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Archaeology and Petroglyphs of Dampier (Western Australia) an Archaeological Investigation of Skew Valley and Gum Tree Valley

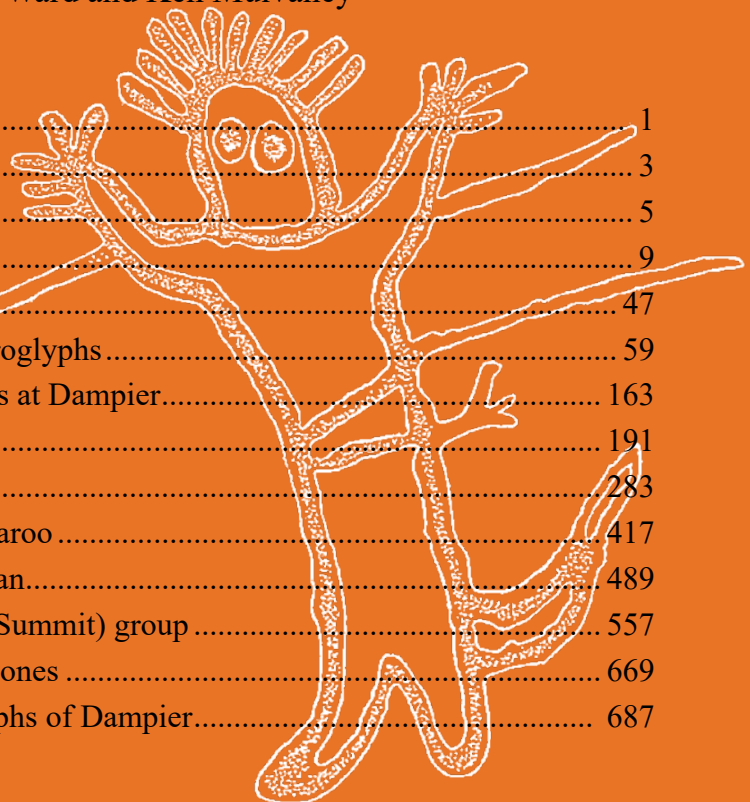
by

Michel Lorblanchet

edited by

Graeme K. Ward and Ken Mulvaney

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Michel Lorblanchet joined the *Centre national de la recherche scientifique* (CNRS, France) in 1969 to study the Palaeolithic rock art of France. After graduating in 1972 from Université Sorbonne (Paris) with a doctorate in Prehistory, he was employed from 1974 to 1977 at the Australian Institute of Aboriginal Studies to conduct research into indigenous Australian rock art. From his base in Canberra, he participated in projects in Far North Queensland and in western Victoria. Between 1975 and 1976, he conducted the fieldwork at Dampier, Western Australia, on which this monograph is based, and made two further fieldtrips there in 1983 and 1984. He returned to France in 1977 to the *Centre de Préhistoire du Pech Merle* (Cabrerets). Lorblanchet was appointed *Directeur de recherches au CNRS* in 1995; he retired in 1999 and lives near Saint Sozy in the Lot Valley where he continues to research and publish about rock art. He is the author of many papers and several books on European Palaeolithic art (some are listed in the editors' introduction) as well as reports and this monograph on his Australian researches.

Volume Editors

Graeme K. Ward has conducted archaeological and ethno-archaeological fieldwork in the island Pacific and Australia. He gained his doctorate from The Australian National University and was employed at the Australian Institute of Aboriginal Studies where he was involved with administration of research programs including the national Rock Art Protection Program. Subsequently, as Research Fellow and Senior Research Fellow at the Australian Institute of Aboriginal and Torres Strait Islanders Studies he undertook research into Indigenous cultural landscapes in northern Australia with traditional knowledge-holders of cultural heritage places. He is the author of various research papers, of three monographs and editor of many collections of archaeological papers; he served as the editor of the Institute's journal, *Australian Aboriginal Studies*, for several years. Currently he is a visitor at the Department of Archaeology and Natural History, School of Culture, History and Language, College of Asia and the Pacific, of The Australian National University.

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Chapter 6
The Woman Group



The Woman Group at Gum Tree Valley

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The Woman Group site

The Woman Group at Gum Tree Valley (GTVW), is located on the rocky plateau that towers above Gum Tree Valley to the south. From here, the valley is not visible, but the vista extends to a grassy flat, about 100 m to the east, 300 m long and 150 m wide, which opens out amid a dark mass of gabbro blocks. Scatters of shells (*Anadara*) and tools have been noted on this open habitable area (Figs 6.1 and 6.2).

The site itself is formed of a scatter of enormous gabbro blocks, whose dimensions are generally greater than the blocks in the valley. Blocks several metres long are abundant; they are separated by deep crevices where some shells and the stone tools of the shell-gatherers who built the coastal middens have been preserved.

Here, unlike what was observed in the bottom of the valley, the GTVW petroglyphs, which total 396, mostly are positioned on the tops of blocks. They were produced by deep-pecking, and often are very weathered and difficult to see. Characteristics of the petroglyph motifs are summarized in the inventory (Table 6.1).

Topographically, the site includes a central depression dominated to the north and south by two parallel hillocks oriented west-east. The northern one is made up of very large blocks, and this has the most important carvings.

Two upright stones, formed by natural pillars driven into a crevice and supported by small blocks stacked around their bases, exist in the north and the south of the Group. The area sampled includes an assemblage of petroglyphs concentrated within a rectangular area about 50 × 30 m.

Distribution maps of petroglyphs and equi-density patterns (Fig. 6.3) show seven sub-groups (Groups I to VII), the five most important of which (I to V) are located

on the northern hillock and aligned east-west following the contours. By contrast, Group VI is located in the depression. The various sub-groups and blocks supporting petroglyphs are listed in Table 6.2.

In addition, two carved, upright solitary stones (SSI and SS2) form a small core satellite in the southeast (Fig. 6.4). These two standing stones are located at the northern margin (SSI) and toward the south (SS2) of the Group.

The Woman Group petroglyphs

Depictions of humans

A total of 102 ‘human’ motifs has been recorded at GTVW. These represent more than a quarter of the total number of Woman Group petroglyphs. They are the dominant representations and their preponderance is very clear. They form a smaller category than that of the Eagle Group and that at the top of Gum Tree Valley. Their average height is 316 mm (Table 6.3).

The histogram (Fig. 6.5) shows the distribution of proportions of occurrence of 27 size classes of motif heights (horizontal (X) axis = size categories in 50 mm increments (Category 1 = 50–100 mm; Category 23 = 1150–1200 mm; vertical (Y) axis = percentage of heights in each size class). The result is characterized primarily by its spread, showing that the dimensions vary widely—the range of variation is 1110 mm and the standard deviation is 182.2—although the tendency is toward lesser heights.

The presence of two main peaks, one for heights ranging from 200–250 mm (Category 4), and another for heights of 300–350 mm (Category 6) reveals the heterogeneity of the heights of the GTVW ‘human’ motifs.

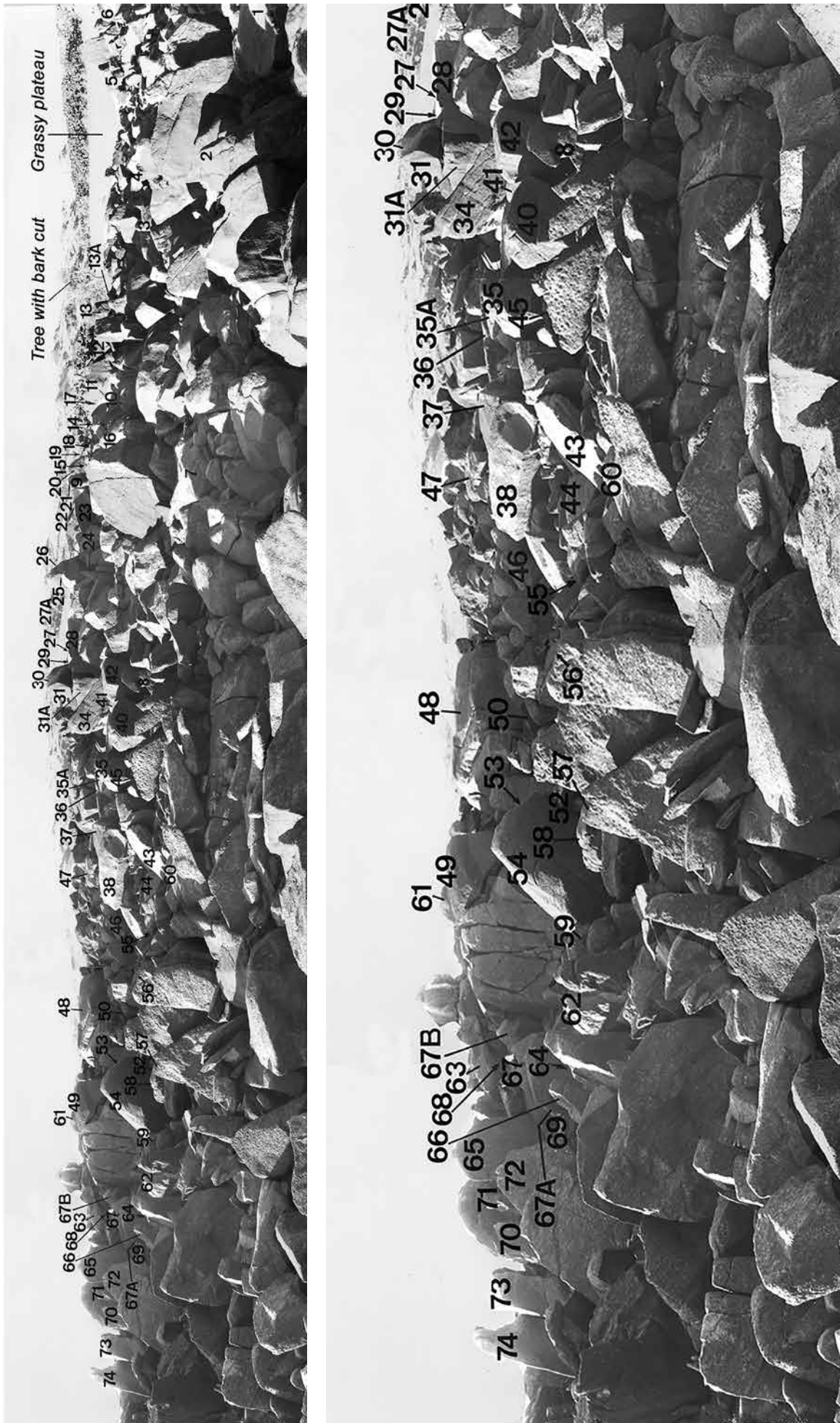


Figure 6.1. GTVW. General view (above) and enlarged left half of photograph (below) with numbered blocks (the enlarged right half of this photograph is on the next page).

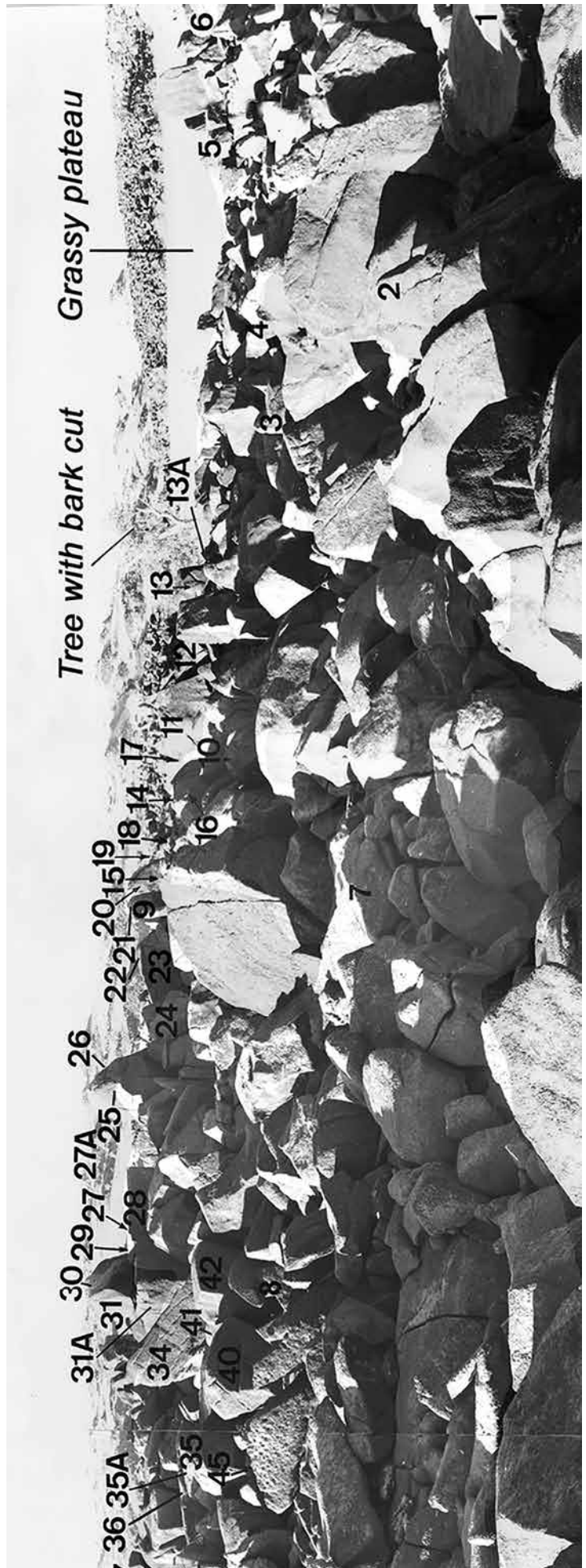


Figure 6.1. GTVW. General view (above) and enlarged right half of photograph (below) with numbered blocks (the enlarged left half of this photograph is on the previous page).

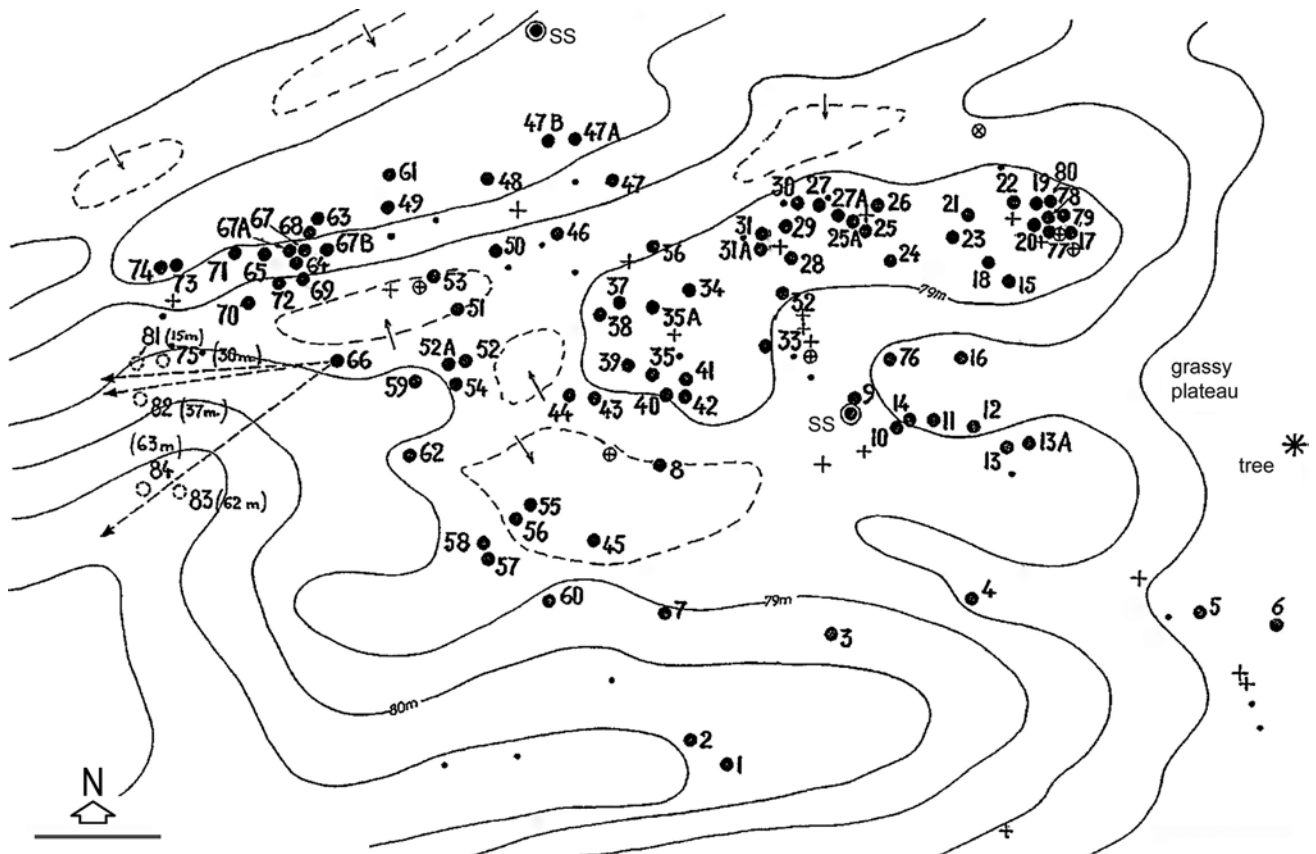


Figure 6.2. GTVW. Plan of the site. Scale: 5 m. Key: ● = petroglyph; + = shell of *Anadara granosa*; ⊕ = *Melo amphora*; ⊗ = *Syrinx aruanus*; • = artefact; ⊙ = standing stone.

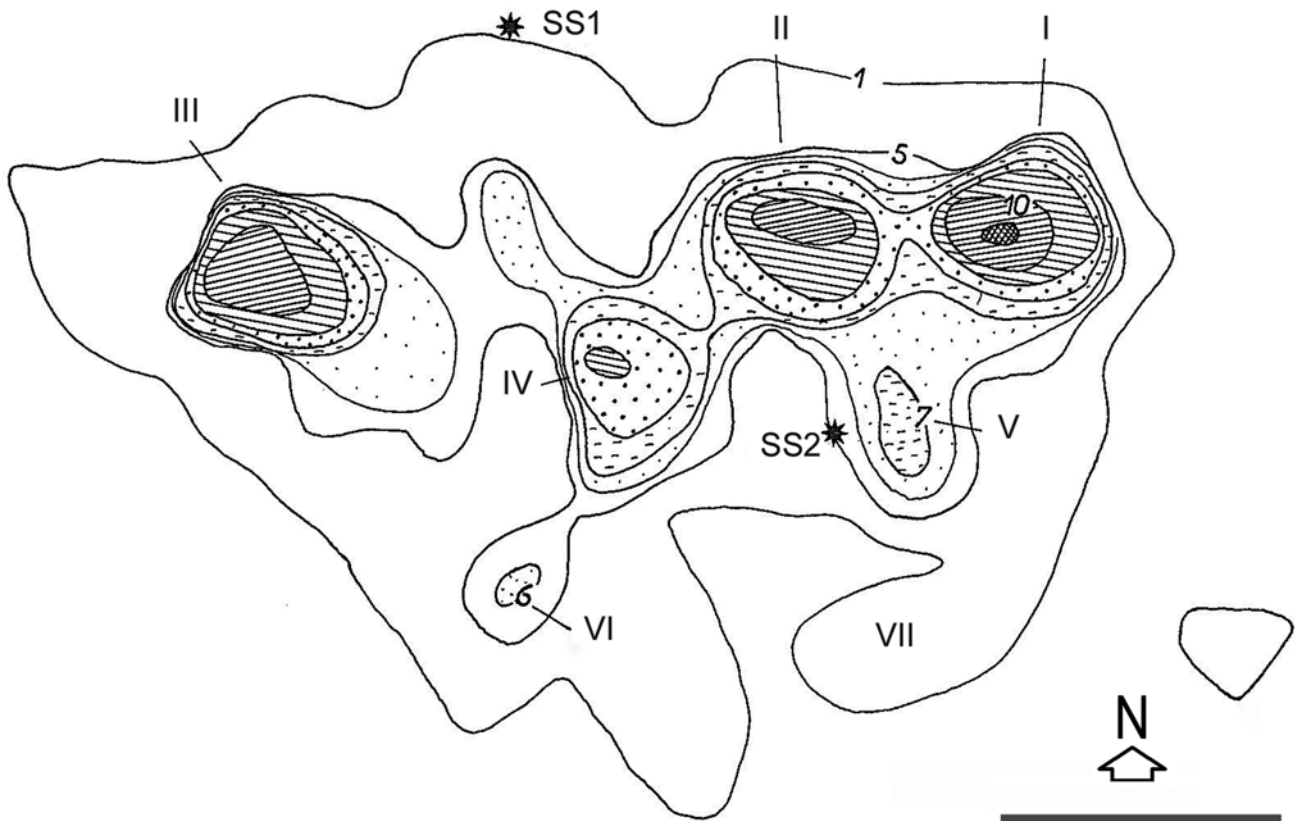


Figure 6.3. GTVW. Density of the petroglyphs. Scale: 10 m. SS1, SS2: Standing stones.



Figure 6.4. GTVW. Detailed plan of Sub-groups I and II with numbered petroglyphs. Scale: 5 m. Key: • = stone artefact; + = shell of *Anadara granosa*; ⊕ = *Melo amphora*; ⊗ = *Syrix aruanus*.

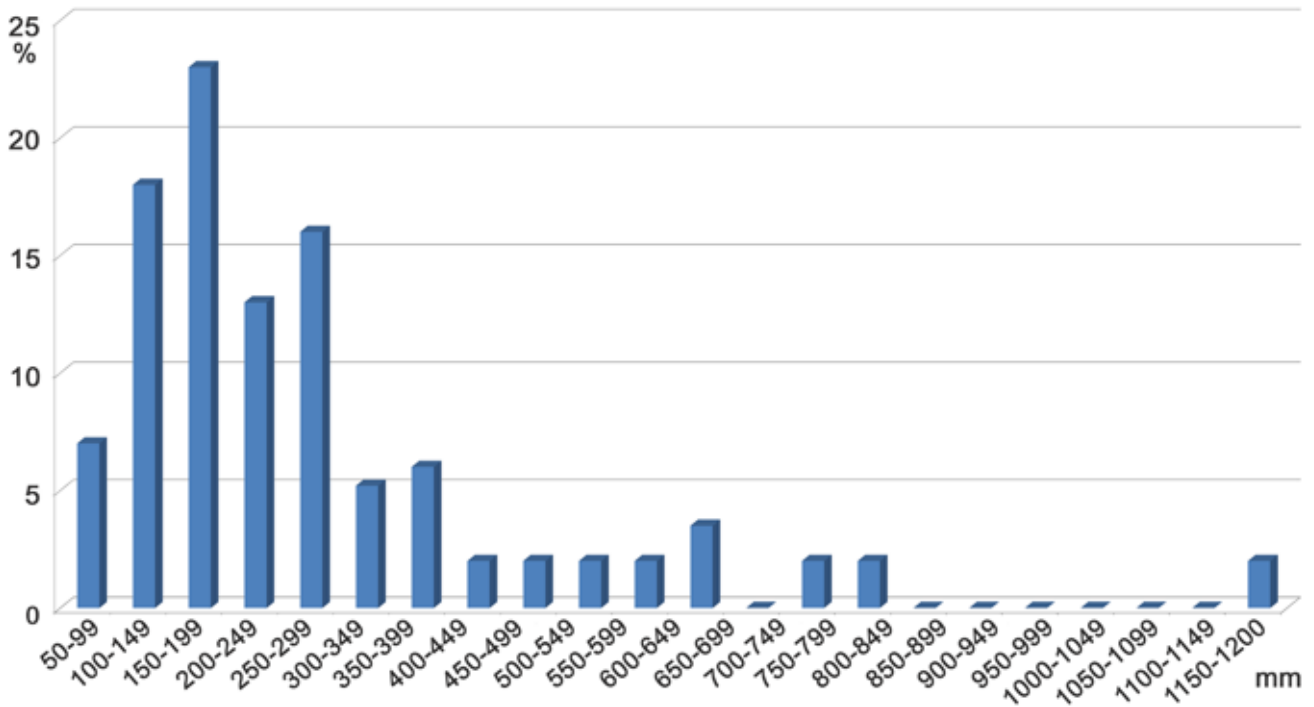


Figure 6.5. GTVW. Range of heights of 'human' motifs. Vertical axis: percentage.

Two categories of petroglyphs are distinguishable immediately: the first consists of motifs of small dimensions and another is of larger motifs. To these two can be added a few other very large depictions. The two main categories correspond dimensionally to two different types: the small motifs (264 mm in average height) are stick-figures. The larger ones (418 mm average height) have a stouter 'body', a more varied morphology: this is the category of 'diverse humans'.¹

Depictions of stick-figures

Stick-figures (Brandl, 1978) represent 56.8% of the total of 'human' motifs. They are the common type with a spindly 'body' extended by 'genitals' (Fig. 6.6). The 'arms' and the 'legs' are arranged in an inverted 'V'. The 'arms' are almost always raised, the only exception being the larger motif on

panel GTVW-48W {p. 542}. The 'head' is often a simple oval thickening of the top of the 'torso'.

Nearly a third of these motifs are in profile; in this case, the 'limbs' are parallel and on the same side of the 'body'. As on motifs in a frontal position, the axis of the 'body' often extends below the 'legs'. It can then include the 'genitalia' as well. Sometimes, however, the 'penis' is projected laterally.

Some individuals have a 'body' that is not exactly linear but, being depicted by repeated pecking, is sometimes given a greater size than the 'limbs', which are reduced to simple lines. These motifs however, are classified as stick-figures because their general shape is very slender (examples are Fig. 6.6: 18 or the 'spear-thrower' GTVW-34 {p. 533}).²

Only a few motifs are accompanied by identifiable equipment: the 'women' wearing 'headdresses' topped with two sorts of parallel 'horns' (GTVW-18 {p. 525}). Two

Table 6.1. GTVW. Inventory of motifs.

type of motif		number	percent
human motifs			
undifferentiated 'male'	H	28	7.05
'woman'	Hf	2	0.50
'male' with exaggerated 'genitalia'	Hv	2	0.50
'male' in profile	Hc	9	2.26
'male' stick-figure	Hs	32	8.06
'male' stick-figure in profile	Hsc	10	2.51
'male' stick-figure with exaggerated 'genitalia'	Hsv	2	0.50
'female' stick-figure	Hsf	9	2.26
'male' stick-figure in profile with exaggerated 'genitalia'	Hscv	5	1.25
'human' motifs 'in coitus'	Hsex	2	0.50
'female' in profile	Hfc	1	0.25
totals		102	25.64
human print	Hp	1	0.25
animal motifs			
'kangaroo'	AK	9	2.26
'bird'	AO	7	1.76
'turtle'	AT	35	8.81
'fish'	AP	5	1.25
other 'animal'	AA	1	0.25
totals		57	14.33
eggs (in cluster)	AOF	72	18.13
animal prints:			
of 'kangaroo'	EK	26	6.54
of 'bird'	EO	34	8.56
of 'turtle'	ET	5	1.25
totals		65	16.35
geometric motifs			
circular forms	GC	1	0.25
arc-like forms	GAR	14	3.52
triangular forms	GAR	2	0.50
oval forms	GO	18	4.53
linear forms	GL	16	4.03
punctations	GP	6	1.51
other geometric forms	GA	2	0.50
dumbbell-like shape	GH	3	0.77
totals		62	15.61
other motifs	MA	38	9.57

Table 6.2. GTVW. Sub-groups and composite blocks.

sub-group	blocks numbered
Group I	GTVW-15, 17, 18, 19, 20, 21, 22, 23, 77, 78, 79, 80
Group II	GTVW-24, 25, 25A, 26, 27, 27A, 28, 29, 30, 31, 31A, 32
Group III	GTVW-63, 64, 65, 67, 67B, 68, 69, 70, 71, 72
Group IV	GTVW-35, 35A, 37, 38, 39, 41, 42, 43, 48
Group V	GTVW-9, 10, 11, 12, 13, 13A, 14, 16, 76
Group VI	GTVW-45, 55, 56, 57, 58, 60

stick-figure 'men' near the centre of a panel (GTVW-49E {p. 543}) seem to support a large arc in their raised 'arms' (several times retouched so that today it looks quite fresh). This arc could depict either a boomerang or a large arciform ceremonial item such as some participants in certain dances might wear on the head.

Table 6.3. GTVW. Dimensions of 'human' motifs.

dimension	mm
maximum height	1200
minimum height	90
range of variation	1110
standard deviation	182.2

GTVW has two 'hunting' scenes where the 'game', depicted disproportionately large, was placed in front of a tiny stick-figure: a 'hunter' ready to throw his 'spear'. One (GTVW-73 {p. 548}), depicts an individual pointing a 'spear' at the 'chest' of a large 'Emu', its single 'foot' three times longer than the 'man' himself. The second (GTVW-34 {p. 533}), shows a 'man' with exaggerated 'genitals' also directing a long 'spear' at the 'chest' of a 'kangaroo' five times larger than himself. The drawing is complete even with an ovoid motif Fig. 6.7: 34), which could represent a woomera, extending from the hunter's 'arm'. This item, by its vertical position, seems to symbolize the throw and the movement of the weapon.

Above the 'woomera', another line parallel to the main 'spear' represents another spear or belongs to the upper 'human'. In both scenes, the type of spear used seems to

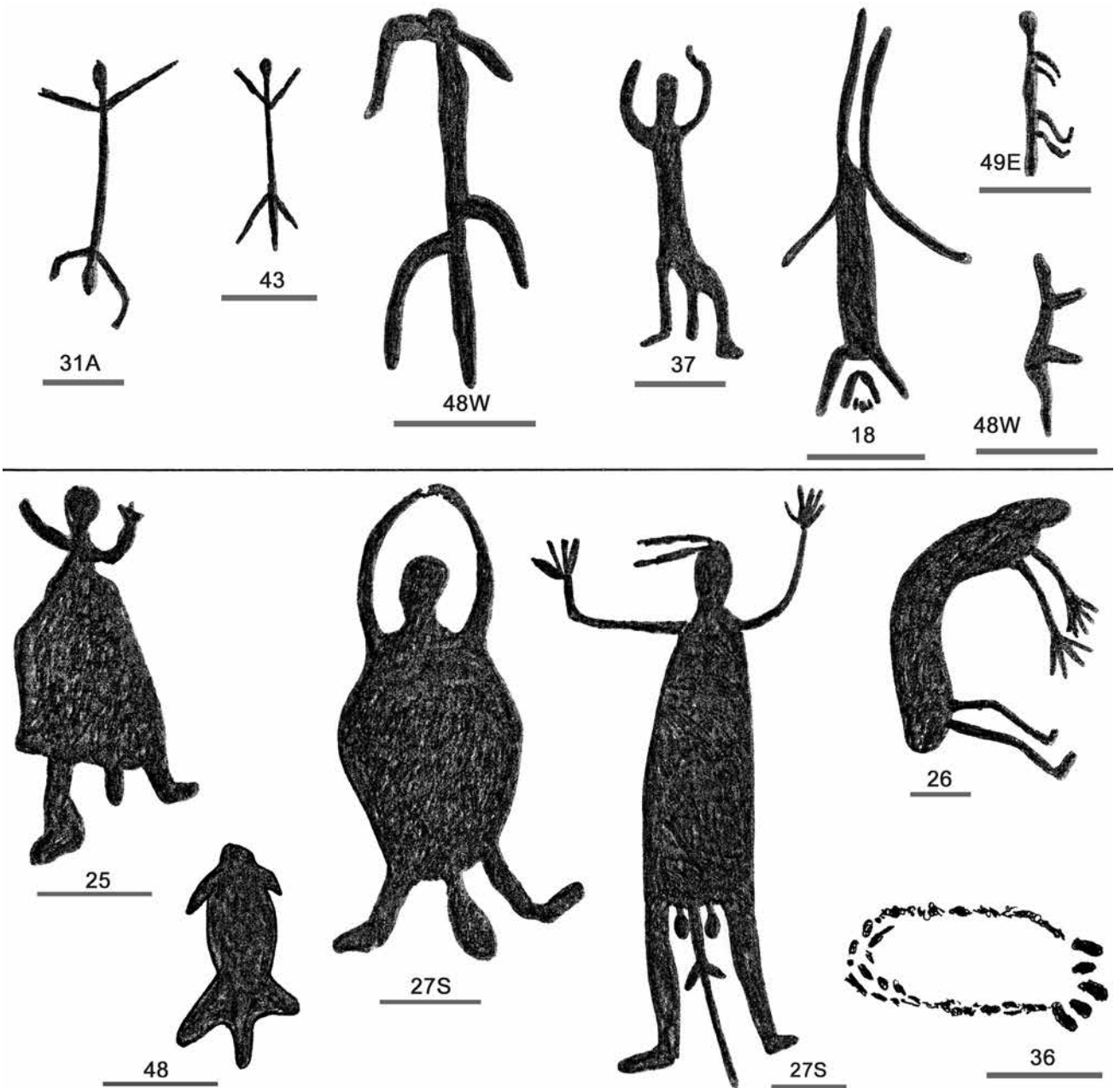


Figure 6.6. GTVW. Examples of 'human' motifs. Scales: 100 mm. *Upper*: stick-figures. *Lower*: diverse figures; lower right: 'human foot'.

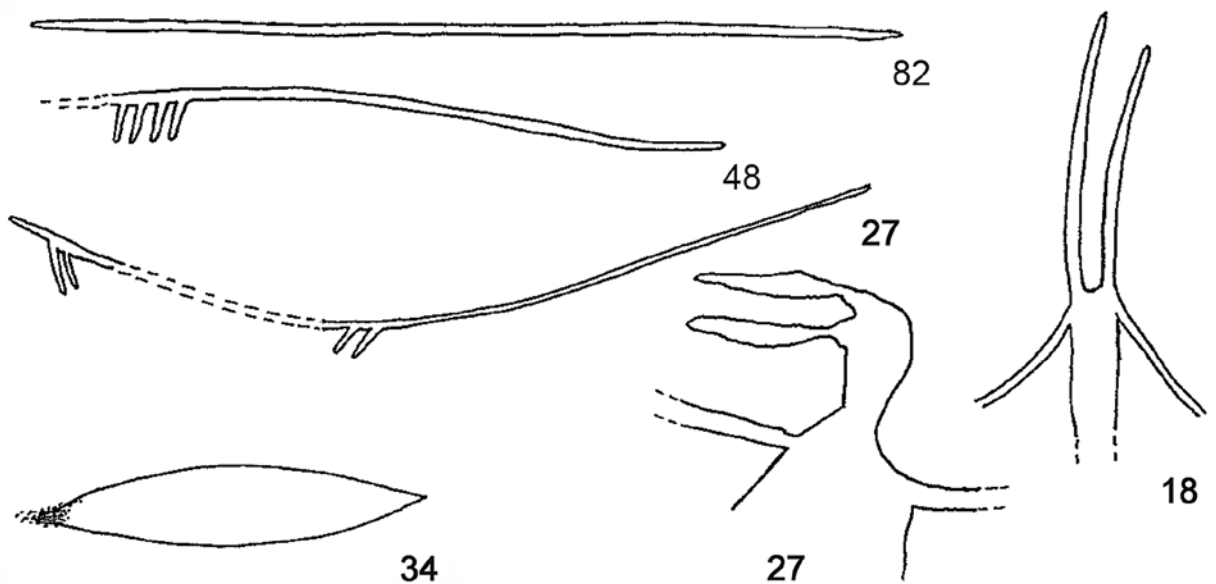


Figure 6.7. GTVW. Depictions of 'weapons' and various equipment. Scale: 82 is 600 mm long; 82: simple 'spear'; 48, 27: 'unilaterally barbed spears'; 34: 'woomera'; 18, 27: antenna-shaped 'headdresses'.

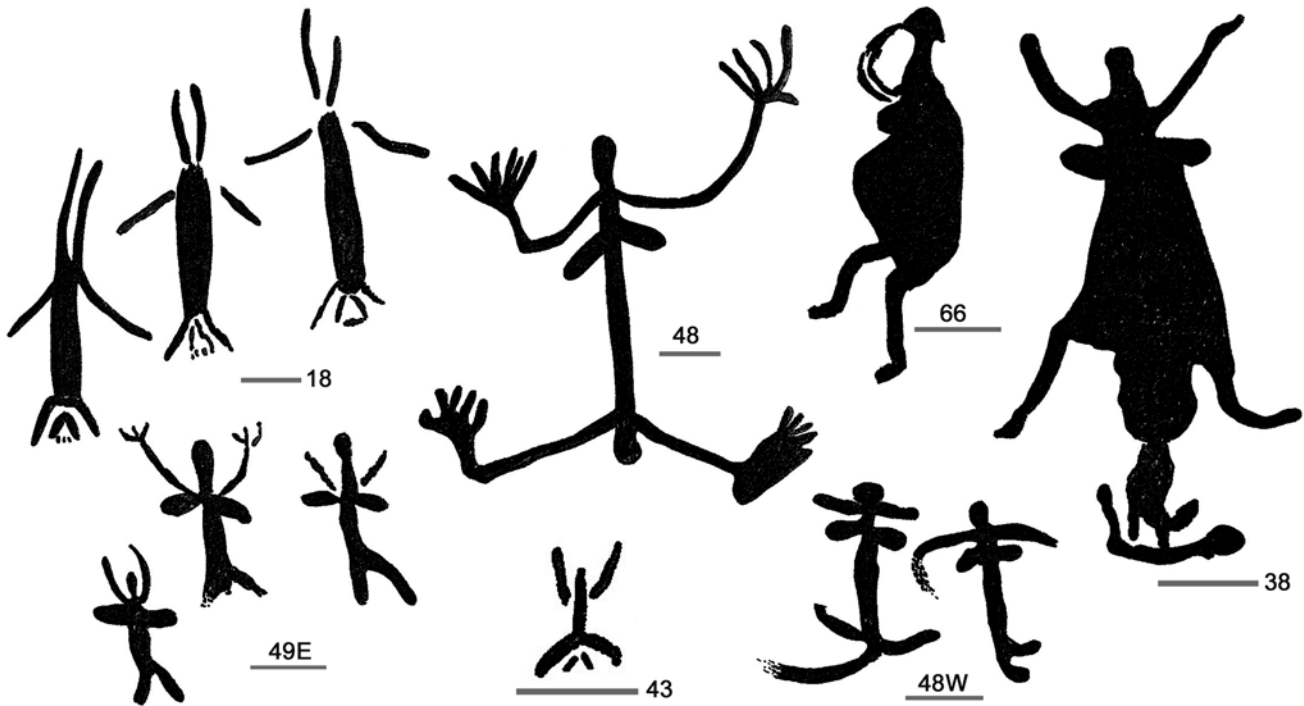


Figure 6.8. GTVW. Depictions of 'human females'. Scales: 100 mm. 66: 'pregnant woman' in profile; 38: 'birthing process'; 48: 'human' with large 'feet' and 'hands'.

be a long stick with a single-point and with no barbs (an example is at the top of Fig. 6.7). But it is unclear whether this simplicity is meaningful and realistic here or if it is simply related to the schematic character of the depiction.

Depictions of diverse humans

The motifs included in this category often have a swollen, ovoid 'body', making them seem obese. For examples, those on GTVW-25 {p. 526}, -27S {p. 530} and -31A {p. 531}, some on GTVW-48 {p. 541}, and that on the top of GTVW-34 {p. 533} that appears to be depicted holding its head (Fig. 6.6).

The most surprising motifs are on GTVW-27S {p. 530}. This panel shows a battle between two 'humans'. The larger one (the largest 'human' motif of this Group, measuring 1.20 m in height) wears an antenna-shaped 'headdress'. He has a forked 'penis' of an inordinate length flanked by two 'testicles'. He is depicted holding in his right hand ('right' as depicted and as one observes the scene) a barbed tipped spear. The 'spear' is separated from the 'hand' by a small space, a common practice in prehistoric and ethnographic depiction, whose realism is not entirely 'visual' but rather 'intellectual'. This often leads, especially in Australia, to a kind of figurative enumeration in which objects are placed side-by-side that, in reality, are contiguous. The 'spear' pierces right through the plump 'man' with the fat 'penis', who, in turn, drives a linear 'spear' into the 'chest' of the large character. Between the two 'combatants' are two small stick-figures.

From its size, and especially its central and hidden location, this 'fight', probably recalling a mythological event, is impressive and exceptional. In fact, it is placed on a vertical rock face, in a deep fissure between two rocks where one must squeeze in and descend to see and record it. It sits in half-light, never struck by the rays of the sun. No other carvings are in a similar position. It is not seen by a walker jumping from one block to another, as usually happens in such broken terrain. The fact that it is concealed from view also demonstrates its particular importance. Its deep patina shows also its old age.

The representation of a female figure (GTVW-48 {p. 541}: 850 × 660 mm)—'The Woman' of GTVW—seen in

quite fresh superficial pecking, is superimposed on several deeply pecked and patinated motifs; this petroglyph is visible to all eyes, on top of a large slightly inclined slab (Fig. 6.8: 48; GTVW-48 {p. 541}).

With its exaggerated hands and feet, this motif is included among the 'diverse human' motifs; it is reminiscent of 'humans' with large 'feet' and 'hands' found among the Spirit Group (GTVS) and in Skew Valley (SKV).

Depictions of human motifs and sexuality

The 'human' motifs of GTVW are characterised, irrespective of type, by the relative rarity of asexual depictions. Depictions of humans without gender represented are a mere tenth of the total, in contrast to depictions of 'males' (78%) and 'females' (12%); this ratio is exceptional in the region.

A 'male' motif is recognizable by its 'penis', and a 'female' by the presence of 'breasts' placed to each side, or by the 'vulva' that is triangular, or 'V'-shaped, or represented by a rounded mass fully pecked (Fig. 6.8). At Gum Tree Valley and Skew Valley, 'female genitalia' are never represented by a circle or oval as seen on many other depictions in the Pilbara. When 'breasts' are present it is rare that a 'vulva' is also. A single feature seems enough to represent the gender. The absence of an 'organ' may relate to a tendency towards schematization, to some rule of 'minimal graphic effort'.

Another interpretation, however, comes to mind: if one regards Gum Tree Valley depiction as primarily realistic, each characteristic form of the motifs, the absence and the presence of certain organs, become significant. Motifs devoid of 'breasts', represented as 'female' by their 'vulva' (Fig. 6.8: 18, 43), might be, according to this hypothesis, depictions of pre-pubescent girls.

A large in-profile 'female' (GTVW-66 {p. 546}), recognizable by its 'breasts', is clearly depicted as pregnant, as shown by the oval shape of the 'belly'. Another petroglyph of this type, unfortunately partly obscured by a pattern that is superimposed, exists at Skew Valley (SKV-102 NW).

A wide 'female body' (Fig. 6.8: 38; GTVW-38 {p. 537}) seems to be in the process of childbirth. The representations of vulva, placenta, umbilical cord and the new-born are

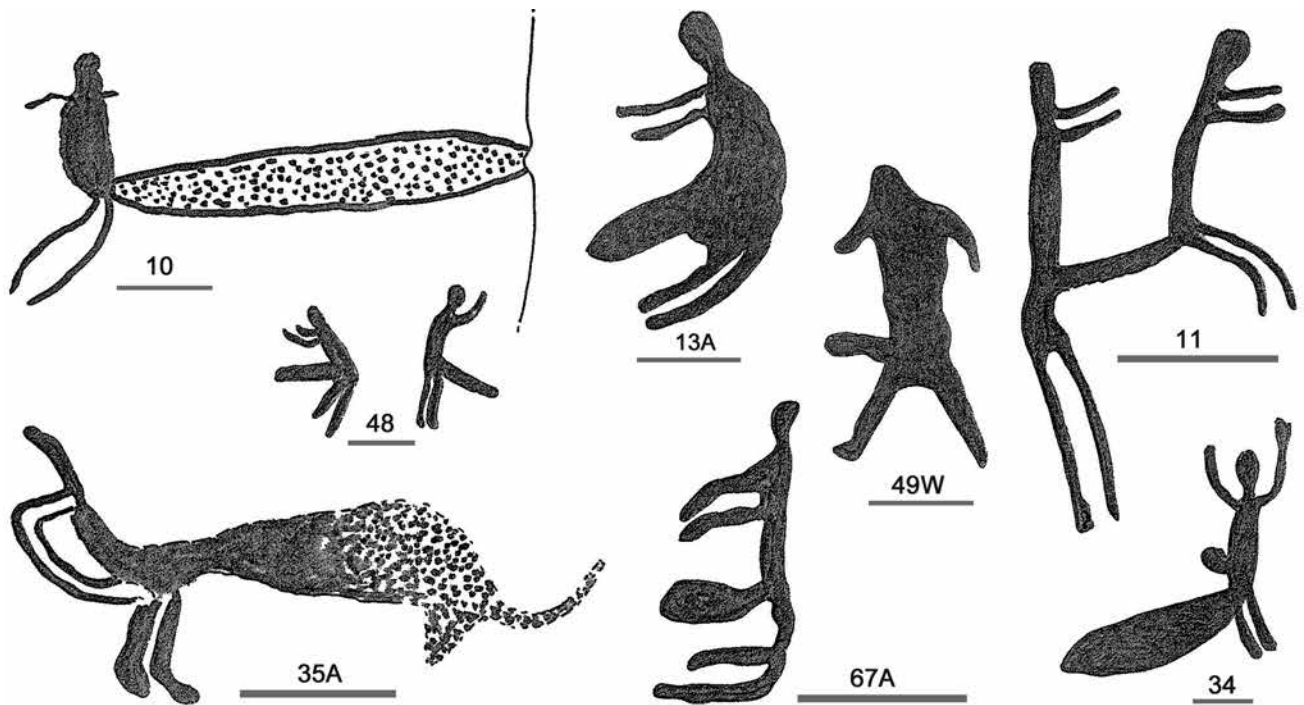


Figure 6.9. GTVW. Depictions of 'male humans' with exaggerated 'genitalia'. Scales: 100 mm. 35A: a 'kangaroo' partially superimposed and confused with a 'man' with large 'penis'; 11: possible 'homosexual scene'. Scales: 100 mm.

identifiable despite the schematic depiction. Another depiction of childbirth delivery was recorded at the Gum Tree Valley Top Site (GTVT-70).

Ten depictions of stick-figures and of 'diverse humans' have an exaggerated 'phallus' and are clearly ithyphallic (Fig. 6.9). The exaggeration of the 'genitalia', the length of which sometimes exceeds that of the 'torso', is more common in this Group of carvings than elsewhere. It is particularly marked in one motif (Fig. 6.9: 10; GTVW-10 {p. 524}) whose long 'penis' leads to an indentation in the edge of the slab. This motif is placed on the top of a slightly inclined rock so that rainwater or other liquids could flow from the end of the 'organ'.

The long forked 'penis' of the large motif (Fig. 6.6: 27S; GTVW-27S {p. 530}) raises problems. We have found, as is often the case in any study of prehistoric representation, a problem of interpretation: should we consider that this 'penis' is a realistic depiction or is it fantastic? All traits lead to interpreting the whole motif as a depiction of a hero or mythological character endowed with extraordinary attributes. The forked appearance of the 'penis' could be understood easily within this interpretation.

A realistic and rigorous interpretation could consider that the shape of the 'penis' is an evocation of subincision. Some petroglyphs of Pilbara, including sites in the headwaters of the river Yule, present markings of a double or a triple 'penis' that are otherwise difficult to interpret. It is equally possible to consider that the organ has a forked end (depicted quite frequently in the region), which is extended here by a line appearing to be either semen or urine, which would give the curious form its trident shape. However, the first assumption seems definitively more plausible.

GTVW has three 'sex scenes'. Two (GTVW-48 {p. 541}: on the east of the panel) show stick-figures apparently connected by their 'genitalia'; but they are poorly preserved and partly covered by other motifs, factors which complicate their interpretation.

By contrast, another scene (Fig. 6.9: 11; GTVW-11 {p. 525}) presents two clear in-profile 'humans' in 'coitus'. Is this a depiction of a homosexual act between two males as

could be implied through the lack of 'breasts' in both motifs and possibly the position of partners? We do not know, indeed, of any profile depiction of dorsal coitus between a man and a woman in the Dampier region, while several scenes of this kind, still more explicit, clearly illustrate homosexuality. We have described one from Skew Valley (SKV-1). Here the absence of a 'penis' in the partner at right prevents a determination of gender of that individual, and consequently does not support the representation of a homosexual relationship. We probably have a simple schematic and symbolic representation of dorsal coitus. Such a depiction is unusual in the region.

The lines joining the depictions of 'male' and 'female' characters on certain panels of the Woman Group could be much more than a simple evocation of sexuality. On another panel (GTVW-48W {p. 542}), the combined traces of 'female' and 'male' stick-figures could symbolize the community's social structure and kinship between individuals.

Depictions of animals

Depictions of macropods

Nine depictions of macropods have been recorded in the Woman Group. This is only 2.26% of the total petroglyphs (Table 6.1). Among depictions of animals they are second in frequency only to the 'turtles' but more than those of 'birds' and 'fishes'.

Dimensions

Dimensions of 'macropod' motifs are summarized in Table 6.4. The standard deviation represents over 66% of the arithmetic mean of the lengths. This emphasises the variability of the lengths. In fact, two categories can be distinguished on the basis of these dimensions. Three major petroglyphs (1300–1920 mm long) can be distinguished from other much smaller motifs (length is generally between 200 and 500 mm). It is possible that these differences in size separate the depictions of kangaroo from those of wallabies, but we have no evidence of this because the anatomical features shown by the carvings are common to both.

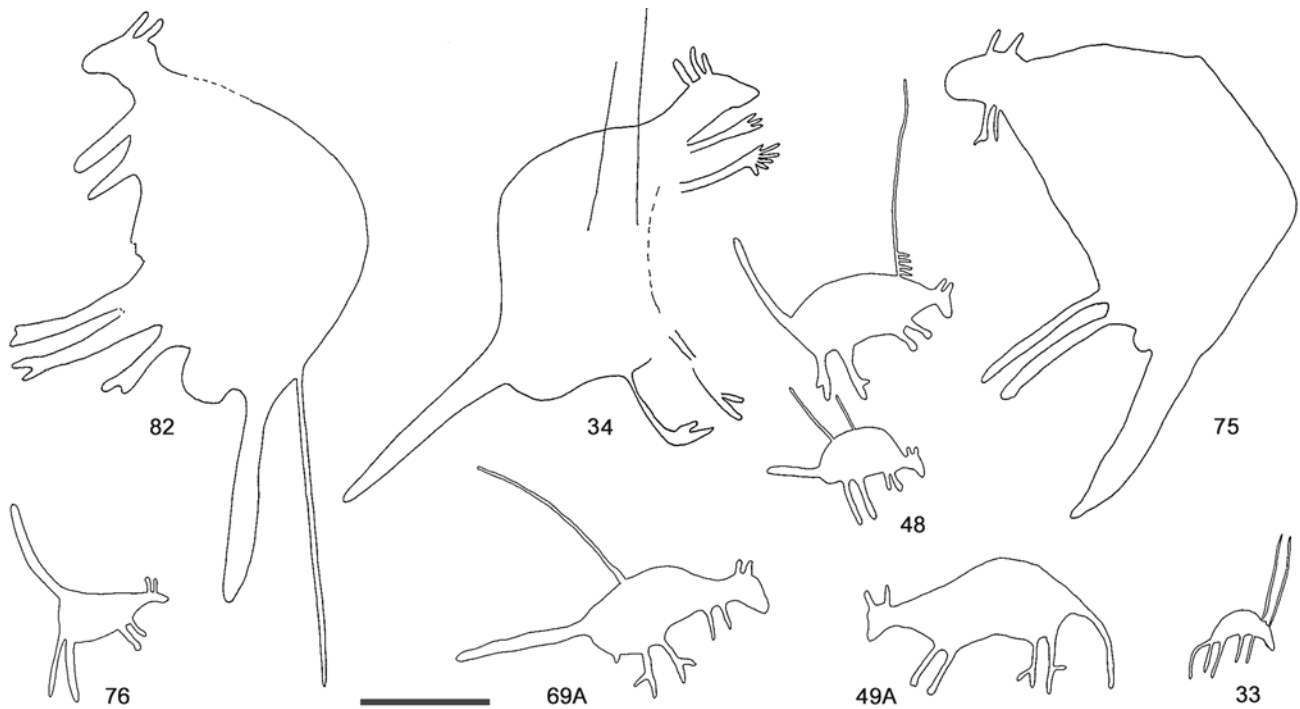


Figure 6.10. GTVW. Depictions of ‘macropods’. Scale: 300 mm.

Positions

The orientation of the depictions of macropods at GTVW does not show a strong preference: four are placed on vertical surfaces, four on of the upper surfaces of sub-horizontal slabs, and one is on an inclined surface.³ The axis of their bodies is itself indifferently vertical (Fig. 6.10: 82), horizontal (GTVW-48 {p. 541}, -49A {p. 540}, -76 {p. 550}) or inclined (GTVW-34 {p. 533}, -69A {p. 547}, -75 {p. 549}).

Body proportions

The average body ratio (ratio of the length and body height) is 1.92. The length of the ‘body’ is often close to twice the height. Two large ‘kangaroo’ (GTVW-75 {p. 549} and -82 {p. 553}), have exceptionally solid ‘bodies’ (ratios 1.53 and 1.50).⁴

The dorsal curvature average (comparison of length, and height of the arch of the back) is 3.46; the macropods of GTVW show a very pronounced dorsal arch. One ‘animal’ (Fig. 6.10: 76) possesses all the characteristics of a kangaroo or of a wallaby, including front ‘legs’ shorter than the rear ones, but its dorsal profile is concave. So, there is one exception; this deviation from the mean does not exclude this motif from the macropod category.

The ‘head’

GTVW ‘macropods’ have the usual triangular ‘head’ except for one (Fig. 6.10: 75) whose thick rounded ‘snout’ is rather unusual. The pecked outline of this large motif also has an archaic look; it is depicted with a robust ‘body’, a short ‘tail’, rigid hind ‘legs’ without much detail, and its front ‘legs’ are hanging directly beneath its throat.

Table 6.4. GTVW. Dimensions of ‘macropod’ motifs.

dimension	mm
average height	856
maximum length	1920
minimum length	200
range of variation	1720
standard deviation	571

‘Legs’

Five of the nine ‘animals’ ‘feet’ are depicted showing separation of the lateral ‘digit’. In only one are the ‘forelegs’ detailed (Fig. 6.10: 34). They are generally attached to the ‘chest’, except in the single case noted, which is probably very old. GTVW-82 {p. 553} has three ‘hind legs’, while GTVW-34 {p. 533} has three ‘ears’. This proliferation of certain organs is related to the re-marking of the carving for a renewal of the motif.

Representation of gender

Three individuals were depicted as ‘male’. The others are asexual.

‘Tails’

No preferential position of the ‘tail’ was recorded: it is horizontal (Fig. 6.10: 34, 48, 82), lowered (GTVW-33 {p. 532}, -49 {p. 540}, -75 {p. 549}) or raised (GTVW-48 {p. 541} and -76 {p. 550}), which is not a natural position of the tail of a kangaroo. The average caudal ratio (the ratio of caudal length to total animal length) is 0.71 (range 0.54–0.96). As in other areas studied, the ‘kangaroo’ and ‘wallaby’ motifs at GTVW have short ‘tails’.

‘Spears’

Six of the nine macropods are depicted as being injured. One or two ‘spears’ are seen lodged in the ‘body’, more precisely in the ‘back’ or ‘head’ (e.g., Fig. 6.10: 33).

These ‘spears’ are either simple lines or depicted with unilateral ‘barbs’ (Fig. 6.7: 27, 48). This ‘barbed spear’ confirms former use of this type of weapon, as also seen in the ‘human’ motif (GTVW-27S {p. 530}). There is also the suggestion of use of a ‘woomera’ by a ‘hunter’ (GTVW-34 {p. 533}).

Depictions of birds

Seven depictions of birds have been recorded at the Woman Group. Their lengths vary from 320–660 mm. Their rounded or exaggeratedly arched ‘backs’, their long ‘necks’, their strong, often ‘three-toed’ ‘legs’, show that they very probably depict Emu (Fig. 6.11). Two motifs on one panel (Fig. 6.11:

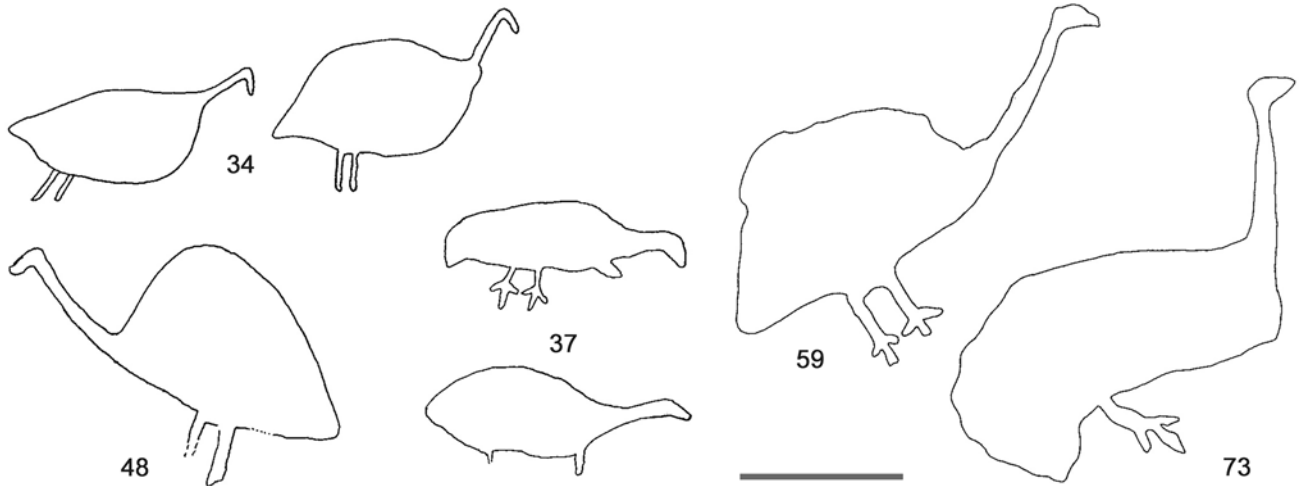


Figure 6.11. GTVW. Depictions of ‘birds’. Scales: 300 mm.

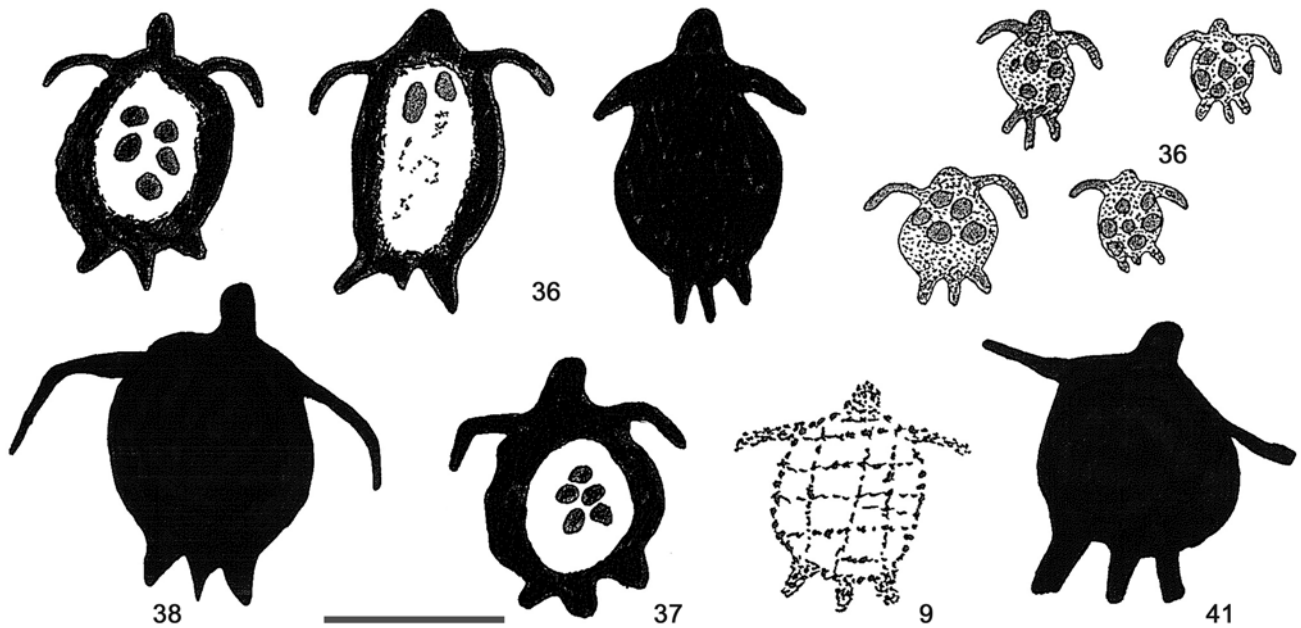


Figure 6.12. GTVW. Depictions of ‘marine turtles’. Scale: 300 mm.

Table 6.5. GTVW. Dimensions of ‘turtle’ motifs.

dimension	mm
average height	221
maximum length	550
minimum length	130
range of variation	420
standard deviation	87

37) even depict the stumps of wings so characteristic of this species. The height of these ‘birds’ is variable. The ‘neck’ is either straight or extended horizontally.

Depictions of turtles

Thirty-five ‘turtles’ were recorded at GTVW. These are the most numerous ‘animal’ motifs. In general, these are small petroglyphs (Table 6.5).

The relatively low standard deviation demonstrates that this is a more homogenous category than most of the other representations at GTVW. The depictions of turtles in this sector are, however, of three varieties:

- 1 Silhouettes: where the ‘body’ of the ‘turtle’ is entirely pecked; there are seven examples;

- 2 Linear contour depictions, with an internal grid showing the details of the ‘carapace’; one example (Fig. 6.12: 9) is deeply patinated and probably old; and
- 3 Motifs containing between five and eight large internal points or ‘dots’ representing eggs; there are 23 examples. These large internal punctations are identical to arrays with compact dots—observed in isolated groupings—and that can be construed as depicting nests of turtle or Emu eggs. The location of these large punctations on the inside of the turtles’ bodies at GTVW also confirms that arrays of isolated dots could depict clutches of eggs.

At GTVW, turtle eggs were depicted inside a loosely pecked ‘body’, while the ‘eggs’ themselves are densely pecked. In five instances, however, these ‘eggs’ are placed in the centre of the ‘body’ in a non-pecked space. These images provide good examples of an ‘X-ray’ style.

We stress that the Woman Group alone within the Gum Tree Valley and Skew Valley assemblages depicts turtles laying eggs. These carving features symbolize the migration and nesting of chelonians which constitute one of the important moments in the seasonal life of these shores and an auspicious moment in the lives of the inhabitants of this coast.

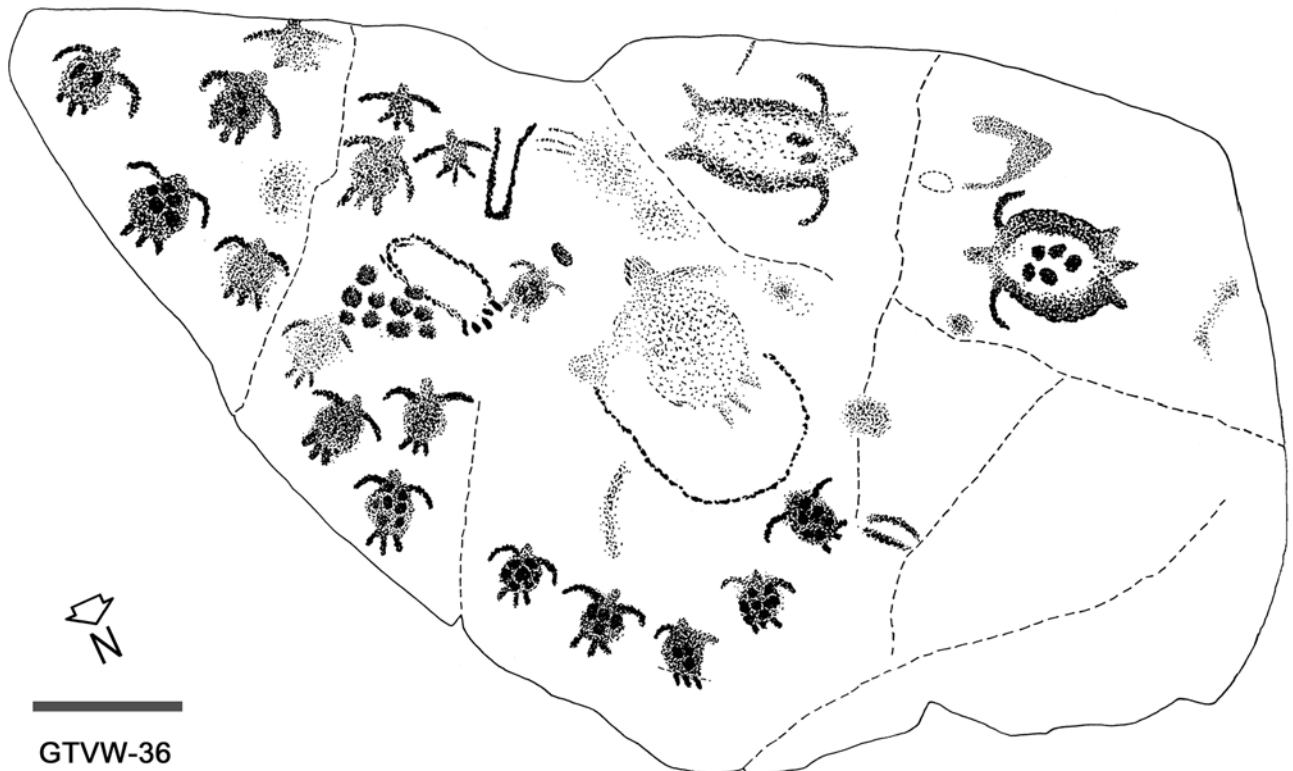


Figure 6.13. GTVW-36. Scene depicting ‘marine turtles’ swimming and spawning. Scale: 300 mm.

Panel GTVW-36 {p. 535}, centrally located and large (2.50 m long and 1.60 wide), bears 30 carvings (Fig. 6.13). They represent an extraordinary scene: a depiction of the migration of many turtles moving towards the beaches to lay their eggs during the warmer months (October-February). These ‘turtles’ are probably swimming. Their curved ‘fins’ convey movement and progress. All are oriented towards the southwest (that is, toward Fenner Creek), which is the general direction of the migration of turtles on this shore. The curved block is located at a height, as is the whole GTVW Group, and dominates the distant marshy stretches of Fenner Creek where their eggs can be collected. These eggs are depicted in an isolated array in the middle of the panel; they probably symbolize clutches in the sand. Another motif in the middle of the block, which also appears to be the goal of the swimmers’ journey from the periphery, represents a huge turtle with no eggs inside: she probably came to lay eggs; she is surrounded by a linear oval that appears to delineate the rim of the ‘nest’. In two places, small parallel lines (two in one case and three in the other)

are the schematic and symbolic representations of the tracks left by turtles crawling across the sand during nesting. Such motifs are found in various places near Dampier and they have already been described from the Skew Valley and Spirit sites. Ultimately, this remarkable portrayal has no equivalent in the southern half of the Dampier Archipelago.

Depictions of fishes

In this part of Gum Tree Valley, ‘fish’ are rare with only five found. They represent just 1.25% of total motifs.

Their lengths vary from 350–800 mm. All are schematic (Fig. 6.14). They generally have an oval shape and their ‘fins’ are barely sketched or absent so that their identifications remain uncertain; however, some details may be inferred. One example (Fig. 6.14: 84) with its elongated form, its large ‘head’ with big ‘eyes’ and dark lines on the ‘body’ suggests the mullet (*Mugil cephalus* Linnaeus), a migratory fish that gathers in estuaries at the end of autumn, as is perhaps another with the large round ‘head’ (GTVW-49 {p. 542}). The wide, almost-lozenge ‘body’ of another

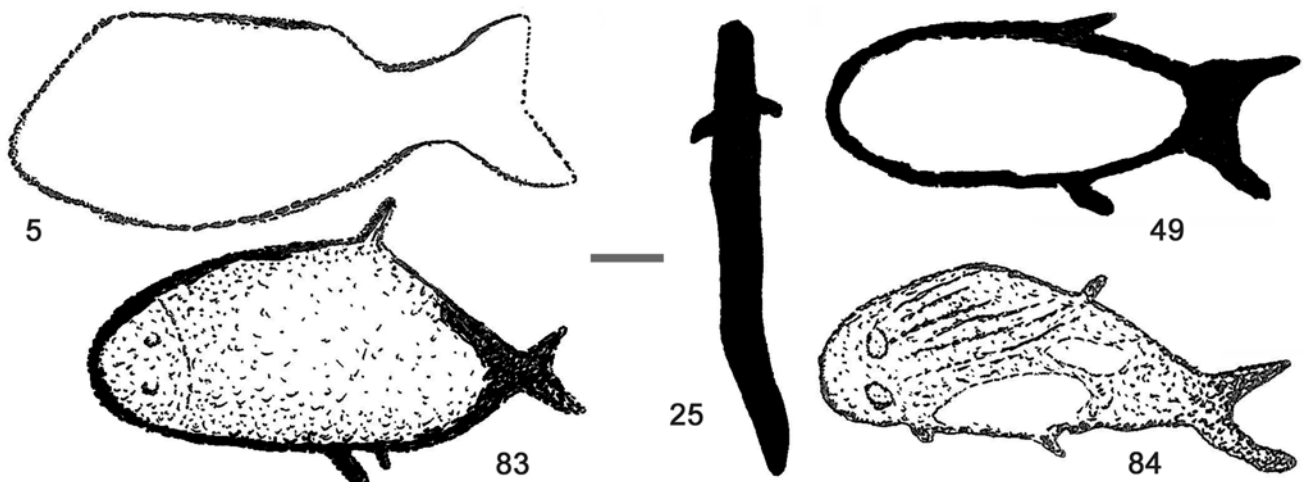


Figure 6.14. GTVW. Depictions of ‘fishes’. Scale: 100 mm.



Figure 6.15. GTVW. Types of ‘prints’ of ‘macropods’ (left) and ‘birds’ (right). Scale: 100 mm.

(GTVW-83 {p. 554}) suggests the Trevally (*Caranx nobilis* Macleay) but the ‘head’ seems a little voluminous.⁵

The presence of two eyes on the same sides of the ‘body’ is not significant. Depictions of the kangaroo often exhibit this characteristic, illustrating that an intellectual realism—not a visual realism—prevails in making these motifs.

The general form of another (Fig. 6.14: 5), including the steep ‘forehead’, is typical of the sea bream (*Pagellus centrodentus*).

The last (Fig. 6.14: 25) probably represents an ‘eel’ (*Anguilla reinhardti*), easily recognizable by its two pectoral ‘fins’, and not an eel-tailed catfish (*Plotosus anguillaris* Bloch), since the ‘barbels’ near the ‘mouth’ are missing. One must ask, however, is this absence significant and, if not, is it simply about schematization?

These two varieties of fishes are known to haunt the vast swamp and the estuary of Fenner Creek. Eel can be captured using keep-nets, and catfish by using a spear when they gather so thickly that they blanket the bottom. Sometimes catfish gather in a cluster that slowly forms at the water’s surface, again facilitating their capture with a spear. These two fishes can be found in freshwater and in brackish or salt water. Whatever its accurate identification, this depiction (Fig. 14: 25) does not necessarily confirm the proximity of the ocean. The four other fishes whose identifications are suggested here are, contrastingly, marine fish.

Depiction of ‘another animal’

GTVW-27 {p. 529} shows in profile a ‘human’ motif grasping a ‘quadruped’ with a rounded ‘back’, the identification of which does not pose too many difficulties: it probably is a depiction of an Echidna (*Tachygiossus aculeatus*) as its short strong ‘legs’, short ‘snout’, and dome-shaped ‘body’ indicate. It is unlikely to be a depiction in profile of a turtle; this would be unique because turtles are represented in vertical views; as well, the turtle’s elongated ‘head’ is absent. The ‘head’ buried in the mass of the ‘body’ is consistent with the form of the Echidna. While vertical presentations are often seen in Australian rock art, few depictions of Echidna in profile exist.

I have surprised an Echidna in clumps of spinifex in Gum Tree Valley, and I can confirm that this animal is always present at the site. It was once a delicacy for the inhabitants of this area. As suggested by the depiction on the panel (GTVW-27 {p. 529}) the Echidna was easily captured by hand, although it has the habit of immediately burrowing into the sand from where it can be difficult to dislodge.

Depictions of eggs

Seventy-two small circular motifs (37 mm average diameter), always in clusters, probably depicting clutches of eggs have been found at GTVW. They are relatively abundant in this place, representing 18.13% of total motifs (Table 6.1).

Sometimes they are gathered in large arrays (one panel GTVW-11 {p. 525} has 42 in one very thick layer).

Their association with depictions of turtles—an example is GTVW-36 {p. 535} (Fig. 6.13), where they are surrounded by a myriad of small ‘turtles’ with their own ‘eggs’ in their ‘bodies’—allows them to be interpreted as turtle eggs and not birds’ eggs. Indeed, marine turtles lay 150 to more than 200 eggs in the hole burrowed into the sand with their fins.⁶ An Emu nest generally has 10–20, which are laid by several females.

Depictions of animal prints and tracks

Depictions of macropod prints

At GTVW we recorded 26 ‘macropod footprints’ (Table 6.1, Fig. 6.15). Their average length is 100 mm, which corresponds to the length of the largest footprints of real kangaroo, notably the red kangaroo (Lorblanchet, 1985). These impressions are almost always arranged in pairs. A single one, Motif 16 is unique.⁷

Depictions of bird prints

Thirty-four carvings of ‘bird footprints’ were found among this Group. They have an average length of 125 mm and their sizes vary between 100 and 210 mm. This corresponds to the average length of real adult Emu footprints (Table 6.1, Fig. 6.15).

These motifs show two different types: some have a continuous trace (for example, Fig. 6.15: 37), and others are fragmented traces, with the ‘toes’ not joining. The largest are found among the second type of motif (Fig. 6.15: 48). They are often in pairs but are never arranged in lines as in other sectors of Gum Tree Valley.

Depictions of turtle tracks

Five motifs comprising two or three parallel lines can be construed as representing turtle tracks (GTVW-36 {p. 535}, -43 {p. 539}). They represent the tracks in the sand of these heavy creatures crawling across the shoreline for egg-laying. This interpretation is based on the association of these motifs with carvings of ‘turtles’. They are clearer in other sectors, notably at Skew Valley and the Spirit Group where they are commonly formed by three lines and sometimes directly beside the ‘body’ of turtle, showing that these are turtle tracks.

Geometric patterns

Circular forms

Only one petroglyph of the category of ‘circles’ has been found at GTVW (Table 6.1). This is a roughly circular linear motif, with a mean diameter of 550 mm over the vertical face of the block (Fig. 6.16: 33; GTVW-33 {p. 532}). This motif appears attached high up, at one point of the rocky ledge.

We do not know if we are, correctly speaking, dealing with a genuine ‘circle’, like the smaller concentric circles of other sectors of Gum Tree Valley. It may very well be either an unfinished animal motif (‘turtle’?) or a realistic depiction, but—for lack of oral testimony—we cannot identify it today.

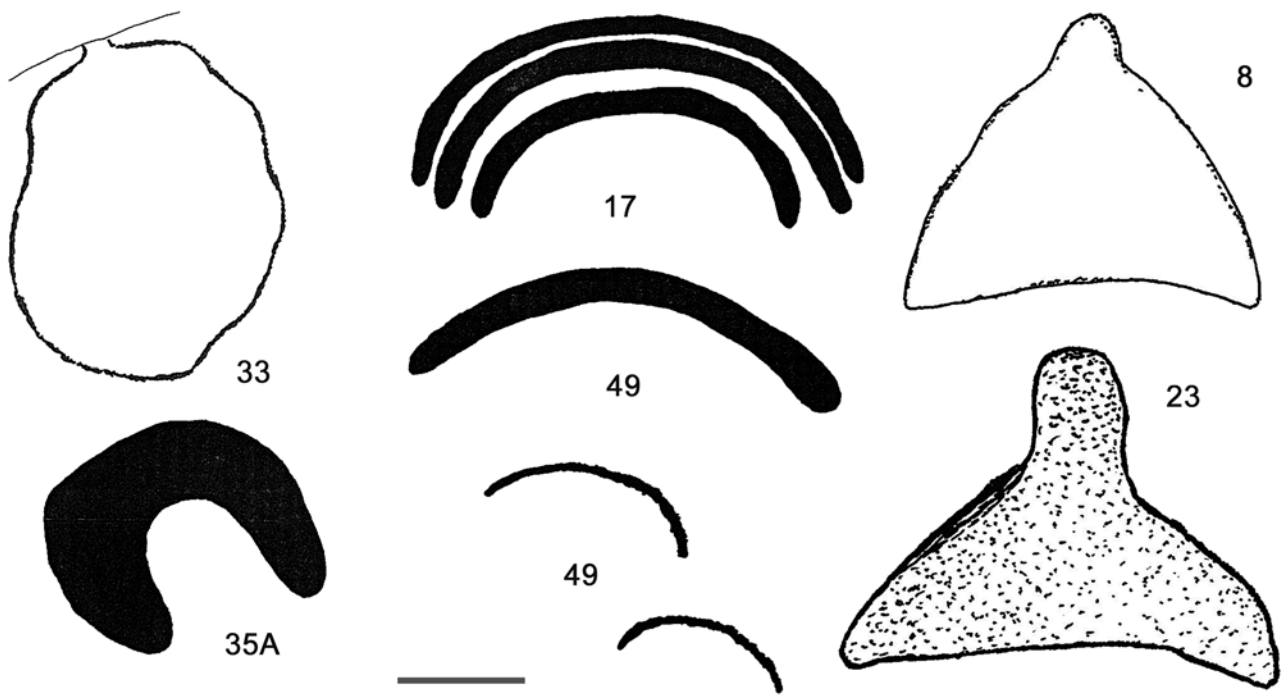


Figure 6.16. GTVW. Geometric patterns. Scale: 200 mm. 33: circular form; 17, 49, 35A: arc-like forms; 8, 23: triangular forms.

Arc-like forms

The Woman Group has 14 arciform motifs that could be meant to represent boomerangs. These are slender arcs. One example (Fig. 6.16: 35A; GTVW-35A {p. 532}) is a thicker arc, similar to bi-lobate motifs. The length of their chord ranges between 220 and 850 mm, and their heights from 70–290 mm.

Five are simple isolated arcs (Fig. 6.16: 35A, 49, 66). In three cases, they are triple arcs (Fig. 15: 17; GTVW-20 and -22—the latter described, not recorded).

Triangular forms

Two of these very specific motifs (Fig. 6.16: 8, 23) were recorded at the Woman Group. They are very large

petroglyphs; one measures 1000 × 750 mm and the other 1700 × 1070 mm. One is represented by a linear outline, and the other has a pecked infill.

The shape of these motifs attracts attention: approximately triangular, they have a concave base and at the opposite point a rounded protuberance. Based on their morphology, we tentatively classify them among the geometric motifs; however, they are probably realistic figures that are difficult to identify, but are likely to represent the tails of marine fauna.

Oval forms

As we noted for the Eagle Site, this category includes quite diverse motifs: Among the 18 oval motifs at GTVW, 16 are linear and two are entirely pecked (Fig. 6.17: 48; GTVW-48

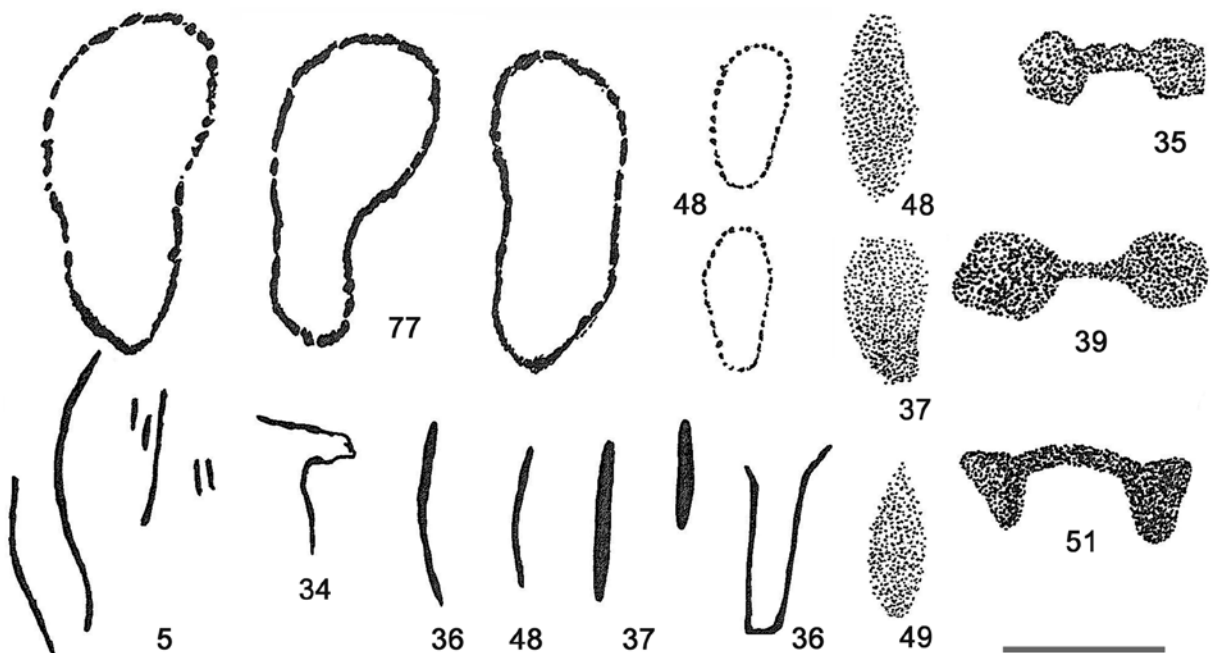


Figure 6.17. GTVW. Geometric motifs. Scale: 200 mm. 37, 48, 49, 77: oval form; 35, 39, 51 'dumbbell' shapes; 5, 34, 36, 37, 48: linear forms.

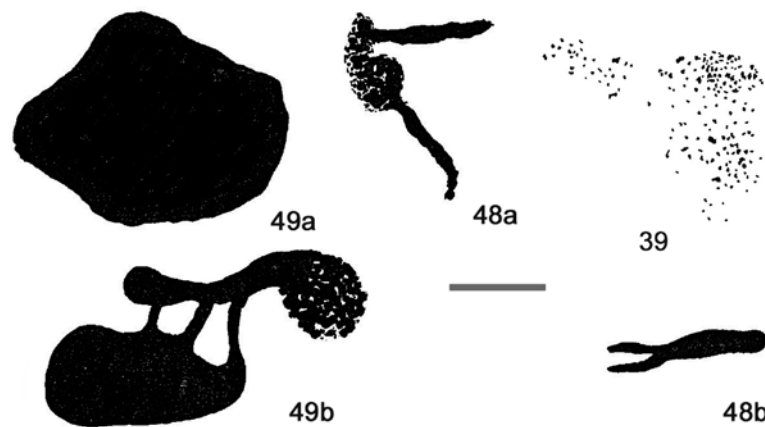


Figure 6.18. GTVW. Examples of indeterminate motifs. Scale: 100 mm. Type 1 (49a,b); Type 2 (48a,b); Type 3 (39).

{p. 541}). Lengths vary from 130–790 mm and widths from 70–430 mm, some are rectilinear and others curvilinear (Fig. 6.17). There are sometimes elongated, sometimes rounded. Some have flanged shapes (Fig. 6.17: 77; GTVW-77 {p. 551}), with others coming together to make a complex pattern (GTVW-79 {p. 552}). Some may be unfinished depictions of animals, including one (GTVW-75 {p. 549}), which includes two lines at one end evoking the caudal fin of an archaic fish. All of them share a common indisputable oval shape.

Linear forms

Sixteen motifs have been placed into this quite heterogeneous category. Lengths vary from 80–630 mm; some are straight and others curved (Fig. 6.17). There are simple long stick forms of 150–200 mm in length, incomplete tracks that seem intentional—but, without being definitive, one can simply say that some are linear, and that a few others may be unfinished or partially erased figures.

Dots or punctations

Since punctations (dots) are very few, only six examples have been noted here. Their identification also raises a problem. It is probably not proper to say whether these are punctations or cupules comparable to those at the top of Gum Tree Valley (GTVT), but their isolation requires them to be placed within the ‘punctations’ category.

They are fully pecked small discs with diameters of ten to 80 mm. They were found only on two blocks (GTVW-36 {p. 535} and -37). Since they are found among depictions of turtles and near arrays of ‘eggs’, it is possible that these also represent isolated turtle eggs.

Other geometric forms

One panel (GTVW-5 {p. 523}) has a half circle (c) with external rays suggesting depiction of a sun or a radiating headdress. Another (GTVW-49E {p. 543}) has, on its right, a complex pattern of two ovals linked by vertical bars.

Dumbbell-shaped forms

These motifs are a specialty of GTVW and GTVK. Their very limited distribution and morphology make them important, although in the absence of a context their interpretation may be impossible. These motifs have two globular masses connected by a short canal, all fully pecked. Three examples were recorded at GTVW (Fig. 6.17). Their lengths vary from 190–320 mm.

Indeterminate carvings

Thirty-eight carvings, representing less than one tenth of the total motifs at GTVW, have remained unidentified. Three categories of ‘indeterminates’ can be distinguished here:

- 1 Motifs that appear to be complete but do not belong to any of the preceding categories and whose form resists any identification; there are several entirely pecked examples on two adjacent panels (Fig. 6.18: 49a,b);
- 2 Incomplete, unfinished or poorly preserved motifs (Fig. 6.18: 48a,b); and
- 3 Some diffuse layers, totally or lightly pecked (Fig. 6.18: 39), that could be ritual marks. It appears that some carved slabs occasionally had been hammered during ceremonies, as has been reported for various petroglyph sites in the Pilbara (Wright, 1968: 11).

Distributions and associations of various motifs at the Woman Group

The average number of motifs (including indeterminates) on each panel in GTVW is 4.71, which is very high. In fact, only 39 panels possess just one motif and 41 have two to four. Nine panels have five to ten. The last category includes five very rich sets—panels with 20–45 images.

As with other parts of Gum Tree Valley and Skew Valley, we studied both the internal relationships among the figures within the panels, and external relationships between motifs placed on different panels, that is, almost always on different blocks.⁸

Such study requires that one set aside the hypothesis of an accidental accumulation of motifs on the same area over time. This possibility exists in the Woman Group, as elsewhere, but it is reduced, since undoubted cases of overlay are exceptional as we shall see. On the other hand, relative homogeneity of the motif assemblage becomes clear through the study of patination and carving techniques. A systematic study of associations will allow a verification of the existence or absence of privileged links among the motifs.

Internal relationships

The data relating to the various types of relationships among subjects are grouped in Table 6.6, compiled from the corpus of petroglyphs at GTVW. The following are simple conclusions drawn from this table:

- 1 The only exclusively single and isolated theme, that is, one not repeating itself and not associating with any other subject, is the 'triangle' category (Table 6.6: 'GT'), one of the largest motifs at GTVW, always alone, and filling all the available surface of the block (but it should be noted that only two examples exist at this site);
- 2 Moreover, there are no examples of a theme being repeated or associating with other subjects; that is, an 'exclusive repetition'.
- 3 By contrast, a small number of subjects are almost exclusively found associated with other subjects. They are the 'human foot' (HP),¹² 'other animals' (AA), 'turtle tracks' (ET), 'circles' (GC), 'punctations' (GP) and 'other geometric motifs' (GA). These themes are distinguished by being very small numbers of motifs that are located in the middle of the largest collections of petroglyphs; and
- 4 Therefore, most subjects show, at the one time, and in variable proportions, cases of inter- and intra-thematic relationships.

Intra-thematic associations

Single, repeated subjects are few, and vary little as shown in Table 6.6. Only the 'human', 'turtle', 'egg', 'macropod-' and 'bird-print', 'arc' and 'oval' categories are sometimes repeated on rock surfaces that only they occupy. The number of repeated subjects generally varies from two to four. None of these few repetitions appear to have a figurative intention and none seem to depict a scene: It is simply an accumulation of the same motif on the same rock. These repetitions represent only one tenth to a third of the total number of subjects concerned. Most subjects are thus combined with other subjects and form the inter-thematic associations.

Inter-thematic associations

The values for the Association Indices ('average number of subjects associated with a particular theme', calculated according to the method of Sauvet & Sauvet, 1979), are generally high at GTVW (Table 6.6).

The subjects that are most often associated, that is, those that are found in at least 75% of cases of association with other themes, are the 'bird', 'egg', 'arc-like' and 'linear'

Table 6.6. GTVW. Intra- and inter-thematic relationships.¹²

subjects	Total subjects	Subjects single, isolated		Subjects single, repeated			Subjects in association with other motifs			
		n	%	n	%	NMIR	n	%	IA	NMIA
HP	1	—	—	—	—	—	1	100	7.0	44.0
H	39	11	28.2	8	20.5	3.0	20	51.3	2.3	6.6
AK	8	3	37.5	—	—	—	5	62.5	2.8	9.6
AO	5	1	20.0	—	—	—	4	80.0	4.0	14.5
AT	10	2	20.0	1	10.0	2.0	7	70.0	3.4	7.4
AP	5	2	40.0	—	—	—	3	60.0	3.3	7.3
AA	1	—	—	—	—	—	1	100.0	1.0	1.0
AOF	4	—	—	1	2.5	7.0	3	75.0	4.0	17.6
EK	9	1	11.1	3	33.3	3.3	5	55.6	1.6	3.6
EO	17	4	23.5	2	11.8	2.0	11	64.7	2.2	6.4
ET	2	—	—	—	—	—	2	100.0	6.0	24.5
GC	1	—	—	—	—	—	1	100.0	2.0	2.0
GAR	6	—	—	1	16.7	3.0	5	83.3	2.0	4.4
GT	2	2	100.0	—	—	—	—	—	—	—
GO	11	1	9.1	3	27.3	2.3	7	63.6	3.1	13.7
GL	12	2	16.7	—	—	—	10	83.3	4.1	13.6
GP	2	—	—	—	—	—	2	100.0	6.2	27.0
GA	2	—	—	—	—	—	2	100.0	4.5	8.5
GH	3	1	33.3	—	—	—	3	66.6	1.5	4.0
MA	24	9	37.5	—	—	—	15	62.5	2.6	8.3
totals	164			19			92			

Key to Tables 6.6 and 6.7		EK	'print/s of kangaroo'
Hp	'human print'	EO	'print/s of bird'
H	'human' figures	ET	'track/s of turtle'
AK	'animal': 'kangaroo'	GC	geometric: circular form
AO	'animal': 'bird'	GAR	geometric: arc-like form
AS	'animal': 'snake'	GB	geometric: bi-lobate form
AT	'animal': 'turtle'	GT	geometric: triangular form
AP	'animal': 'fish'	GO	geometric: oval form
AA	'animal': other	GL	geometric: linear form
AA(HO)	'animal': 'man-bird'	GP	geometric: punctation or dot (smaller, different to 'eggs')
AA(HK)	'animal': 'man-kangaroo'	GA	geometric: other forms
AOF	'animal': 'eggs'	GH	dumbbell shape
		MA	other, undetermined motif
IA	Index of Association (the average number of other themes associated with the first theme)		
NMI	average number of individuals		
NMIR	average number of repeated individuals		
NMIA	average number of individuals associated with the theme		

Table 6.7. GTVW. Relationships among the subjects.

	H	HP	AK	AO	AS	AT	AP	AA	AOF	EK	EO	ET	GC	GAR	GB	GT	GO	GL	GP	GA	GH	MA
H	21	–	4	4	–	3	2	1	1	1	5	1	1	3	–	–	3	7	1	1	–	7
HP	–	–	–	–	–	1	–	–	1	–	–	1	–	–	–	–	1	1	1	–	–	1
AK	4	–	1	2	–	–	–	–	–	–	1	–	1	–	–	–	2	2	–	–	–	1
AO	4	–	2	2	–	1	–	–	–	–	3	–	–	–	–	–	1	2	1	–	–	2
AS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
AT	3	1	–	1	–	3	1	1	1	–	1	2	–	–	–	–	1	2	1	1	1	4
AP	2	–	–	–	–	1	–	–	–	–	2	–	–	1	–	–	–	2	–	2	–	1
AA	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
AOF	1	1	–	–	–	1	–	–	4	–	–	1	–	–	–	–	1	1	–	–	–	1
EK	1	–	–	–	–	–	–	–	–	7	4	–	–	1	–	–	1	1	–	–	1	1
EO	5	–	1	3	–	1	2	–	–	4	8	–	–	1	–	–	2	2	1	–	–	5
ET	1	1	–	–	–	2	–	–	1	–	–	2	–	–	–	–	1	2	1	–	–	2
GC	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GAR	3	–	–	–	–	–	1	–	–	1	1	–	–	4	–	–	–	2	–	–	–	2
GB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GT	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GO	3	1	2	1	–	1	–	–	1	1	2	1	–	–	–	–	4	2	1	1	–	5
GL	7	1	2	2	–	2	2	–	1	1	2	2	–	2	–	–	2	3	2	2	–	6
GP	1	1	–	1	–	1	–	–	–	–	1	1	–	–	–	–	1	2	2	–	–	2
GA	1	–	–	–	–	1	2	–	–	–	–	–	–	–	–	–	1	2	–	–	–	1
GH	–	–	–	–	–	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–
MA	7	1	1	2	–	4	1	–	1	1	5	2	–	2	–	–	5	6	2	1	–	4
	H	HP	AK	AO	AS	AT	AP	AA	AOF	EK	EO	ET	GC	GAR	GB	GT	GO	GL	GP	GA	GH	MA

Abbreviations expanded in Table 6.6

form categories. These subjects, as well as those outlined above (which are in constant state of association but exist in very small numbers) are precisely those with the highest Index of Association. Their index is often between 3 and 6.

Thus, a tendency of certain subjects to associate seems to be reinforced: not only are they the most frequently associated, but also, they are associated with the greatest number of themes. They may be thought of as having a ‘gregarious disposition’; they are found in the middle of the richest collections. By contrast, ‘human’ motifs are only usually associated with a small number of themes.

These nuances are clarified through a reading of the second array, Table 6.7. This time it is ‘human’ motifs that show the broadest range of association because they combine, especially with themselves (21 cases), and with most other subjects. The ‘indeterminates’ (MA) are also very ubiquitous. Subjects that display a wide variety of relationships include the ‘turtle’, ‘oval’, and ‘bird-print’ categories; more than those of the ‘macropod’, which tend to be grouped with each other. Some motif categories, such as the ‘egg’, ‘fish’ and ‘arc’, are more selective in their relationships.

These two tables support each other in evaluating several types of associative behaviour:

- 1 Certain subject categories such as ‘human’ (H) or ‘indeterminate’ (MA), are ubiquitous and display considerable freedom of association: They have a broad range of relationships. However, they have rather weak Associative Indices; that is, the average number of subjects with which they are associated in each case is quite reduced. This contrast is apparent from the fact that they are even present on those panels that attract only one or two different subjects, which lowers their Associative Index;
- 2 Other subject categories, the ‘egg’ (AOF) for example, are much more restricted in their relationships. They are present in only a few very productive large sets and thus provide an elevated Association Index; but they have a reduced

associative range because they do not exist outside these few large panels;

- 3 ‘Turtle’ (AT) has both a raised Associative Index and a broad range of associations. *Turtles are important elements at GTVW*; and
- 4 The ‘macropod-’ and ‘bird-print’ categories (EK and EO) have a different position again: they associate with themselves through subject repetition, but they are found with other ‘prints’ and form mixed groups of ‘prints’. Outside of these preferential meetings they mingle with few other themes. ‘Arcs’ are similar: they are associated with themselves and with ‘humans’, but rarely with other subjects and their Association Index for this site is low.

External relationships

The maps of distributions of different motifs have been drawn as equi-density curves so that they can be more easily compared (Fig. 6.19). These place a value on the clustering of motifs, and they duplicate in part some of the clusters (Groups I to VI) of the general map of GTVW Group petroglyphs (Fig. 6.3). These distribution maps allow three types of spatial distribution to be distinguished:

- 1 Wide east-west distribution along the direction of contour lines along much of the site. These subject categories are included: ‘human’, ‘macropod’, ‘macropod-print’ and, to a lesser extent, ‘bird-print’ (Fig. 6.19: left). Several of these distribution zones, including those of ‘human’ and ‘macropod-print’ have a western centre of gravity, located at Group III (Fig. 6.3). The ‘bird-print’ subject covers the area of the ‘macropod-print’ and also extends southward to the area of Group VI where it is most numerous;
- 2 Central concentrations, whose centres of gravity are at, or near, Group IV. These are the zones of ‘turtle’, ‘bird’ and ‘linear pattern’ (Fig. 6.19: right). On this map, three panels with the geometric

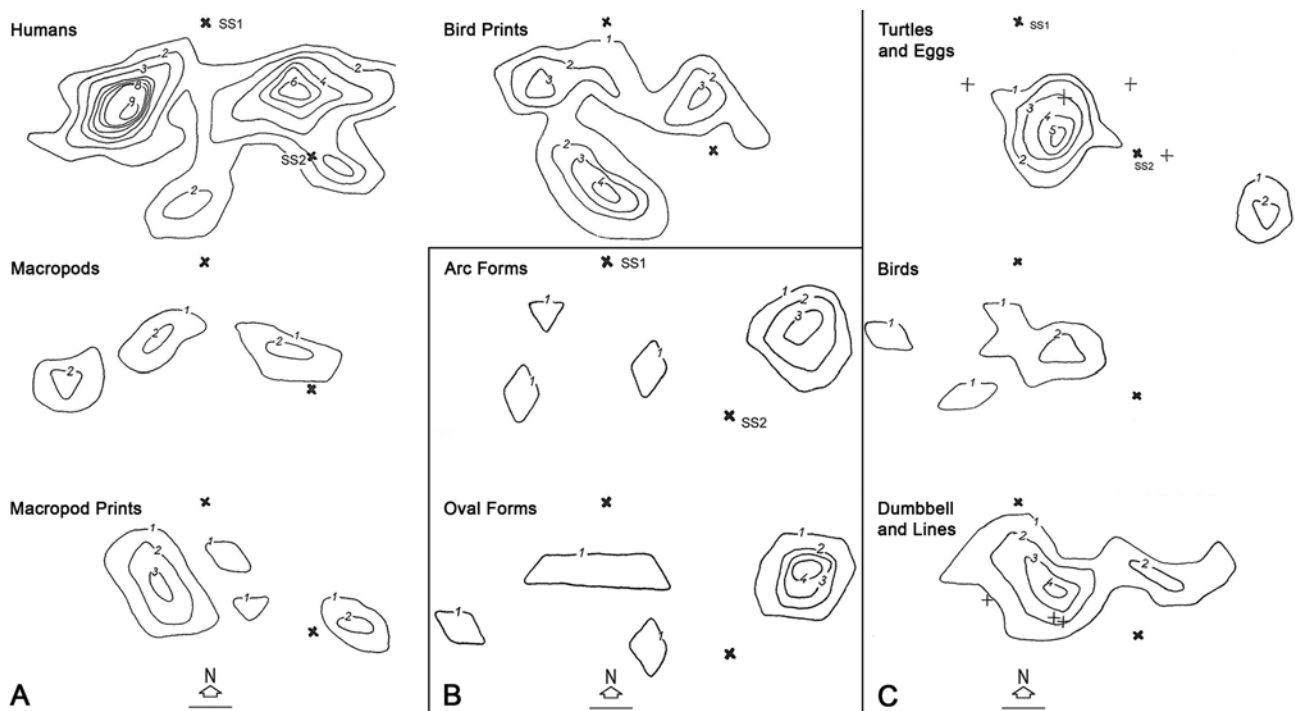


Figure 6.19. GTVW. Density map of motif categories. Scales: 5 m. (A) with extensive distribution; (B) with a lateral concentration; (C) with a central concentration.

motifs ‘dumbbell’ (GH) have been noted; they are peculiar to GTVW. They are also found at the centre of the site; and

- 3 Lateral concentrations to the east. Some geometric motifs such as the ‘arc’ (GAR) and ‘oval’ (GO) are concentrated primarily near Group I (Fig. 6.19: central; cf. Fig. 6.3).

Other motifs have somewhat different distributions, but they are in very small numbers; the five ‘fish’ motifs (AP), for example, are scattered; two of them are placed at the extreme westerly margin of the Group.

In addition, the map shows clearly that standing stones, SSI and SS2, are located outside the main petroglyph zones.

The rock support at GTVW

Dimensions

Throughout GTVW, the gabbro blocks are voluminous; their dimensions are significantly larger than the blocks of other sectors of Gum Tree Valley. The carved blocks themselves are of a great size, and much larger than the petroglyphs, as shown by the comparisons of block and motif in Table 6.8. Thus, although the supporting blocks are the most voluminous of the entire study area (cf. average maximum length of GTVE blocks of 1270 mm), the GTVW petroglyphs are of more modest size since they are on average nearly 250 mm smaller than those at GTVE (Table 4.18).

Table 6.8. GTVW. Comparison of support block and motif dimensions.

dimension	carved blocks	motifs
average maximum length	1500	316
maximum length	4000	1990
minimum length	380	60
range of variation	3620	1860
standard deviation	800	263

At GTVW, the size of the supporting rock seems not to have influenced the size of the motifs; the latter occupy, on average, only a little more than one fifth of the length of the blocks. It is, however, remarkable that the richest panels (GTVW-36 {p. 535}, -48 {p. 541}, -59 {p. 545})—with 20–45 motifs—are placed on the largest blocks of the group (lengths between 3 and 4 m).

The highest concentrations of petroglyphs (Groups 1 to IV) are located on a natural bulge in the landscape, oriented east–west according to the contours, which is formed from exceptionally voluminous blocks (Fig. 6.2). In this case, probably, it is rather the elevated position of the place that has attracted carvers rather than the size of rock surfaces.

Ultimately, while placed on large blocks, the GTVW petroglyphs are relatively small overall. Only rarely are they repeated on the largest of these blocks and then they tend to occupy all the space available.

Shapes

As in other sectors of the region, the perfect adaptation of petroglyphs to the forms of the rock support is not systematic, but sometimes it is obvious. The shape of the large triangular pattern (GTVW-8 {p. 524}), for example, closely follows the edge of the block. Another (GTVW-36 {p. 535}) shows genuine staging, with small ‘turtles’ (some carrying ‘eggs’) aligned along the edge of the slab, and appearing to make for the centre, which is occupied by large ‘turtles’ and a ‘clutch of eggs’ (Fig. 6.13).

The ‘tail’ of a ‘kangaroo’ might follow the shape of the rock support. In one instance, it is elongated to fit the length of the slab (e.g., GTVW-34 {p. 533} and -82 {p. 553}); in another, it is even in a raised position—one that is never seen on living animals—where a break in the rock hinders its placement (GTVW-48 {p. 541}).

The natural limits of the panels are indeed often restrictive. Thus, on the last block (GTVW-48 {p. 541}), the crack necessitates a vertical arrangement of the sets of the figures.

In other cases, however, the edges of the motifs spread beyond the rocky edge and extend slightly onto the side of

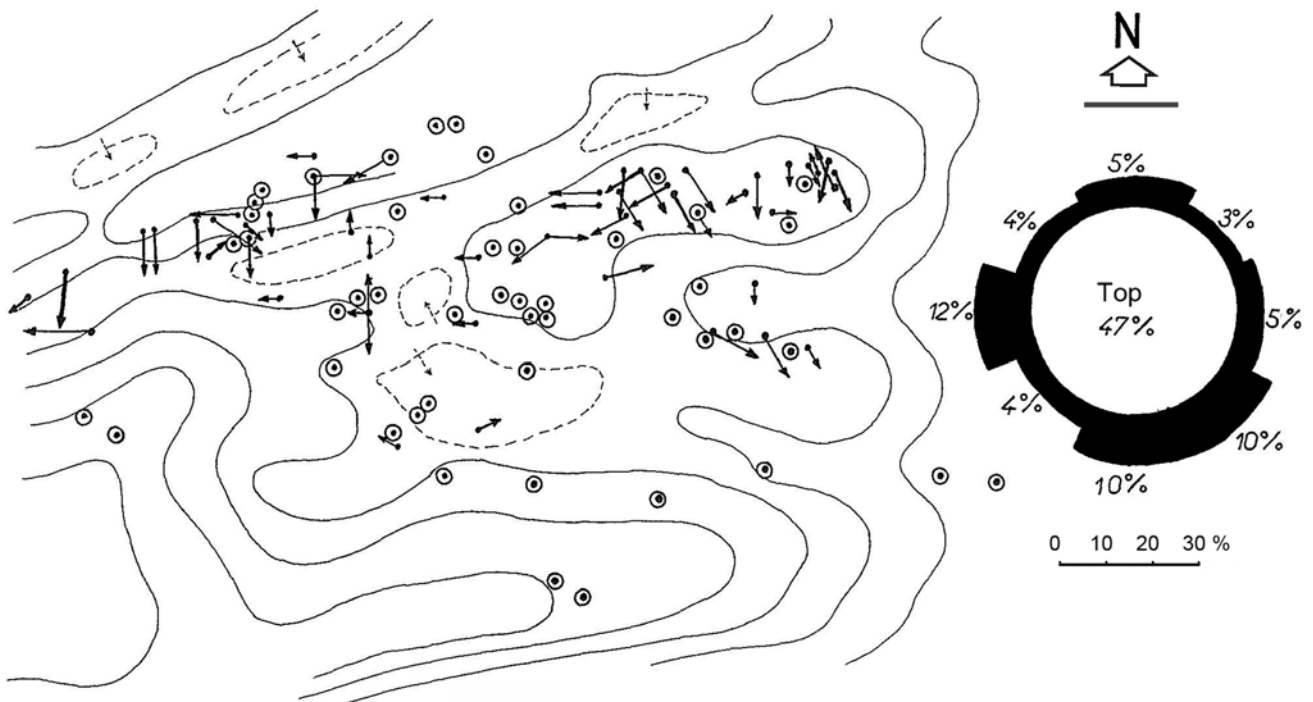


Figure 6.20. GTVW. Map of orientations of the carved surfaces. Scale: 5 m.

the block. The depictions of the ends of both the hunter's spear (GTVW-73 {p. 548}), and the tail of the kangaroo (GTVW-76 {p. 550}), show once more that the visual aspect was not essential, and that the carver drew what he knew and not what he saw.

Orientation of carved surfaces

The map of orientation of carved surfaces (Fig. 6.20) shows that petroglyphs are most often located on the upper surfaces of slabs and not on vertical or sloping faces of blocks. Here, placement on the upper surface is largely dominant: it represents nearly half of all cases (47%), while the use of vertical or inclined surfaces represents only 3–12% depending on orientation. In contrast to what was found at the very base of Gum Tree Valley and at Skew valley, here the motifs are not very conspicuous. The only area where they are sometimes placed on vertical or inclined surfaces is the east-west ridge, slightly to the north and dominating the GTVW Group.

On the other hand, among the petroglyphs that are not on the upper surfaces, there is no evidence of a preferred orientation. Certainly, there is a tendency towards a western and southern orientation, but this only applies to a few motifs, and the most frequent orientations cover in fact a wide sector of the compass.

Thus, the primary purpose of the carvers of the Woman Group petroglyphs does not seem to have been to attract and retain visitor attention. The whole Group seems to be more secret than the others. Some panels such that depicting 'the fight' (GTVW-27S {p. 530}), in the centre of the Group, are even hidden at the bottom of a deep crack.

Table 6.9, showing the relationships between different motifs and the inclinations of the support blocks, refines and clarifies this general impression. Indeed, of all the motifs, it is 'human' figures that are most frequently found on vertical and inclined blocks since nearly two-thirds (63.8%) of the

total 'human' category use this placement. Thus, they are the only motifs that generally are placed for the visitor to see. By contrast, more than three quarters (78.5%) of 'animal' depictions and 'footprints' lie on the upper surfaces of the blocks, and can be discovered only by approaching to within a short distance. In the detail, we note that all the 'egg' motifs, almost all 'turtle' and a large majority of the 'kangaroo-print' motifs are on horizontal surfaces. The 'bird-prints', while they are often on horizontal surfaces, are slightly more varied in their positions. One half of the 'geometric motifs' are on upper surfaces, no more than any other positions.

The Index of Visibility column of Table 9 summarizes the general situation: Only 'human' motifs have a positive index, and the negative index of other motifs ranges from 0–0.61, emphasising the tendency toward more-or-less concealment.⁹ The data on which these statistics are based are insufficient to expand on these general findings.

Furthermore, as is the rule for all petroglyphs, the Woman Group motifs are more-or-less visible, depending on the incidence of the sun's rays. During the recording, we noted the times at which it was best to view them. It appears that nearly one fifth were visible in early morning, nearly two-fifths at mid-morning, a tenth each in the middle of the day, in the early afternoon, and the late afternoon. By contrast, more than 5% remain in the shade all day; but despite this they are still perceptible. Eight percent always are very difficult to see.

Their often-deep patina and frequent exposure on upper surfaces thus make all these motifs very difficult to decipher. A visitor remaining an hour on the GTVW Group may find only a fifth to just over one third of GTVW motifs (Table 6.10). In these conditions, as was the case in many other parts of Gum Tree Valley and Skew Valley, the usefulness of tracing and recording is so important, and photography alone quite insufficient.

Table 6.9. GTVW. Motifs and inclinations of the support blocks.

Motifs		upper surface of slab (t)		vertical rock face (v)		inclined rock face (s)		visibility index
		n	%	n	%	n	%	
'humans'	H	37	9.3	44	11.0	21	5.3	1.18
'human print'		1	0.3	—	—	—	—	—
'animal'								
'macropod'	AK	4	—	4	—	1	—	—
'bird'	AO	4	—	3	—	—	—	—
'turtle'	AT	33	—	—	—	2	—	—
'fish'	AP	3	—	2	—	—	—	—
other 'animal'	AA	—	—	1	—	—	—	—
total 'animals'		44	11.0	10	2.5	3	0.8	0.22
'eggs'		72	18.1	—	—	—	—	—
'print'								
of 'kangaroo'	EK	21	—	—	—	5	—	—
of 'bird'	EO	25	—	5	—	4	—	—
of 'turtle'	ET	2	—	—	—	3	—	—
total 'prints'		48	12.1	5	1.3	12	18.5	0.10
geometrics								
circular form	GC	—	—	1	—	—	—	—
arc-like form	GAR	1	—	6	—	7	—	—
triangular form	GT	1	—	—	—	1	—	—
oval form	GO	8	—	7	—	3	—	—
linear form	GL	11	—	2	—	3	—	—
punctuation (dot)	GP	6	—	—	—	—	—	—
others	GA, GH	4	—	1	—	—	—	—
total geometrics		31	7.8	17	4.3	14	3.5	0.54
indeterminates		21	5.3	13	5.3	4	1.0	0.61
totals (n=397)		254		89		54		397
percentages			63.9		22.4		13.6	100

Table 6.10. GTVW. Motif visibility data.

best time to view	proportion (%)
early morning	19.0
mid-morning	37.8
middle of the day	10.8
early afternoon	10.8
late afternoon	8.1
sub-totals	86.5
all day in shade	5.4
difficult to view at any time	8.1
total	100.0

Carving techniques and patination observed at the Woman Group

Carving techniques used at GTVW

The Woman Group petroglyphs were made using five main carving techniques.¹⁰

Deep pecking—linear

Deep linear pecking is commonly found in the other sectors of Gum Tree Valley. More than a quarter (25.4%) of motifs in the group was made using this technique.

Deep pecking—overall (intaglio)

Also known as 'intaglio', overall deep pecking also is very common at GTVW (Fig. 6.21). It applies to 70.5% of the motifs. Moreover, 2.8% of petroglyphs show an association of linear deep pecking and total deep pecking.

Superficial pecking—overall

This technique is very rare here, representing only 0.8% of motifs. Associated with a fresh patina, it was used only for making 'The Woman' with large 'feet' and 'hands', and for some 'kangaroo footprints' (GTVW-48 {p. 541} and -52A).

Cuts and scratches

Cuts and scratches were made to form a sort of deep scraping on one panel (GTVW-47A {p. 538}, Fig. 6.22); this technique already had been encountered in the few motifs at the Top of Gum Tree Valley in a slightly different form (GTVT-68, -100, -101). Moreover, this type of mark was found in other sites of the Dampier Archipelago, such as the 'Standing Stones' site, which is a typical '*dalu* (increase) site' (Palmer, 1975). Another type of 'ritual mark' is the hammering-pounding beside carved motifs such as those on the block GTVW-39 {p. 538}.

Simple linear incision

The technique of simple linear incision has been observed on one block (GTVW-48 {p. 541}): at the right is the depiction of a macropod wounded by a spear. The dotted line of the 'spear' was preceded by an incized line, which was a simple sketch as a design outline, locating the track of the 'spear'. It was conserved because the final route was not faithfully followed and the original was not overlain and thus obliterated.

This detail tells us that some of the pecked carvings were outlined prior to being carved and that the older incision technique was contemporaneous with total deep pecking.

A homogeneity of carving techniques at GTVW is evident. Deep pecking, linear or, more frequently, overall pecking, are by far the most common. Linear pecking and overall pecking seem to have been used interchangeably and at the same time since they are often juxtaposed on the same

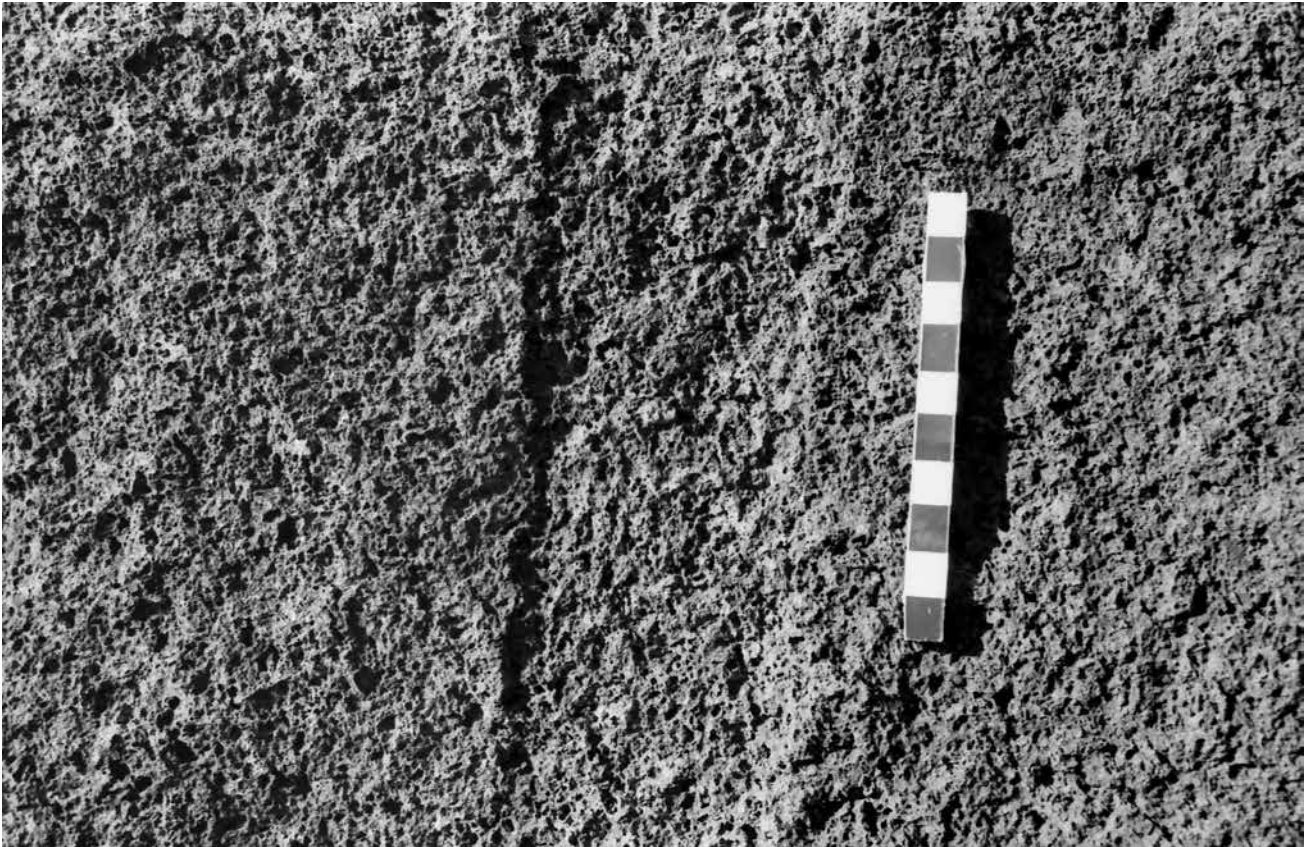


Figure 6.21. GTVW-25. Detail of 'overall deep pecking'. Scale: 100 mm.



Figure 6.22. GTVW-47A. 'Cuts and scratches'—an example of ritual marking. Scale: 100 mm.

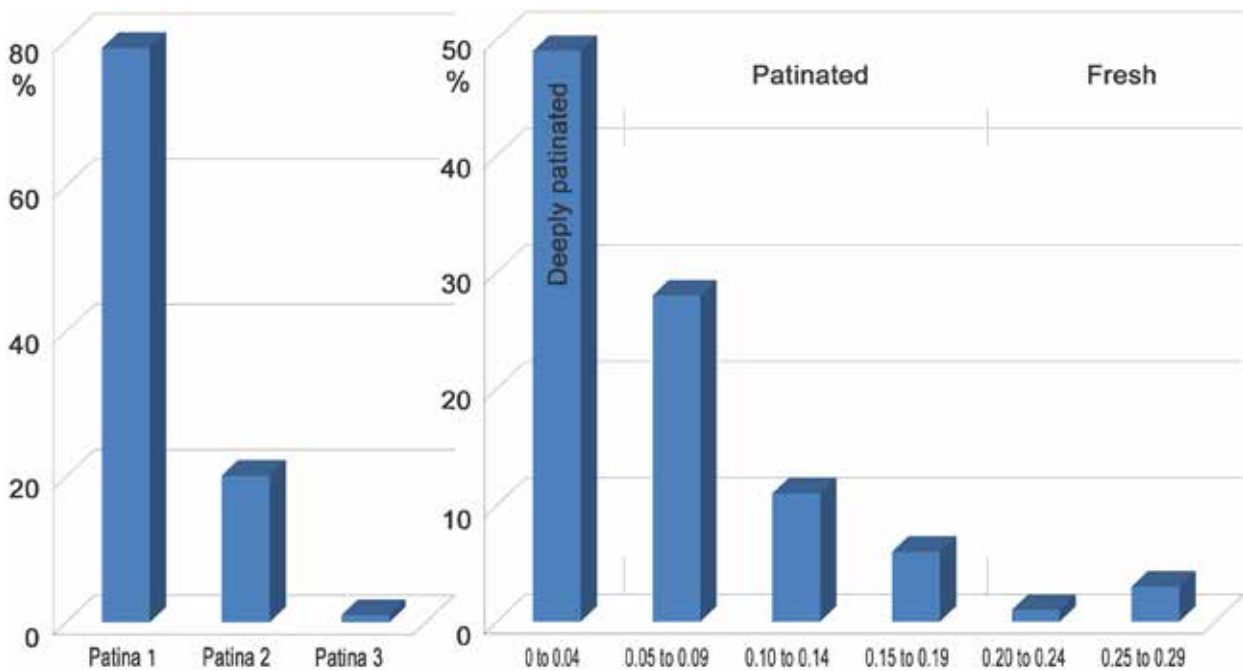


Figure 6.23. GTVW. Categorization of proportions of patination. Left: visual evaluation. Right: photoelectric measurement. Horizontal axis = densities.

blocks. They are not reserved for particular motifs and their topographic distributions are superimposed.

Superimposition

A single indisputable case of superimposition of technique has been recorded: ‘The Woman’ with big ‘hands’ and ‘feet’ (GTVW-48 {p. 541}), in overall superficial pecking of fresh appearance, is placed entirely over an overall- and deeply-pecked ‘Emu’, certainly old, as is shown by its patina.

Re-marking

A single case of renovation of a motif with an alternative technique has been noted on the arc panel (GTVW-49E {p. 543}). The large arciform motif, first executed at an early date by deep overall pecking, has been re-marked later by a lighter, overall superficial pecking, not covering the entire original surface pattern and contrasting visually with it.¹¹

Three other partial re-markings were recorded on the ‘human’ with exaggerated ‘genitalia’ (GTVW-67A {p. 547}), and on two ‘bird prints’ (GTVW-68—described, not recorded), but in these three cases, the renovation has been done in the same technique (deep pecking) as that used to make the original. Only the contrast in patinae shows the existence of re-marking.

It is possible to conclude, therefore, that almost all of the GTVW petroglyphs have been executed during a short enough period for the carving technique to remain stable, and the use of ‘deep pecking’ perpetuated them. Only a few petroglyphs attest to subsequent reuse of the site, which was also very unobtrusive.

Study of GTVW patination

Method

As in other sectors of Gum Tree Valley and at Skew Valley, the patination of GTVW petroglyphs were studied using two procedures:

- 1 By visually classifying carvings into three categories: Patina 1 (‘deeply patinated’), Patina 2 (‘patinated’), Patina 3 (‘fresh’); and

- 2 By measuring the contrast between petroglyphs and their rock support with a photo-electric cell; this process allows more objective classification of carvings and patination.¹³

General proportions

The histograms (Fig. 6.23) show two different populations of patinae at GTVW: a major set of strongly patinated motifs (Patina 1 and 2), the contrast values of which range between 0 (no contrast) and 0.19 (low contrast), and a small subset of fresh patina (Patina 3—contrasts between 0.20 and 0.29). A few renovated motifs show two patinae (1 and 3); an example is GTVW-49E {p. 543}.

The GTVW site seems to have been used early (period of ‘deeply patinated’ and ‘patinated’ carvings), then reused later to a more limited extent (period of Patina 3, ‘fresh’ patination).

Densitometric sections

The spot measurement of density values allows not only the measurement of contrasts but also the realization of densitometric sections that specify, giving a value, and allows us to visualize certain localized phenomena, such as the superposition of petroglyphs.

For example, the depiction of a female with big feet and big hands—‘The Woman’ (GTVW-48 {p. 541})—that is superimposed on one of an Emu, offers the most remarkable case of superimposition at this Group. Not only does it present an original style that is found among the recent carvings most closely associated with regional shellfish clusters, but also a ‘superficial pecking’ technique, which is quite different from the ‘overall deep pecking’ of the Emu underneath. The difference in patination between ‘bird’ and ‘female’ is also very clear, as the densitometric section shows clearly (Fig. 6.24).

Indeed, the spot measurements of density along a line crossing the two petroglyphs allows us to construct a section that shows a plateau for the natural surface of the dark non-carved rock, then a slight depression for the ‘Emu’ carving (Fig. 6.24: cross-section amplitude curve). This background

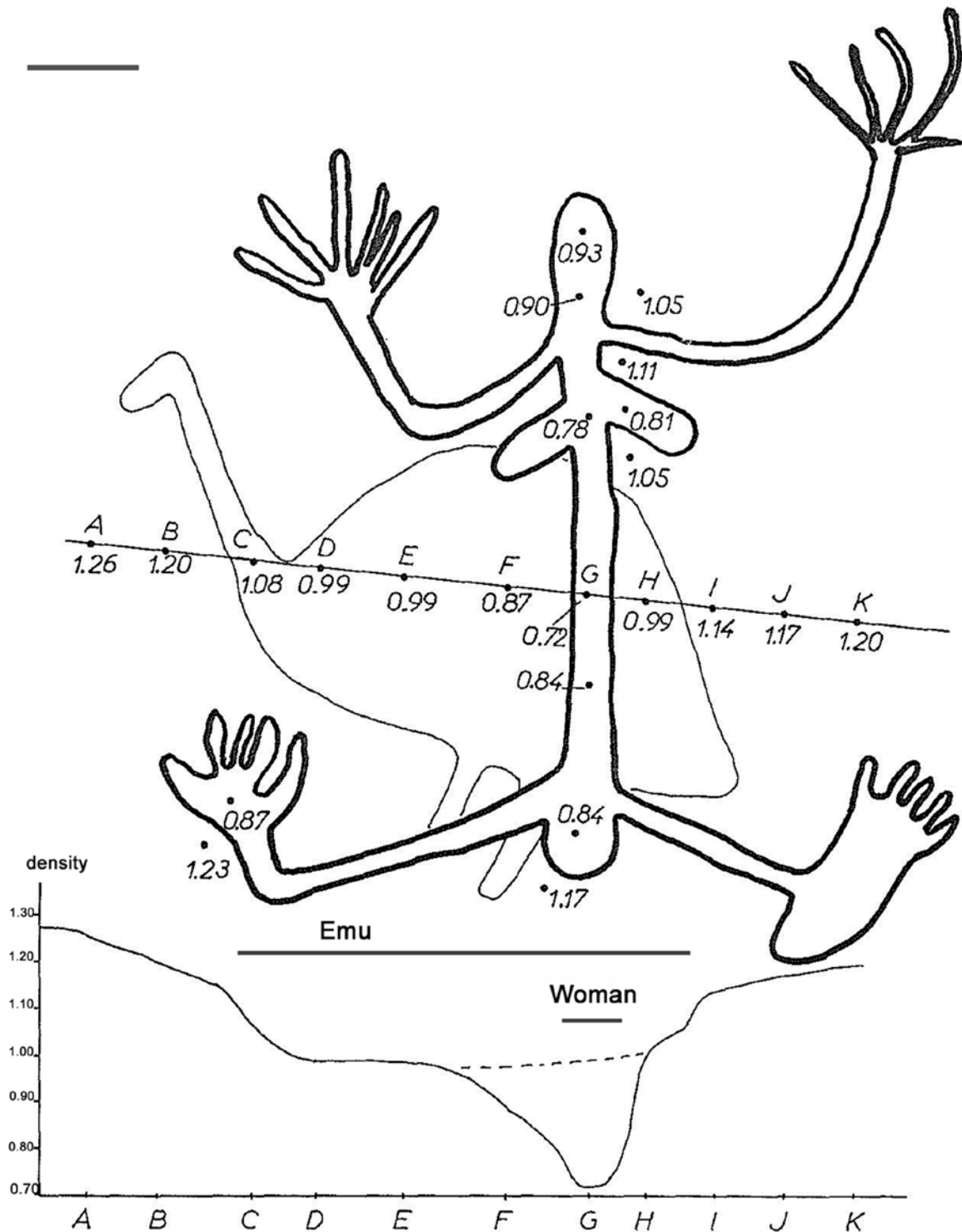


Figure 6.24. GTVW-48. Example of a densitometric section. Spot measurements (point by point) of density using a photoelectric cell permit the tracing of the densitometric section of the 'Emu' and the superimposed carving of 'The Woman'. Scale: 100 mm.

is broken by a very pronounced groove, corresponding to the 'torso' of 'The Woman'; this is quite accentuated and provides the lowest density value.

The differences in depth measure the amplitude curve and visually show the contrasts. It can even be measured with precision: thus, the contrast between the 'body' of 'The Woman' and that of the 'Emu' is 0.27 (Fig. 6.24: H: 0.99 less G: 0.72 = 0.27).

Patination and motifs

Almost all motifs have Patina 1 or 2. Patina 3 relates only to a few motifs. Populations of Patina 1 and 2 have important

differences: 311 carvings are 'deeply patinated' (Patina 1) and only 80 are 'patinated' (Patina 2). This lack of balance shows that the site probably was used mainly during ancient times. Moreover, these two populations do not show different thematic composition. Depictions of humans, animals, eggs, footprints, geometric and indeterminate shapes are found in both cases. However, some nuances exist in the details as shown in Table 6.11.

The changes mark the change between Patina 1 and Patina 2 assemblages; they show that 'animals' become more numerous in proportion, and the geometric motifs decrease. Other subjects are fairly stable across the two stages.

Table 6.11. GTVW. Relationships between motifs and patination.

motif	Patina 1		Patina 2	
	n	%	n	%
'human'	80	25.7	20	25.0
'animal'	39	12.5	19	23.7
'eggs'	56	18.0	13	16.3
'prints'	50	16.1	12	15.0
geometrics	54	17.4	10	12.5
indeterminate	32	10.3	6	7.5
totals	311	100.0	80	100.0

The same 'animal species' feature in the two cases. In contrast, the decrease of geometric motifs in the Patina 2 assemblage is accompanied by a change in themes: circle and triangle motifs have disappeared, and the incidences of lines, ovals and arches fall sharply. Finally, one geometric motif is related exclusively to Patina 2: the 'dumbbell' motif.

Thus, while the use of the site by the carvers seems to have slowed over time, and the thematic traits changed slightly, there was no iconographic upheaval.

Patination and carving techniques

The study of the relationship between patination and techniques allows a few remarks: Patinae 1 and 2 are indifferently associated with 'deep pecking' whether overall or linear. The few fresh carvings (Patina 3) are, in contrast, made with 'overall superficial pecking'; but this technique does not happen in association with Patinae 1 and 2. Given the number of patinated and deeply patinated motifs, this absence is probably significant.

Distribution of patination

The only comment that is possible is that the distributions of Patina 1 and Patina 2 petroglyphs overlap. No change in occupation of the GTVW site can be detected here.

Cultural remains recovered from among the GTVW petroglyphs

Cultural remains found at the Woman Group are less numerous than in other sections of Gum Tree Valley and at Skew Valley. As elsewhere, they include stone tools and shells. In addition, the group includes two interesting upright stones, and, on its eastern edge, an isolated *Eucalyptus*, whose bark has been removed several times.

In 46 locations, different items were recovered from among the carvings. The attached list gives a brief description (Table 6.12). There are both elements of a lithic tool industry and shells of various species. All these pieces suggest a passage through or a short stay among the petroglyphs.

Stone artefacts

The artefacts are of a type common to Gum Tree Valley and Skew Valley. There is a large lithic tool kit of local stone (gabbro and granophyre) and occasionally chert. In total, 25 stone pieces were found. These include 18 flakes (including one in green granophyre and another in chert), six cores (including three planar 'horsehoof' cores, two globular cores, and a block), and a thick scraper with a steep edge (Figs 6.25, 6.26; Table 6.12).

Shells

There are 53 shells of *Anadara granosa*, five fragments of the large *Melo amphora* and one of *Syrinx aruanus* (Fig. 6.27; Table 6.12).

Radiocarbon age estimate using *Anadara* shell

The shells of *Anadara granosa* (31) collected from the vicinity of Block 5 (Fig. 6.1: bottom right of Group; Fig. 6.28: bottom right) were submitted for radiocarbon determination to the University of Lyon radiocarbon dating laboratory. Details of the sample and results of the analyses

Table 6.12. List of cultural remains recovered at GTVW.

1	flake	24	fragment of shell <i>Melo amphora</i>
2	shell of <i>Anadara granosa</i>	25	two chips stuck in a crack (Fig. 6.26)
3	flake	26	shell of <i>Anadara granosa</i>
4	flake	27	flake
5	'horsehoof' core	28	five shells of <i>Anadara granosa</i>
6	'horsehoof' core	29	seven shells of <i>Anadara granosa</i>
7	thick scraper with steep edge	30	shell of <i>Anadara granosa</i>
8	shell of <i>Anadara granosa</i>	31	twelve shells of <i>Anadara granosa</i>
9	fragments of large shell <i>Melo amphora</i>	32	flake
10	shell of <i>Anadara granosa</i>	33	flake
11	block	34	globular core
12	flake	35	shell of <i>Anadara granosa</i>
13	flake of green granophyre	36	two shells of <i>Anadara granosa</i>
14	small chip of chert	37	small chip
15	shell of <i>Anadara granosa</i>	38	eight shells of <i>Anadara granosa</i>
16	large fragments of shell <i>Melo amphora</i>	39	fragment of shell <i>Melo amphora</i>
17	flake thick	40	large fragment of shell <i>Melo amphora</i>
18	shell of <i>Anadara granosa</i>	41	globular core
19	horsehoof core	42	fragment of shell <i>Syrinx aruanus</i>
20	shell of <i>Anadara granosa</i>	43	long flakes and shell of <i>Anadara granosa</i>
21	flake	44	small flake
22	eight shells of <i>Anadara granosa</i>	45	flake
23	shell of <i>Anadara granosa</i>	46	flake

Table 6.13. GTVW. Shell sample. Un-calibrated radiocarbon result.

GTVW-	sample context	material	laboratory code	uncalibrated 14C ages BP	collector / laboratory comment
1	Shell sample 31, surface, at base of Block 5 (Fig. 6.1 upper right; Fig. 6.3 bottom right)	<i>Anadara granosa</i>	LY-3607	1910±110	late episode of <i>Anadara</i> gathering in Dampier area

Table 6.14. GTVW. Shell sample. Calibration input data.

laboratory code	sample code	14C BP (CRA)	14C SD lab error or added years variance f**2	Age Span years	d13C per mil	d13C SD years	Delta R years	Delta R SD years	Marine carbon percentage	Cal curve
LY-3607	Marine	1910	110	1	0	0	52	35	100	3

Table 6.15. GTVW. Shell sample. Calibrated radiocarbon results generated by calib611.

laboratory code	radio-carbon age	Delta r+sd years	calibration data set	one sigma ranges	rel. area	two sigma ranges (rounded)	rel. area
LY-3607	1910±110	52±35	marine09. 14C	cal BP 1288: cal BP 1523	1	cal BP 1185: cal BP 1680	1

provided by the laboratory, and calibration made of the radiocarbon age estimates are presented in Tables 6.13–6.15.

The result of about 1400 years ago (1185–1680 cal BP range) for this sample (LY-3607) corresponds to a late episode of the *Anadara* gathering in the Dampier area (cf. stratigraphy of the Skew Valley midden—Chapter 2, Part I: *Excavation of the midden at Skew Valley*). Another indication of the date of bivalve collection is given by the radiocarbon date on the *Anadara* sample collected at GTVT (LY-3608—Chapter 7: *GTVT radiocarbon analyses*).

Distributions of the cultural remains

The distribution of these remnants (Fig. 6.28) corresponds, in broad outline, to that of petroglyphs (cf. Fig. 6.3). They fall in fact within the area occupied by the carvings, and their number generally increases where the petroglyphs are themselves the most numerous, for example in Groups I and II and near the standing stone (SS2). Similarly, the two major blocks (GTVW-5 {p. 523} and -6) located at the eastern extremity of the site seem to have encouraged the formation of a small satellite groups of artefacts and shells. However, although partly matching when overlain, the distributions of artefacts and shells are not identical (Fig. 6.28).

The artefacts show a central concentration between the two standing stones, SS1 and SS2, while the major concentrations of shells are to the east beyond the embedded stone, SS2.

A comparison of distribution areas thus seems to show a certain independence of artefacts and shells (Fig. 6.29). The latter are mainly on the margin of the petroglyph zone. Moreover, they demonstrate human visitation at the eastern part of the Group. This fact seems to indicate that, at least an epoch ago, access was gained from the east. The shells appear to mark a relationship with the grassy plateau that was a frequently visited camping place, as shown by the density of remains scattered on the ground. Near GTVW a beautiful example of a faceted ‘horsehoof’ core also was noted on the ground. A *Eucalyptus* whose bark has been used also stands in at this place (Fig. 6.32).

Artefacts and shells do not have the same chronological significance: The lithic industry at GTVW belongs to the ‘Australian Core Tool and Scraper Tradition’ (Mulvaney, 1969, 1975) that persists from the Pleistocene to the period of colonization. The small number of pieces does not allow any statistical study. The large scrapers and faceted ‘horsehoof’ cores, sometimes worn and very patinated, must be very old, but they also exist in the shell midden of Skew Valley in Levels 1 and 2. The absence here of microliths may not be significant. It is thus difficult to be certain that these tools are of Pleistocene age.

Among the shells, the *Anadara granosa* correspond to the top layer of the Skew Valley mound and the many shell mounds of the region. They must be dated mainly to around the fourth to the second millennium before the present. Some may be more recent, although excavation and radiocarbon analysis data place the end of, or a clear diminution in, the collection of *Anadara* on the Dampier Archipelago, towards the second millennium before the present.

The fragments of *Melo amphora* and *Syrinx aruanus* belong to large gastropods whose shells served as water vessels. Shellfish clusters contain them as revealed in our excavations at Skew Valley, but some may be Pleistocene as indicated by the radiocarbon results for *Syrinx aruanus* from the Top of Gum Tree Valley.

It thus appears, definitively, that collectors of *Anadara granosa*, the builders of the shell middens, occupied the GTVW site, and that much earlier visitation is not excluded, although this can be proved only by remains associated with carvings.

Other cultural remains

Standing stones

Two standing stones were recorded, one to the north of the group and other to the southeast (Fig. 6.28: SS1 and SS2). SS1, to the north, is an elongated slab, entirely natural, with a pointed top 600 mm above ground, and an average width of

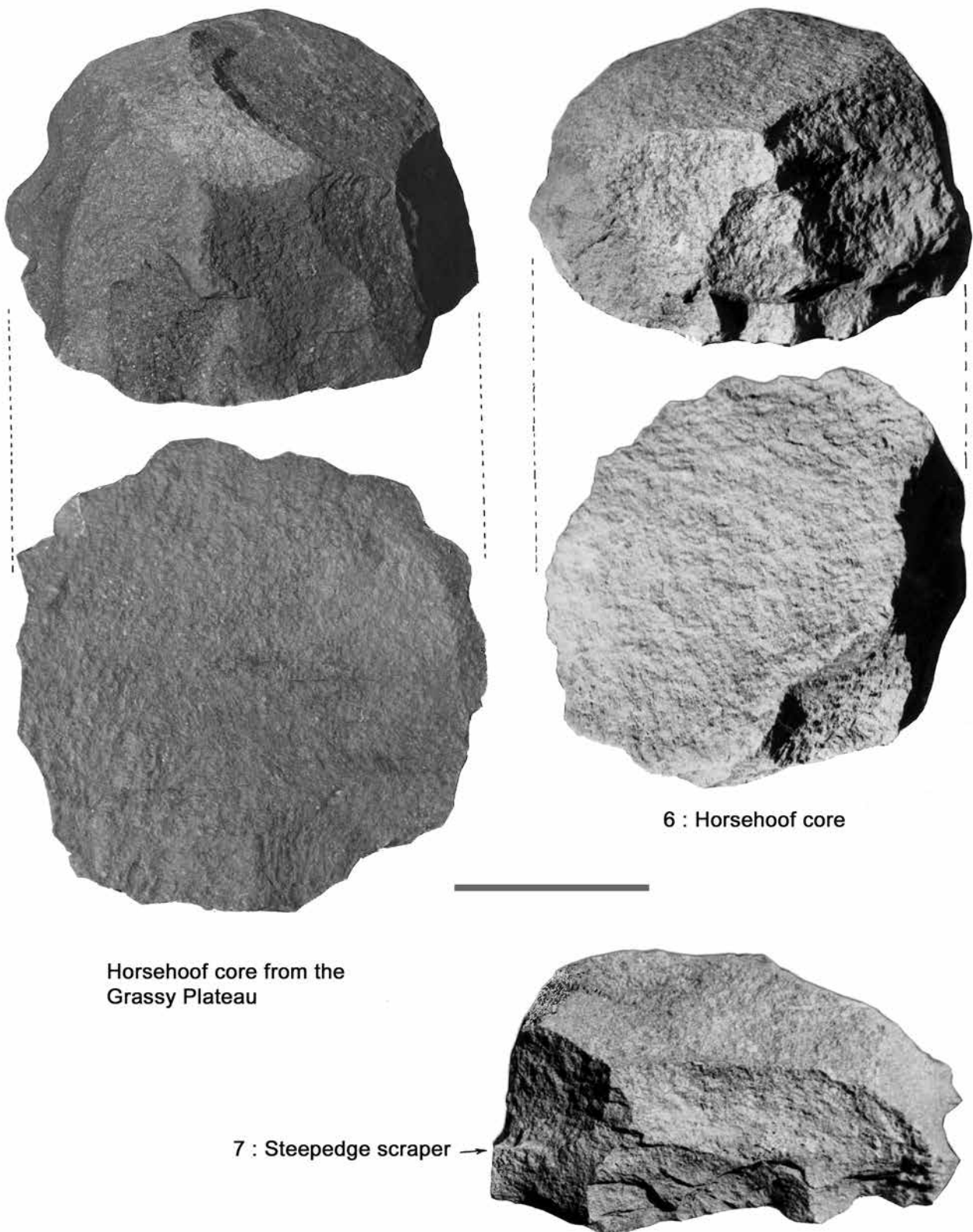


Figure 6.25. GTVW. Some tools associated with the petroglyphs. Scale: 50 mm. A 'horsehoof' core from the grassy plateau; 'horsehoof' core (Table 12: 6); scraper with steep edge (7).



Figure 6.26. GTVW. Flakes (Table 6.12: 25) stacked in a fissure between two carved blocks. Scale: 100 mm.



Figure 6.27. GTVW. Fragment of a large *Melo amphora* container (Table 6.12: 16). Scale: 100 mm.

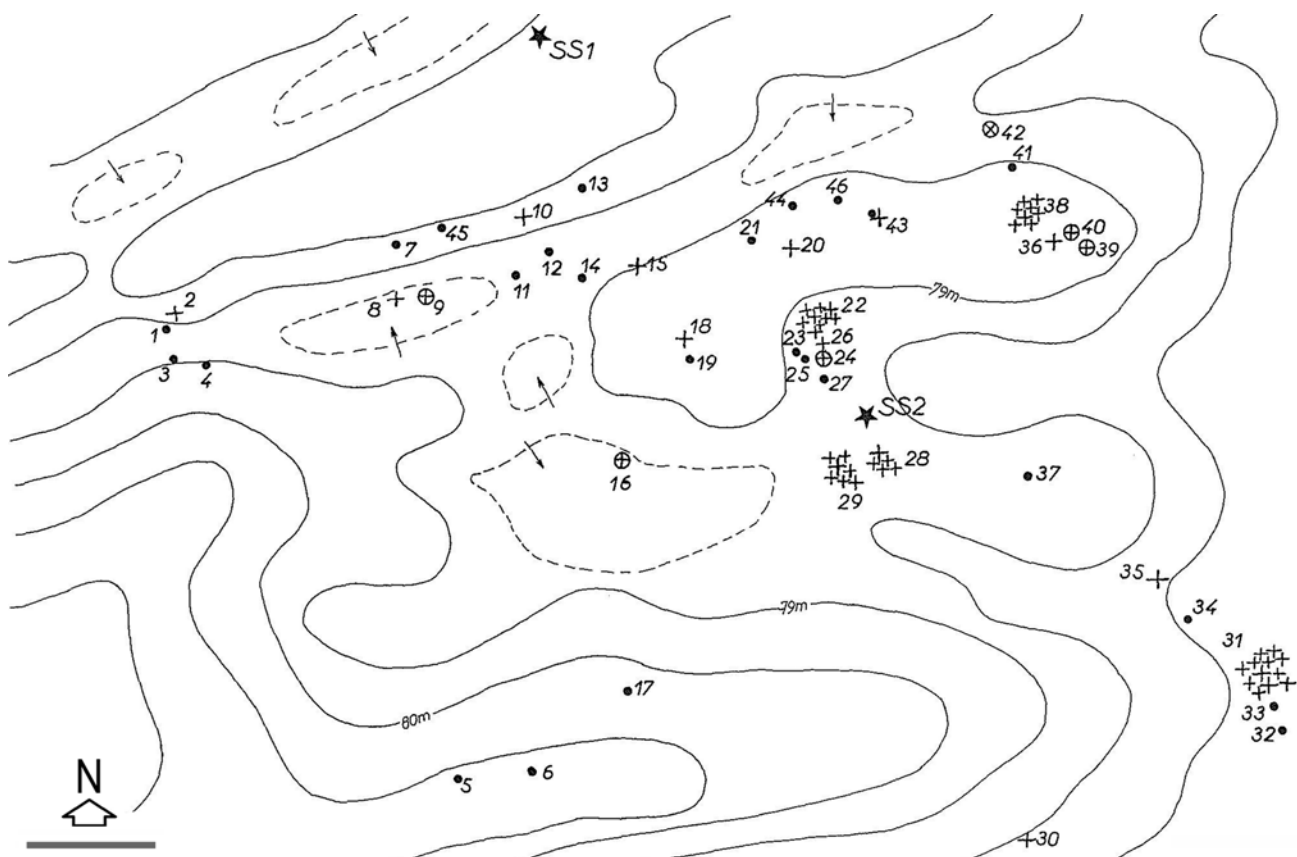


Figure 6.28. GTVW. Distribution of the remains recovered from among the petroglyphs. Scale: 5 m. Key: ● = stone artefact (Table 6.12); + = *Anadara granosa*; ⊕ = *Melo amphora*; ⊗ = *Syrinx aruanus*; SS = standing stone.

160 mm (Fig. 6.30). It is stuck in a crevice between blocks and securely packed by several other blocks intentionally placed around its base. SS2, to the south, has the same disposition and is very firmly fixed between two enormous blocks (Fig. 6.31). Its dimensions are similar: 600 mm high, but with average width only 120 mm. Also, the top is square, not rounded and pointed, as is the case with the other standing stone.

SS2 is in the immediate vicinity of several carved slabs, including Panels 9, 10, 11, 14, 33, 41, 42, 76, which feature depictions of turtles, humans sometimes with exaggerated genitalia, and a kangaroo; that is, motifs very common throughout the Group. By contrast, another panel (GTVW-27 {p. 529}) is unusual in its theme (probably a mythological fight) and its position is hidden, placed at mid-distance between two standing stones, as is the large panel (GTVW-36 {p. 535}) that bears an unusual 'migration of turtles'.

By contrast, the petroglyphs closest to SSI are unique in GTVW. There are incisions and deeply patinated scrapings on top of one block (GTVW-47A {p. 538}), located a few metres south of SSI. The rarity of this type of carving makes it particularly interesting.

We have noticed two panels identical to motifs on 47A, at another site on Dampier Island called the 'Standing Stones Site', a few kilometres from GTVW, to the north of Dampier Township. On this hill stands a group of 100 small menhirs that are associated with rare carvings. Among these are two striated and scraped surfaces like the example just described, which could be interpreted as 'ritual marks'.

These incisions—damaging the reddish weathered surface of the blocks—suggest scraping intended to make a powder from the rock, which could be used as a pigment, and which could be endowed with magical powers; or simply these could be features resulting from a ritual act to mark the rocks.

The existence of the two standing stones and the associated scrapings give the GTVW Group an obvious cultural status. As at GTVK, one can interpret the Woman Group as a 'dalu site' (Palmer, 1975).

Scared ('de-barked') tree

On the eastern border of the Group, at the edge of the grassy plateau, stands an old *Eucalyptus* (gum tree), a solitary tree on this desolate plateau, whose trunk and lower branches bear very particular scars from the removal of its bark. They form oval gaps lined with ridges, certifying antiquity of removal and partial regrowth of the bark (Fig. 6.32).

The 'canoe trees' found throughout southeastern Australia, with their large trunks half denuded by removal of the bark to make canoes, suggested identification of the GTVW tree scars. Given the shape and condition of these scars, it is likely that the bark was removed between 50 and 100 years ago. It probably marks the last use of the site. This tallies with the identification of some tools made in bottle glass unearthed during excavation of the Skew Valley shell midden.

For a long time, throughout Australia, *Eucalyptus* bark has been used for the manufacture of various receptacles. Spencer and Gillen provided good examples from Central Australia: 'in terms of material', they wrote (Spencer & Gillen, 1912: 379):

... these bowls or pitchis as the natives call them, fall into three groups: one manufactured from the bark of a gum tree, a second from the soft wood of the 'bean tree', and the third from the solid, hard wood of the gum tree. The bark pitchis is only a roughly fashioned trough bowl, the shape of which depends upon that of the trunk of the tree from which it has been cut (Fig. 213). It is always shallow and widely open at each end, both the inner and outer

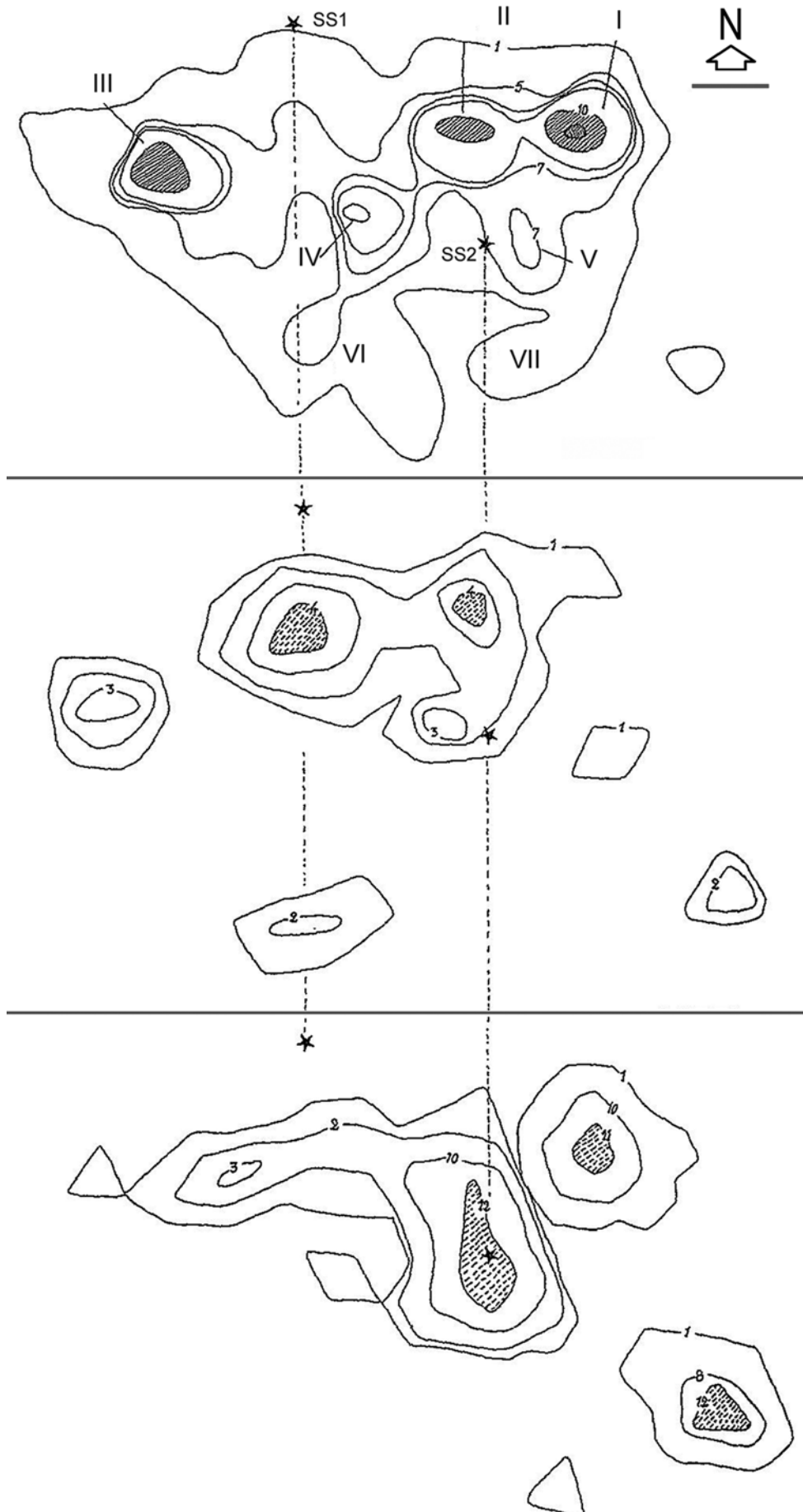


Figure 6.29. GTVW. Comparison of areas of distribution of petroglyphs and other cultural remains. Scale: 5 m. *Upper:* petroglyphs. *Middle:* artefacts. *Lower:* shells.



Figure 6.30. GTVW. Standing stone SS1 located to the north of the Group (height 0.6 m).



Figure 6.31. GTVW. Standing stone SS2 with its stone settings (height 0.6 m).



Fig. 212. GUM-TREE FROM WHICH A ROUGH BARK PITCHI HAS BEEN CUT, WARRAMUNGA TRIBE.



Fig. 213. ROUGHLY MADE PITCHI, CUT FROM THE BARK OF A EUCALYPTUS.

Figure 6.32. GTVW. *Eucalyptus* trunk with old evidence of bark removal to make container like 'pitchi'; right: making pitchi from *Eucalyptus* bark. Sources: Lorblanchet files; Spencer & Gillen, 1912: 370.



Figure 6.33. GTVW. Example of grassy plateau grinding stone with its pestle-like muller (resting at top right of grinding stone). Scale: 100 mm.

surfaces being marked with coarse, irregular groovings made by a large flint. By the side of Tennant Creek, close to the main camp, there was a tree, represented in Fig. 212, from the bark of which one of these pitchis had recently been cut. This pitchis was used during the ceremonies for holding birds'-down, gypsum and red ochre, employed in the decoration of the performers.

Grinding stones

Not far from the scarred tree and the GTVW group, on the edge of the grassy plateau, we noted the presence of several grinding stones (Fig. 6.33); these indicate that the plateau was a living place.

Woman Group conclusions

- Among the sites on the Dampier Island, the Woman Group (GTVW), isolated on a hill apart from areas most frequented and not associated with habitation evidence, exhibits distinctive characteristics.
- The 397 petroglyphs of GTVW cover a rectangular area 50 × 30 m and are gathered into seven groups forming denser clusters in a continuous fabric of carvings. Outside this rectangle, petroglyphs are rare or totally absent.
- More than one quarter of all GTVW petroglyphs depicts human subjects; about 15% are of animals. The dominant 'animal' here is 'turtle' (8.84%), and this is the other peculiarity of this Group. Depictions of eggs, notably turtle eggs, are abundant (about one fifth of the motif total); 'animal prints' and geometric forms each account for a little less. Indeterminate motifs represent less than one tenth at this Group.
- Although the petroglyphs were carved at different times in the past, the study of their association is nevertheless interesting. The way they were assembled on the same slab, on the same panel, follows some simple rules. Some motifs, such as triangles, always appear isolated. Others, such as 'human prints', eggs, arcs and ovals, are often repeated in multiple copies on the same rock surface. But in contrast to these two situations, most subjects are more often associated with other themes on the surfaces of the same blocks. Most motifs at GTVW even show a particularly 'gregarious' behaviour and a strong associative tendency. Many appear within a rich assemblage. The themes that have high associative indices are the 'bird', 'egg', 'arc' and 'human' subjects.
- The 'humans' have the distinction of combining most frequently with other subjects; they associate with the greater variety of other motif categories. By contrast, other subject categories such as 'egg', 'fishes' and 'arc', are more selective in their spatial placement. 'Turtle' subjects are different to the others: not only is their Index of Association higher, but their range of associations also is very wide.
- Furthermore, the different motif categories at GTVW show three modes of topographic placement within the site:
 - 1 Some subjects—'human', 'macropod' and 'print'—have an expanded distribution. They may be thought of as the 'backdrop' to the site;
 - 2 Others, like 'turtle', 'bird' or 'linear' categories have a central concentration; and
 - 3 Finally, others, such as 'arc-lie' and 'oval' forms show a lateral concentration (to the east).
- The GTVW carvings are quite small. They are usually placed on the upper surfaces of huge blocks. In contrast to what has been seen in other sites in the region, they are generally not available to look at but frequently their placement tends to concealment. However, some differences in details exist. 'Humans' have the strongest Visibility Index, while 'turtle' and 'egg', always placed on horizontal surfaces, consequently have the lowest Visibility Index.
- The carving technique most commonly employed is 'deep linear' or 'overall pecking'.
- The carvings are generally much patinated, so that they contrast only slightly with the rock support. Petroglyphs with a fresh aspect are exceptional.
- The remains associated with the carvings are few: there are only 25 artefacts and 53 shells. They indicate only discrete—non-continuous—occupation during the millennia, and short sojourns, probably by a restricted number of visitors.
- From a chronological perspective, these remains suggest late, transient passage of the collectors of *Anadara granosa*, the makers of the 'middens' on the shoreline. They also attest to a lengthy human presence, perhaps since the Pleistocene.
- The existence of two upright standing stone confers a special atmosphere on this place.
- The GTVW Group is thus probably an ancient '*dalu* site' outside the habitation area. It was the theatre of original operations that we will try to describe in the general conclusion of this study by comparing data sets of the various petroglyph assemblages studied.

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Endnotes

- 1 'Diverse humans', that is depictions of various types of human-like motifs. 'Human' forms are discussed in detail in Chapter 2, Part I: *Descriptions of the Petroglyphs*—Editors.
- 2 Examples of various motif categories are included in the text figures. Illustrations of many petroglyphs prefixed 'GTVW-' may be found among the series of illustrations numbered serially and placed in the Appendix accompanying this chapter. Some motifs—identified, numbered, studied, traced in detail, photographed, located on maps, and sometimes included in computations reported in Lorblanchet's study—are neither included in text figures nor in the illustrative appendices accompanying each chapter due to the large number of petroglyphs at each site—Editors.
- 3 The terms 'sub-horizontal' and 'sub-vertical' designate rock surfaces that are approximately horizontal or vertical with respect to their position in the landscape—Editors.
- 4 'average body ratio' is dealt with more extensively in Chapter 4: *Body proportions*. For a macropod, 'body length' measurement is distance from base of the neck to the base of the tail, and 'body height' is between the line of the belly and the highest point of the arched back. The 'dorsal curve' is the ratio between the length of the back (from neck to tail) and the height of the arc above this line—Editors.
- 5 Details of characteristics and habitats of putative identifications of genera and species may be sought in the annals of the *Australian Faunal Directory* (ABRS, 2009)—Editors.
- 6 The number of eggs in a clutch is species dependant; each female lays three to five clutches during the breeding season and each clutch would comprise between 40 and 120 eggs—Editors.
- 7 Described but not recorded—there is no illustration—Editors.
- 8 The definitions and methodology of internal- and external- relationship analyses are discussed in more detail in Chapter 5: *Distributions and associations of various motifs*, and Chapter 7: *Associations and groupings*—Editors.
- 9 The character and analytical role of the 'visibility index' or 'index of visibility' is discussed in greater detail in Chapter 7 GTVT—Editors.
- 10 The range and specific characteristics of carving techniques are discussed in greater detail in Chapter 4 GTVE and Chapter 7 GTVT—Editors.
- 11 Re-marking (renovation) is discussed in detail in Chapter 3 GTVS, extensively in Chapter 4 GTVE, and again with use of the 'contour gauge' in Chapter 5 GTVK—Editors.
- 12 Qualification of use of the term 'human prints': (a) These are not 'hand prints' comparable to the ubiquitous pictograms found throughout Australia (and widespread throughout the world) that are produce by blowing pigment across a hand (also done with other items such as a boomerang), or made by pressing a hand wet with pigment onto a shelter or cave wall. (b) Rather, in the context of this discussion of Dampier petroglyphs, 'human hand print' and 'human foot print' are shorthand terms for representations of the hand/s or foot/feet of a 'human'. (c) Since they are most often the depiction of part of the integral anatomy of a being, they are qualitatively different from the 'animal prints' discussed subsequently in each chapter, the 'kangaroo track', 'bird print' and 'turtle track', which represent simply the 'footprint' left in the soft ground by a passing animal—Editors.
- 13 Use of the photoelectric cell to quantify patination states is discussed more fully in Chapter 5: *Carving techniques and patination observed at the Kangaroo Group*—Editors.

Chapter 6—Appendix

Recordings of the petroglyphs of the Gum Tree Valley Woman Group (GTVW)

To define the orientation of each figure, on each recording are indicated: (*a*) the north orientation when it is a horizontal panel on top of a slab, and (*b*) the vertical orientation (an arrow with a 'V') when the surface is close to the vertical. Unless otherwise indicated, all scales represent 10 mm.

GTVW-5

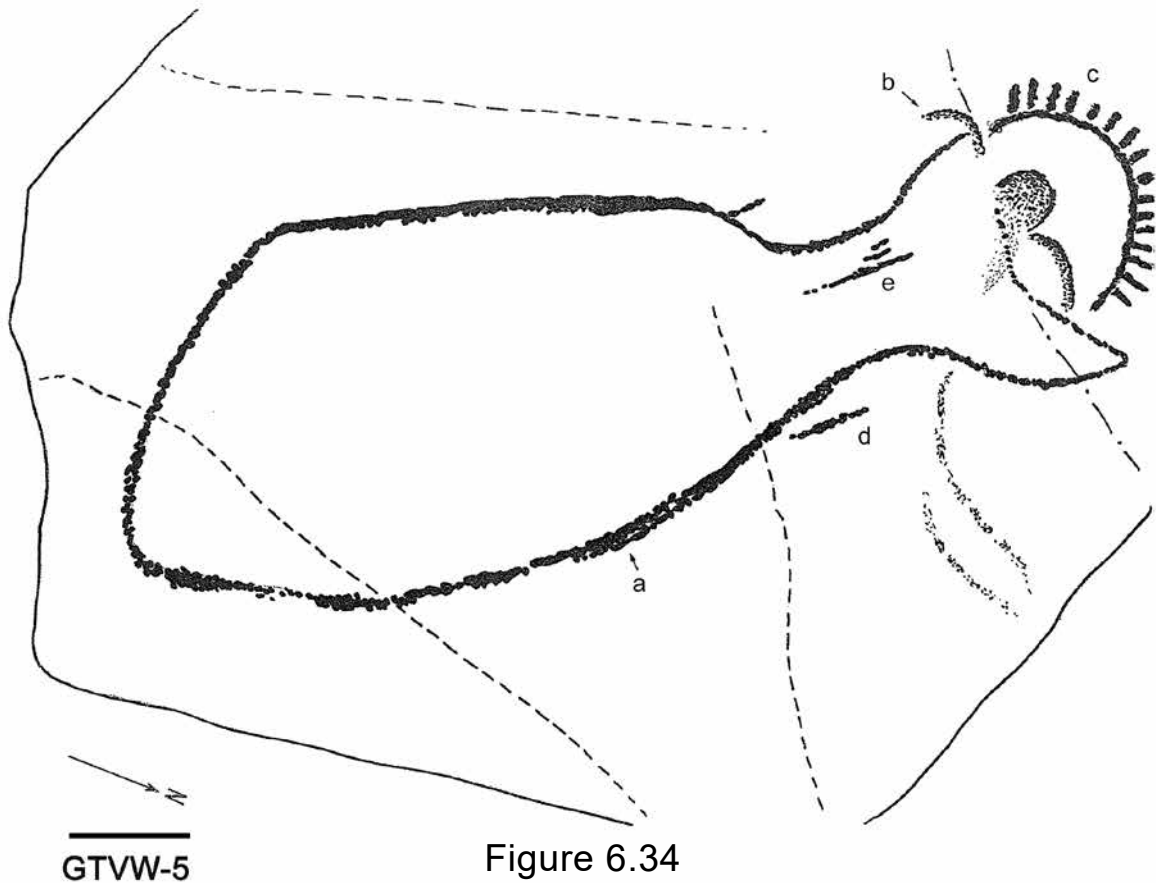


Figure 6.34

GTVW-8+10

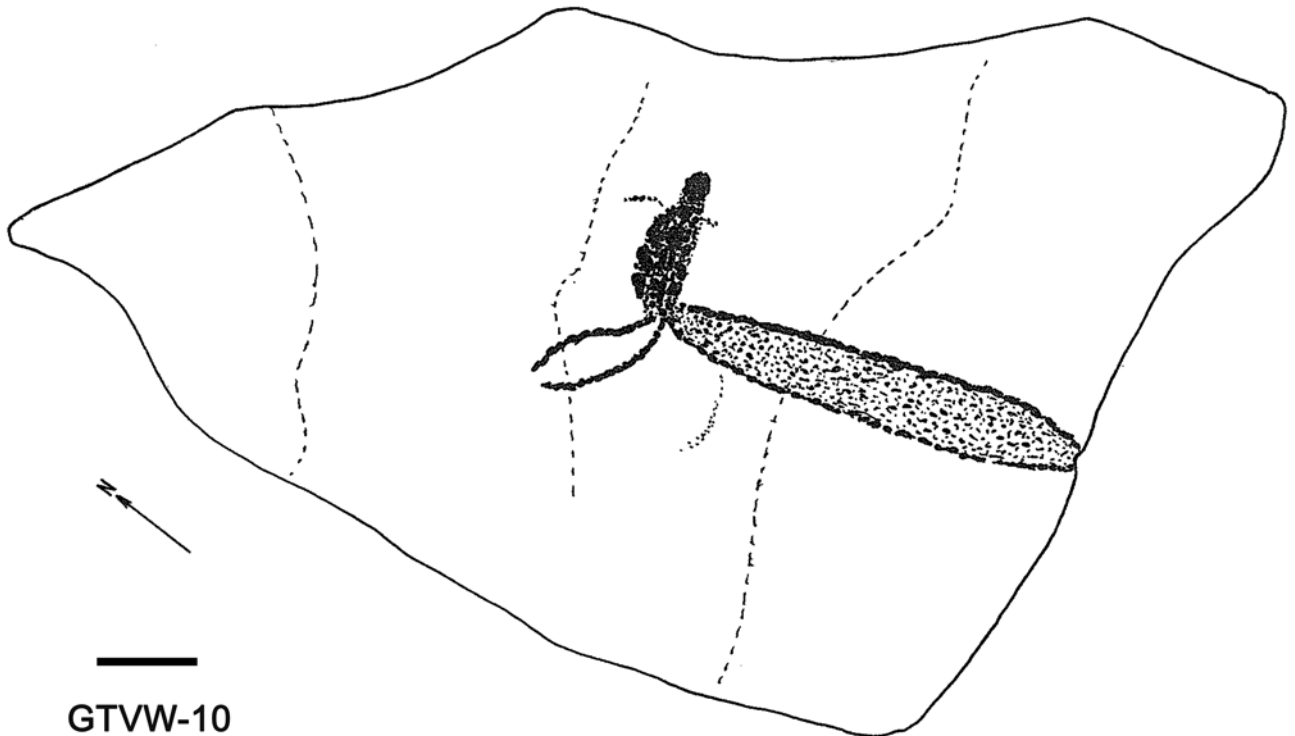
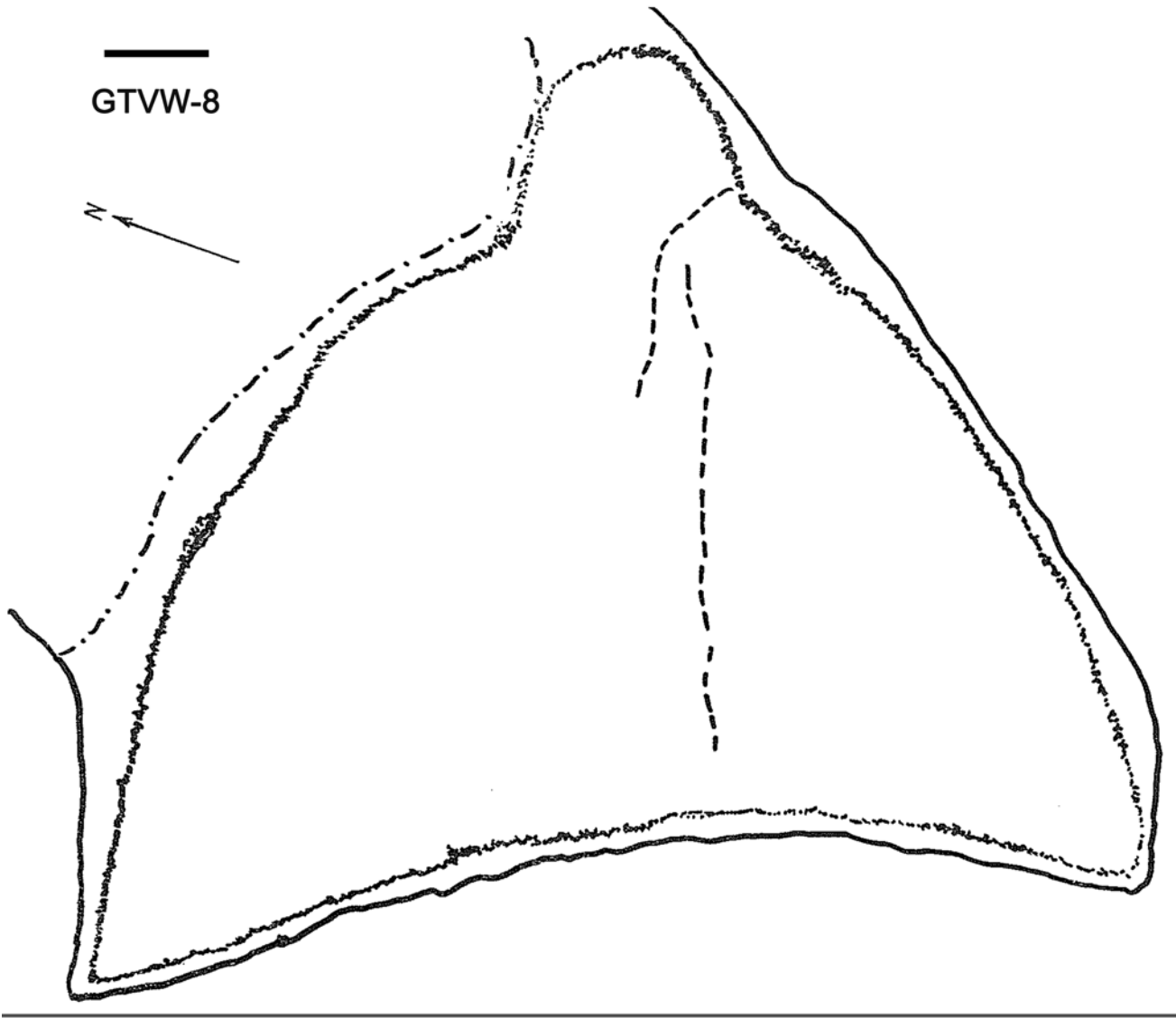


Figure 6.35

GTVW-11+18

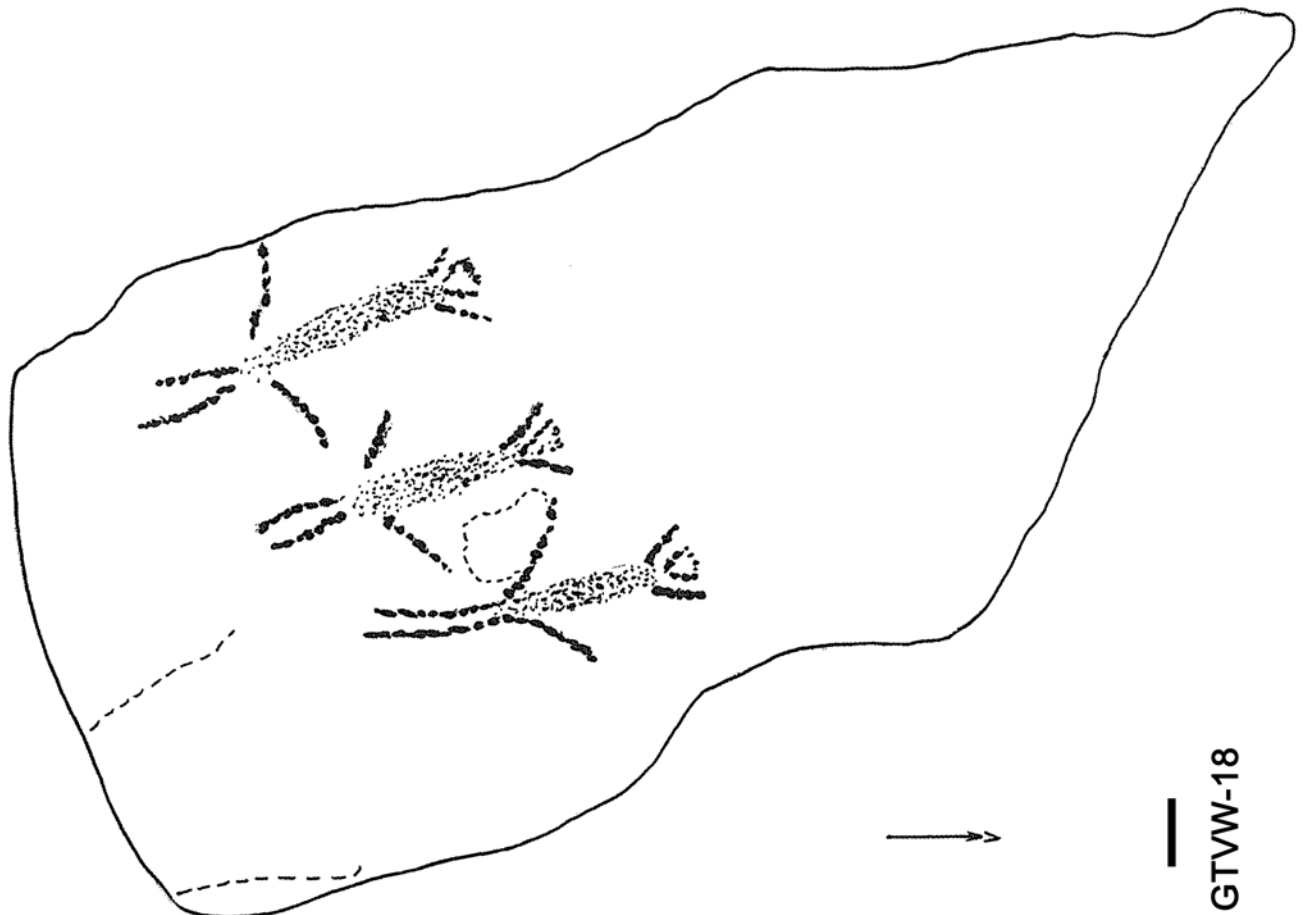
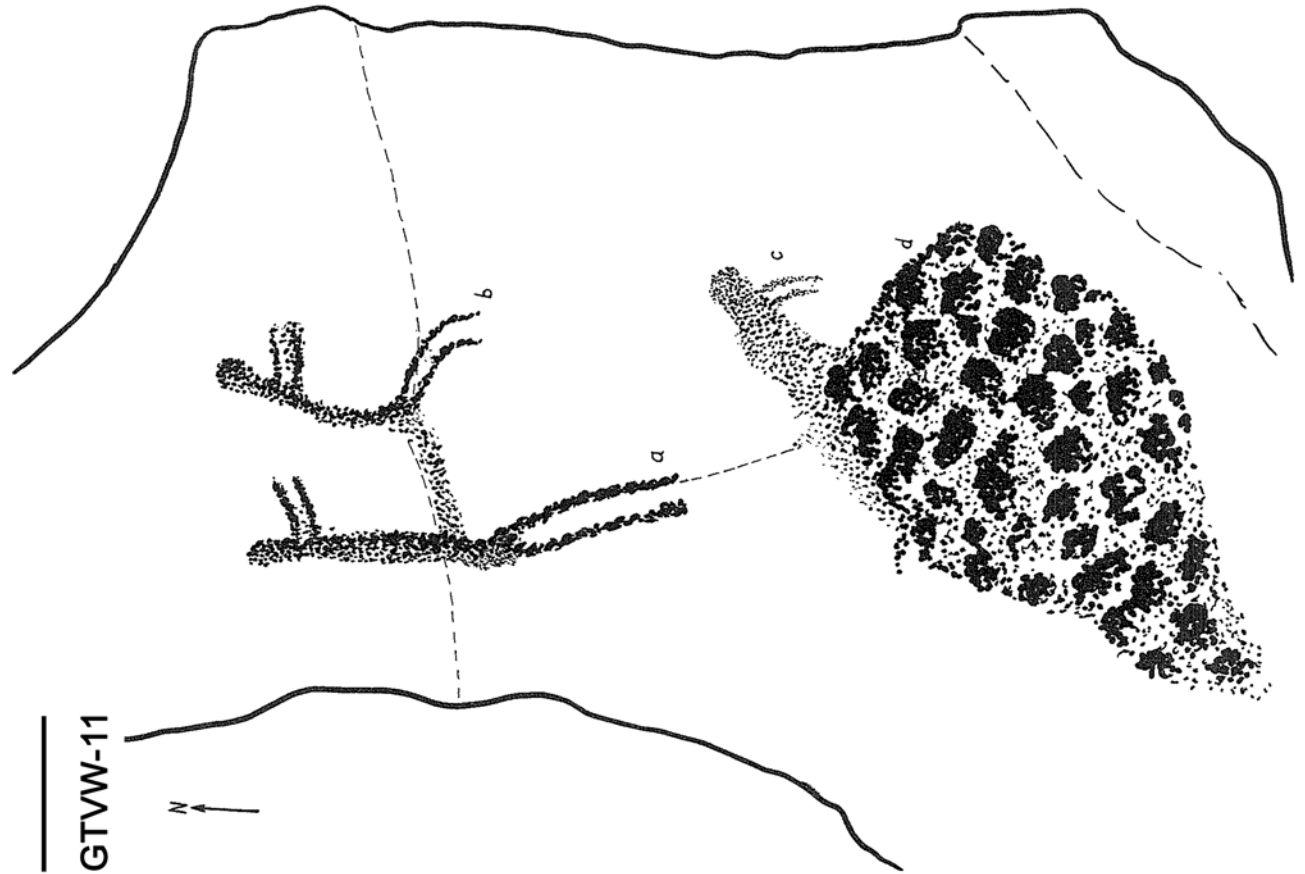


Figure 6.36

GTVW-13A+25

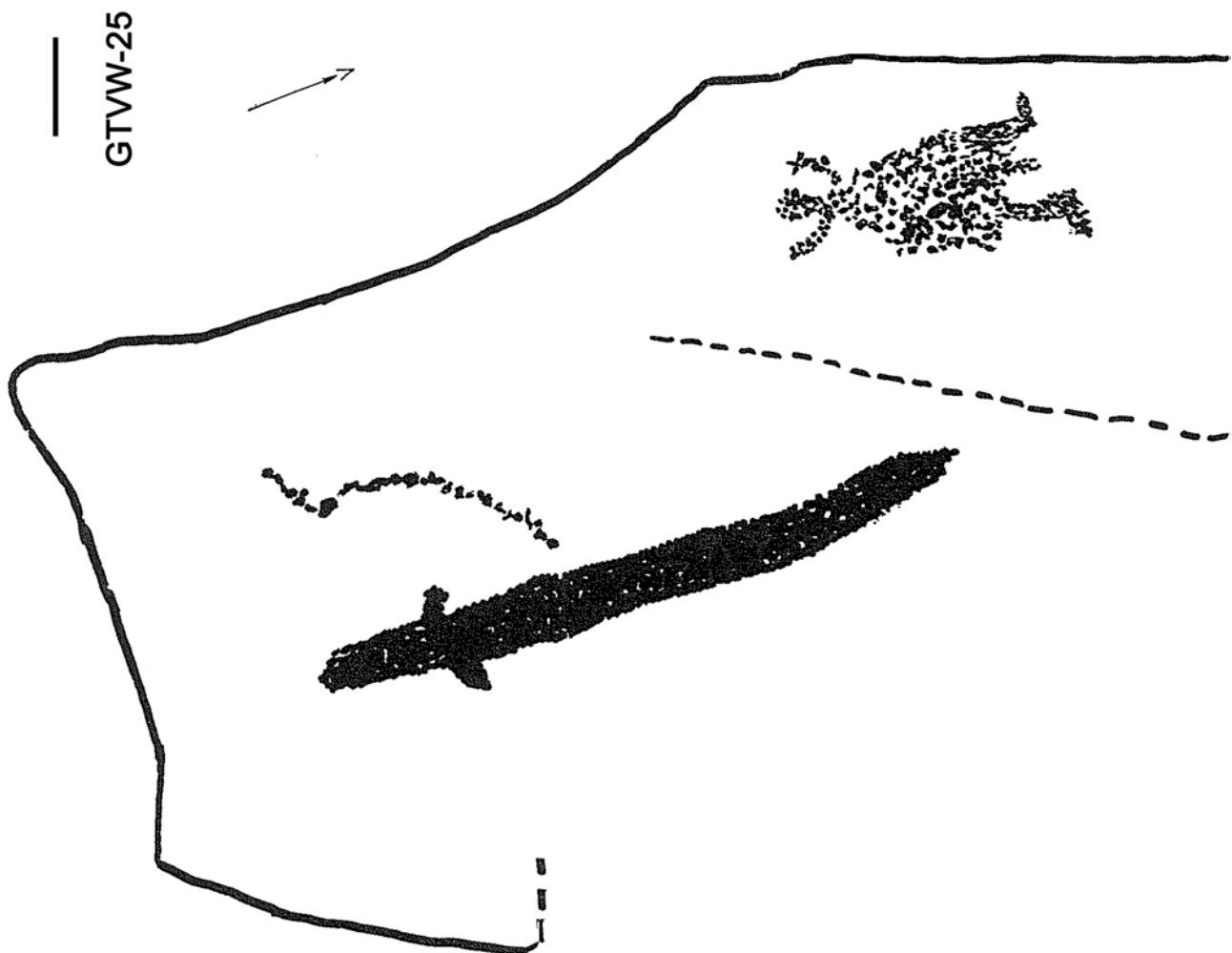
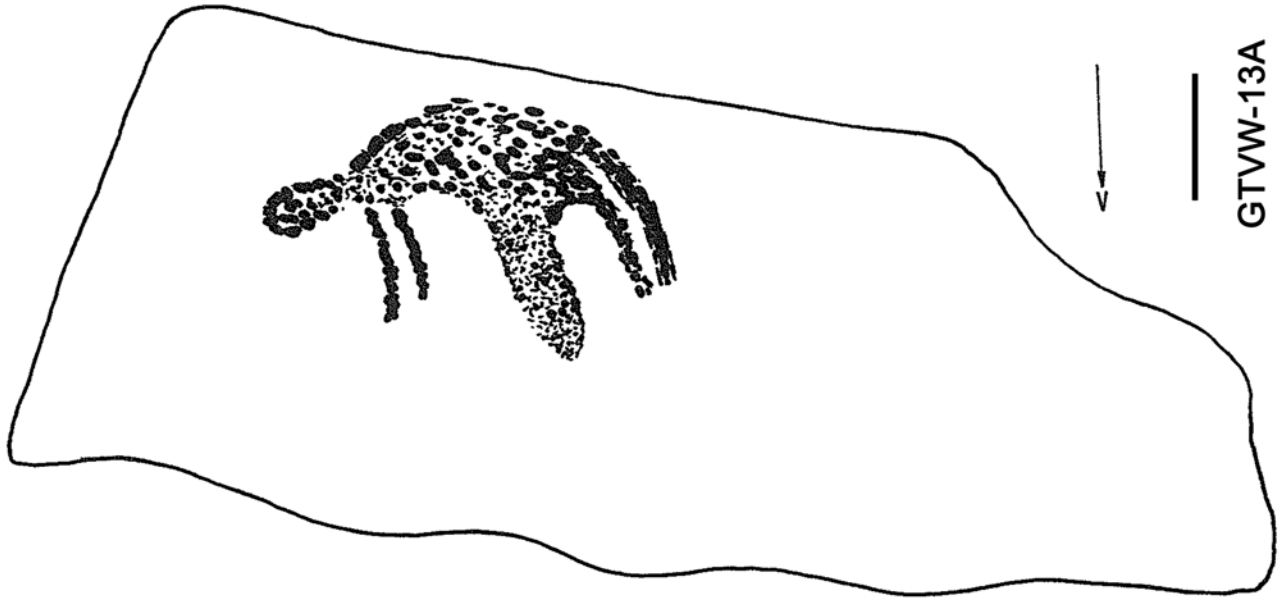


Figure 6.37

GTVW-17+23

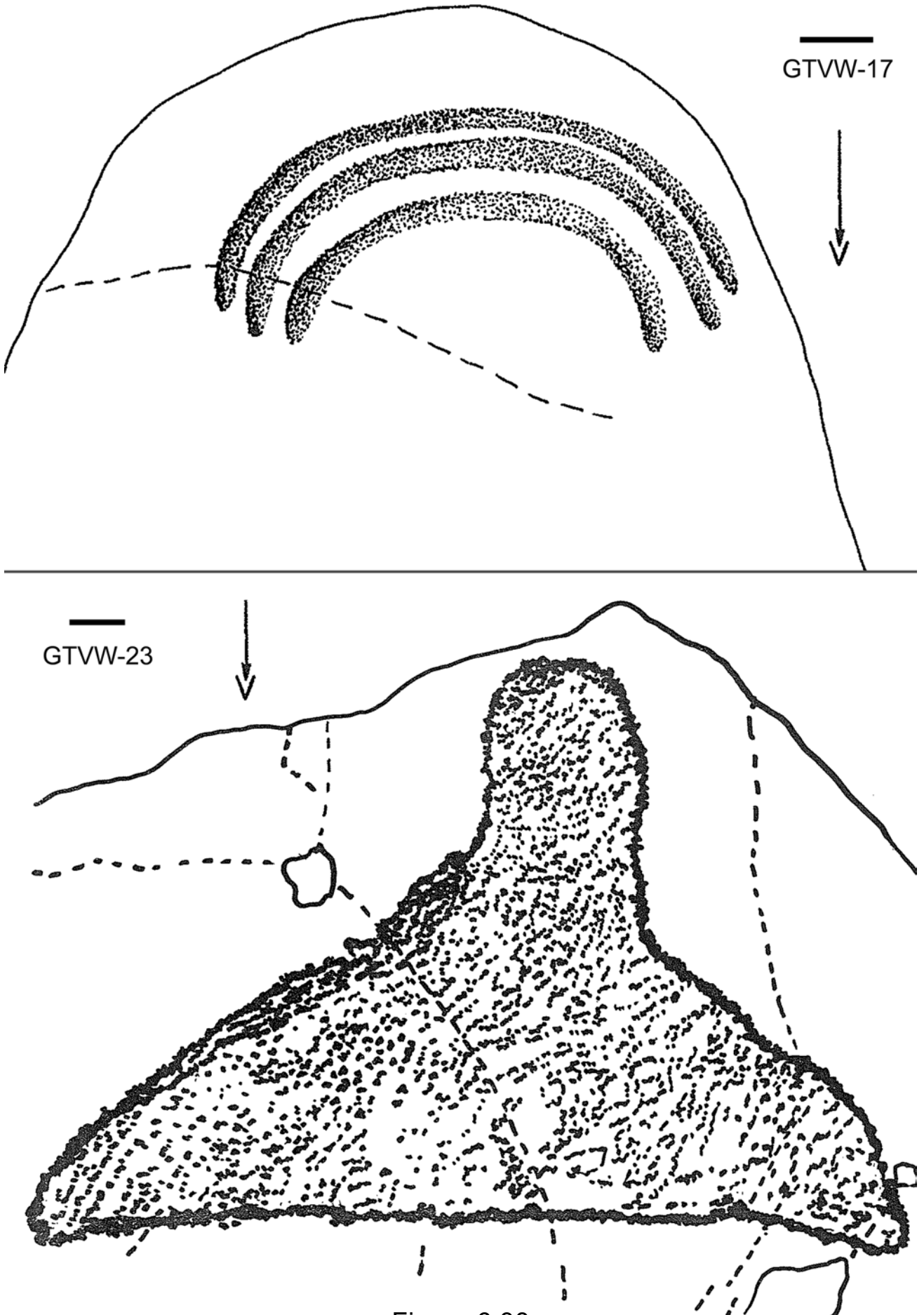


Figure 6.38

GTVW-26

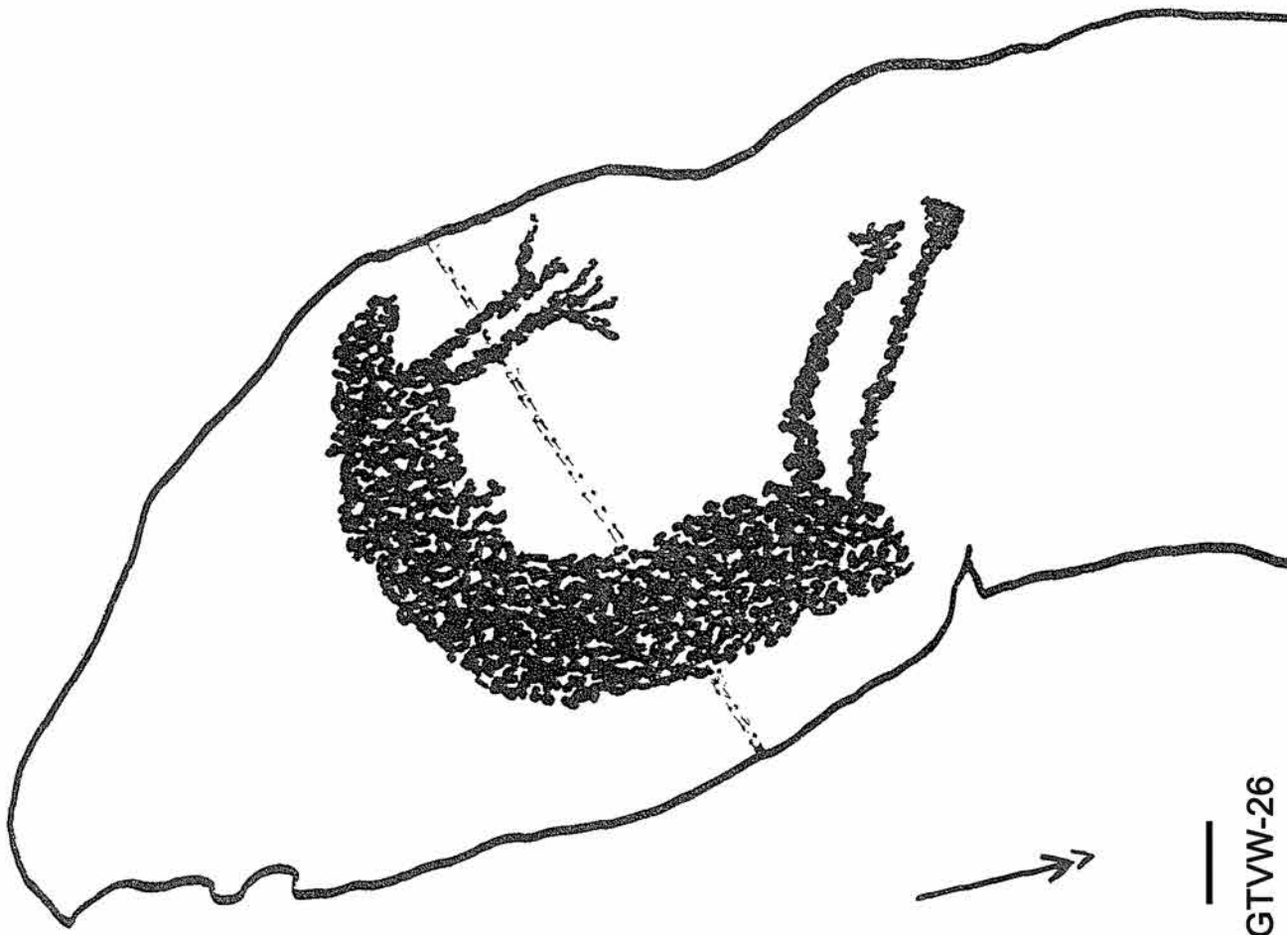


Figure 6.39

GTVW-27

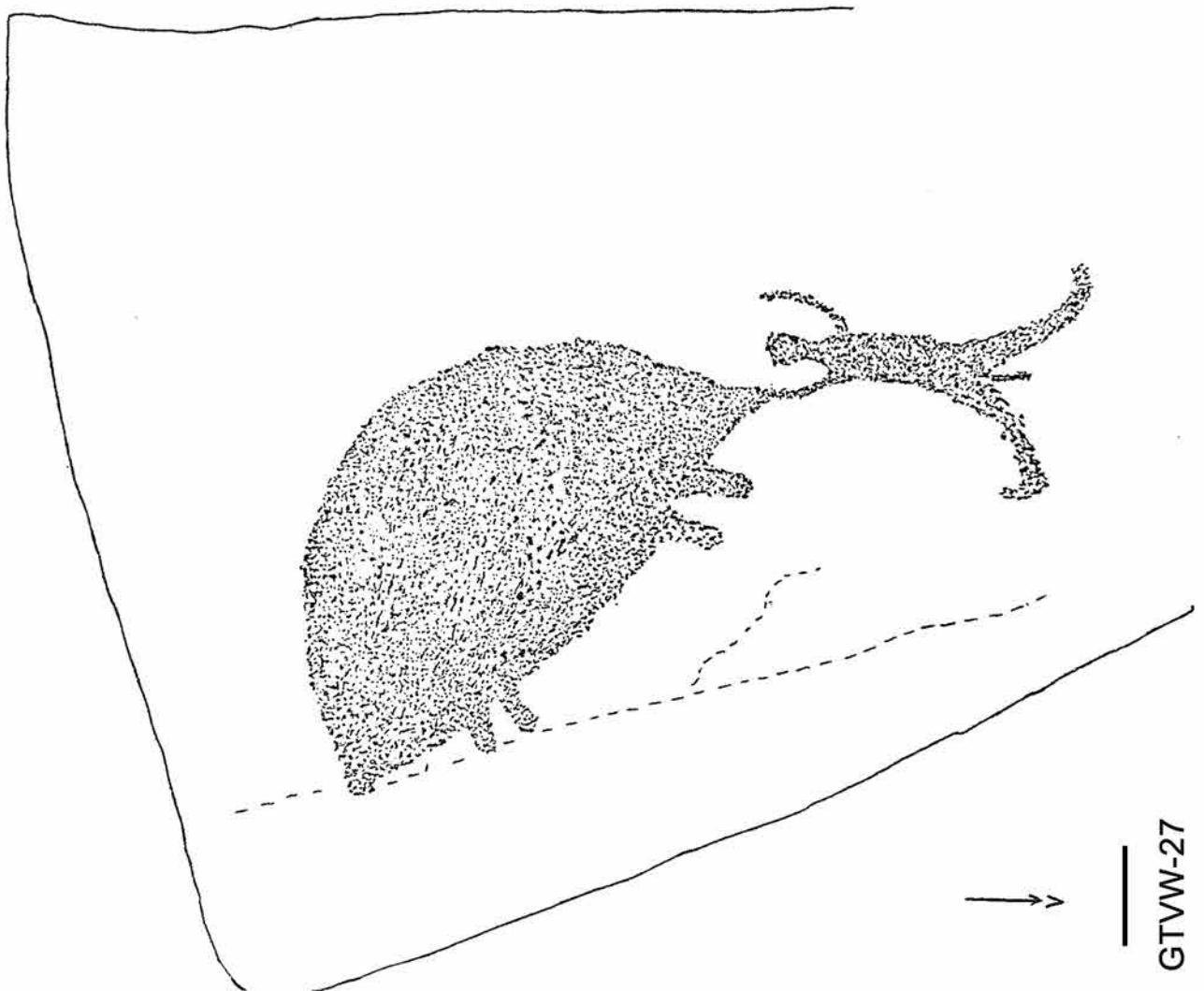


Figure 6.40

GTVW-27S

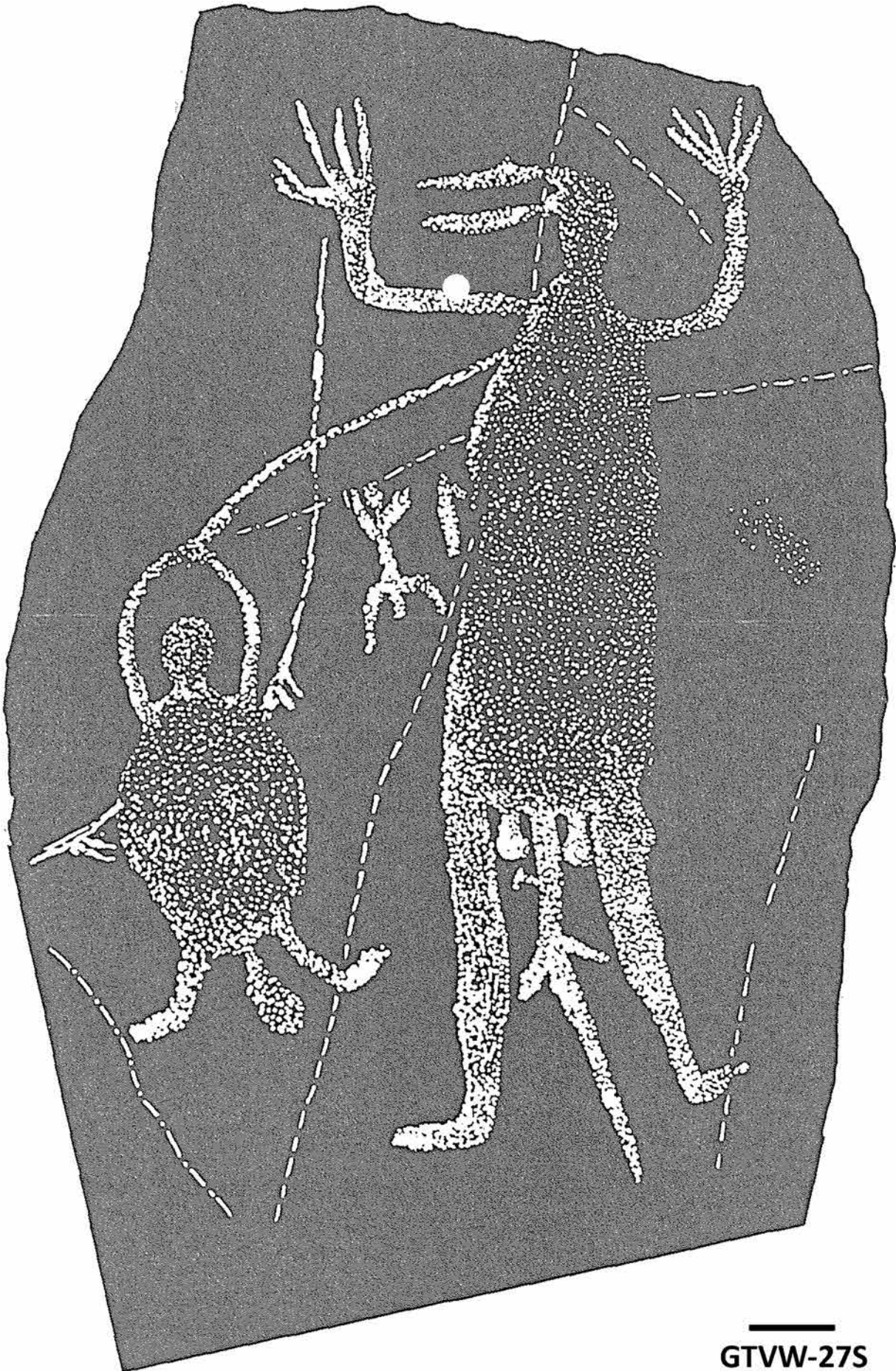


Figure 6.41

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GTVW-27S

GTVW-31A

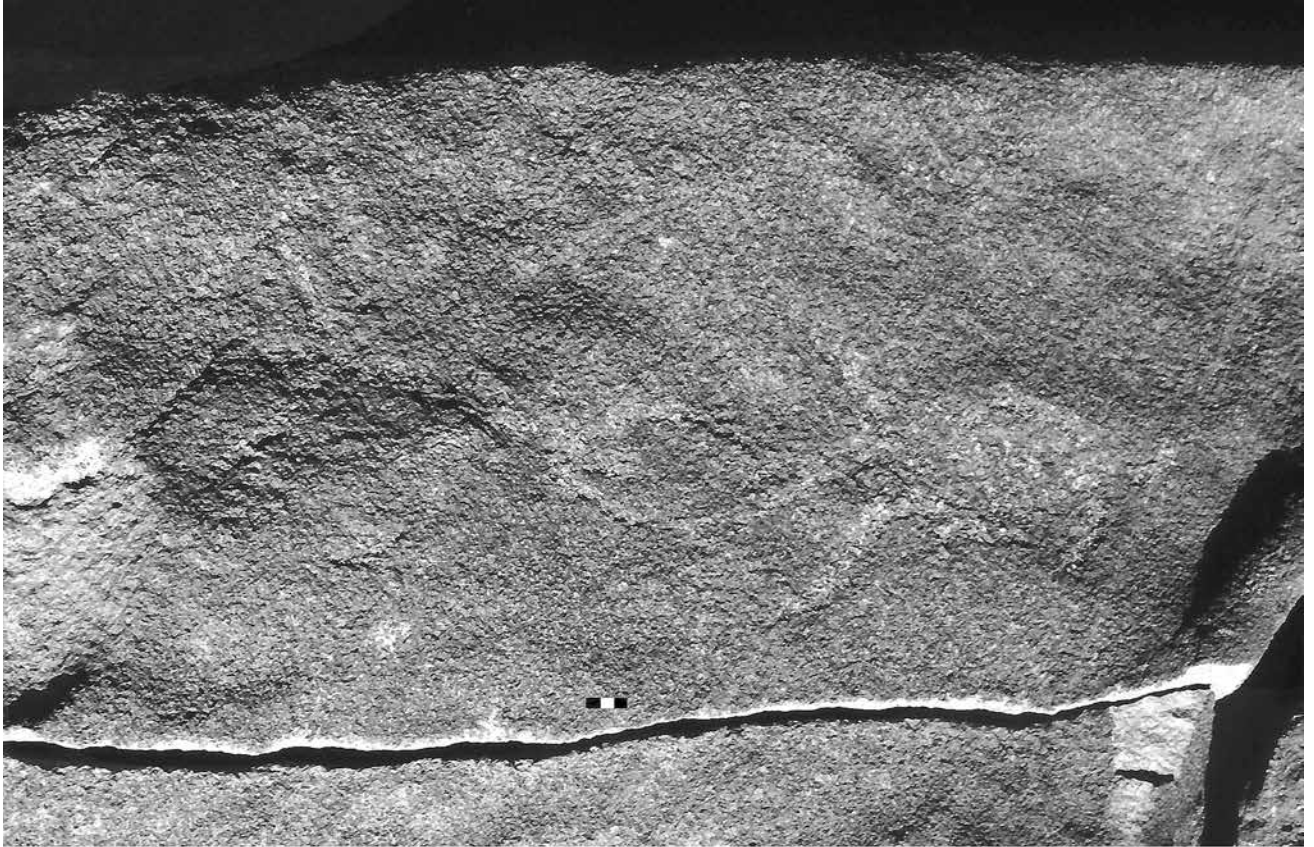


Figure 6.42

GTVW-33+35A

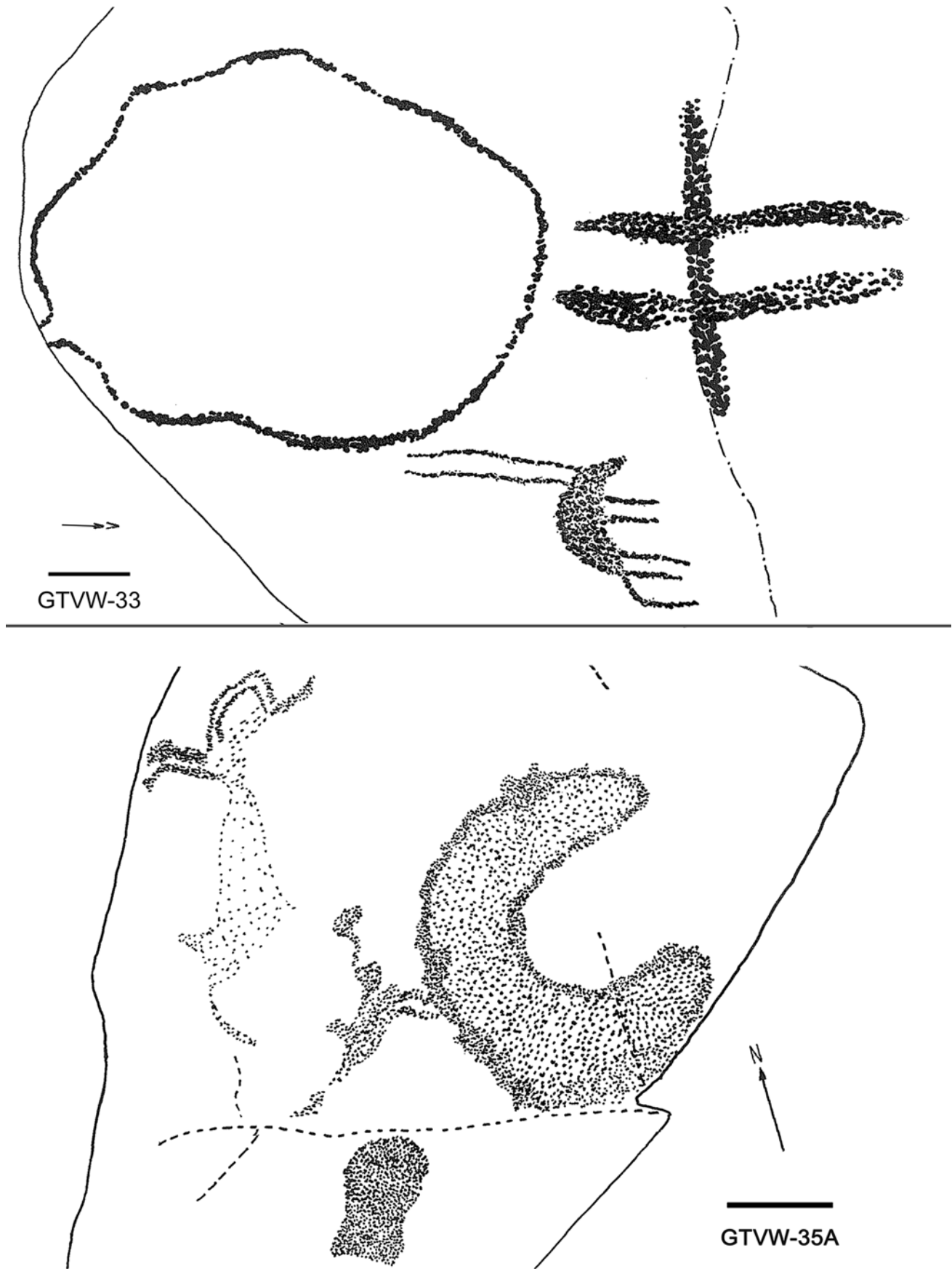


Figure 6.43

GTVW-34

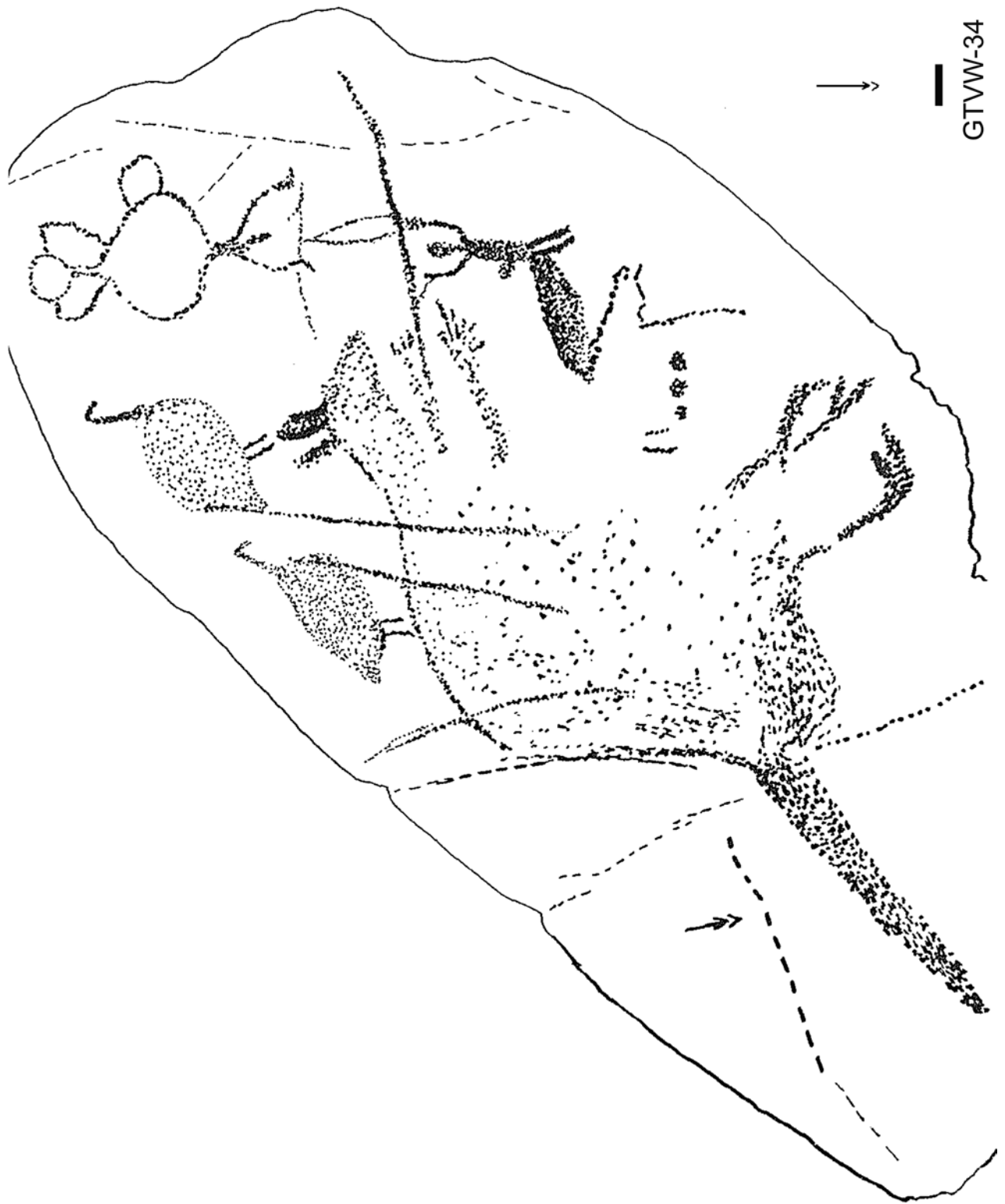


Figure 6.44

GTVW-35

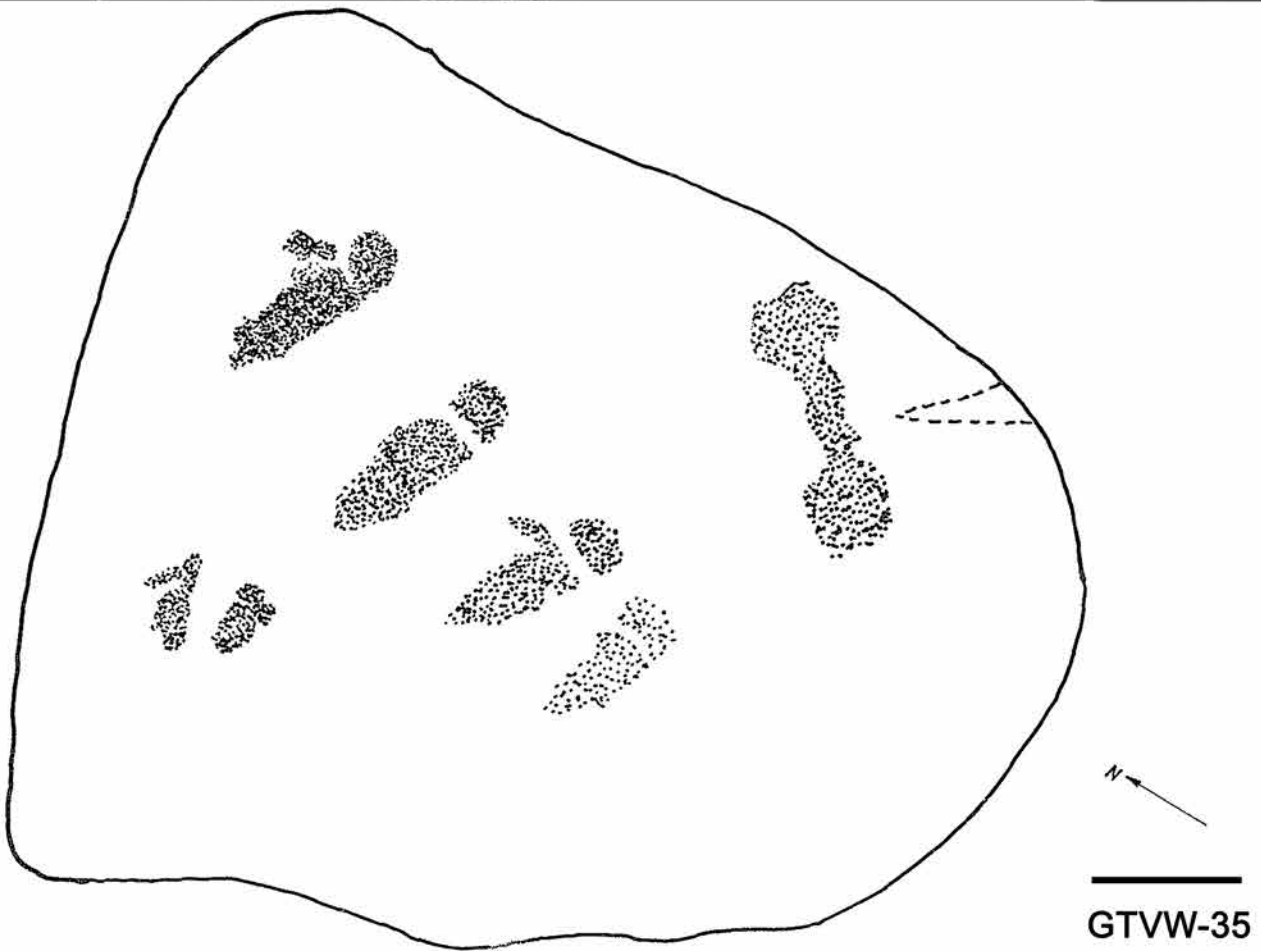


Figure 6.45

GTVW-36



Figure 6.46

GTVW-37

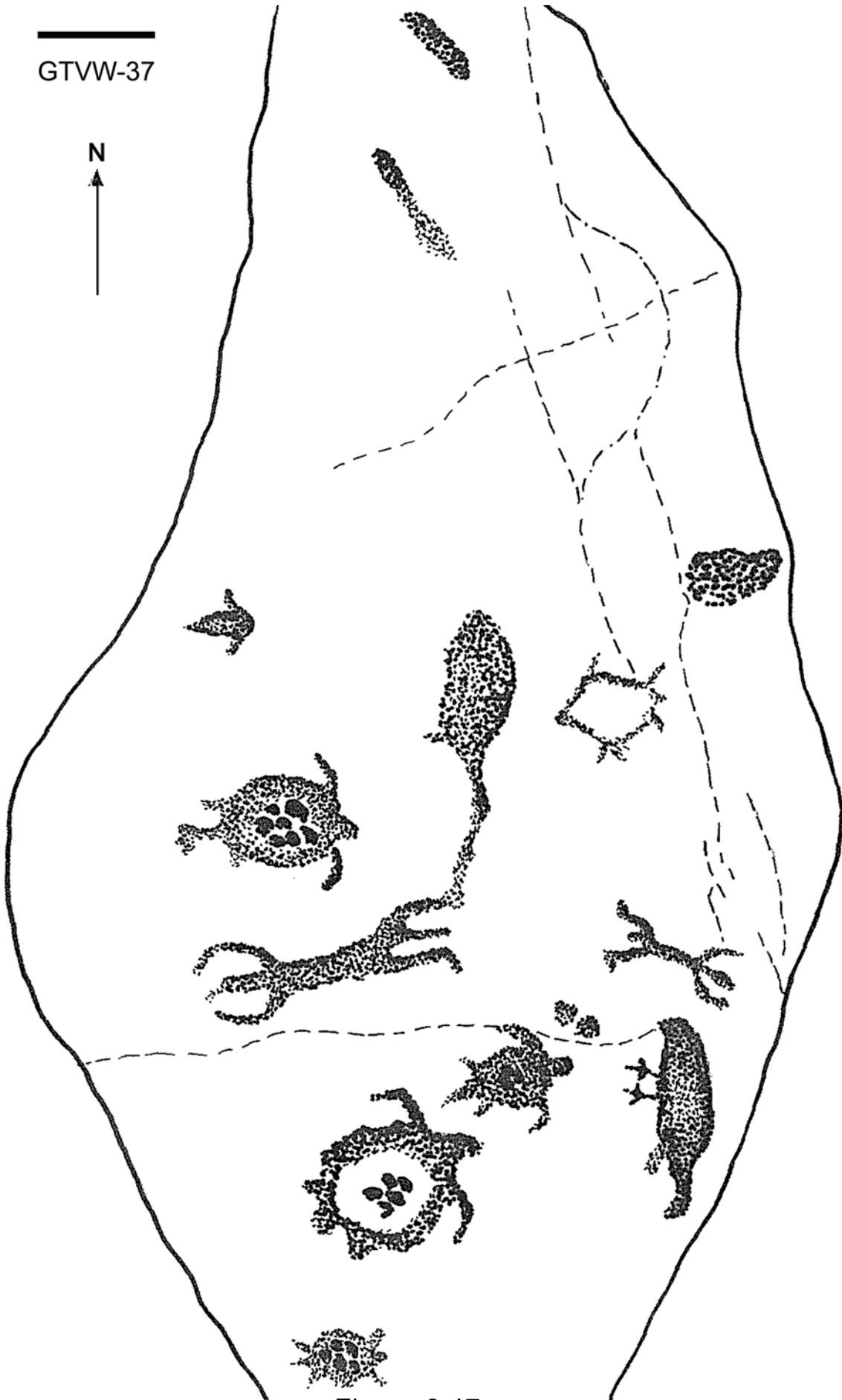


Figure 6.47

GTVW-38

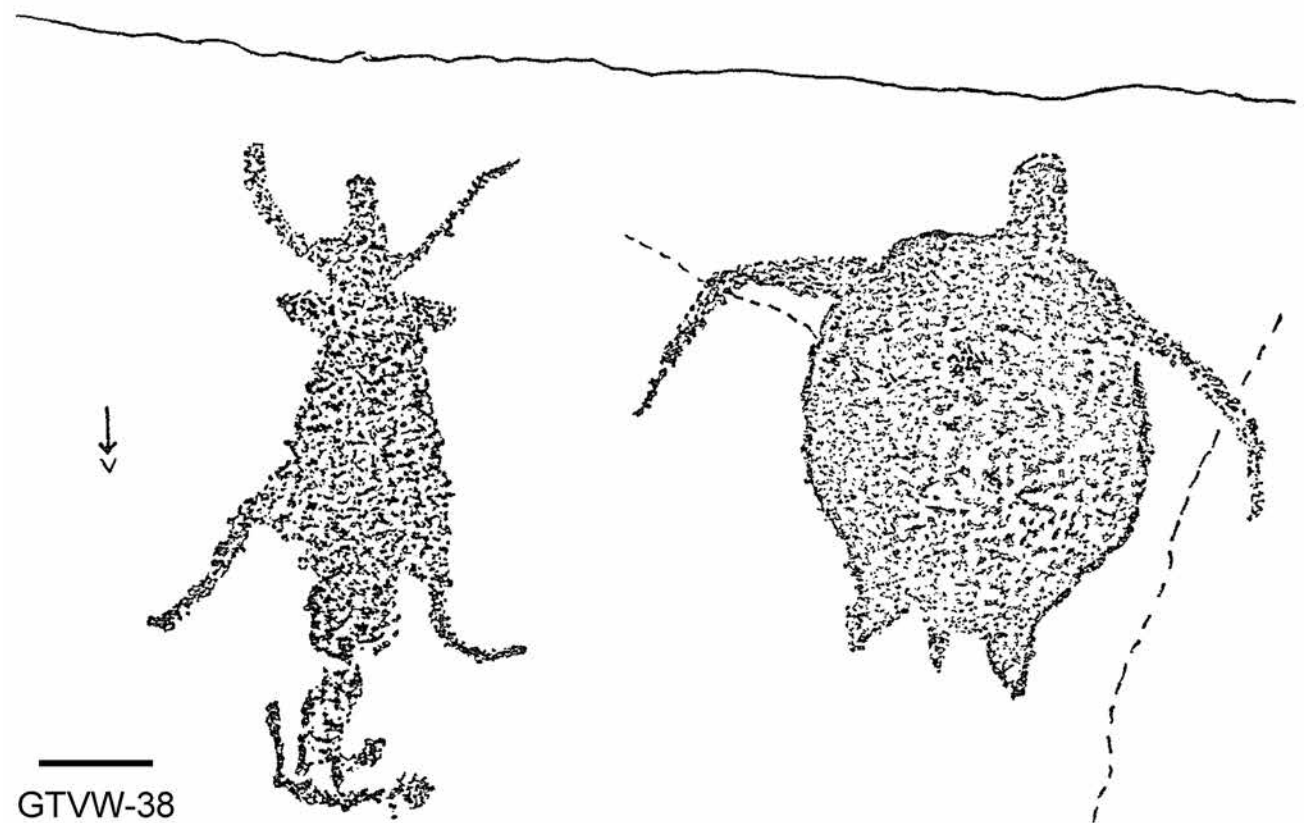
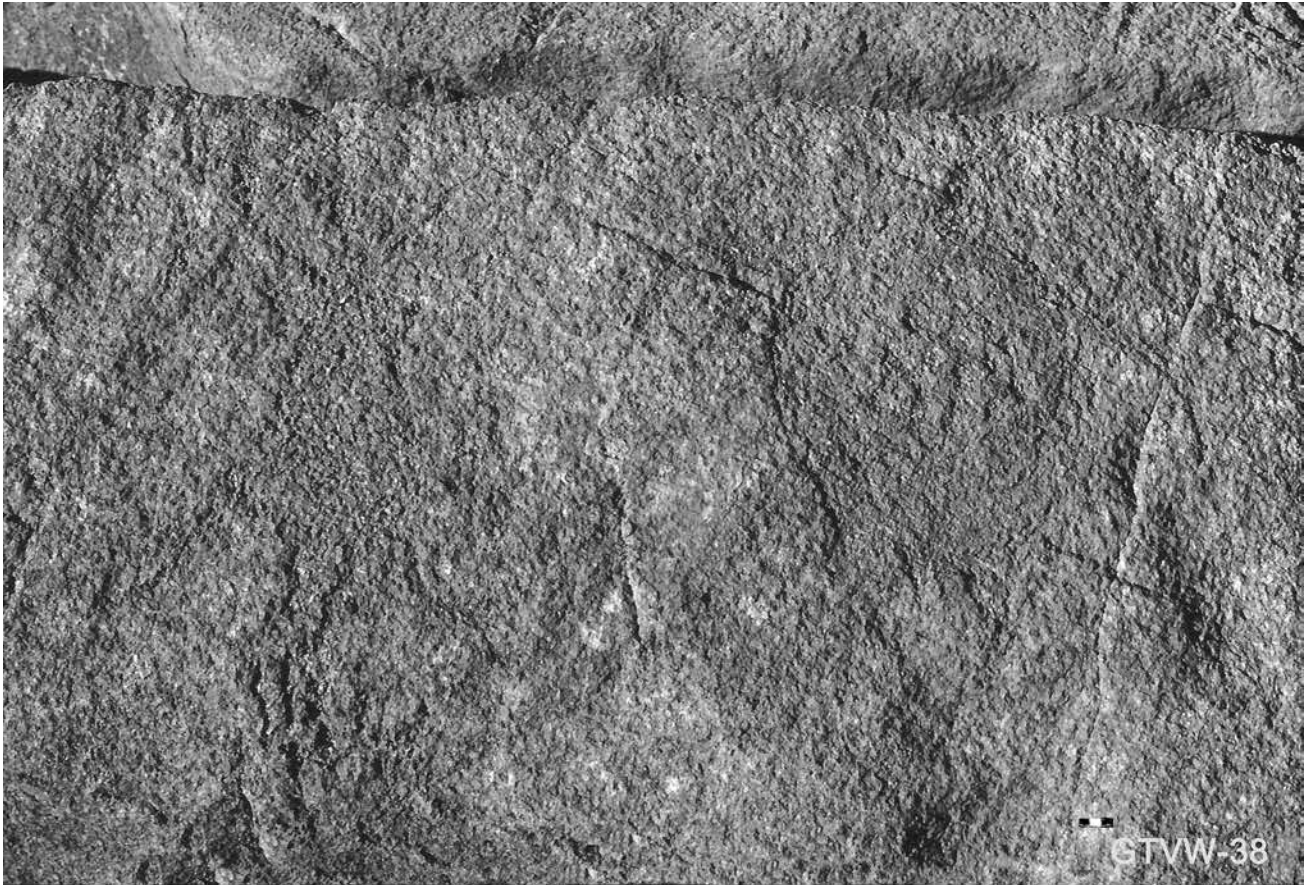


Figure 6.48

GTVW-39 +47A

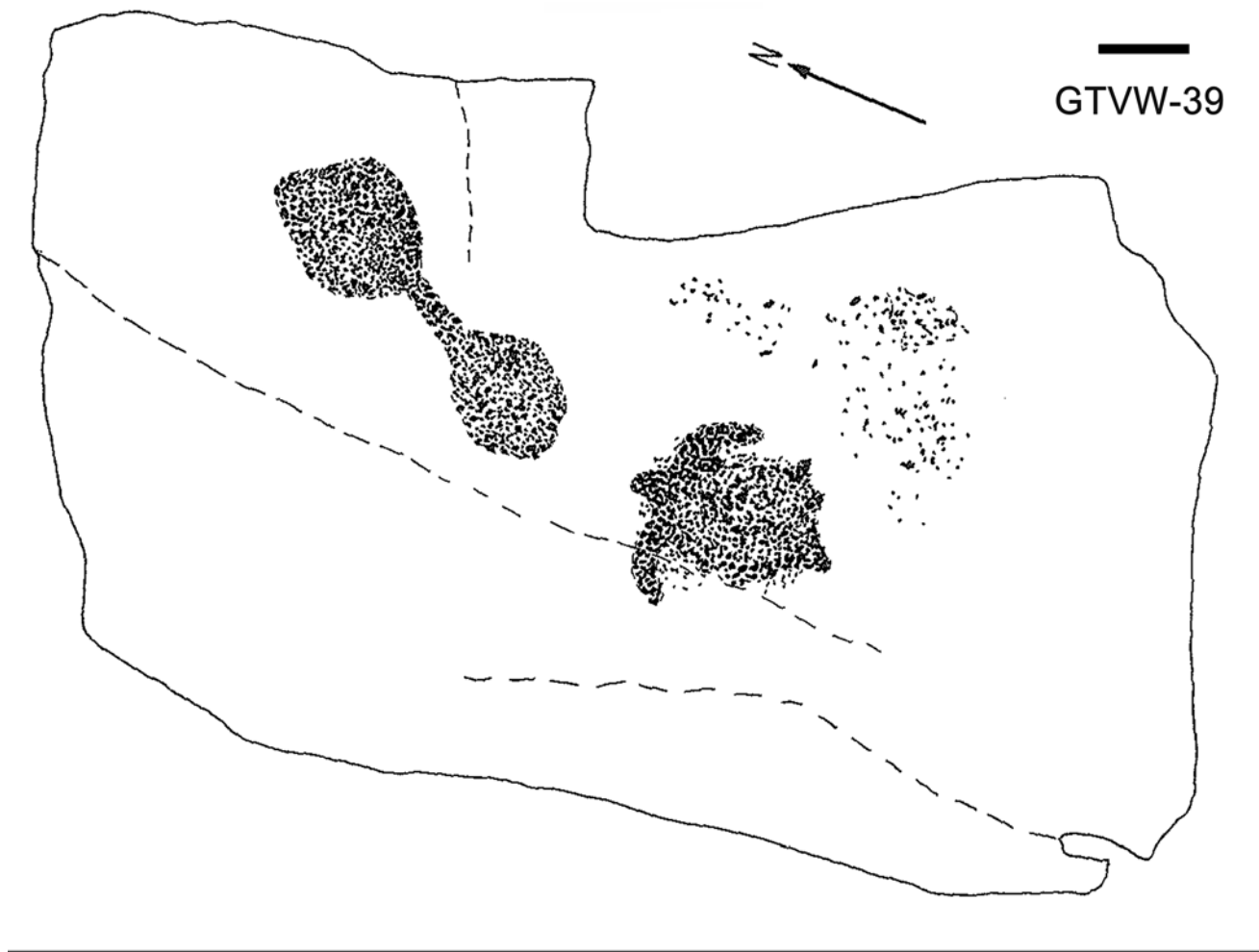


Figure 6.49

GTVW-41+43

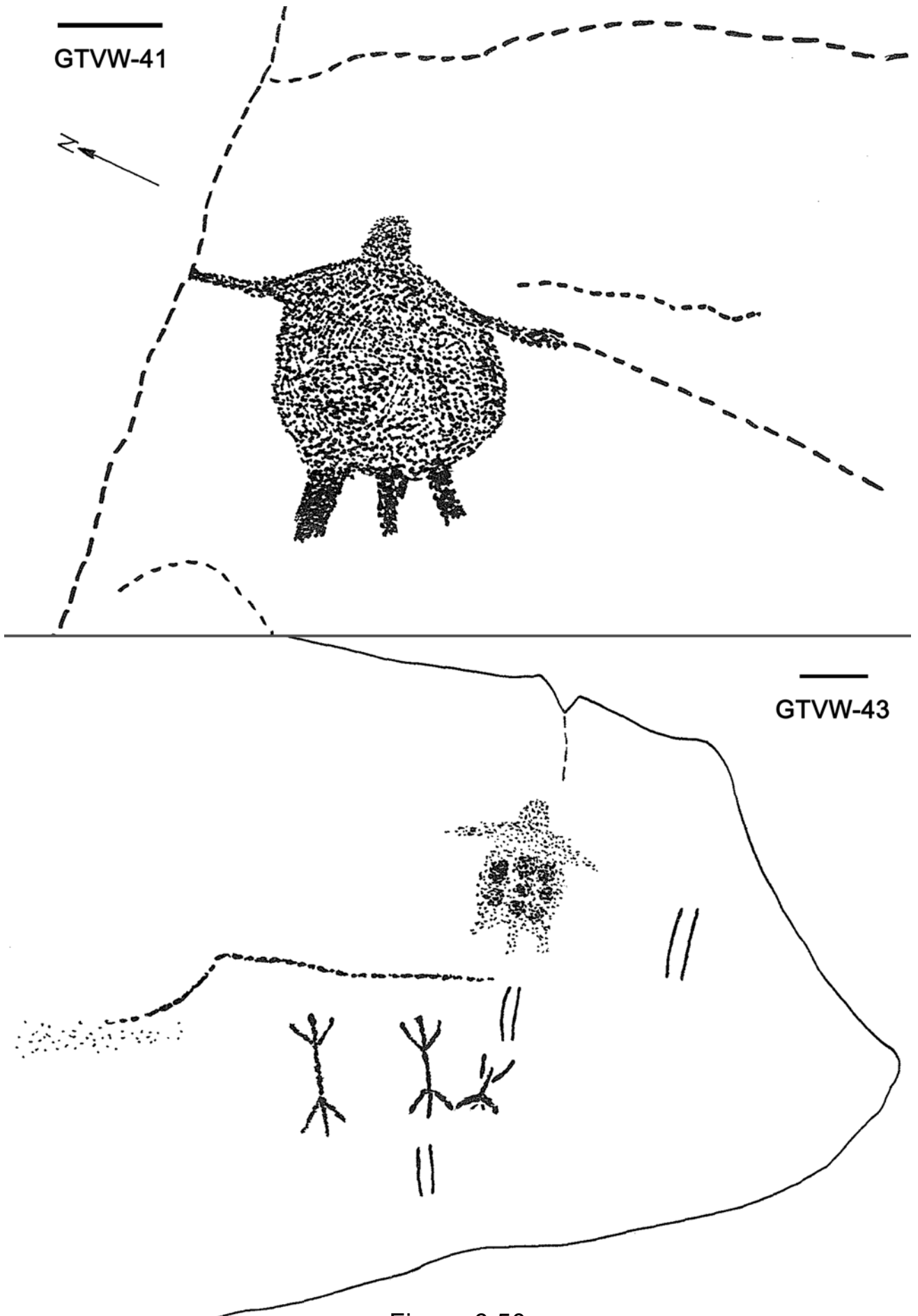


Figure 6.50

GTVW-48 +49A



Figure 6.51

GTVW-48



Scale: 200mm

GTVW-48

Figure 6.52

GTVW-48W + 49AA

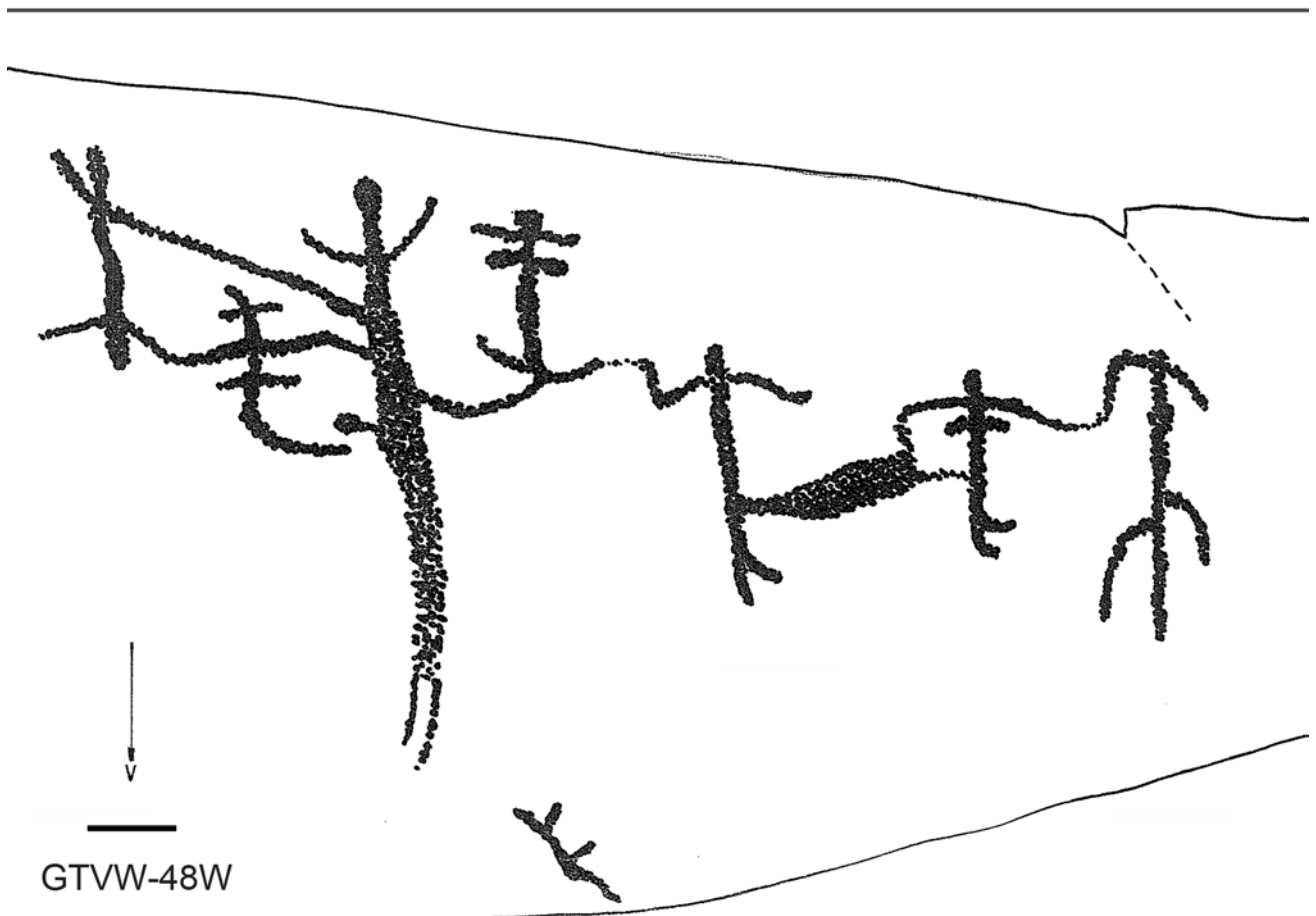
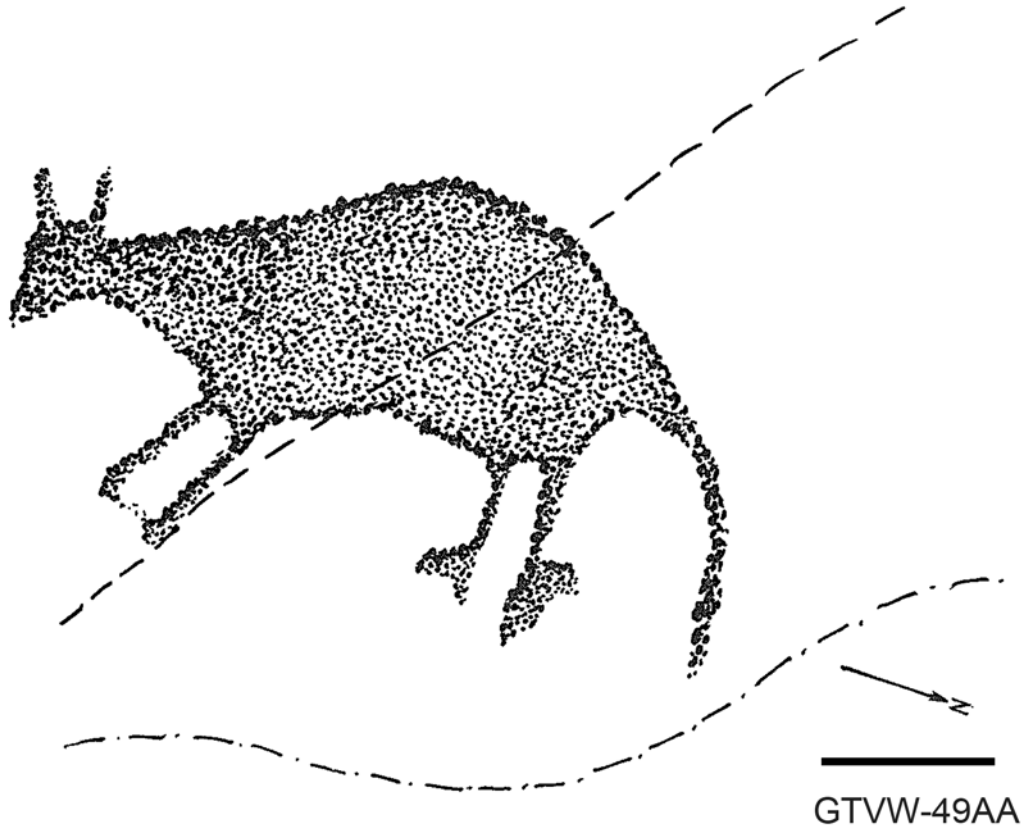


Figure 6.53

GTVW-49E

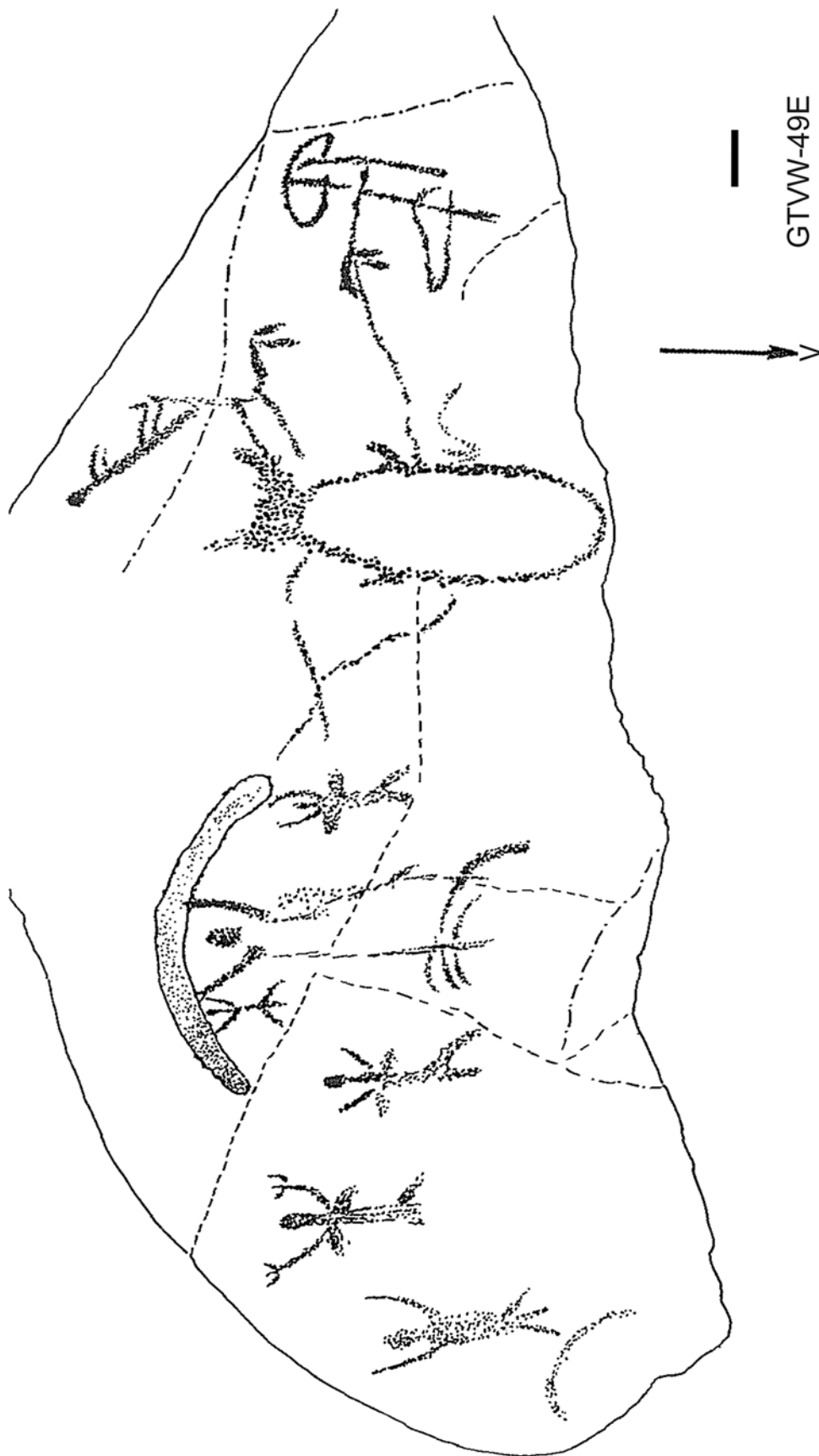


Figure 6.54

GTVW-49W

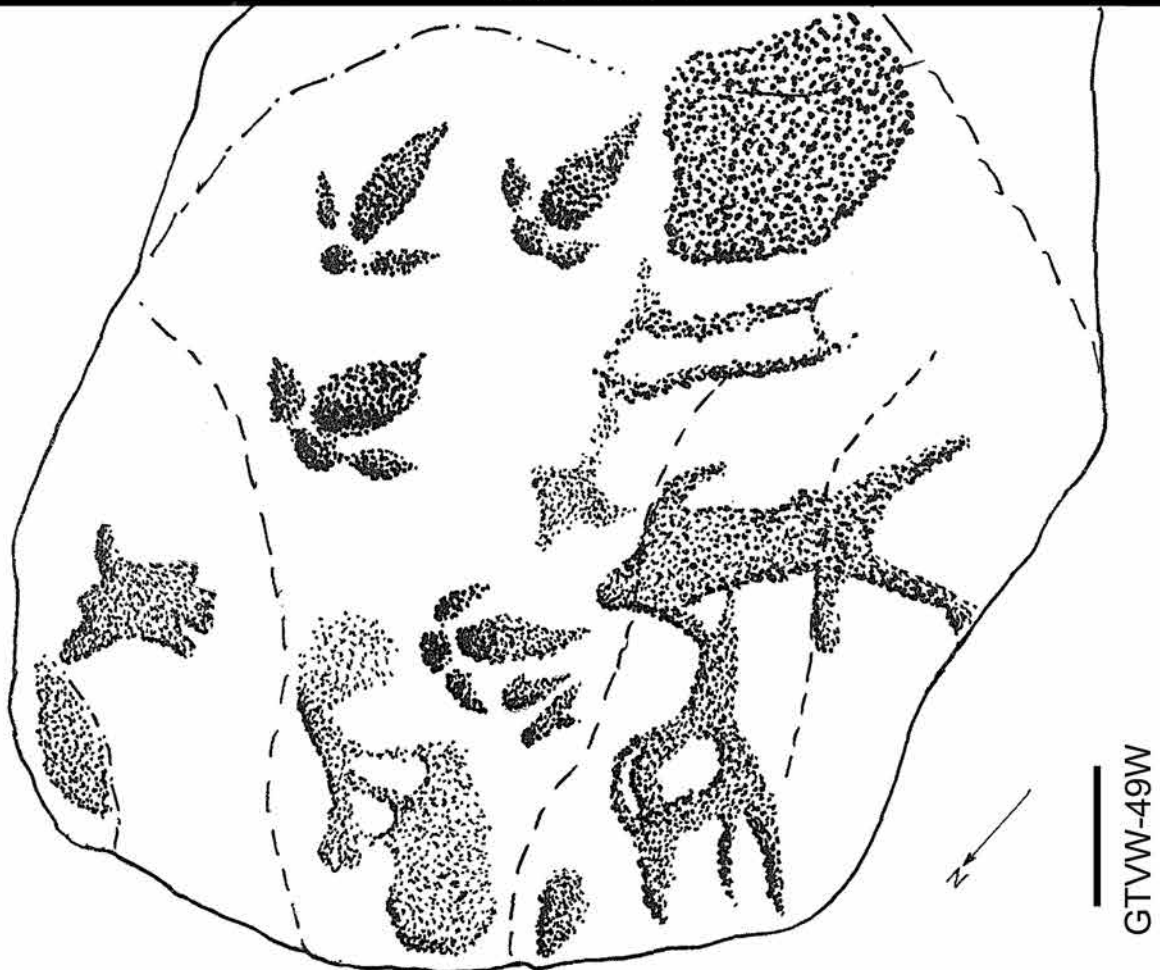


Figure 6.55

GTVW-51+59

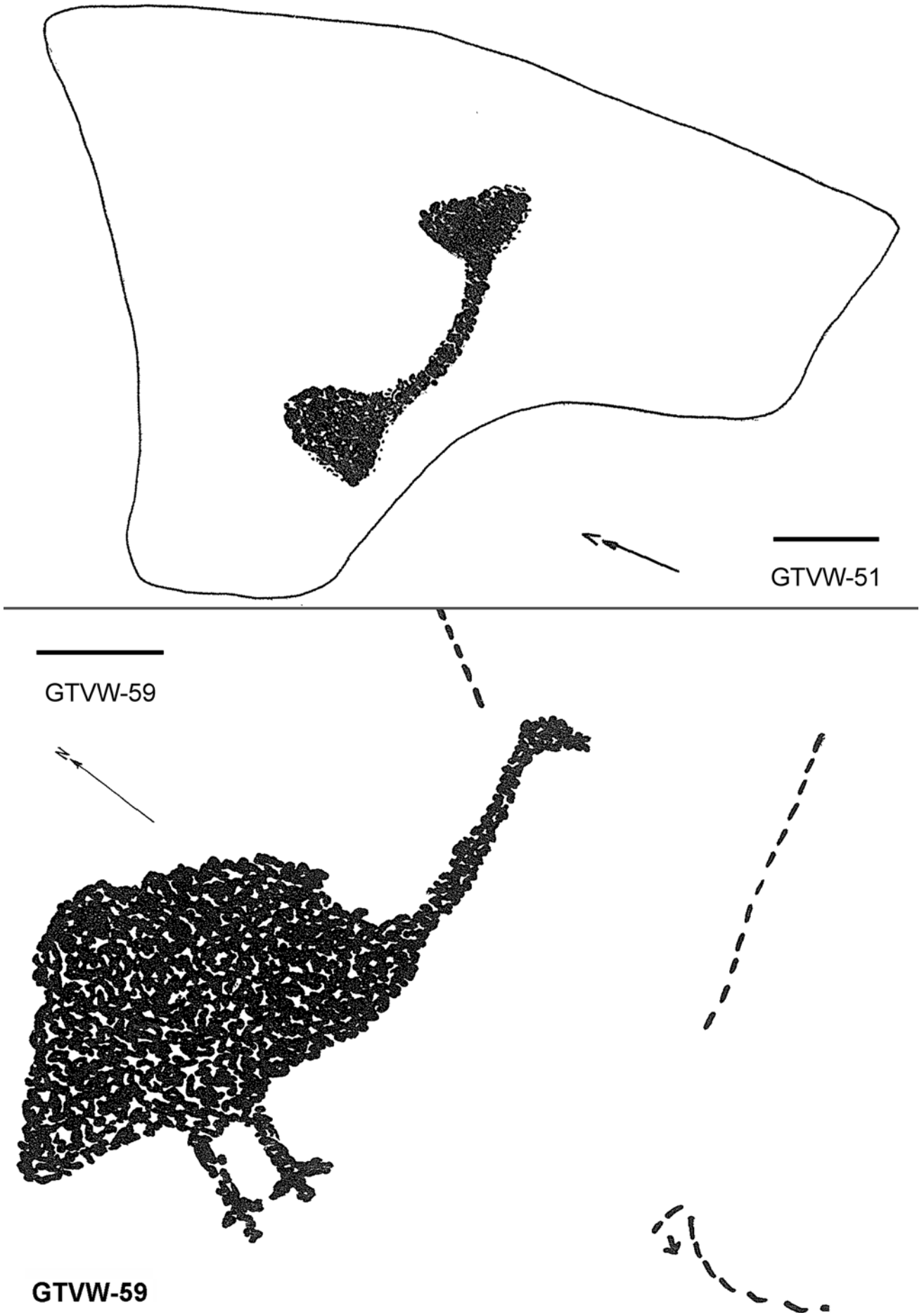


Figure 6.56

GTVW-66

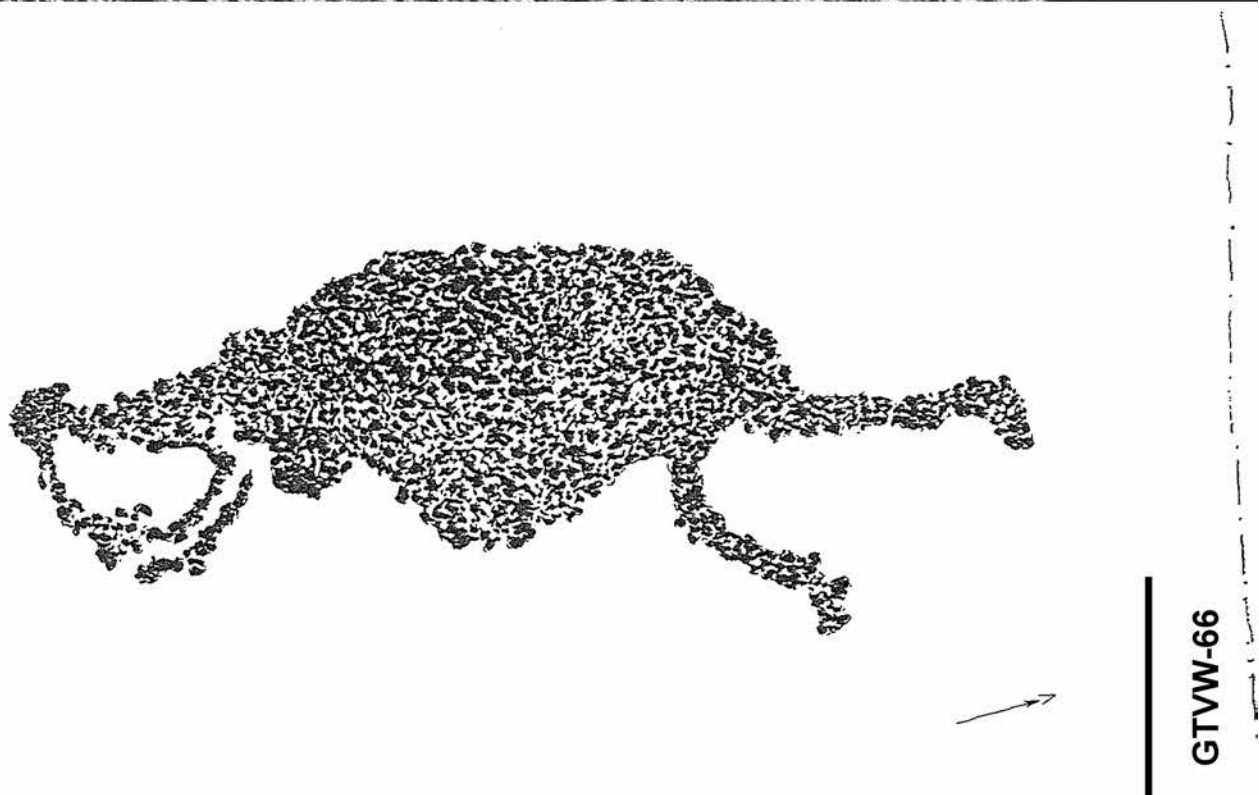


Figure 6.57

GTVW-67A+69A

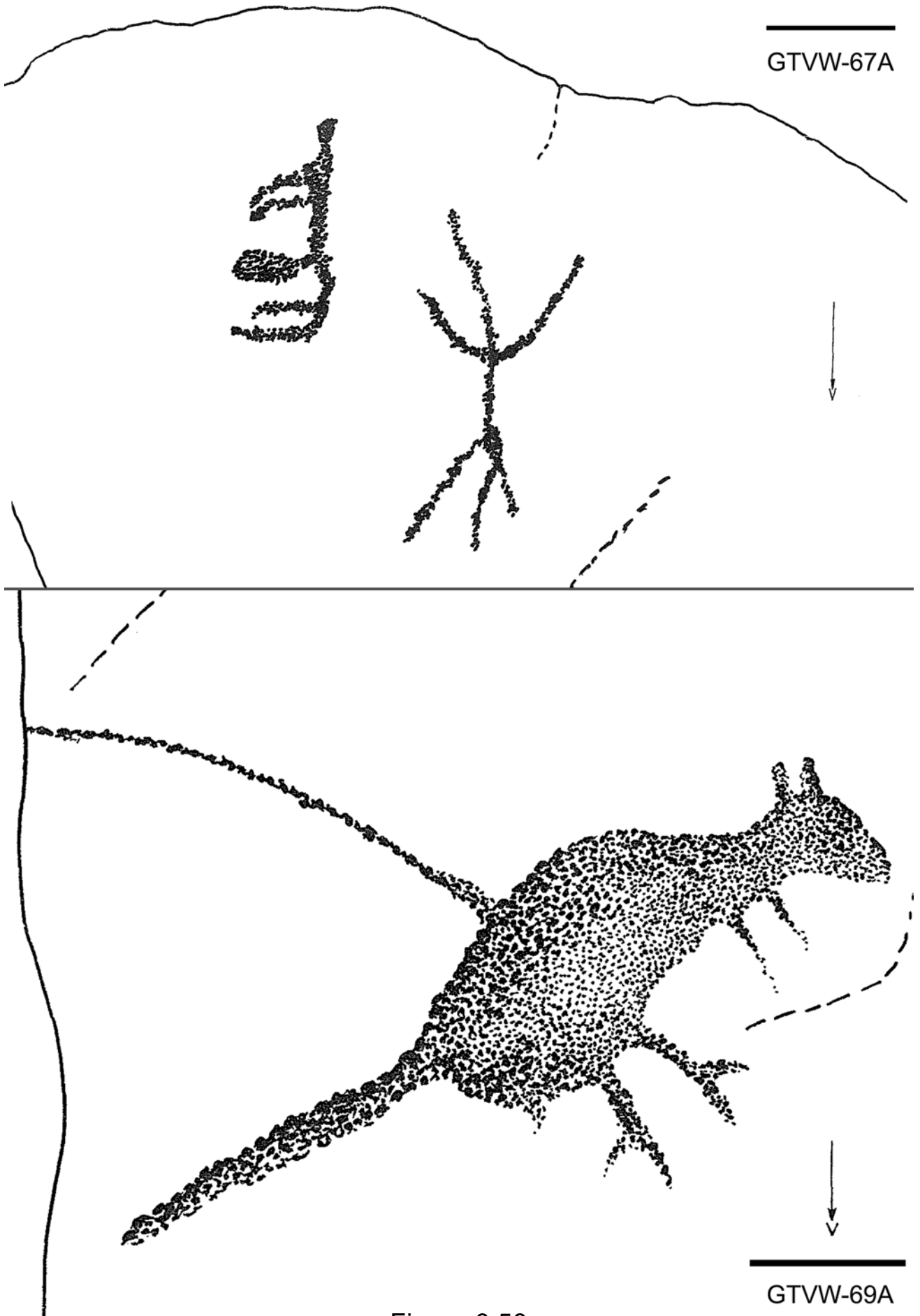


Figure 6.58

GTVW-73

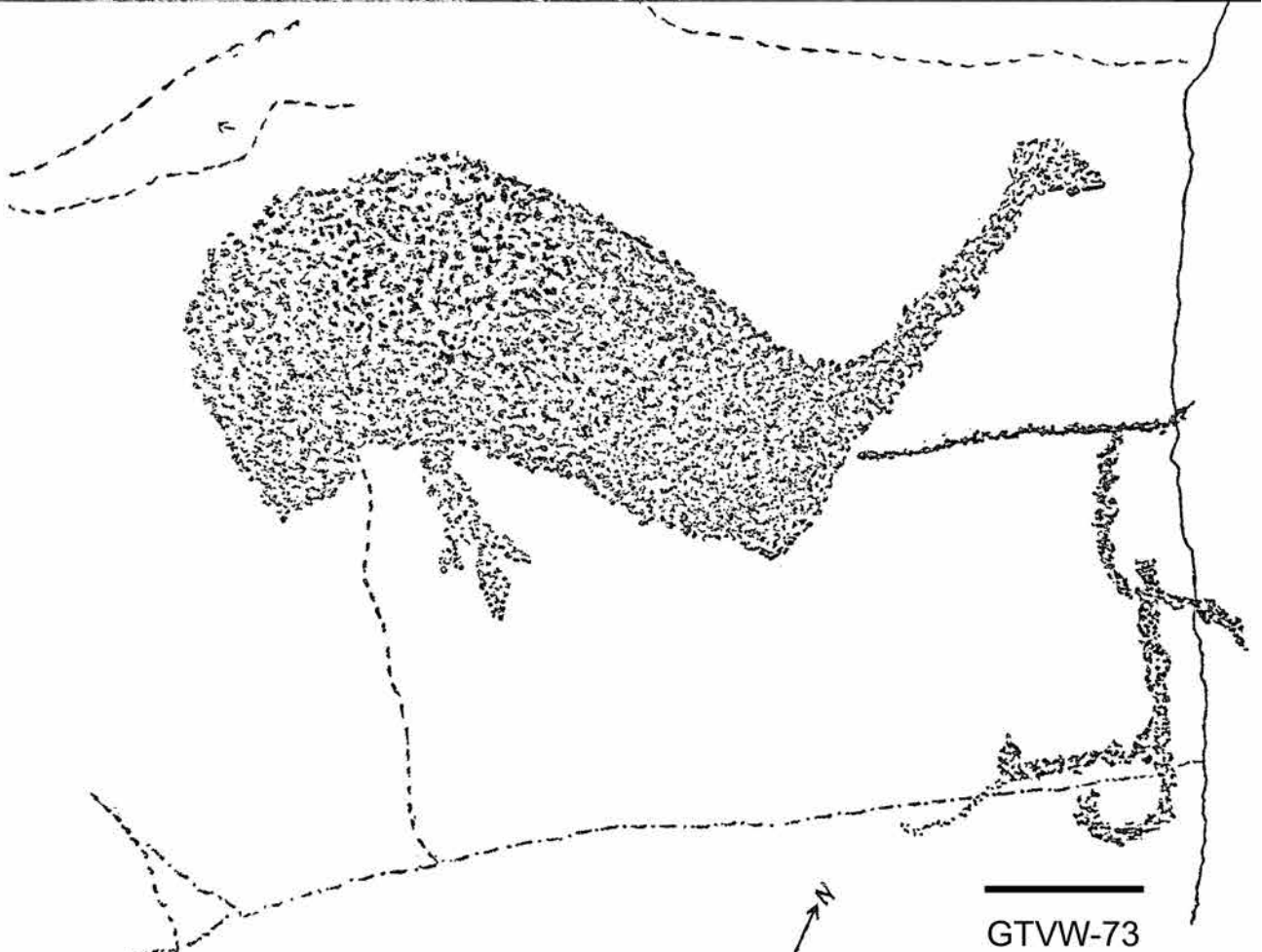


Figure 6.59

GTVW-75

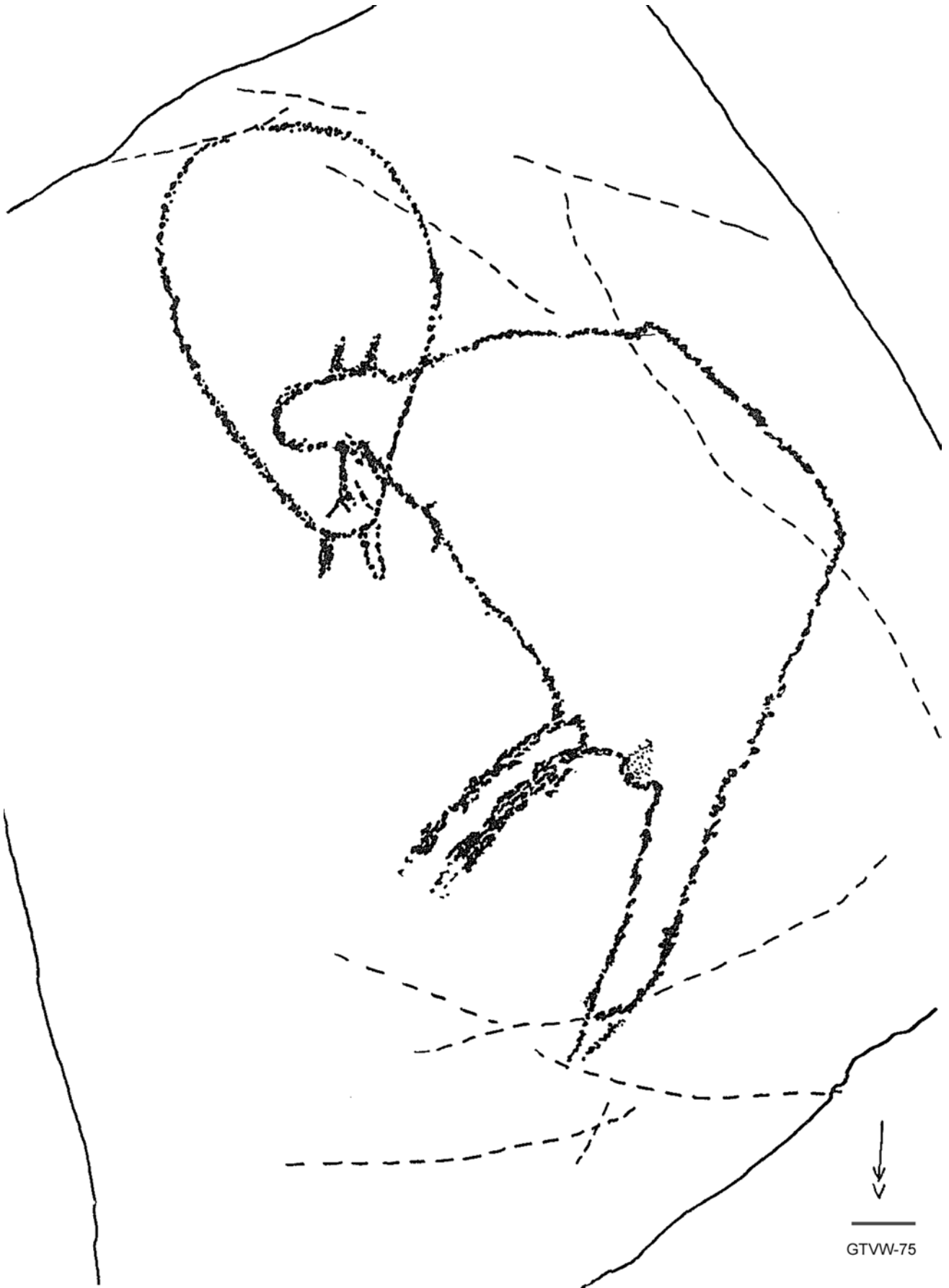


Figure 6.60

GTVW-76

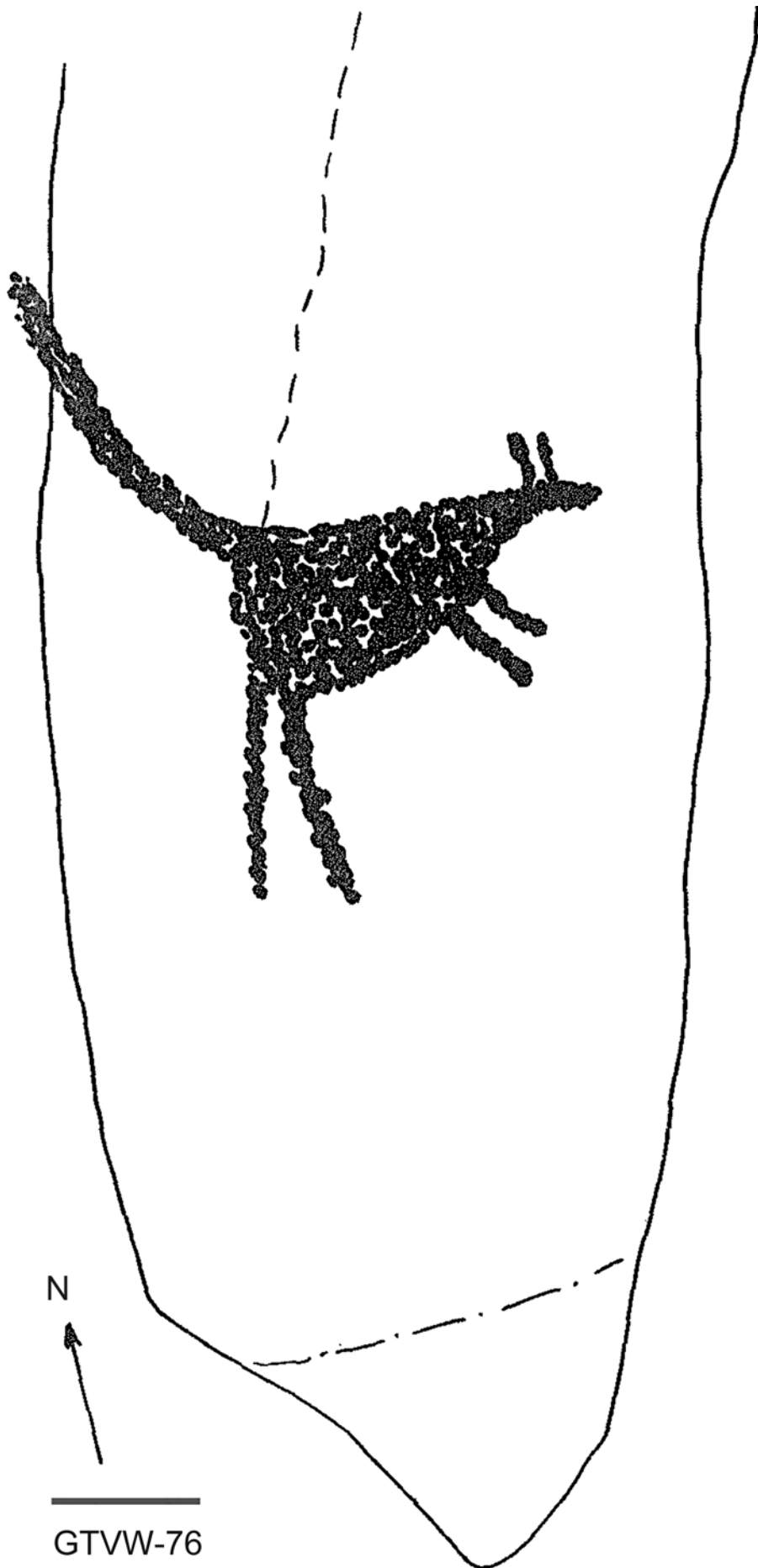


Figure 6.61

GTVW-77

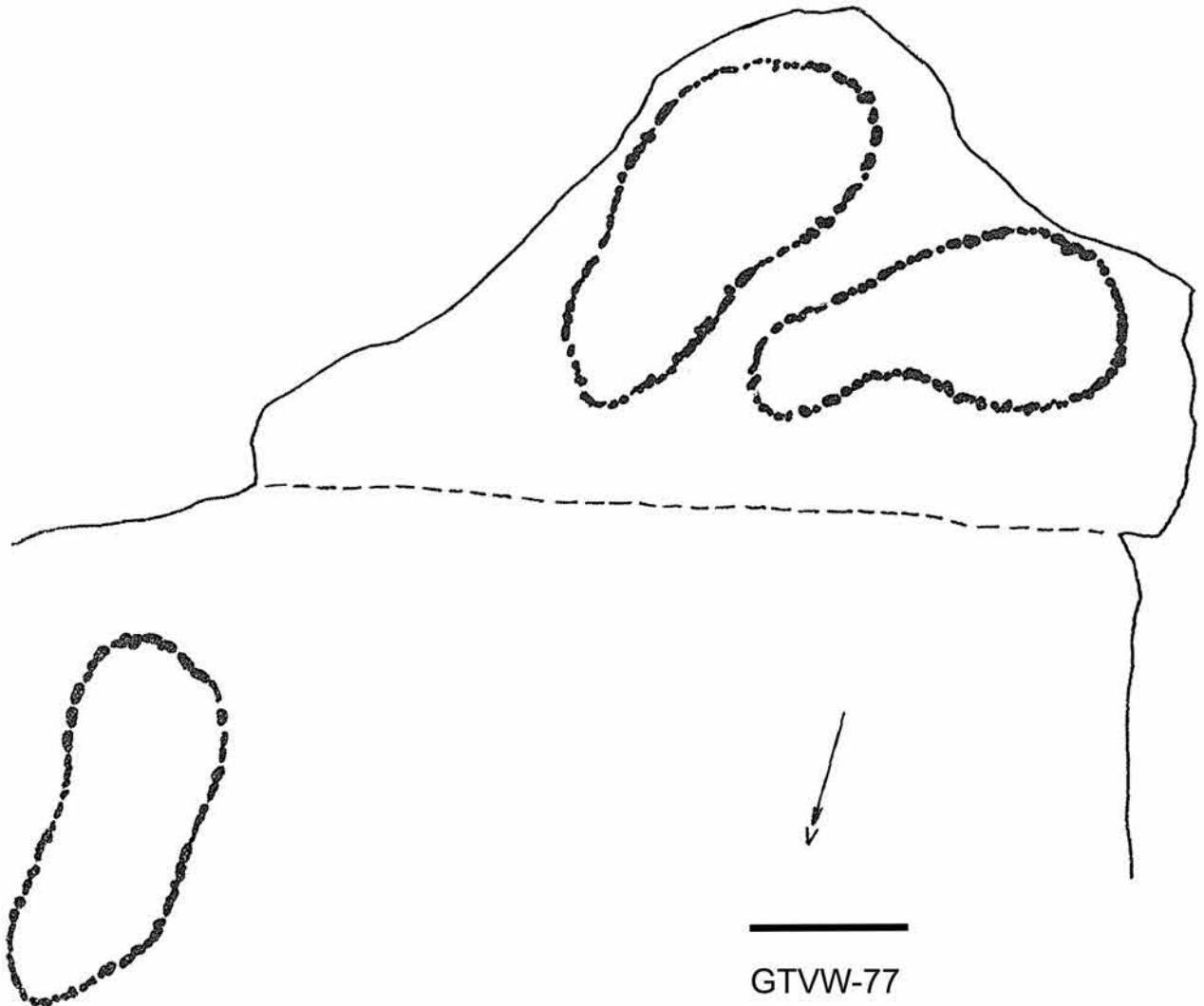


Figure 6.62

GTVW-79+81

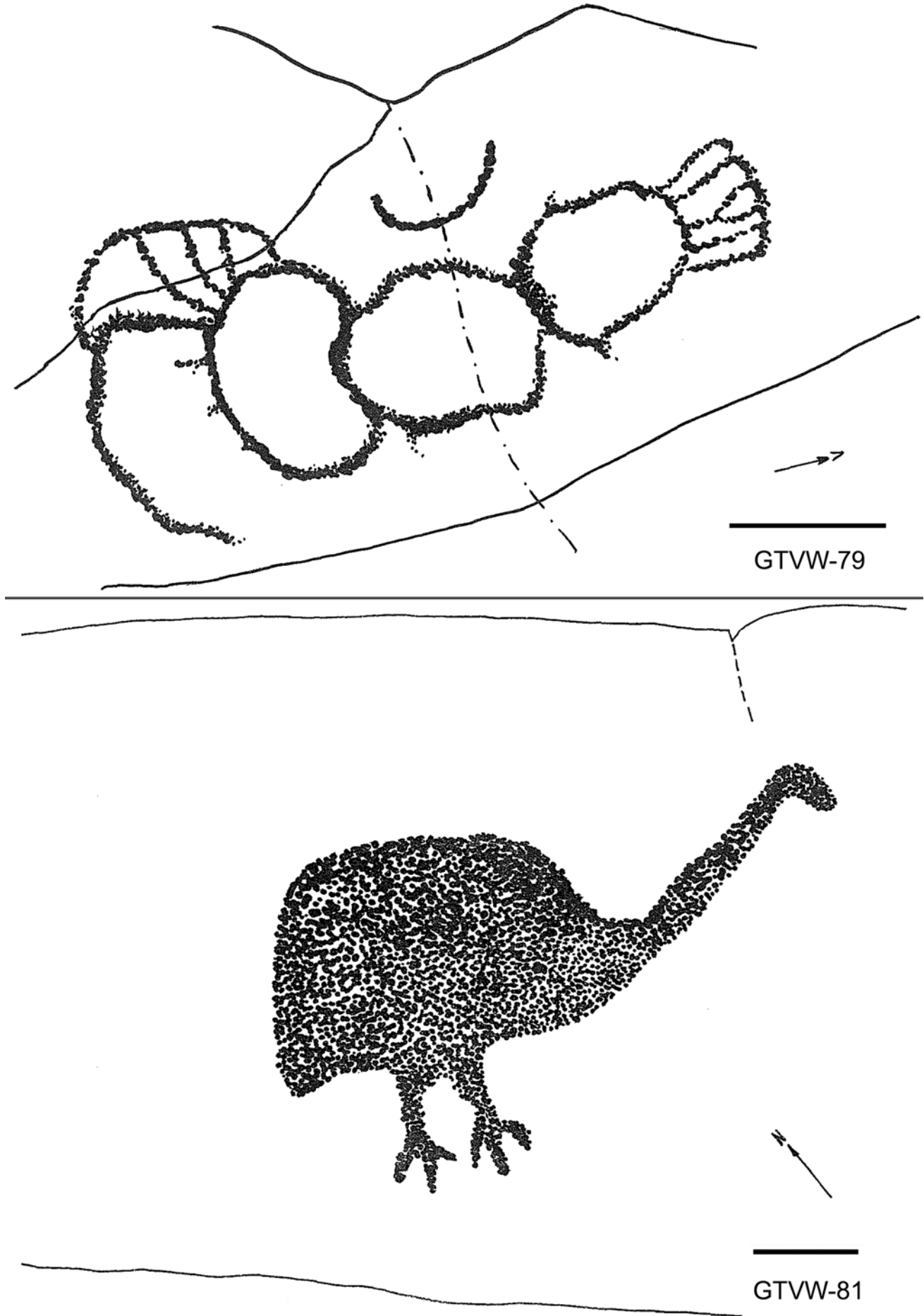
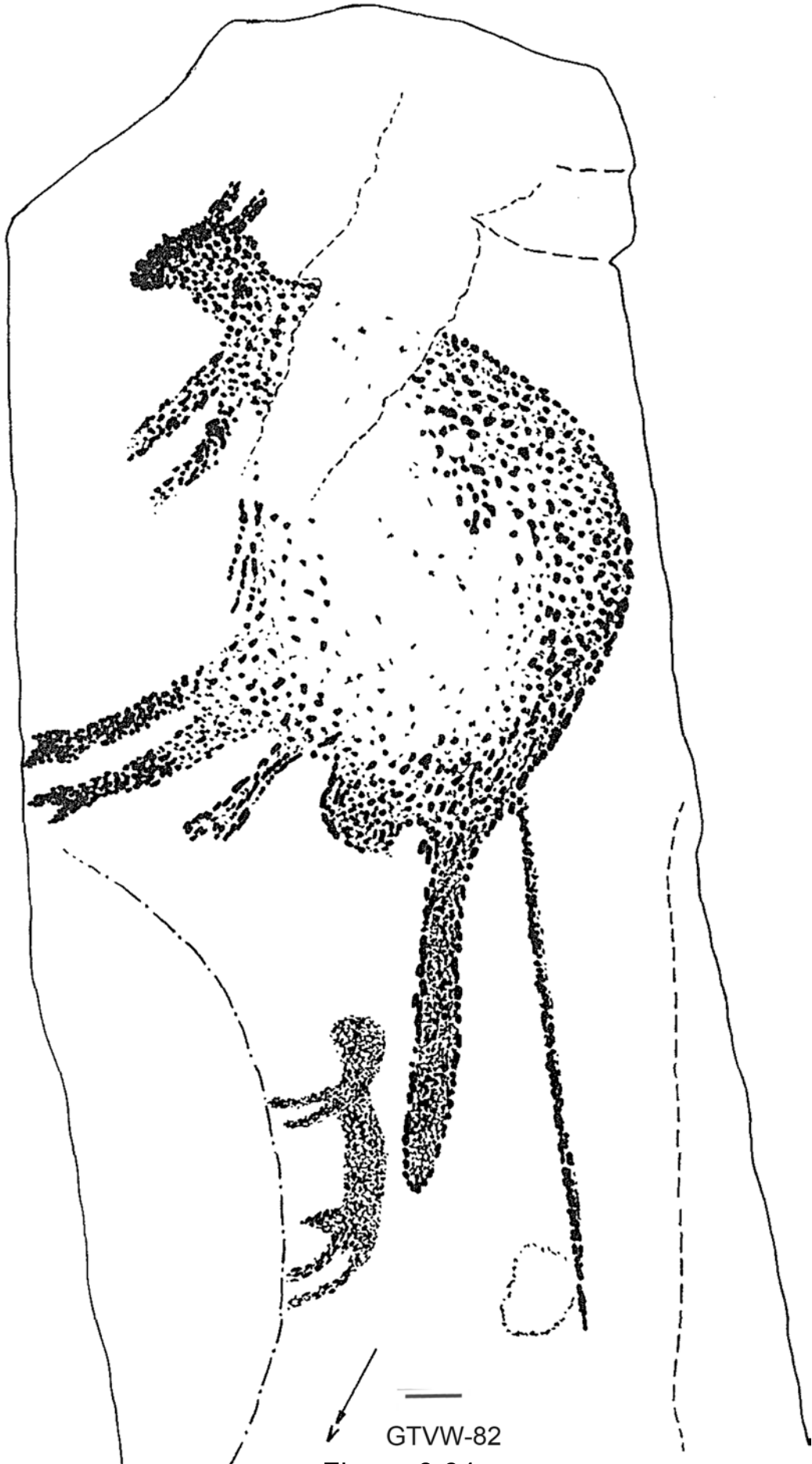


Figure 6.63

GTVW-82



GTVW-82
Figure 6.64

GTVW-83+84

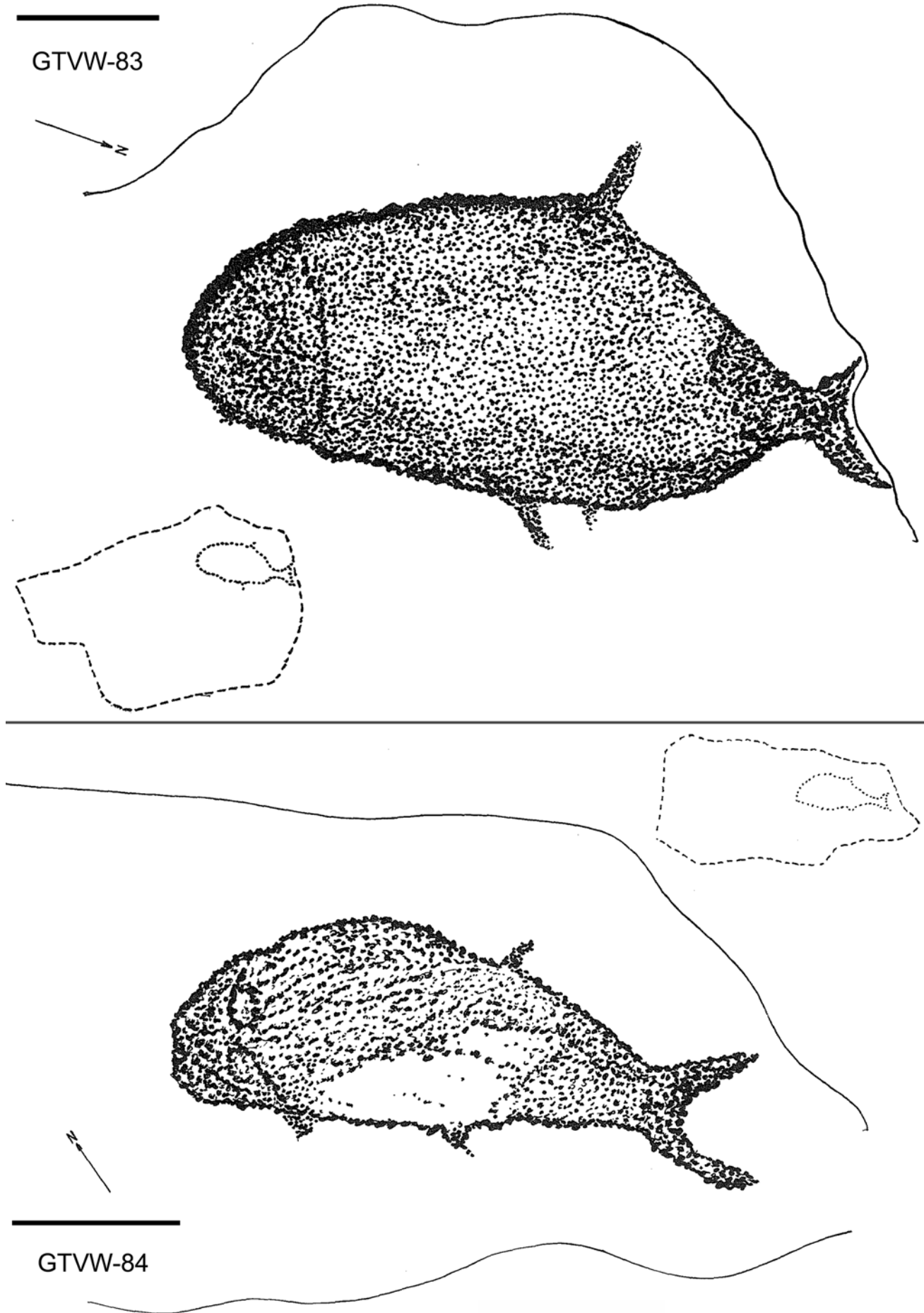


Figure 6.65

Fig. 6.1	490, 491	GTVW-5	523
Fig. 6.2	492	GTVW-8	524
Fig. 6.3	492	GTVW-10	524
Fig. 6.4	493	GTVW-11	525
Fig. 6.5	493	GTVW-13	526
Fig. 6.6	495	GTVW-17	527
Fig. 6.7	495	GTVW-18	525
Fig. 6.8	496	GTVW-23	527
Fig. 6.9	497	GTVW-25	526
Fig. 6.10	498	GTVW-26	528
Fig. 6.11	499	GTVW-27	529, 530
Fig. 6.12	499	GTVW-31	531
Fig. 6.13	500	GTVW-33	532
Fig. 6.14	500	GTVW-34	533
Fig. 6.15	501	GTVW-35	532, 534
Fig. 6.16	502	GTVW-36	535
Fig. 6.17	502	GTVW-37	536
Fig. 6.18	503	GTVW-38	537
Fig. 6.19	506	GTVW-39	538
Fig. 6.20	507	GTVW-41	539
Fig. 6.21	509	GTVW-43	539
Fig. 6.22	509	GTVW-47	538
Fig. 6.23	510	GTVW-48	540–542
Fig. 6.24	511	GTVW-49	540, 542–544
Fig. 6.25	514	GTVW-51	545
Fig. 6.26	515	GTVW-59	545
Fig. 6.27	515	GTVW-66	546
Fig. 6.28	516	GTVW-67	547
Fig. 6.29	517	GTVW-69	547
Fig. 6.30	518	GTVW-73	548
Fig. 6.31	519	GTVW-75	549
Fig. 6.32	519	GTVW-76	550
Fig. 6.33	520	GTVW-77	551
Fig. 6.34	523	GTVW-79	552
Fig. 6.35	524	GTVW-81	552
Fig. 6.36	525	GTVW-82	553
Fig. 6.37	526	GTVW-83	554
Fig. 6.38	527	GTVW-84	554
Fig. 6.39	528		
Fig. 6.40	529		
Fig. 6.41	530		
Fig. 6.42	531		
Fig. 6.43	532		
Fig. 6.44	533		
Fig. 6.45	534		
Fig. 6.46	535		
Fig. 6.47	536		
Fig. 6.48	537		
Fig. 6.49	538		
Fig. 6.50	539		
Fig. 6.51	540		
Fig. 6.52	541		
Fig. 6.53	542		
Fig. 6.54	543		
Fig. 6.55	544		
Fig. 6.56	545		
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Fig. 6.58	547		
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Fig. 6.61	550		
Fig. 6.62	551		
Fig. 6.63	552		
Fig. 6.64	553		
Fig. 6.65	554		

