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RESEARCH ARTICLE

EXPLANATION AND INTERPRETATION: AN OVERVIEW OF NEWLY DISCOVERED ROCK ART MATERIALS FROM THE JORDANIAN BLACK DESERT

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ABSTRACT. *This study analyzes recently discovered rock art inscriptions and carvings from northeastern Jordanian Badia, interpreting their symbolism from both local and scholarly perspectives. The paper examines how the surrounding environment shaped these representations and explores their cultural significance. Furthermore, this research provides a comprehensive overview of the rock art tradition in northern Badia, focusing on basalt stone carvings dating from the 1st century BCE to the 4th century CE. The rock art features various animals, most commonly camels, alongside anthropomorphic images and abstract (non-representational) designs, including geometric patterns. This research presents only the second known published example of an elephant depiction in the region's rock art corpus. It also distinguishes between hunting spears and combat spears, discussing technologies such as the atlatl (spear-thrower) as represented in the engravings. Additionally, the study analyzes war shields depicted alongside warriors.*

KEYWORDS. *Rock art, petroglyphs, anthropomorphs, abstract images, elephant depictions, hunting spears, combat spears, atlatl, Black Desert, Jordan.*

INTRODUCTION

The rock art and inscriptions discovered across Jordan's Black Desert constitute a major corpus for researchers of ancient North Arabian inscriptions and cultural heritage (Macdonald & Al-Manaser 2017, 2019; Al-Manaser 2023). These findings have enabled scholars to reconstruct a coherent narrative of prehistoric societies that existed across the region for several centuries. Through this body of evidence, researchers have better understood the political, social, and economic organization of desert dwellers, particularly during the Roman and pre-Islamic periods. The substantial quantity of inscriptions, especially the vast corpus of Safaitic inscriptions, has facilitated this reconstruction of ancient lifeways and intertribal relations.

The study of rock art represents a significant form of inquiry that deepens our understanding of social, economic, and religious life among the inhabitants of the Jordanian Harrah during the 1st century BCE to the 4th century CE. This significance derives from the diverse cultural elements embedded in this art, which represent various aspects of material and non-material culture, including zoomorphic figures, anthropomorphic representations, and abstract or geometric drawings. This study employs the designation "Safaitic rock art" as a heuristic device to refer to the engravings associated with the Safaitic script, and not as a claim to a unified ethnic or cultural identity.

The authors acknowledge that this term is hypothetical, based on the language and writing system that is geographically and temporally appropriate for the region, given current archaeological surveys and associated written materials. As the true autonym of these people remains unknown, "Safaitic rock art" is used here as a heuristic device rather than an ethnonymic claim. This methodology, using rock art as a visual proxy for identifying cultural groups in the absence of written

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Table 1. The rock art of northeastern Jordan, southern Syria, and northern Saudi Arabia comprises three typological categories.

Category	Description
Zoomorphic	Animal shapes, especially camels, horses, ibex, ostriches, lions, and hyenas, along with exotic animals such as Bactrian camels, elephants, and suids (Al-Manaser *et al.* 2021).
Anthropomorphic	Individual male and female figures; dancing groups; fighting groups; hunting groups.
Abstract	Geometric designs are represented as circles, lines, squares, and sun symbols.

records, has been demonstrated in numerous previous studies (Al-Manaser & Alturki 2025; Al-Manaser & Alghazawi 2025).[1]

While several theories explain the large corpus of inscriptions, one hypothesis suggests that herders created them during leisure time (as a pastime) while engaged in transhumance (periodic herd movement) (Brusgaard 2015). Examining figurative rock art alongside inscriptions provides a more comprehensive view of how these people constructed their culture, engaged with neighboring communities, and used visual imagery to represent daily observations and conceptual understandings of their world. The depiction of certain images (such as horses and camels) may have represented social prestige and group identity, comparable to the pre-Islamic Arabian practice of *mufakhara*.

The rock art of the northeastern Jordanian Black Desert comprises one of the most visually striking and culturally rich collections of pictorial representation from Jordan's prehistoric and protohistoric periods (Al-Manaser & Alturki 2025). The petroglyphs, created by engraving, pecking, punching, and striking against the smooth, shiny patina of basalt boulders, date primarily from the 2nd century BCE through the 2nd century CE. The rock art of the Jordanian Badia appears in open-air settings throughout an inhospitable yet culturally significant volcanic desert landscape.

The semiotic relationship between Safaitic inscriptions and figurative engravings in the Jordanian Harrah remains insufficiently explored (Al-Manaser & Macdonald 2024). These carvings transgress conventional boundaries between writing and images, as well as between individual and collective expression. They do not simply document a pre-existing reality; rather, they form part of an active semiotic ecosystem through which ancient desert peoples conceptualized and remembered their existence within a changing, often inhospitable environment, while simultaneously asserting their position within this ever-changing reality. Modern researchers aim not only to document these images but also to recover, as much as possible, the pictorial competency that gave them meaning for their intended viewers.

ROCK ART TYPOLOGY (TABLE 1) AND THEORETICAL FRAMEWORK

It is better to view the Black Desert's rock art as more than unsophisticated renditions of daily life or idle graffiti. Instead, these carvings likely served as memory aids and markers of social identity for nomadic groups. The detailed depiction of camels and horses, the use of "heroic proportions" for camels to communicate prestige or monetary value (Brusgaard 2020), and the detailed hunting scenes with distinguishable spear types all support the existence of a sophisticated visual language. Furthermore, representations of exotic animals (e.g., the Bactrian camel, which is not native to Jordan, and a second example of an elephant) indicate trade routes, geographic mobility, and cultural exchange between desert communities and larger trade networks throughout Central Asia and urban areas of the Levant (Brusgaard & Akkermans 2021).

The distribution of rock art is patterned rather than random. Carvings concentrate in visually prominent locations such as hilltops overlooking wadis (dry riverbeds), seasonal water sources, and migration routes. This patterned distribution supports the interpretation that carving served as a means of creating or marking places and asserting one's presence to travelers, neighbors, and possibly supernatural beings (Brusgaard

[1] It is essential to clarify that the term "Safaitic rock art," "Safaitic tribes," or "Safaitic art" is purely hypothetical and used metaphorically in this context. The actual names of the peoples or tribes responsible for creating these inscriptions and rock drawings remain unknown.

Figure 1. Plate 1: Elephant Depiction. Photo by Ali Al-Manaser.

2019). The repeated association of rock art with funerary structures (i.e., cairns or tower tombs) suggests a ritualized or commemorative relationship among the living, the dead, and the inscribed landscape.

Safaitic rock art is characterized by a selective and highly stylized system of depicting themes. Although the number of portrayed themes is limited, they do not represent free expression. Activities such as herding, milking, and pitching tents are almost never depicted. Similarly, trade caravans and residential structures appear very rarely. The primary focus is on a limited number of themes: hunting, raiding/warfare, and marking individual and collective identity through stylized representations of animals and people (Brusgaard & Akkermans 2021). Both the epigraphic and graphic traditions of the Black Desert followed conventions that restricted the range and manner of expression. Carvers possessed considerable creativity; however, this creativity operated within an organized visual language that was accepted and understood by the larger social group.

It is more accurate to understand these carvings as a cultural practice constrained by the unique components of Bedouin culture, the landscapes they inhabited, and the temporality of those landscapes. Rock art thus represents one method of making one's presence known, proving ownership, commemorating an occurrence, and communicating with both human and divine beings. The physical representation is materially inscribed upon the land. At the same time, the rock art interacts with the landscape, both developing the landscape and being developed through the physical and social environment. The examined petroglyphs demonstrate the complexity and expressive capacity of Safaitic rock art traditions in the basalt deserts of the Harrah region. Despite their highly schematic execution, these engravings convey sophisticated visual narratives centered on hunting, warfare, mobility, and social identity. The scenes are executed through deeply incised linear grooves carved into dark basalt surfaces, creating a striking visual contrast between the lighter engraved lines and the surrounding volcanic patina. Through selective emphasis, spatial arrangement, and exaggerated bodily forms, the artists easily communicated movement, hierarchy, and symbolic meaning (Al-Manaser

& Alturki 2025). This study follows the standardized documentation methods established by the International Federation of Rock Art Organizations (IFRAO). Based on these standards, two techniques for creating rock engravings are distinguished: pecking (creating images through percussion with a stone tool) and incision (creating fine-line engravings using a sharp-pointed object) (Alghazawi & Al-Manaser 2024).

RESEARCH SAMPLE AND ANALYTICAL DESCRIPTIONS

The study of rock art in the Jordanian Harrah region has not received scholarly attention commensurate with the epigraphic documentation of this area (Al-Manaser & Macdonald 2024). Only a limited number of investigations have sought to elucidate this category of visual expression, despite its critical significance for interpreting the semantic content of inscriptions and the social and religious articulations of the agents who executed either the texts or the figural representations. The following section presents a selection of figurative representations pertaining to weaponry and armed conflict, including an elephant depiction, only the second example identified within the Jordanian Harrah rock art corpus.

Plate 1. Elephant Depiction (Figure 1)

Description. This petroglyph likely represents an elephant, constituting the second recorded example from the Jordanian desert region (to the authors' knowledge) (Al-Manaser & Alturki 2025). The figure was executed using the pecking technique in a simplified manner, showing three visible legs. The fourth leg may have been intentionally concealed behind the front limb to create a rudimentary sense of perspective. *Analysis*. Despite weathering and schematic execution, the overall body mass and anterior projection support the elephant interpretation. The presence of an exotic, non-local animal such as an elephant in the rock art corpus carries significant interpretive weight. It suggests either direct or indirect contact with regions outside the immediate desert environment, possibly through trade networks, long-distance raiding, or the movement of individuals who had encountered such animals elsewhere. This depiction thus serves as visual evidence of the geographic mobility and cultural connectivity of the Harrah's ancient inhabitants (Al-Manaser & Alturki 2025).

Plate 2. Performative or Combat Scene (Figure 2)

Description. This rock panel contains two Safaitic inscriptions alongside a dynamic scene depicting six anthropomorphic figures arranged in mutual opposition, adopting what appears to be a combative or performative posture. The small circular shields depicted likely reflect lightweight defensive equipment suitable for mobile pastoral groups inhabiting the basalt desert region. *Analysis*. The composition may represent a symbolic or ceremonial activity, potentially associated with martial display, communal celebration, or a traditional dance indexing notions of strength, bravery, and social cohesion. One inscription appears to contain the root *ṭ-ʿ-n* (*ṭaʿan*), which carries semantic connotations relating to "stabbing," "piercing," or, in certain contexts, ritualized movement or warfare. Should this reading be validated, it would substantiate the association between the depicted scene and performative martial traditions well-attested among nomadic groups of the Levant. The juxtaposition of text and image here exemplifies the semiotic integration characteristic of Safaitic cultural production (Al-Manaser & Macdonald 2024).

Plate 3. Archers Scene (Figure 3)

Description. This panel contains depictions of 17 figures rendered with simple lines and indistinct features. All figures hold bows, and one figure rides a camel. *Analysis*. Based on the systematic study by Keshia A.N. Akkermans (2020) of weapon scenes in Safaitic rock art (*c.* 1st century BCE–4th century CE) from the Jabal al-Qurma region of northeastern Jordan, the bows depicted exhibit specific technical, stylistic, and functional characteristics. The drawings clearly depict a double-convex composite bow, a small bow with a distinctive "Cupid's bow" shape. This form corresponds to the composite bow known in antiquity, constructed from a wooden core, sinew, bone, and horn, characterized by high efficiency in firing arrows accurately and powerfully with less effort compared to a simple self-bow (Akkermans 2020). The bow scenes do not exhibit supernatural or mythical elements; instead, they depict mundane activities such as hunting raids, battles, or displays of collective strength. The high repetition and uniformity of these scenes suggest that the engravings were not random self-expressions but rather constituted a "visual language" expressing shared social and tribal norms.

Figure 2. Plate 2: Performative or Combat Scene. Photo by Ali Al-Manaser.

Plate 4. Crowded Combat Composition (Figure 4)

Description. This panel presents a crowded, complex composition that appears to depict conflict or organized combat. Not all conflict scenes centered on camels should be interpreted as raids (Macdonald 1990; Brusgaard & Akkermans 2021). Multiple mounted and dismounted human figures are distributed across the basalt surface in overlapping arrangements that generate visual tension and movement. Horses are represented with sharply angled legs, elongated bodies, and extended necks, emphasizing rapid movement and aggression. *Analysis*. The angularity of the limbs creates rhythmic visual patterns that intensify the sense of instability and violence within the scene (Brusgaard & Akkermans 2021). One of the most prominent visual features is the repeated depiction of long spears or lances extending diagonally across the panel. These weapons establish directional movement and visually connect opposing figures, creating an impression of active engagement between mounted warriors and foot soldiers. In several cases, spears appear to intersect with human bodies, possibly indicating injury, defeat, or violent impact. Such overlapping linear arrangements transform the scene into a sequential visual narrative rather than a collection of isolated figures. This compositional strategy suggests that the artist intended to convey a temporal sequence or a specific narrative of conflict.

Plate 5. Hunting Scene (Figure 5)

Description. This panel presents a dynamic hunting composition focused on a mounted horseman pursuing a quadruped, most likely a gazelle or ibex, a motif frequently associated with hunting symbolism in Safaitic visual culture (Brusgaard & Akkermans 2021). The horse occupies the central portion of the scene and is rendered with elongated legs, an extended rectangular body, and a slightly arched neck. The rider is depicted in a highly stylized two-dimensional form seated above the horse's back. *Analysis*. The exaggerated anatomical features of the horse enhance the impression of speed and forward momentum rather than anatomical realism. The forward orientation of the animal reinforces the sense of active pursuit and controlled motion, suggesting both physical energy and symbolic power. Although minimally detailed, the mounted figure dominates the composition visually through an enlarged torso and emphasized head. The rider's upright posture conveys authority, confidence, and composure, while the prominent headgear, represented as a raised or rounded projection, may symbolize tribal leadership, martial prestige, or elevated social rank. Such empha-

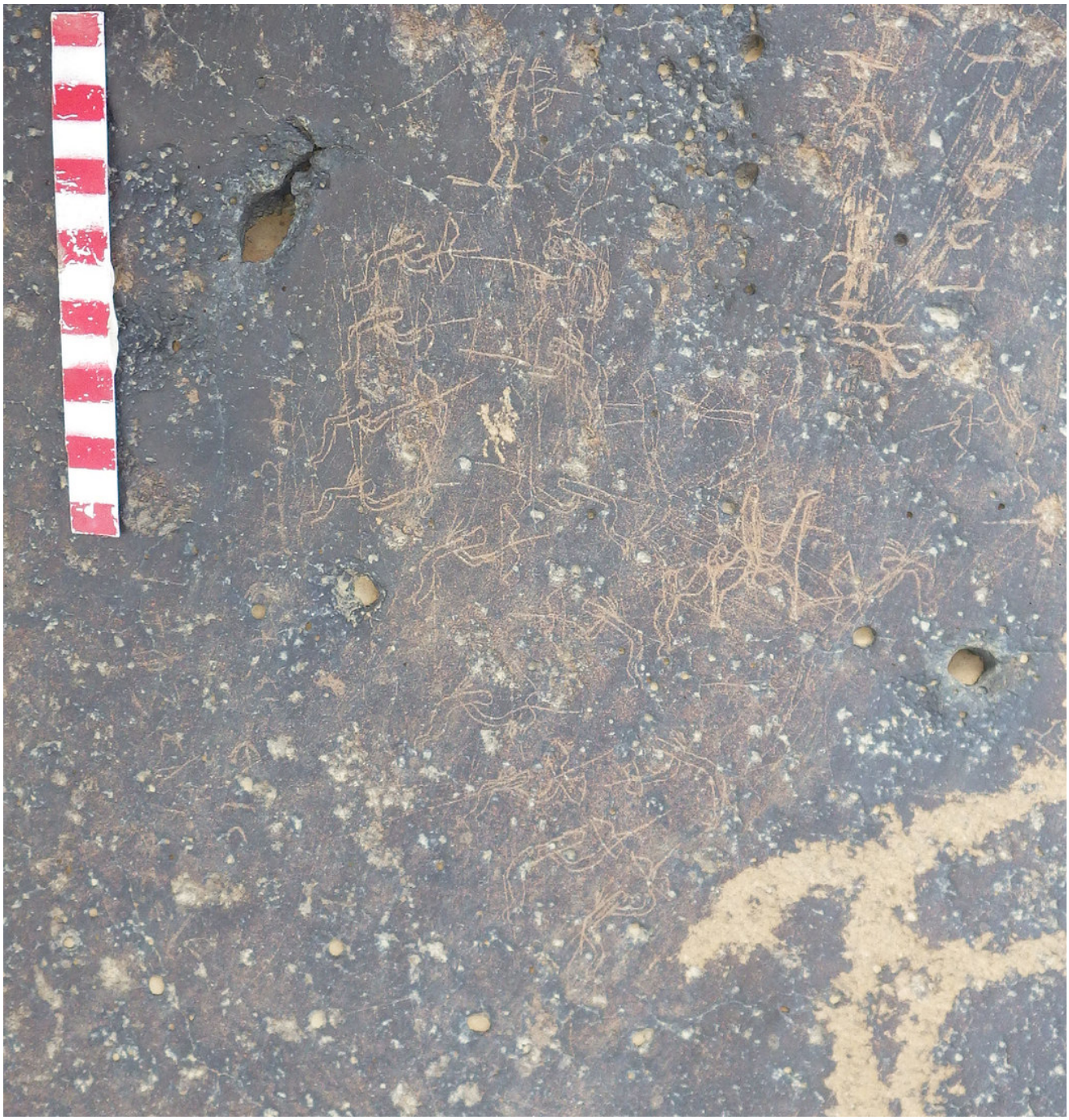

Figure 3. Plate 3: Archers Scene. Photo by Ali Al-Manaser.

sis indicates that symbolic identity and social status were of greater importance than naturalistic representation within Safaitic artistic conventions (Brusgaard 2019). A long horizontal line extending from the mounted figure toward the prey most likely represents a spear. This weapon forms the visual axis of the composition, linking hunter and prey through a directional line that guides the viewer's gaze across the panel. The prey is rendered using thinner, more fragile linear outlines, with bent legs suggesting motion, instability, injury, or collapse. The interaction between horse, rider, weapon, and prey transforms the image into a narrative scene rather than a static symbolic representation. The composition thus communicates not only the act of hunting but also broader cultural values associated with courage and skill (Brusgaard 2019: 89–90).

NARRATIVE CONTENT AND INTERPRETIVE POSSIBILITIES

The surrounding Safaitic inscriptions further enrich the visual and cultural significance of these panels. Rather

Figure 4. Plate 4: Crowded Combat Composition. Photo by Husain Zainadin.

Figure 5. Plate 5: Hunting Scene. Photo by Ali Al-Manaser.

Table 2. Weapon Type.

Weapon Type	Description and Analysis
Spear (short pole weapon)	Distinguished by being shorter than the fighting spear and carrying, at its rear, a distinct counterweight or atlatl weight, a technological feature consistent with experimental reconstructions of spear-thrower darts (Hutchings & Brüchert 1997). This counterweight likely served to maintain balance during throwing and to increase propulsion velocity toward the prey. Most drawings representing hunting from horseback or camelback show the spear penetrating the prey's body, a motif that may emphasize the lethality and skill of the hunter. The legs of the horse or camel are consistently depicted with sharp angles and extended postures, a stylistic convention that conveys rapid motion and aggressive pursuit (Brusgaard & Akkermans 2021).
Lance (long pole weapon)	In the examined rock art panels, the spear is typically rendered longer than a hunting spear, a visual convention intended to afford the fighter greater distance, maneuverability, and control over the enemy. It is observed that spear-fighting scenes are usually depicted without the inclusion of animals such as horses or camels, focusing instead on the human figures and their weapons.
Sword	In the engraved panels, the sword is rendered using simple linear incisions and appears relatively small. Its form resembles the Arab sword, distinguished by a slight curve, a visual convention likely intended to facilitate ease of movement and maneuverability during combat. The source of raw material for swords remains unknown; one hypothesis suggests such materials may have been imported from cities near the northeastern Jordanian desert region (Macdonald & Al-Manaser 2019).
Shields	The shield is typically associated with dismounted human figures (infantry) who also carry short spears or swords. The shield motif is predominantly circular in form. One plausible interpretation suggests such shields were manufactured from animal hide, a practical choice that would have made them lightweight, thus facilitating maneuverability in combat and enabling rapid movement.
Bow-and-arrow	Depicted as a small, double-convex composite bow with a distinctive "Cupid's bow" shape and a slightly curved outer end. This weapon is used almost exclusively by infantry figures in the rock art panels and is rarely associated with mounted figures (cavalry). Occasionally, a quiver containing arrows is depicted on the archer's back, with arrows pointing upward (Akkermans 2020).
Dagger	In the petroglyphs, the dagger is typically depicted at the waist of human figures (fighters). However, distinguishing between the dagger and the sword within the engraved panels remains challenging, as both weapons are rendered using similar linear conventions and schematic forms. The typological separation presented here is therefore analytical rather than strictly visual; future research may refine these distinctions.

than functioning independently from the imagery, the inscriptions appear integrated into the overall composition, framing and interacting with the engraved scenes (Al-Manaser & Macdonald 2024). Their presence demonstrates the close relationship between writing and visual representation in the cultural landscape of the basalt desert. These texts may have served as commemorative statements, ownership marks, tribal identifiers, or memorial expressions associated with the depicted events and individuals. Taken together, these petroglyphs reveal that Safaitic rock art functioned as more than simple visual documentation of quotidian activities. Through minimal yet deliberate artistic conventions, the engravings communicated concepts of authority, courage, mobility, warfare, and social prestige that were central to the identities of nomadic communities (Brusgaard 2019; Al-Manaser & Alturki 2025). The panels therefore represent cultural statements

embedded within the landscape, preserving collective ideals of heroism, masculine identity, and tribal memory within the Harrah region.

The artist attempted to convey a general narrative of daily life within the desert landscape through a diverse range of petroglyphs depicting zoomorphs, hunting practices, conflict scenes, and geometric or astronomical motifs. These rock art panels clearly illustrate significant stories that constitute a core record for understanding the inhabitants' lifeways, social relationships, and cultural tendencies during this period (Alghazawi & Al-Manaser 2024). The engravings preserved the narratives and experiential knowledge of living people for millennia upon the basalt surface. While the artist's intentionality may never be fully reconstructed, the images likely served multiple purposes, possibly including a means of passing time during pastoral herding activities (Brusgaard 2015).

WEAPONRY IN SAFAITIC ROCK ART: A TYPOLOGICAL AND SYMBOLIC ANALYSIS

Weaponry (Table 2) occupies a central position within the visual language of Safaitic rock art and cannot be understood merely as a practical representation of hunting or warfare technologies. Rather, the repeated depiction of spears, bows, swords, shields, and mounted combat scenes reflects broader symbolic systems associated with masculinity, social prestige, tribal identity, and mobility within the nomadic landscapes of the Jordanian Harrah (Akkermans 2020). The engraved weapons functioned not only as instruments of violence but also as visual markers of authority, courage, and heroic self-representation embedded within collective memory and social performance. The typology of Table 2 presents a descriptive account of recurring weapon motifs observed across Safaitic petroglyph panels. It should be emphasized that this is a qualitative typology based on visual analysis rather than a statistical survey.

CONCLUSION

The rock art of the Jordanian Black Desert represents a sophisticated visual communication system through which ancient nomadic communities expressed social identity, territorial claims, commemorative practices, and cultural values (Brusgaard 2019; Al-Manaser & Alturki 2025). The newly published petroglyphs presented in this study, including the rare elephant depiction, performative combat scenes, archer compositions, and hunting narratives, significantly expand the known corpus of Safaitic visual culture. The integration of inscriptions with imagery demonstrates the semiotic complexity of these cultural productions (Al-Manaser & Macdonald 2024). The typological analysis of weaponry reveals not only technological knowledge (e.g., the atlatl, composite bows) but also symbolic dimensions of masculinity, prestige, and collective memory (Akkermans 2020; Hutchings & Brüchert 1997).

Future research should continue to explore the relationship between text and image, the distribution patterns of specific motifs, and the connections between Safaitic rock art and broader Near Eastern artistic traditions (Alghazawi & Al-Manaser 2024; Al-Manaser & Alghazawi 2025).

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