between that implied by the animals’ spines and the en face view. Pictures in twisted perspective are thus created, which Breuil and Obermeier (1935: 109) thought “typical of Aurignacian and Eastern Spanish art”. Twisted perspective may therefore be one of the indices of pictorial space.

It is noteworthy that the bison of Altamira were drawn from memory. Their depicted hoofs therefore were not copies of retinal projections of patiently posing models to which the artist could repeatedly refer whilst painting, but were recreations of memories of hoofs skilfully adapted to fit the requirements of the moment.

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Professor Jan B. Deregowski
Department of Psychology
University of Aberdeen
Aberdeen, AB24 2UB
Scotland, United Kingdom

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Bichoun: newfound rock art at Boroujerd, Lorestan Province, western Iran

MOUSA SABZI and ESMAIL HEMATI AZANDARYANI

A large number of petroglyphs have been identified from western Iran, including at Dare Divin Alvand (Saraf 1997), Kurdistan (Lahafian 2004, 2010), Haj Mad Farm and Moradbeig Valley (Rashidi Nejad and Zamaniyan 2009), Cheshmeh Malek and Dareh Divin (Rashidi Nejad et al 2012), Dostal Valley (Hemati Azandaryani et al 2014), Azandaryani (Hemati Azandaryani et al 2015), Qeshlagh (Mohamadi and Hemati Azandaryani 2015), and Arzanfoud (Arzanpoul) and Aliabad (Hemati Azandaryani et al. 2016).

During an archaeological survey in the Boroujerd area of Lorestan Province in 2016, a cluster of rock art was found in the Bichoun area, located 10 km east of Boroujerd city. The rock art of Bichoun consists of two groups of cupules and 205 motifs of other petroglyphs. The petroglyphs of Bichoun area have been located through a transect survey, and the total of 205 were dispersed over 27 single boulders. The main technique applied in producing these petroglyphs is hammering (direct percussion), sometimes rubbing and engraving. They and other rock art forms in the region occur on the rocks and flat surfaces with dense schist having formed flat panels.

Lorestan Province, an area of 28 294 km², is part of the Iranian highlands, where other provinces, including Hamadan and Markazi to the north, Khuzestan in the south, Isfahan to the east, and both Kermanshah and Elam to the west surround it. Climatically, Lorestan is cold during winter and mild in summer, with lush green vegetation. The city of Boroujerd is located in Lorestan Province, 105 km north-east of Khoramabad, and 58 km south-west of Malayer. The site of Bichoun is about 15 km east from Boroujerd (Fig. 1).

Figure 1. The location of rock art in Bichoun area, Lorestan, Iran.
Cupules of Bichoun

The issue of cupules is more complex than that of other petroglyphs. The cupules are not the results of natural factors, such as water or mineral solution, but of the creativity of humans during thousands of years, manifested in different places of the world in these spherical cap shapes (Bednarik 2008, 2016). In addition, there are petroglyphs among them as well as mortars. From the pre-Historic periods to sixty years ago, large mortars were used to grind cereals in Iran (Lahafian 2010). They are often remains of early people, most of whose other signs vanished so that only these features have remained (Bednarik 2007). Cupules are next to other petroglyphs at Bichoun, which seem to have been created simultaneously. Cupules vary dimensionally, and their main corpus at Bichoun is available on two slabs. The first one seems to have been removed from its original place, as a level slab that has 17 cupules of different dimensions (Fig. 2); while the latter has 22 cupules of 2–4 cm width and 0.5–1 cm depth, on a 40 × 60 cm level slab. The cupules of the second slab begin in a line and end in a three-line shape. Considering the isolation of the slab, it seems that it was also removed from its original location (Fig. 3).

Other petroglyphs of Bichoun

Presumed ibex motifs are depicted in profile with four legs and long curved horns (Fig. 4). Some regard ‘ibex’ as the god of water (Schmandt-Besserat 1997). The ‘ibex’, in fact, has always been a conspicuous symbol for prosperity and abundance in ancient Iranian myths, bearing a strong association with water that is generally known as the source of prosperity (Samadi 1988).

In this region there are few petroglyphs that resemble deer. The head and body of this motif type is illustrated in profile, while its ‘antlers’ are in a full frontal view with elaborate details. This animal itself has not been reported from this region yet; incidentally, among motifs, ‘deer’ are regionally considered very significant. They are comparable to motifs from other areas such as Doustali valley (Hemati Aazandaryani et al. 2014), Haj Mad Farm (Rashidi Nejad and Zamaniyan 2009: 95), Arjank valley (Naserifard 2009: 65) and Khomein and Tymareh (ibid.).

Stylistically, ‘dogs’ are depicted elongated in single petroglyphs. Motif designations are of course subjective, and many motifs offer no iconographic clues to their meaning. As an illustration we can point to a petroglyph in Gheshlagh Dali (Hemati Aazandaryani et al. 2015) with some parallels in the Historic sites of Timareh, including Tange Charghab, Shahneshin Ashnakhour, Mour siah Farnam (Farhadi1998: 276–279) and Sofla Arges (Beik Mohammadi et al. 2012).
Anthropomorphous motifs

These are often singular, in which exiguous lines are applied. The position of legs in these anthropomorphous motifs is similar to the shape of the number 8 in Persian (٨), their torso is in the form of a segment, and their head and neck looks like points. In these petroglyphs, anthropomorphous motifs are sometimes represented as horse riders and sometimes as standing figures (Fig. 5). Considering that all motifs are stylised it is difficult to realise their sex. Moreover, among the regional motifs, there are examples of contextualised scenes, some of which seem to show a story or a narration. In the ‘scenes’, riders are either together with ibexes or, in a few cases, accompanied by ‘dogs’, which might indicate hunting. There are some parallels in Historic sites of Dareh Divin (Rashidi Nejad et al. 2012: 11) and Dostali valley (Hemati Azandaryani et al. 2014).

Conclusion

In the region of Bichoun, Boroujerd, Lorestan, motifs of cupules and petroglyphs occur in groups. These petroglyphs were made using hammering and engraving techniques. The themes include ‘ibexes’, ‘deer’, ‘dogs’, other ‘symbolic’ motifs and anthropomorphous ones. It should be noted that many petroglyphs of Bichoun are upside down and removed from their original place, where various factors threaten them, and they are unprotected. Boulders are used as building materials by the villagers, thus some of them appear upside down.

Due to the same environmental and climatic conditions, the cupules and petroglyphs are patinated and varnished variously in this region, which indicate different dates of hammering of cupules and other petroglyphs. Detailed researches on the chronology of petroglyphs have not been carried out in Iran, so we cannot suggest any date for the newfound cupules and other petroglyphs of Bichoun.