

REFLEXIONS ON TWO TYPES OF PROTOHISTORIC MONUMENTS
OF WEST SAHARA

Since our article (1973), in which we referred to a number of crescents in Mauritania, a great deal more material has come to light: the intention, in our following remarks, will be to emphasise some of the problems and questions posed by recent finds, as well as to provide comparative matter from the past. The second type of construction – large stone-bordered enclosures which have been baptised “moscas” (or “flies”) by their Spanish discoverers – while not unknown in northern Mauritania, appear to have lain fallow since around 1973 in that area, apart from brief mention by MONOD (1948) and MAUNY (1961); we shall therefore examine as far as possible some of the spectacular finds made by aircraft in Spanish territory, as well as commenting further on Mauritanian examples which it was earlier hoped to visit in Spring 1975. The name “mosca” seems most apt, due to the similarity of these monuments to large flies with closed wings seen from above; we therefore propose to employ this terminology throughout.

Crescents

These, it will be recalled, come in the family of V-shaped monuments; as MONOD (1948, 26) has remarked, the distinction between crescents and V-shapes is often impossible to determine, since intermediate types occur.

Re-reading our remarks on crescents and “eyes”, it is clear that we failed to emphasise that all those noted by us to date were “en relief”, or tending to rise in height from the end of the arms until attaining maximum height at the centre point, say between 50 cm and 1.20 metres. A few seen had clearly-defined central tumuli rising well above the body of the crescent in each case. (Fig. 1). BESSAC mentions in a personal communication to MONOD, who reproduces it (1948, 27) that the crescents around Tindouf are often flat . . . and rarely “en relief”. REYGASSE (1950, 85) also shows in the centre photo a flat monument at Abalessa, Hoggar, which may very well be closely related.

Referring to such monuments, in the context of burials covered by stonework “paving”, MAUNY mentions (1961, 88) that they will be particularly archaic and lack grave-goods generally. Meanwhile we still have to ascertain whether the large flat “paved” crescents in southern Morocco, below referred to, are burials or not. Again in general terms we think that the “quartier d’orange aux pointes prolongées” shown by LHOTE (1944, 67) looks similar to much of what we have seen around Choum and F’Derick.

“Eyes”, on the other hand, being those constructions which have their pointed extremities at 180° to one another (the “monuments fusiformes” of HUGOT (1974, 308)) seem to be “en relief”, so far as we can determine from the frugal literature

available, as also from our limited experience; we shall later examine them in more detail, with special reference to their apparent relationship to crescents.

Another omission of which we are only too well aware (although emphasising that the vital work by CAMPS (1961) largely evaded our grasp until after our article went to press, apart from several short glimpses in foreign libraries, including one whose Staff went on strike) is, of course, the question of the orientation of monuments, as also that of the bodies and of the cultural elements such as corridors and niches. Camps, in the preface to SAVARY (1966, 7) – in itself a most rewarding work – deals admirably with the corridors of “keyhole monuments” being aligned towards the rising sun. LHOTÉ (1967, 131) considers that this orientation holds good equally for V-shaped constructions. MAUNY mentions (1957, 82) a theory seemingly confirmed by a number of observations, which is that – during a period beginning prior to the end of the Neolithic and continuing up to the introduction of Islam – there existed a funerary cult which was carried out facing the west. This in no way implies a change of orientation of the many monuments facing eastwards, although WOISARD (1955, 158) cites five “prayer emplacements” in front of a crescent located 12 km north-north-east of Aouinet Legraa, north-western Algeria. (Fig. 2)

No mention is made as to which way the worshippers would face, when using these emplacements; but it will be apparent from the layout shown that they would be unlikely to face exactly the same way, due to the curving nature of the line of emplacements. The same author notes a general absence of stone artefacts in proximity to his crescents, all situated in north Mauritania or north-west Algeria; they also seem to be “en relief” rather than flat. And he cites a crescent with a standing stone in front of it at about 25 47 N 09 47 W, 3 km north of the track from Aïn Ben Tili towards Fort Trinquet (Bir Moghreïn). A drawing to scale which we made from the dimensions mentioned in the text indicates that the distance between the tips of the tails will be around 312 metres, putting this monument firmly in the category – in terms of size – of some of the Spanish Saharan examples mentioned below.

REGNIER cites crescents with four small tumuli in front, in a line parallel to the general north to south orientation of the monuments “seen in numerous places” (1961, 140). Since his article covers a vast zone, we are unfortunately none the wiser as to their location, ranging in all probability – from the text – from the Hoggar to the Adrar des Iforas, Mali. The dimensions are given as 10 metres “diameter” for the crescents (which are certainly rather rounded in form) and the tumuli in front may have a diameter of around 1 metre, no height being mentioned.

Speaking of crescents of the Hoggar, DENIS (1959, 297) gives a normal orientation of between north-east and south-east, citing, however, some tombs (note this terminology) that face west, at Oued T-in Amzi and I-n Azaoua well, this latter lying astride the track running from Iferouane, Niger, towards Tamanrasset. In 1973 we cited the westfacing monuments known to us at the time and there is reason to think that they are very rare indeed. DENIS also mentions chouchât apparently associated with crescents at an unspecified location; at yet another, his colleague CAPDASPE notes a crescent with one standing stone at the centre and another with

three, a phenomenon noted by VOINOT in 1908 and apparently set into the monument illustrated by us at fig. 14. Near T-in Dahart (the position is given as 22 57 N 04 33 W) are mentioned two monuments whose exact shape is none too clear to us, although each has a flat centre around 30 cm in height and two straight “arms” resembling pathways. These seem not to be the same type of V-shape as illustrated at our fig. 16, since such a construction is later illustrated by DENIS at another location.

CHUDEAU shows (1909, 16) a pair of crescent-shaped dunes, facing south-west with their arms touching at the tips, from west Sahara. It requires little imagination to deduce that some crescents – from around Tindouf, for instance – will derive their form of layout from these natural shapes.

In the last few months we have been fortunate in having had close contact with two individuals who have investigated other zones, R. LETAN and J. CASTELEIRO, who have also been kind enough to put their written and verbal theories, as well as photographs, very much at our disposal. In the former case, we have also had the inestimable advantage of undertaking together a reconnaissance of a part of south-east Morocco in which R. LETAN has already made some interesting discoveries; later we investigated briefly, on our own, a “continuation area” thoughtfully indicated to us; we feel that results showed considerable promise for the future, not only in terms of stine monuments, but also lithic industry and rock carvings.

R. LETAN having already spent much time in the area immediately east of the village of Mrimima (Map 1), on the track between Fom Zguid and Agadir Tissint, it was natural that he should also have pushed south into the desolate zone around the massif of Jebel Hamsailik. A large flat crescent discovered by him to the east of the oued of the same name (position about 33 04 N 10 43 W) is set upon a prominent bare hill-top; his own investigations having revealed some intriguing apparent relationships of straight lines joining various parts of the monument and its associated tumuli, let it suffice to mention here that, in the northern half, rectangular stone patterns (Fig. 3) appear to divide up part of the stone “paving” into definite compartments, for a purpose unknown; in the southern portion there are a couple of stone niches – their borders carefully picked out in stones – set into the west perimeter (Fig. 4). This monument will shortly be published by its discoverer and there is a “fusiforme” set upon a second eminence around 100 metres to northwards (Figs. 5 and 6).

While we cannot comment upon the compartments, the niches do seem to fit into the cultural pattern of the vicinity, since we observed a similar westerly niche built into a strange flat monument (position about 33 07 N 10 37 W) whose form is neither exactly a crescent nor a V-shape, being orientated towards 75° magnetic, which seems to preclude its being a later Islamic addition (Fig. 7). This exhilarating find was made close to a rock carving site at about 33 07 N 10 36 W, in close proximity to a large tumulus with the unusual feature of being seemingly flat on top and a height of about 1.5 metres. We have no idea whether these two adjacent constructions date from the same era, since we have never previously observed anything quite like either of them.

On a hill running east to west, at about 33 06 N 10 36 W, we found first a fusiforme and then a crescent, whose extremities are slightly lower than the centre; distance between the tips of the arms was around 47 paces. Unfortunately it was omitted to note the position of the fusiforme in relation to that of the crescent. However the two fusiformes do seem to bear a definite relationship to their respective crescents; the north to south orientation of each is very striking and each has a flattish platform attached on the west side. While we saw nothing to indicate that these flat crescents might be burials, the central tumular effect of the centre portion of each fusiforme makes this a distinct possibility. BESSAC (1958, 365) considers that the multiple flat (“dessinés”) crescents at Tindouf may not be burials at all. However VOINOT (1908, 361) thinks that, while the “keyhole” monuments of Central Sahara may initially have had a religious purpose, only coming later to be used as burials, V-shaped constructions were designed as tombs. He also mentions “keyhole” monuments as being orientated towards the rising sun. The distance from Tindouf to Jebel Hamsaïlik area being around 300 km, it is worth attempting a physical comparison of the flat crescents of each zone at some future date.

R. LETAN showed us another flat crescent across a col, just to the east of Mrimima, whose extremities are slightly higher than its centre (compare CAMPS, 1974, Pl. XX. 2.). After he was obliged to leave for the north, we investigated towards the south on either side of a track which begins about 2 km west of Oued Tissint at the point where this oued is crossed by the track Mrimima – Agadir Tissint. Travelling 1 km south from this junction, then 2 km west across country, we visited a site already known to him, whose main feature was a crescent-like monument almost on top of the most easterly of a number of small rocky hills running east to west. It possessed flat arms and a prominent bulky tumulus in the centre (Fig. 8), some 1.40 m high; the distance between the extremities was 20 paces. We wondered whether three large stones near the tip of the northern arm had been placed with intent (compare BESSAC (1953, 1603)).

Proceeding southwards along the track almost to the Oued Draa, we found a line of low hills running about 30°–210° magnetic and beginning immediately west of a track junction, we observed another crescent astride an open piece of ground, with a oued running parallel and to the north of the line of hills. (Fig. 9). The north arm of this construction “hangs” over the edge of the oued and, indeed, this is the only part of the construction visible as one approaches on foot from the north. Both arms are lower than the centre and neither tip is visible from it. LHOTE (1944, 69) speaks of large numbers of crescents (apparently of the type “en relief” we have noted between Choum and F’Derick) in the east part of the Adrar des Iforas, Mali, lying atop small mounts and with their arms trailing down their slopes.

Further to the south-west and still in the same line of hills we came across a very decayed construction which might have been a fusiforme; however the platform, if not separate, was anyway set to the northwards. Two other fusiformes occurred at other sites, one to east and one to west of the north-south track used as our axis, without apparent crescents near them. One, however, had a stone circle very close to

it, similar in essence to a couple of others we saw in the vicinity (Fig. 10). Both the circle and the fusiforme nearby possessed niches picked out in stones; that beside the fusiforme was separate and its open end pointed to about 320° magnetic; that forming part of the circle pointed exactly opposite, or towards 140° . Once again we asked ourselves if these niches are contemporary with the monuments, remembering the “msellahs” (Islamic prayer recesses) cited by REYGASSE (1950, 62) in Central Saharan monuments.

No conclusions are yet possible in respect of this interesting zone of south-east Morocco; however it may be that there is a tendency for there to exist one crescent per zone, by which we infer one per line of low hills or isolated hillock; we have yet to see a number of crescents or V-shapes together here. The relationship of the crescent to the fusiforme is not evident yet; however we should like to mention a crescent set just to the south of a fusiforme, both being “en relief”, set close to the main Trans-Sahara track north of Oued Seguelil, near Atar, Mauritania. Clearly we need to see a great many more examples of both constructions in this immediate area; and excavation seems of prime importance for what it might reveal. Meanwhile we are indebted to H.-J. Hugot for the recent information that an article on fusiforme is currently in preparation.

Turning now to investigations carried out by J. Casteleiro, who has made available two unpublished manuscripts and many photos taken from the air, it was hoped, at the beginning of the year, to undertake a joint publication on the crescents and “moscas” of Saguia el Hamra and Central Mauritania. Inability to spend enough time together to prepare the main draft having, for the time being, prevented this interesting project, on which we had agreed, it only remains to express the fervent hope that he will in time produce a work considerably more detailed than these notes can hope to be.

As with figure illustrations of our Moroccan material above-mentioned, drawings must here too be regarded as strictly schematic, not – as in the former case – due to the problems of photographing whole monuments from above, but rather due to pictures available not enabling us to pick out the exact outlines, captured from the air, these being sometimes hazy. Scale is also a problem. The sites have been identified, as far as possible, from the 1 : 500.000 Sheet NG 29–IV, Semara, with the geographical position of each zone or feature being taken from the Official Standard Names Gazetteer No. 108, published in Washington, D. C, in June 1969. We have occasionally changed these coordinates very slightly, when it seemed that the indications of position given in either manuscript require this.

The two most surprising features of these crescents and V-shapes are, firstly, their gigantic size and, secondly, the fact that they appear to occur in clusters or groups, quite unlike their south-eastern Moroccan colleagues.

At Gor Angana (27 28 N 10 41 W) is reported a V-shape with a distance of 1 km between tips; the same dimensions are given for a monument near the curve of the Oued Afra (presumed by us to be that at about 27 38 N 10 10 W), in this case the central one of three near the curve of the oued, spelt “uad” on the Spanish map. Close to Musa (26 52 N 2 04 W) on a small elevation on the south bank of the

Seguiet el Hamra are two crescents with long curving tails. From the vehicle track crossing the easterly one (Fig. 11), we calculate the distance between the tips of the tails as being about 70 metres. Taking this measurement and transposing it to another photograph on a differing scale, then the distance between the centres of the two monuments will be some 220 metres. Should the vehicle tracks mentioned happen to be those of a lorry – rather than, as we have dared to assume, those of a jeep-like vehicle – then these dimensions will necessarily err on the small side.

Compare the sizes for such monuments given by HUGOT (1974, 307) and CAMPS (1974, 347) which are respectively 150 metres and “more than 300 metres”.

A further single crescent is reported near Tifariti, to the north of the fort and on the edge of a water-course, with a V-shape between Bir Lehmar (23 06 N 11 01 W) and Necca (= Nebca: 26 02 N 11 37 W). In the region of Chbabien (27 18 N 11 23 W) there are seemingly four more constructions; since this zone is comparatively large, it is felt that these monuments should provisionally be counted as single ones. Three appear to have no tails.

The author mentions that interrogation of local people has produced only the reply that they are “earlier than the Kur’an”; also that they appear and disappear. This latter phenomenon he explains to be the tempest known locally as the Irifi, which predominates for about six months in the year. Although he has been down on a flight over part of the area near Choum – on a visit to Mauritania – CASTELEIRO has not so far observed the clusters of smaller crescents similar to our own finds; presumably their smaller size (40 to 50 metres between the tips of the arms) accounts for this to a large degree.

Possibly the most significant observation he makes is that these monuments, normally on high ground within the Spanish Saharan territory under reference, are not easily visible to persons on the ground, including those in vehicles or on camels; and that complete examples are visible only from the air. R. LETAN having recently remarked, à propos of our mentioning the sighting of a Moroccan crescent without binoculars from over 1 km distance, that the builders possibly wished their handiwork to be visible from afar, it does seem that this theory cannot apply to Casteleiro’s discoveries. The sole alternative is thus to ask whether it can be remotely possible that the crescents and V-shapes reported by him to date may have been intended to be visible principally from the air. This question will also hold good for the “moscas” described below.

Before ending our remarks on crescents and V-shapes, we will reproduce, for comparison only, some examples from various parts of the Sahara, mostly published by former writers. Fig. 12 shows a type noted by MONOD (1948, fig. 35) at Toufourine, Erg Chech, in north-west Algeria, of which we have seen an example in south Morocco, west of Aïn Timelouka, in the Agadir Tissint region. The size of this was about 8 metres long and 5 metres broad, measuring from the rear of the body to a point between the tips of the arms. In the Adrar Ahnet, Central Algeria, a small crescent is shown by MONOD (1932, 52) at Oued Amg’a, similar, we feel, to a couple we observed behind a line of six major crescents near Choum, set directly

below the eastern face of a rocky hillock (Fig. 13.). The crescent at Amguid, Central Algeria, observed by VOINOT (1908, XII), shown by us at Fig. 14, has a tumulus with a standing stone at its centre; there is another tumulus at the end of the southern arm and a long, curved north arm due, we presume, to the presence of a small ravine nearby; a small enclosure is built joined to the front part of the centre. A flat, ungainly edifice shown by the same author (1908, XI) consists of a tumulus flanked some metres away by a stone border, indicating the body and the arms (Fig. 15).

There exist more graceful types at Ti-n Felki and In Ghogui, central Algeria, found by VOINOT (1908, XIII, 2 and 3) whose outlines are depicted at Fig. 16. In the case of that at In Ghogui, the left-hand monument in our sketch, compare PACE, SERGE and CAPUTO (1951, 385) for another in the Fezzan; PERVES (1945a, 197, numbers 17 and 18) has apparently noted some in the Hoggar and Tassili n'Ajjer: and L. K. RATSCHILLER believes (personal communications) that he has seen such a construction in Spanish Sahara, as well as at least on crescent or V-shape, this latter in the area roughly west of Bir Lehmar.

Again set in the Adrar Ahnet MONOD shows a quantity of flattish V-shapes, generally with stone piles in the centre. At Fig. 17 we show an edifice at In Ziza (1932, 55). A very low stone platform (fig. 18a) was noted by us in the Arak gorge, central Algeria, in January 1975, possessing only one (northern) arm, pointing towards 43° magnetic; this descended into a water-course, in addition to being traversed by an animal path apparently in use. It had seemingly been excavated and its method of construction was by a number of low stones flanked by a border of higher ones, stuck into the earth and about 20–25 cm high. Compare an intriguing arrangement of monuments at Djebel Ahellan, Hoggar, illustrated by HUGOT (1963, 174–75); each of these curious enclosures has a short north-eastern arm and a longer one which points south. Some interesting variations of V-shapes are shown by PERVES (1945, 197) although they are so small that our own reproductions are very approximate only (Fig. 18b). Another variant is shown at fig. 19, a “street grave” published by GABRIEL (1970, 21) in Tibesti. Finally, fig. 20 shows another construction seen this year, apparently 220 km southwards from In Salah, central Algeria, on the present Hoggar track and set just to the west of it. It resembles a crescent whose arms have been blunted or cut off and has seemingly been excavated.

The crescent motif has appeared in Saharan rock art and is specifically noted by HUGOT (1974, 164) in the Tassili n'Ajjer; a dubious specimen appears in Capsian art illustrated by CAMPS (1974, VIII).

In general terms it is felt that insufficient attention has hitherto been paid to differing forms of crescent and V-shape, as well as to the uses to which these constructions were put, in differing areas. The solitary flat south-eastern Moroccan monument, a mere pattern of flat “paving” in a prominent position, for instance, seems rather far removed in terms of shape from its central Mauritanian cousins; these are flatter and higher (en relief) and occur in patterns of up to six, placed arm-to-arm but not touching, along a volcanic outcrop, with a positive battery of occasional tumuli around them and even a stone circle apparently associated in one case.

As to the probable age of V-shaped monuments and crescents, PERVES (1942b, 218–219) considers them to belong to the oldest part of the Iron Age in North Africa. Recent conversations with R. MAUNY have left us with the impression that they will have been constructed from 2000/1500 B.C. onwards or, in general terms, that megalithic monuments of this ilk came in at the very last period of the Saharan Neolithic. From his important work just submitted for publication in ALMO-GAREN V/VI, a copy of which we have been lent, the final Neolithic period in West Sahara seems to have extended at least as far down as 790 B.C. he also mentions the enormous task facing protohistorians in the study of preislamic funerary monuments and underlines the urgent need for further excavation.

It seems likely, as far as we are able to determine at the present time, that detailed study of all aspects of the heel-shaped cairns of Shetland – as well as of certain other types of Scottish monument – might pay a handsome dividend.

Moscas

These stone-bordered enclosures are apparently first noted by GOBIN (1938, 145) “in a oued between Agmar and Bir Moghreïn” while on a camel journey during which he also discovered four square monuments, the locations of three of which are unknown to us. Later on MONOD (1948, fig. 56) illustrated a group of six just to the east of Bir Lemouissate, south-east of Bir Mogreïn, following a personal communication by Commandant Bouteil. We show GOBINS only sketch at fig. 21, the measurements of which were queried by MONOD (1948, 23). This portrays a small circle of stones at either end of each “corridor”, while these are missing from Monod’s sketch, which, however, refers to the constructions at Bir Lemouissate, rather than to those “between Agmar and Bir Moghreïn”, which site will be somewhat to the northwards. It is significant that there is a small hillock in the vicinity of both sites; GOBIN excavated one of the circles and reports a totally negative result. The orientations shown in the drawings of the two authors indicate that they are placed haphazardly and do not face any particular direction.

Resulting from aerial searches by himself and various friends who became interested, CASTELEIRO reports moscas, further north, in the areas of Chbabien, Lehmeira Thibora (this being, we think, the Aaglet Lehmeira at 27 25 N 11 29 W), Habchi (a oued between 27 39 N 11 23 W and 27 45 N 11 20 W) and, finally, Jang Saccum (26 55 N 11 29 W) whose northern area lies in Morocco.

Study of the photographs in our possession, upon which the following rough sketches are based, enables us to determine that this interesting material shows characteristics over and above those illustrated by MONOD and GOBIN. We have tried to omit lines or areas which are not absolutely clear. Firstly, there can be more than one circle at the broad end of the corridor (Fig. 22), the second apparently being placed beyond the first, in line with it, as also with the corridor. None of Casteleiro’s photographs, however, show a circle at either end of the corridor (compare GOBIN above.). A monument possessing two corridors – these effectively dividing it into three segments instead of two – can lie close to another with only one corridor (Fig. 23). A single-corridor edifice can have a supplementary enclosure,

apparently without corridor, tacked on at its broad end (Fig. 24), as well as being positioned close to another single-corridor monument. In general terms, we think that the thin end – or “head” of the mosca – tends to be filled in completely with stones for some little distance, a feature not apparent in Gobin’s sketch. A final detail is that a double-corridor monument is shown in one picture close to a crescent of uncertain dimensions (Fig. 25), apparently with some stone patterns of indeterminate form in front. This mosca seems also to possess a circle inside the enclosure, at the broad end, touching the border. In this case, however, the “head” of the mosca seems to have been disturbed. A path or track nearby, if around 0,50 metres wide, will give the monument a maximum width of about 12,5 metres, not allowing for distortion. A similar deduction has been made for one another monument, whose dimensions will, however, be the subject of some distortion.

Study of a map on which all finds have been entered, ranging from crescents, V-shapes and moscas down to some intriguing symbols apparently scratched in the earth – one of which, in common with Nazca, Peru, shows spiraliforms as well as possessing a track obligingly running nearby as a rough scale – it seems that a most interesting zone lies close to the common frontier with Mauritania; this will be in the area of Bir Lehmar and extending about 12 minutes of longitude on either side of 11 00 W.

Let it be mentioned in passing that these monuments of Spanish Sahara are, like those in the region of Nazca, set not far from the sea. They are commonly thought to be protohistoric, while REICHE (1968, 78) recalls the fact that the textiles and pottery of Nazca and Paracas style – related, according to archaeologists, to the ground-drawings – have been dated between 300 BC and 900 AD.

Quite clearly these configurations and isolated constructions of Western Sahara are more visible from the air than from ground-level, which will account for their not having come to light long ago. We can only hope that this interesting material will now be thoroughly investigated on the ground and results published in detail; dare one hope that moscas, for instance, may prove to have their corridors facing towards various heavenly bodies? Until more is known, however, prudence requires that no further comment be made. Our sincere thanks are meanwhile due to R. LETAN and J. CASTELEIRO, without whose enthusiastic cooperation these notes could never have been compiled; we also thank H.-J. HUGOT, R. MAUNY and A. SIMONEAU, who have each contributed much information of the greatest value during our divers researches.

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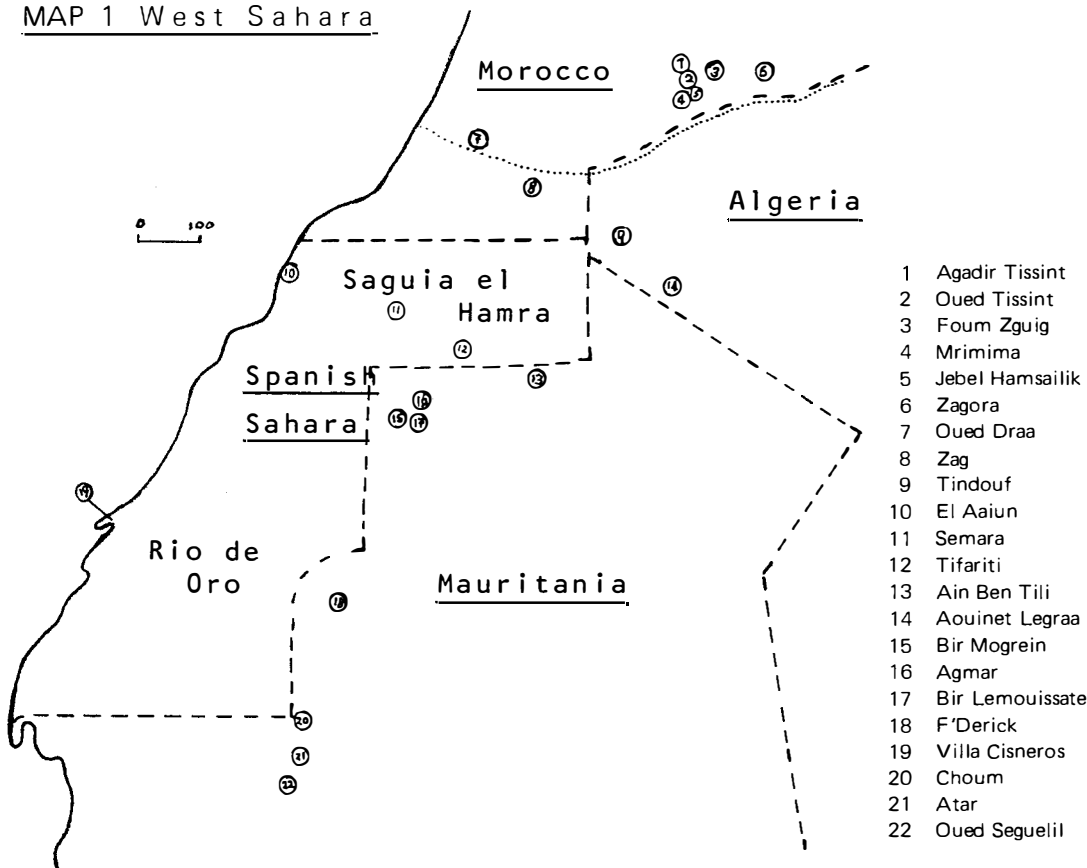
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MAP 1 West Sahara



MAP 2 Central Algeria

CENTRAL ALGERIA

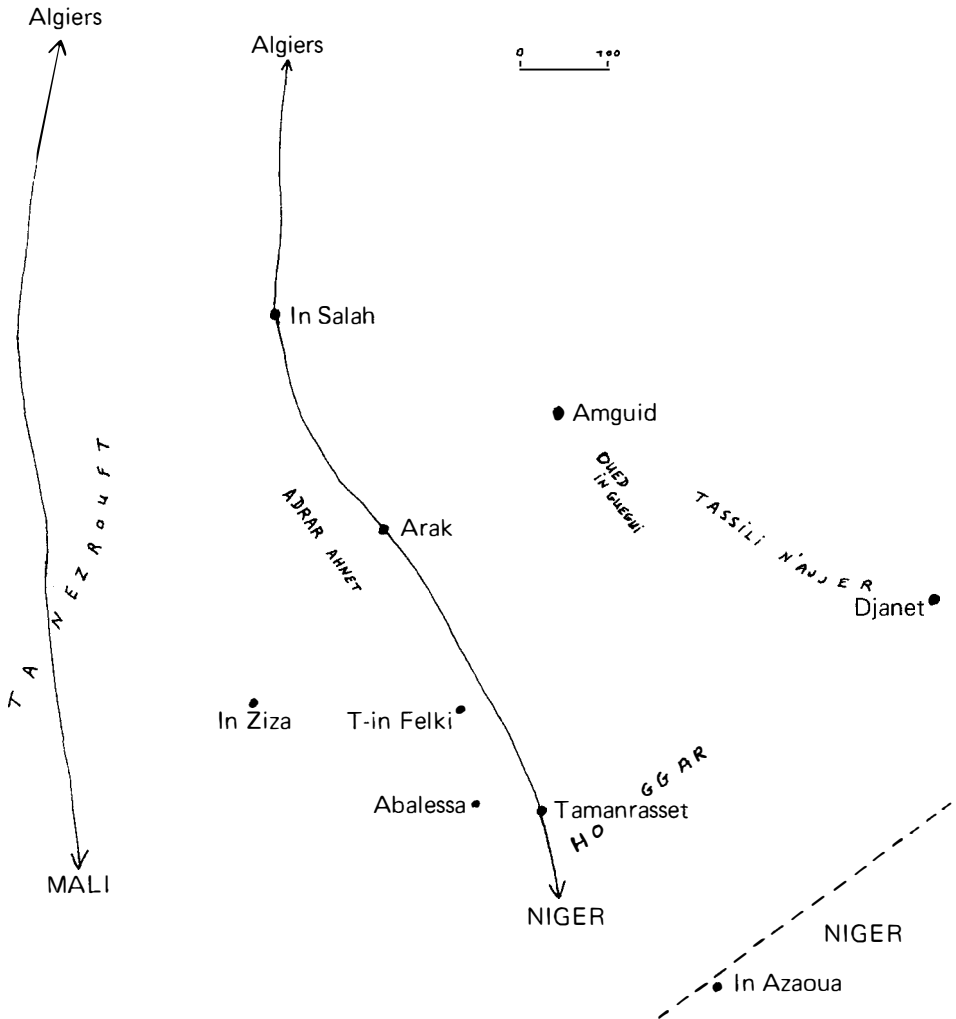




Fig. 1: CRESCENT. Photo Köbel

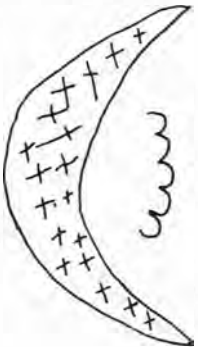


Fig. 2: CRESCENT AND NICHES (after Woisand)



Fig. 3: CRESCENT, Jebel Hamsailik. Photo Milburn



Fig. 4: CRESCENT, Jebel Hamsailik. Photo Milburn

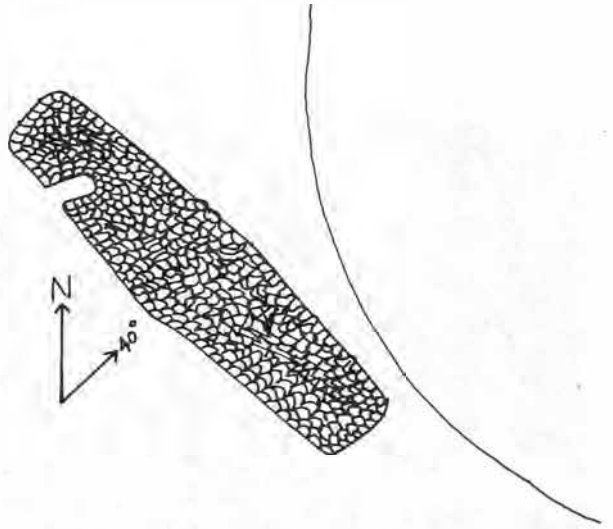
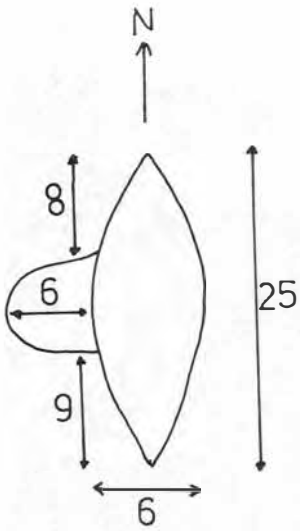


Fig. 5: Fusiforme (after own photo). Fig. 7: FLAT MONUMENT WITH NICHE (after own photo)



Fig. 6: Fusiforme. Photo Milburn



Fig. 8: CRESCENT WITH CENTRAL TUMULUS. Photo Milburn

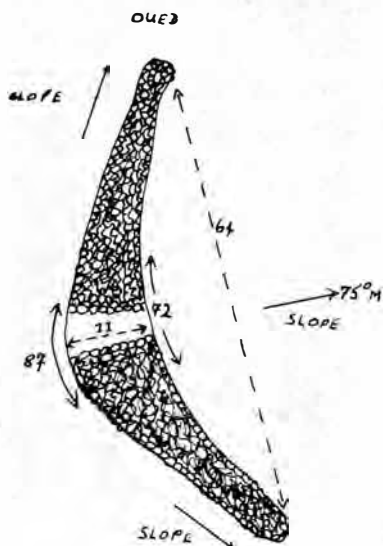


Fig. 9: FLAT CRESCENT



Fig. 10: STONE CIRCLE. Photo Milburn



Fig. 11: CRESCENT (after a photo by Casteleiro)

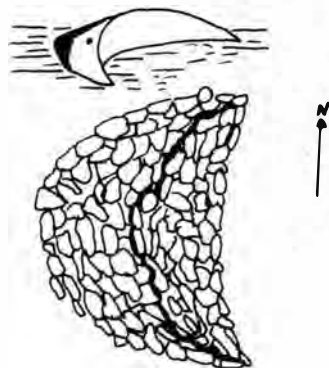


Fig. 12: CRESCENT (after Monod)

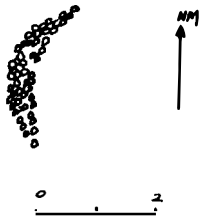


Fig. 13: CRESCENT (after Monod)

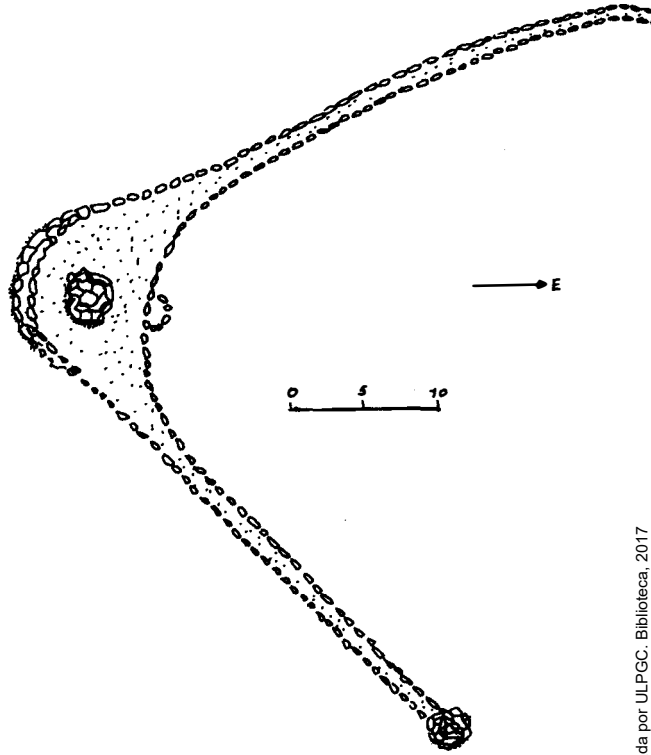


Fig. 14: LARGE CRESCENT (after Voinot)

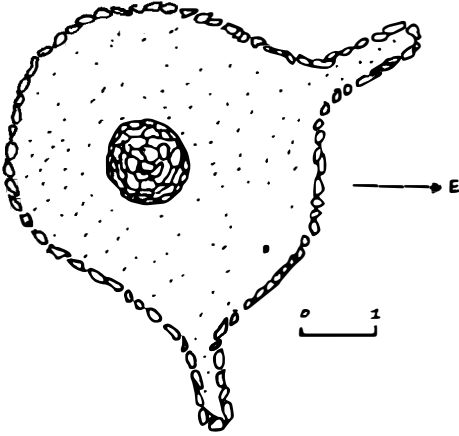


Fig. 15: V-shape (after Voinot)

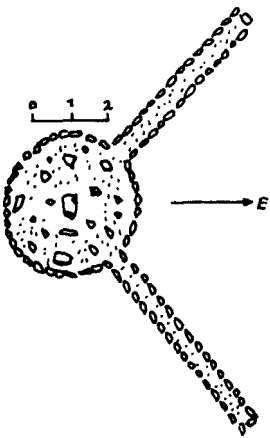


Fig. 16: V-shapes (after Voinot)

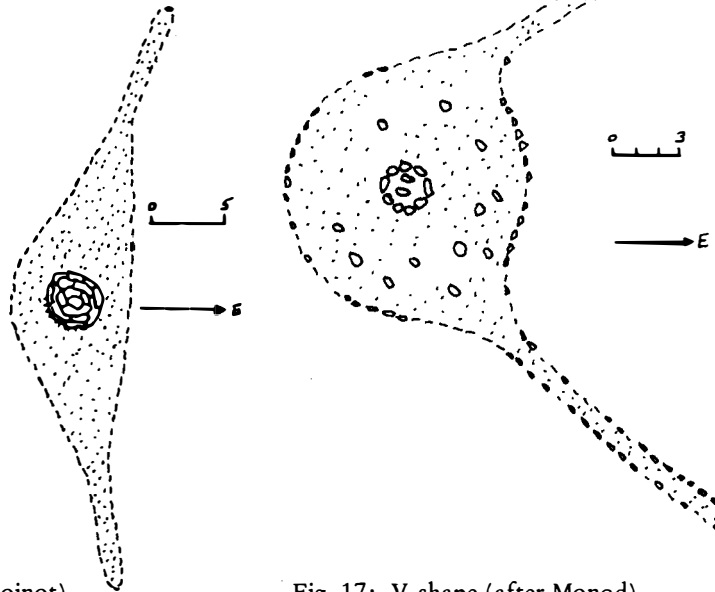


Fig. 17: V-shape (after Monod)

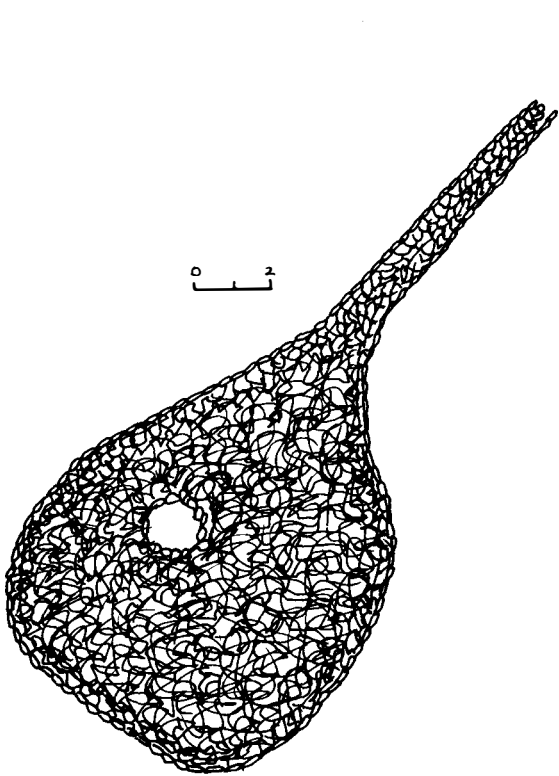


Fig. 18a: LOW STONE PLATFORM (after own photo)

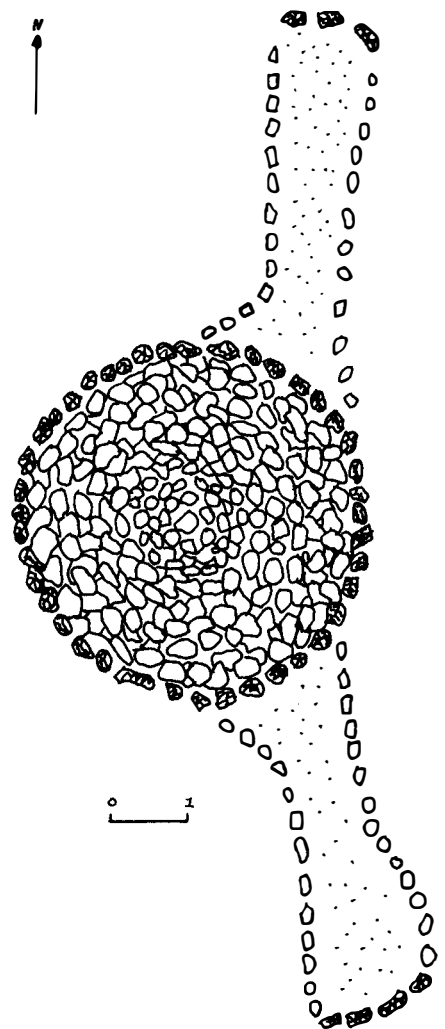


Fig. 19: MONUMENT OF TIBESTI, Chad (after Gabriel)

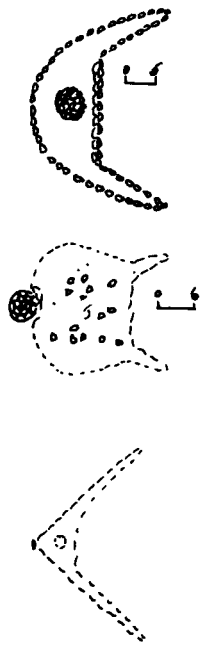


Fig. 18b: FOUR MONUMENTS OF CENTRAL SAHARA (after Perves)

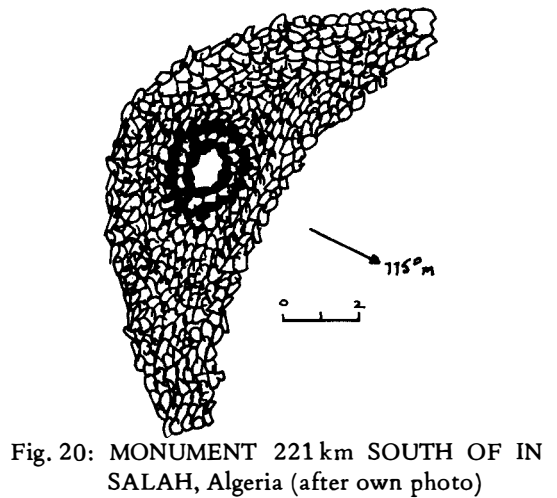


Fig. 20: MONUMENT 221 km SOUTH OF SALAH, Algeria (after own photo)

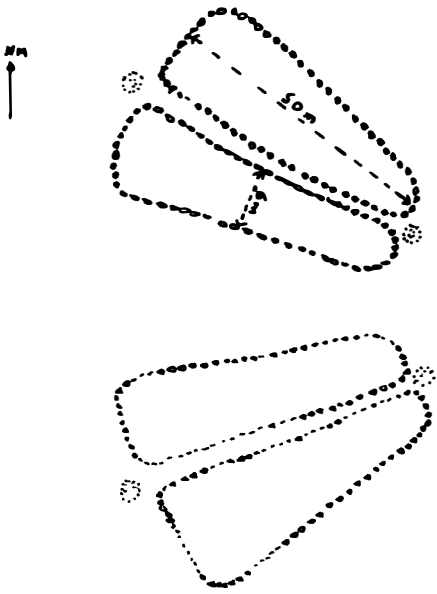


Fig. 21: MOSCAS (after Gabien)

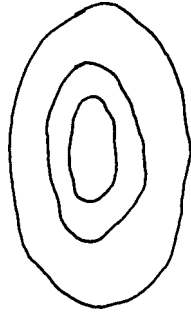


Fig. 22: MOSCA (after photos by Casteleiro)

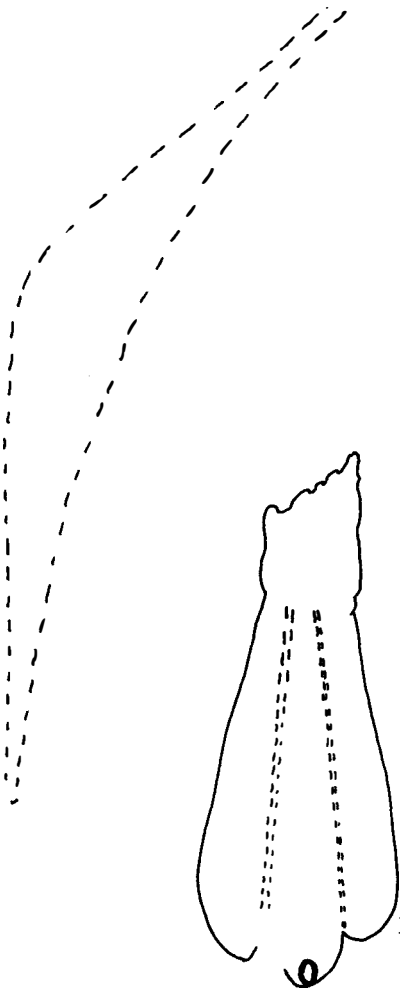


Fig. 23 and 24: MOSCAS (after photos by Casteleiro)

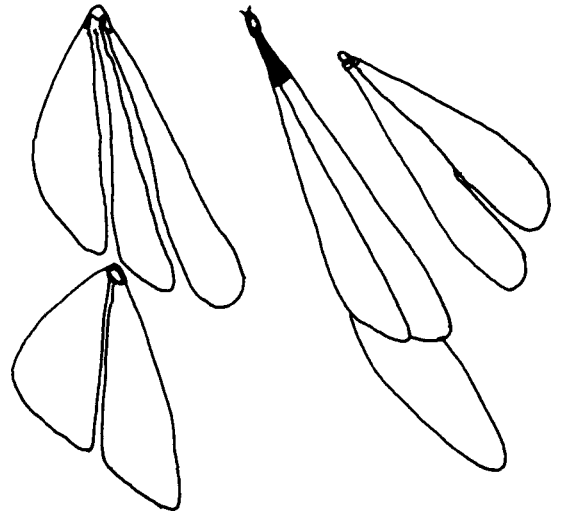


Fig. 25: MOSCA AND CRESCENT (after photos by Casteleiro)