably low cavity developed over a length of 34 meters. Regular spaced vertical joints dissect into sixteen segments the 40-50 cm thick head-bed at the bottom wall of this cavity, which hosts the majority of paintings.

#### LINEAR PAINTINGS AND CATTLE FIGURES

At first glance, the most evident paintings are red crosses and crudely drawn linear quadrupeds, by hue and technique constituting a single continuous layer (Fig. 3, sections a and b). In all, 404 crosses, mainly concentrated in large clusters, decorate the shelter basal cavity. One further isolated cluster of 28 crosses is present past the western corner of the terrace (Fig. 4), where it is still possible to walk along a narrow, precipitous ledge.

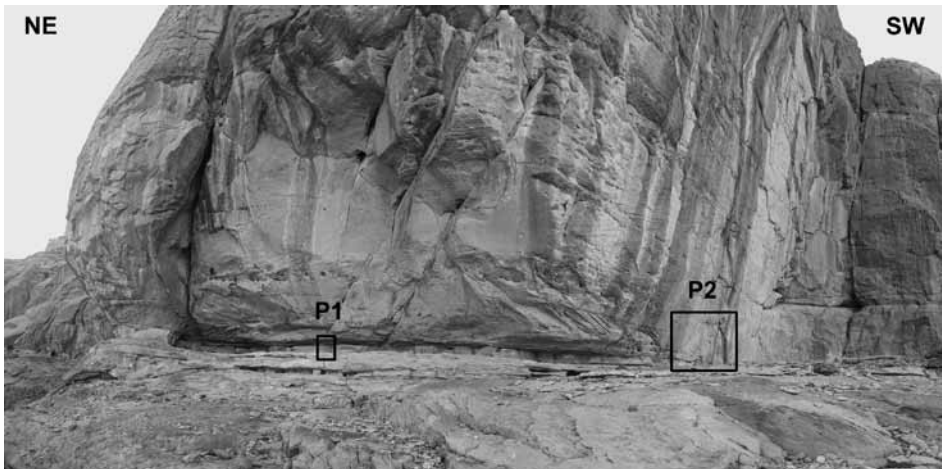


Fig. 2 - The Eli-1 shelter corresponds to the overhang of a massive sandstone bed. A low cavity, carved at the base of the overhang, hosts the majority of the paintings. P1 is the location of the faint paintings recalling the Niola Doa iconography. P2 is the location of a triangular niche decorated with four human figures attributable to the Archaic Period



Fig. 3 - The cavity at the base of the Eli-1 overhang (section a) is decorated with 404 crosses distributed in clusters, over a length of 34 metres. Undeterminable sketchy quadrupeds (section b) are interspersed among the crosses. Very few crosses are found on the shelter ceiling, generally made rugged by the natural flaking of the weathered rock (DStretch enhanced image in CRGB colour space converted to grey scale)

Thick strokes with blurred terminations characterise the traits of the crosses. At present, it is not possible to advance any safe interpretation for this simple motif. In some cases, it could represent the extreme simplification by stylization of an anthropomorphic figure as apparent in the Sakila III site (BAILLOUD 1997, fig. 202). However, clear evidence is missing in Eli-1 since very few crosses display five or six points, as usually do crosses derived from anthropomorphic figures.

The sketchy quadrupeds interspersed among the crosses look fuzzy and anatomically extravagant; one show up a pointed muzzle and thin spikes on the heads (Fig. 3, section b), one resembles a camel with three protuberances on the back, another one is featured by a rounded head and hooved legs. These animal depictions look painted with few strokes, maybe with a rough paintbrush, evidently without pursuing any naturalistic realism.

Crosses and sketchy animals are not a novelty in the Ennedi; Bailloud (1997) attributed to the final Camel Period comparable motifs found in the neighbourhood of the Fada oasis. However, the basal cavity of the Eli-1 shelter preserves

more elaborate paintings than these simply executed ones; within its easternmost segment, a neatly drawn cattle figure decorates one of the blocks collapsed from the ceiling (Fig. 3, section a). Partly eroded cattle figures and the remains of the lower half body of two women wearing dotted gowns are present at the western end of the basal cavity (Fig. 5).

In the midsection of the basal cavity, about 15 meters from the eastern corner of the Eli-1 shelter, digital enhancement by DStretch reveals the existence of faded paintings barely visible to the naked eye. The fresh looking red crosses superimpose two cattle figures painted in white, with straight backs and long, thin horns (Fig. 6).

#### THE NIOLA DOA-LIKE PAINTINGS IN THE ELI-1 SHELTER

Just to the right of these cattle figures, beyond a rocky edge, red crosses and a linear animal superimpose a standing human, 40 cm tall (Fig. 7). After digital enhancement, the silhouette of this faint figure results readable; the head looks oversized respect to the body, the waist seems wide in proportion to the tapering thorax suggesting obesity, and the thighs appear exaggerated respect to the thin legs. The right arm of this human is down-stretched while the bent left arm is horizontally holding a stick at the shoulders height. To his lower left, two smaller figures in the same faded hue of red are shown wearing skirts long to the calves, a clothing detail indicating women depiction.

By body proportions, pose, and the distinctive stick detail, the largest of these three human figures closely matches the outline of the most typical, pecked figures from the Niola Doa constellation of rock art sites located in Wadi Guirchi, 110 km to the northeast of Eli-1. These open-air sites, renowned for the life-sized pecked humans sporting intricate body decorations (SIMONIS *et al.* 1994; 1998), belong to the pastoral era. In fact, pecked cattle figures directly associated to Niola Doa humans are observed in the “Panneau de Fuchs” (CHOPPY *et al.* 1996, p. 132 and p. 133; British Museum online collections ID 2013, 2034.6254), at Anoa 1 (CHOPPY *et al.* 1996, p. 22), and at Dur Duro (SIMONIS *et al.* 1994, fig. 14).

In particular, the match of the Eli-1 painted silhouette looks particularly good with the second figure from the right in the Niola Doa “lost site” (SIMONIS *et al.* 1998, fig. 3), once this figure is horizontally reflected and scaled down to one-third (Fig. 7). The direct comparison with the enhanced images of the Niola Doa-like paintings individuated in the Gran Riparo d’Archei (FALESCHINI *et al.* 1994, MENARDI NOGUERA 2017b) suggests the large round shape of the upper part of the head could represent a voluminous, globular hairstyle.

The three faded figures considered together reproduce the well-known constant association of large “fat” humans of dubious gender identification wearing only body decorations, with much smaller figures in a skirt, certainly women (SIMONIS *et al.* 1998). This dual way of representing humans in the Niola Doa art is likely meant to emphasise a general difference in height between women and men or a difference in status related to social prestige. It could also express a difference in nature, as between worshipper and worshipped if the larger figure pertains to the sacred, or all the above conditions together.

The presence in the southern Ennedi of paintings reproducing the iconography of the Niola Doa petroglyphs is a well-established fact since the very first mo-

Fig. 4 - Past the western corner of the Eli-1 overhang, two cattle figures and twenty-eight crosses decorated the rocky wall. One of these simple motifs to the extreme right is vaguely reminiscent of an anthropomorphic figure having six points. Two bicolour cows stand out on the left of the clustered crosses (Photo Mauro Colella - DStretch enhanced image in CRGB colour space converted to grey scale)

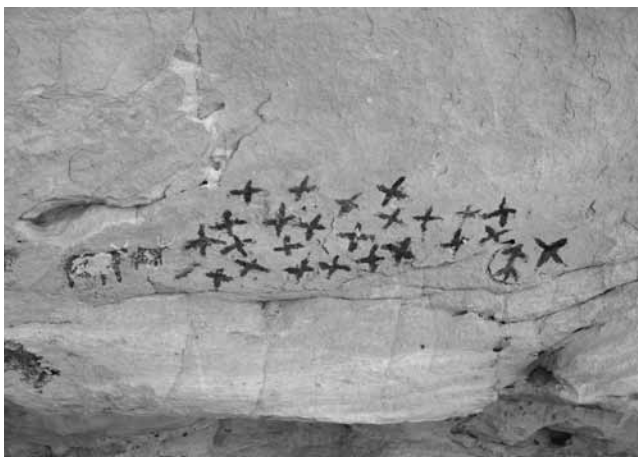
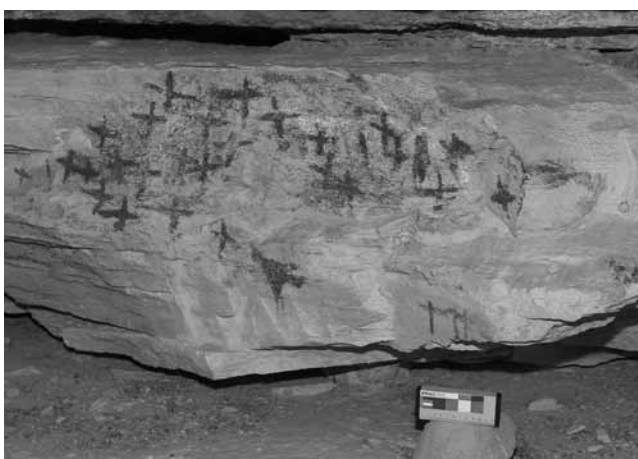


Fig. 5 - Relics of a cow with its calf and the lower bodies of two women wearing dotted gowns survive at the western end of the basal cavity developed along the overhang of the Eli 1 shelter



Fig. 6 - In the midsection of the shelter bottom wall, red crosses obfuscate two white cattle figures with long horns (DStretch enhanced image in LDR colour space converted to grey scale)



ment of the discovery of the Gran Riparo d'Archeï (FALESCHINI *et al.* 1994). This large shelter, also known as Archeï VII (CHOPPY *et al.* 2002), counts two scenes that can be straightforwardly compared to the iconography content of the Niola Doa art. It also contains other motifs that could represent a further occurrence of Niola Doa-like paintings as best shown in 3D surveys (MENARDI NOGUERA 2017b). Already known evidence of this particular group of paintings beyond the Gran Riparo d'Archeï is presently limited to four other sites: Tarkey Bowdé III (CIVRAC 2013, figg. 7, 8), Kéléo (HÉGY 2015, fig. 18), and possibly Soboro 8A plus Soboro 14 (CHOPPY *et al.* 2003, pp. 129, 153). Unfortunately, the paintings reported from the Soboro sites represents dubious cases since published as hand drawings only. In all, including Eli-1, the total number of sites with such evidence is six over an excess of 400 inventoried sites. Therefore, the Eli-1 Niola Doa-like paintings constitute a real novelty.

In the lack of enough superimpositions observations, it is not possible to frame the Niola Doa-like paintings in the relative regional chronology published as preliminary by Bailloud (1997). The aesthetic of the human body expressed by the Niola Doa-like paintings is affine for the appreciation of adiposity to the aesthetic of the human bodies typical of the Hohou style (middle Bovine Period), which best examples are documented in the site of Sivré I (BAILLOUD 1997, fig. 77). The resemblance between the human figures in the Hohou style and the figures recalling the Niola Doa pecked humans was promptly outlined by Simonis (*et al.* 1994) in the Gran Riparo d'Archeï, although no explicit mention was made about the Hohou style in comparing the variety of different recognised "steatopygian" humans. This Hohou aesthetic is in stark contrast with the slender athletic human bodies introduced in the Ennedi art tradition starting with the Tamada style, which most beautiful examples can be observed in the shelters of Manda China (BAILLOUD 1997) or Chéïré-1 (MENARDI NOGUERA and BONOMO 2014). It is important to remember that the painting in the Tamada style, comprehend the first depictions of metal weapons. At the same time, the head decorations and hairstyle of the best-preserved Niola Doa-like painting in the Gran Riparo d'Archeï recall the fashion of the rounded hairstyle with pendants and inserted feathers, introduced as a constant iconographic element in the Ennedi art tradition since the appearance of the Tamada style. The Niola Doa-like paintings could be chronologically framed between the Hohou style (middle Bovine Period) and the Tamada style (recent Bovine Period) as they evidently share the appreciation for adiposity with the former and the hairstyle fashion with the latter. Cultural diffusion of a new fashion or the arrival of people with curly hairs naturally growing in rounded hairstyles could explain this observation.

#### THE ARCHAIC PERIOD PAINTINGS IN THE ELI-1 SHELTER

To the west, the Eli-1 basal cavity ends as the overhanging massive sandstone bed recedes southward forming a vertical wall. This wall has an attractive arched niche in the middle, about 3x3 meters large. Four faint aligned figures, drawn by the outline with a dark-violet paint, decorate its centre (Fig. 8). All but the third figure from the left in the row are in a very fragmentary state of preservation. A small rectangular relict to the right of the group could represent evidence for a fifth smaller human figure destroyed by weathering.

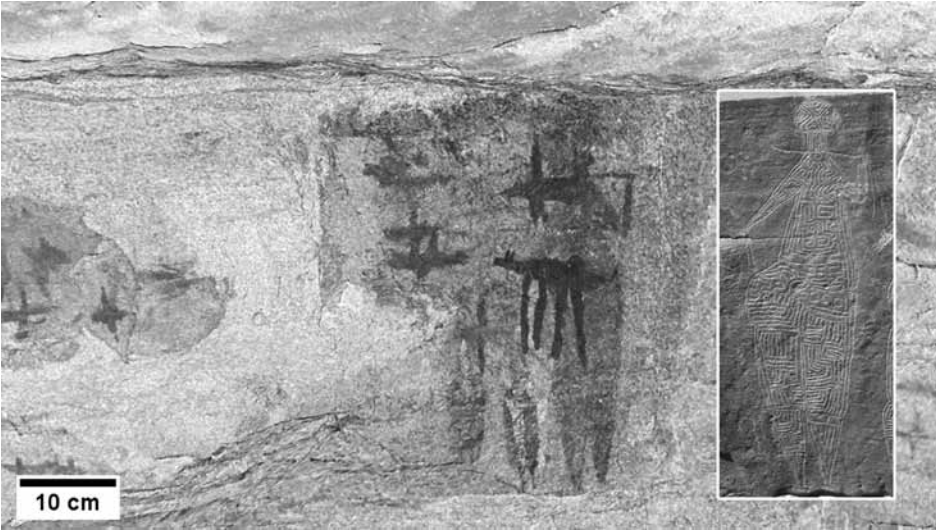


Fig. 7 - Crosses and a sticky animal superimpose three faint human figures painted in the mid-section of the shelter bottom wall (DStretch enhanced image in CRGB colour space converted to grey scale). The silhouette of the tallest figure (40 cm tall) matches the silhouette of one of the pecked figures holding a stick depicted in the Niola Doa "lost site" as shown by the insert (Photo insert: David Coulson, reproduced from the TARA collection published online by the British Museum, Registration number: 2013,2034.6165. Reproduced under the Creative Common Licence)



Fig. 8 - Four faint aligned figures painted by the outline in dark violet, all but one preserved as fragments (DStretch enhanced image in LDS colour space converted to grey scale)

These four figures align with the same imaginary baseline indicating they constitute a single group scene. A round head without facial details characterises the unique figure preserved in its entirety (Fig. 9). Small traits on the nape indicate a stylized, short hairstyle. Arms terminations are dumb, with five traits representing open straight fingers. On the left side of the chest, below the armpit of the upraised left bent arm, two small-rounded protuberances indicate the bosoms, an



iconographic detail allowing for a woman-identification. Three systems of crossed bands wrap the trunk. Lines traced across the limbs possibly represent other bands or bracelets and anklets. Oblique traits closely drawn below the abdomen level, likely depict a sort of raffia skirt.

All four figures are bearing large objects attached to the waist, rounded at their bottoms and tapering at the top end, internally decorated with a pattern of angled lines. Comparison with the African bags preserved in the ethnographic collection of the Quais Branly Museum in Paris suggests the best identification of these objects is with net-bags or bags made of vegetal fibres. Some items from this collection (MUSÉE DU QUAIS BRANLY 2017, ID: 71.1991.0.123 X and 71.1934.35.17), if translated into rock art would look the same. The inflated appearance of these painted objects possibly indicates bags at full capacity.

The first and third figures from the left are equipped with two of these presumed bags each, being the one to the left bigger. The second and third figures apparently bear just one big bag each.

Notwithstanding the weathered state of the upper body of the second figure from the left (Fig. 8), the head is still recognizable while the arms are enough preserved to read the gesture. A headdress painted by straight traits, scaled down to the left, suggests a depiction by profile. The right arm is bent up at the shoulders level; the left arm is overextended to touch the down stretched arm of the facing figure to the right. The second and third figures of the group are in action relation. The open legs of the second figure imply he is leaning to the right or walking toward the third standing figure. A depiction by a three-quarter perspective or by profile could explain the single big bag; the smaller one would be not visible because of the line of view.

A postural analysis of the two central figures in the group, using a 3D digital mannequin based on a realistic model of the human skeleton, was performed in DAZ Studio® to improve the understanding of the scene (Fig. 10). Body proportions of the best-preserved figure match the mannequin ideal body proportions in an imperfect way only, since the head is smaller than ideal in respect to the trunk length. However, the model shows that the extended arm of the left modelled figure is more prolonged than natural to allow touching the hand of the standing figures to the right. Besides the drawing trick adopted by the artist, the 3D model explains why the figure to the left appears with just one bag (Fig. 10, right section).

The raised up arms with open hand shown by the first, second and third individuals of the group can be interpreted as a friendly gesture of salutation since it coincides with one of the gestures rooted in humanity, not culturally specific (MORRIS 2012). Unfortunately, the preservation state of the fourth figure does not allow completing the gesture analysis for the whole scene. Anyway, it could be a salutation scene, possibly between two parties, perhaps composed of women only, meeting after the successful harvesting of some natural resource.

The stylization conventions adopted for the human body, the iconographic details and the drawing by outline technique, allow comparing these four figures with the most representative paintings of the Sivré style attributed to the Archaic Period (i.e. the pre-pastoral period in the terminology established by BAILLOUD

*Fig. 9 - Human figure characterised by a round head without facial details and hand fingers depicted as single traits draw on dumb terminations. Two small protuberances shown below the armpit of the upraised arm represent the bosoms, allowing for a woman-identification (DStretch enhanced image in LDS colour space converted to grey scale)*



*Fig. 10 - Postural reconstruction by a 3D digital mannequin of the two central figures shown in the Eli-1 western niche (backdrop: DStretch enhanced image in the LDT colour space of the modelled paintings, converted to greyscale). Clothing and body decorations are artist's renditions, not meant to represent accurate reconstructions of the actual depicted items. Left panel: frontal view - right panel: perspective view*



1960; 1997). The stylization conventions noted in the Sivré sites (BAILLOUD 1997) summarise as follow: round heads without facial details, generally in smaller proportion than natural, hands and feet fingers painted as traits on dumb terminations, women bosoms depicted as small protuberances on one side of the thorax. Concerning body decorations and accessories, the most distinctive iconographic details in the Sivré styled humans are dots, representing tattooing or body paintings, and wrapping bands. In the case of the two large figures of Sivré III (*ibidem*), explicit depictions of loose ends indicate these bands are stripes made of fabric as also confirmed by high-resolution 3D photography (MENARDI NOGUERA 2017b). On the evidence offered by the Sivré III site, the crossed bands characterising the third figure painted in the western niche of Eli-1 are best interpreted as stripes of fabric.

## CONCLUSIONS

Progress in Saharan rock art studies are by nature incremental as amazing works of art might emerge from the shadow of any unchecked desert corner at any time. Thus, commenting the novelties from the Amilianga pass areas require caution, especially in the case of the oldest paintings belonging to the Archaic Period.

Pre-pastoral paintings are effectively rare at the regional scale for the low preservation chance related to their old age and the strength of the weathering agents, locally very active. In this respect, the Ennedi is different from the Central and Eastern Saharan massifs, since its southern fringes are still included within the annual average 200 mm isohyet marking the conventional boundary between the Sahara and the Sahel ecosystems (ECOWAS-SWAC/OECD 2006).

The pre-pastoral paintings, by definition, should be older than the earliest evidence of cattle herding in the region, which dates to the late fifth millennium BC (JESSE *et al.* 2013). How much older are the paintings in the Sivré style in respect of the local introduction of pastoralism is presently impossible to say since the youngest paintings in the pre-pastoral sequence of the Ennedi are depicted in the profoundly different Elikeo and Chequered styles (BAILLOUD 1997).

Compared to the many thousands of documented human depictions attributable to the pastoral era, known human depictions in the Sivré style are very rare as they number in the dozens. Therefore, in the present state of the rock art sites inventories, every single newly reported pre-pastoral painting looks like a precious gem. While buxom women are known from the Sivré I and Sivré III sites (BAILLOUD 1997, figg. 37, 77), while muscular male hunters did find their champions in Archeï II (MENARDI NOGUERA 2014, figg. 4, 5), slender women apparently devoted to gathering surfaced for the first time in Eli-1.

The few known paintings in the Ennedi Highlands reproducing the iconography of the Niola Doa petroglyphs of pastoral age constitute another kind of a rarity, which needs to be questioned. Insufficient data collection on the field and an incomplete state of the published photographic documentation might explain the scarcity of good examples. Indeed, also the taphonomic factor (BEDNARIK 1994) played its role as the few reported cases bear the effects of an intense decay by weathering, making hard to assess their real rarity since their geographic distribution was likely dependent on the original selection of culturally significant lo-

cations. New extensive systematic surveys by photographic scanning and image enhancement of faded paintings might change the statistic once the preferred location pattern within the landscape is eventually understood. Nevertheless, the Niola Doa artists could have been the heralds of a short-lived culture, shared by a small group of cattle herders, which left traces of their wandering just in very few places, before being wiped out or assimilated by the artistically prolific people that introduced metallic weapons in the Ennedi. The Niola Doa-like paintings found in Eli-1 proves the importance of this strategically located shelter also for the people which greatest known artistic achievements are the life-size human petroglyphs of Niola Doa.

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