

The Lion-Bull Motifs of Persepolis: The Zoogeographic Context.

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The lion-bull iconography during the Achaemenian period of ancient Persia has generated different theories of astronomical and seasonal events besides the suggestions that it could be the symbol of the time cycle of the day, with lion representing the sun and bull the night. However, the present paper draws the reader's attention to the hitherto unexplored angle of zoology to understand physiognomy of the lion-bull iconography in sculptural art of ancient Iran. The zoomorphology of lion and bull attempts at taxonomic identification based on iconography, which is also influenced by observations, imagination and collective psyche of sculptors. Notwithstanding this human bias involved in depiction of the animal, the present study demonstrates 'near-nature' precision in sculptural art, thereby allowing precise identification and shows how the artistic manifestations reflect a combination of animal morphology with myths and collective observations that might have passed down since generations. This is yet another form of faunal evidence that needs to be taken into account in addition to the skeletal record when confronted with presenting a holistic view of the animal world at the site.

The paper is structured into three parts viz. Zoo-morphology of lion-bull motifs, Biogeography and Early History of lion and bull, and Faunal (skeletal) evidence of Lion and Bull in protohistoric and early historic Iran. This study highlights the significance of integrating skeletal record with other means of 'faunal evidence' in ancient literature, iconography, coins and ceramics that are helpful in understanding ancient subsistence, and socio- religious structure.

Keywords: *Asiatic lion; Aurochs; Zoomorphology; Zoogeography; Persepolis; Iran*

Introduction

Persepolis, the dynastic seat of the great King, Darius I, still stands as a reminder of the glorious period of the ancient history of Persia. The splendid architecture and the sculptural art of Persepolis have been subjected to in depth studies by numerous scholars. For instance, some scholars have interpreted the eye-catching motif of 'lion-bull combat' variously as symbolic representation of the astronomical and seasonal events (like spring festival of Nouroz). Others have questioned this interpretation pointing out that there was no such celebration of a New Year's festival at Persepolis in circa 500 B.C. A seal of lion-bull combat from Achaemenid Sardis is argued to represent the perpetual cycle of day and night, with the lion representing the sun and the bull representing the night. Theories of this kind have continued to leave scholars pondering over the lion-bull iconography in the ancient Persian art (Lindsay 1971; Frankfort 1963; Hartner 1965; Hartner and Ettinghausen 1964; Hinnells 1985 and Rice 1988).

Against this background, the present paper provides a third angle which aims at studying the animal motifs from an archaeozoological perspective. It is an approach, apart from the sculptural art and mythology, of looking into the life history of the animals represented in the sculptural art at Persepolis. The zoomorphs of lion and the bull exemplify an excellent combination of realistic and mythological concepts and point to the sculptor's meticulous observations of animal morphology and behaviour, prior to actual depiction. Lion and bull (cattle) have a long geographical association with the landscape of Persia but it is the taxonomic frame of their morphology, which should help in identifying particular species, or composite forms that are associated with it. The bull occurs here as an animal of prey. However, as a fertility symbol, its inherent strength is essentially reflected in its powerful rendering through almost all ancient civilizations. Yet it appears to be submitting to the seemingly terminal assault on it by the lion. The sculptures show that the artists had a clear idea and knowledge of the animal's anatomy that they must have derived from the first hand experience of observing them in close proximity.

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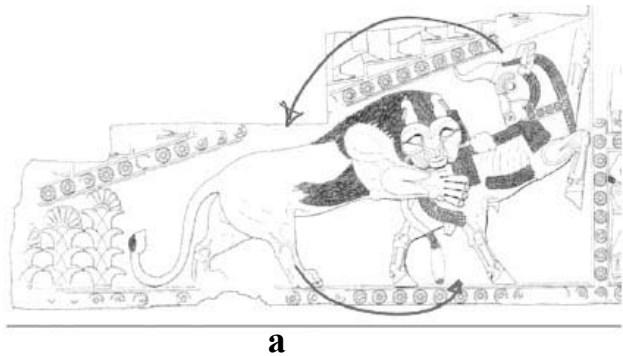
Zoo-Morphology of Lion-Bull Motifs

The archaeological backdrop of these animals provides an interesting story. The representation of the large predator and an equally forceful looking bull makes the correct taxonomic identification of the animals imperative. For this purpose their morphology as depicted in the sculptures is the only parameter that is available to us. Are these figures depicted from the immediate observations of real animals or is it the continuum of artistic traditions based on memory and imagination? This is the question that would concern all historians, but it is also important for scientists interested in natural history. A zoologist and a palaeontologist would essentially like to know the past distribution of those animals and the impact they had on the lifestyles of local communities. The repetitive animal motifs and their provenance also help to trace cultural spread as well as zoological distribution of fauna and their ecological implications. At Persepolis, the motifs of lion-bull combat (lion attacking a bull) occur twenty seven times and thereafter in Persian art (Hinnell 1985:104). Its frequent appearance near key locations such as near the throne room strongly points to its symbolic significance. Today the lion-bull combat is seen only at the ancient throne room of Darius in his Palace at Persepolis, the seat of his vast Achaemenid Empire (figs. 1a and b). Whether on the columns of the palace of Persepolis (fig. 2), or carved as tall sculptures in capitals of Susa (fig. 3), and Naksh-e Rostam (fig. 4), the bull is essentially fashioned in a style that confirms its affinity with wild cattle. Other animals of prime attention include the mythical beast called Griffin (fig.5), which is carved as large as the bulls and whose anatomy draws our attention to Scythian legends (Mayor

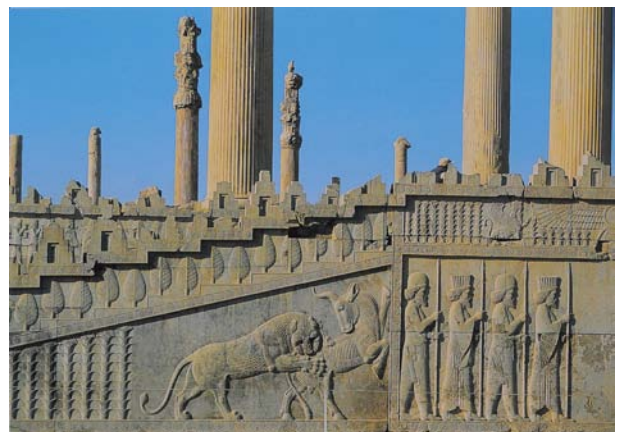
2000). The griffin appears to have been taken from Babylonian art. Such a massive sculptural response to the animals as symbols of supreme power, fertility and virility have been drawn by local experiences emerging out of close interaction with these animals (lion and bull) besides the legends and myths that are an accumulation of past knowledge passed on from previous generations. Hence it is yet another form of faunal evidence, other than bones, that provides a holistic view of the animals' past existence and its behaviour manifested in sculptural art.

Identification of the sub-species of the lion, represented as Asiatic lion at Persepolis stands open to further queries calling for a study of individual data sets on the respective morphology deriving from the eight extant sub-species. In the case of bulls, a close observation reveals horn cores, ears, body size, humped or hump less, shape of the forehead, proportion of length and width of skull and height of the bull are some of the significant characters that should help in determining the taxonomic status of the sculpted species. The sculptor's traditional training and individual imagination are key factors that strongly influence the rendering, which may not necessarily be realistic. As regards the taxonomical determination of these animals, zoo-morphology of the images needs to be complimented by the existing knowledge of geographic range, anatomy and archaeological record from contemporary sites.

The bull is mostly shown as being attacked on its back by the lion, while the fore limbs are raised against the wall. The lion-bull combat is depicted



a



b

Fig. 1 a & b: Lion-bull combat scene at Persepolis. (After: *The Omen of Fars: Iran Touring and Tourism Organisation, Shiraz 2003 and Curtis & Tallis 2005:78*)





Fig. 2: Showing bulls on the columns in North Staircase of the Apadana, Persepolis (After: Brosius 2006: 38)



Fig. 3: Capital at Susa. (After: Gardner 1948:67).



Fig. 4 : Bull on the capital at Naksh-e-rustam (King Darius' tomb) (Source: from author's personal archive)



Fig. 5: Griffin at Persepolis (from author's personal archive)

in a very realistic manner as if the viewer is actually witnessing it. The expressions of rude shock, rage, and fear, all are apparent on the face of the bull. In spite of the helplessness of the bull that is firmly fixed by the lion, the muscular contortions clearly bespeak of the enormous strength of the animal. Both the enemies are equal. It can only be a wild bull. Silver coins depict frontal attack on the bull that has entirely submitted to the roaring lion (fig.6). A cylinder seal impression depicting King Darius' battle with raging lions portrays a realistic combat, where the Assyrian influence in the style of lion's depiction is witnessed by the king's name written in Old Persian, Elamite and Babylonian (fig. 7; Hinnels 1985). Here the hind legs, contours of the body and tail once again suggest the artist's reconstruction of animal anatomy with almost nature-perfect precision. The roaring lions in relief on the brick façade and glazed brick panel excavated from Susa





Fig. 6: Silver coin from Treasury
(After: Schmidt, E. F. 1953).



Fig. 7: : Lion hunt by King Darius (After: Brosius 2006: 44).

(Mecequenem 1980) have more natural depiction with Asiatic resemblance. However, gold Rhytons with the body of a winged lion shows that in this case the morphology is influenced by a matter of proportions rather than actual upper anatomy (fig.8). At Persepolis, lions carved in relief are extremely animated. Their gait is shown most realistically. Interestingly, small mane and slender body appear to have an Asian affinity (fig. 9). It is significantly observed that the curls of the mane and bulbous cheeks are not as realistically carved as that of lion motifs in the subsequent repertoire of Indian art, which was actually inspired by the former (fig.10) .

As regards the identification of the species of the bull represented in the sculpture, there are certain morphological features which are mixed and seem to be the regional variations. Yet the aggressiveness of wild species is distinctly visible, very similar to the aurochs. The hump-less bull figures on the Capital at Susa, show a very characteristic narrow frontal, long and broad face, once again confirming that it is a short horned variety, but its thick neck and bulky body is certainly a feature of *Bos taurus*. Almost every figure here has small horn cores with thick neck, broad face that is turned backwards while the back of the neck is always shown with a prominent arch. In addition it also displays short and thick horn cores that are markedly bent and

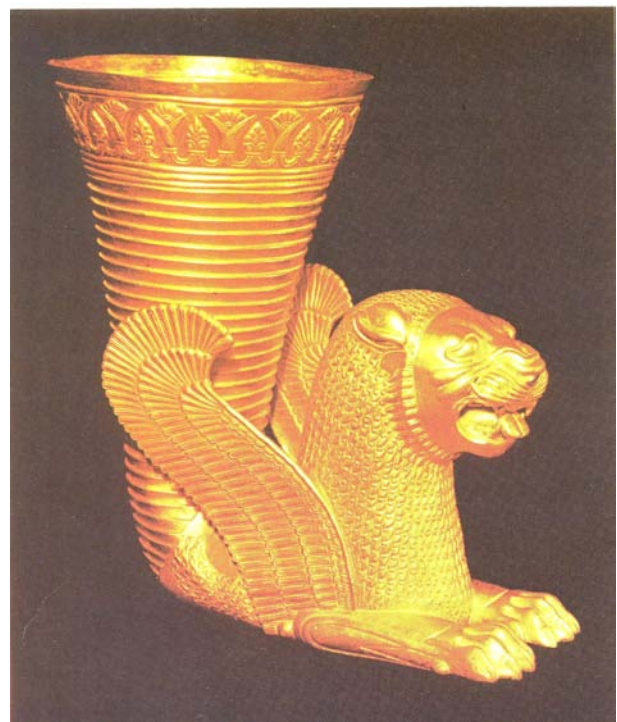


Fig. 8: Gold Rhyton with lion's head (After: Hinnell 1985:38)





Fig. 9: : Lions in relief at Persepolis (After: from author's personal archive).



Fig. 10: : Ashokan pillar at Vaishali, Bihar (Mauryan period) (Copyright and Courtesy Professor Harry Falk, Professor at the Institute for Language and Cultures of South Asia, Freie Universität, Berlin, Germany).

set close to the head. Due to the shortness of the facial part, the forehead is longer in relation to the whole skull. However, there is a characteristic 'wild character' in combat bulls that brings it close to *Bos primigenius* (fig. 11), whose bones have been reported from Neolithic and Chalcolithic sites of Khuzestan and Fars province. Faunal evidence has amply shown that the aurochs (*Bos primigenius*) was the most widespread beast occupying a vast territory stretching from Europe to Northern Africa, Middle East to Central Asia. By 13th Century the territory shrunk to Eastern Europe to parts of central Asia (Vuure 2002; 2005). However, the report of a natural death of the last individual of live aurochs comes from Jaktorów Forest in Poland in 1627 (Heymanowski 1972). Aurochs' behaviour finds a mention in several phraseological references in Russian and Polish literature (Pusch 1840; Skorupka 1968). Caesar's narrative is a window to the animal's behaviour and strength. The description of aurochs by Julius Caesar in his works, *The Gallic War* in c. 53 B.C., translated in English by McDevitte and Bohn (1869) highlights the bovine prowess. Caesar in Book 6th part 28 of *The Gallic War* writes "... those animals which are called *uri*. These are a little below the elephant in size, and of the appearance, colour, and shape of a bull. Their strength and speed are extraordinary; they spare neither man nor wild beast which they have espied. These the Germans

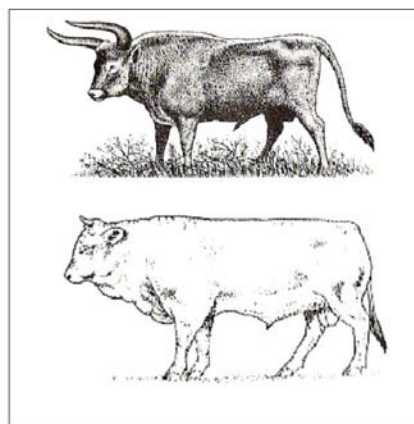


Fig. 11: The reconstruction of aurochs and its comparison with domestic *B. taurus* (Author: Clutton-Brock 1987).

take with much pains in pits and kill them. The young men harden themselves with this exercise, and practice themselves in this sort of hunting, and those who have slain the greatest number of them, having produced the horns in public, to serve as evidence, receive great praise. But not even when taken very young can they be rendered familiar to men and tamed. The size, shape, and appearance of their horns differ much from the horns of our oxen. These they anxiously seek after, and bind at the tips with silver, and use as cups at their most sumptuous entertainments." (McDevitte and Bohn 1869). Several complete bones and near complete skeletal evidence, pictures from the rock art (viz. at Lascaux and Chauvet caves), and descriptions from the 17th century literature (Schneeberger's descriptions in Gesner 1602: 141-142) and Smith's description (Smith 1827) provide an actual perception of the animal. The beast's height at withers was 170cm and the horns curve forward and inward and the neck was relatively long and thick (Vuure 2002).

The absence of skeletal remains from early historic sites does not necessarily mean that the aurochs had disappeared from the region after the Chalcolithic period. The carving of a bull especially engaged in combat with lions needed them to be shown equally strong and powerful. It is highly likely that the first hand encounter or description of sighting the animal enabled sculptors of Persepolis to bring that typical ferocious and aggressive image especially for those bulls shown in combat with lions.



The artistic manifestations of zebu, the humped cattle (*Bos indicus*) are few in Persepolis, e.g. on the panels of Apadana (fig.12) and a few coins from treasury. The one figure sculpted on the panel of Apadana has a distinct hump but the horn cores are bent inwards. The bull's size and morphology suggest its Indian origin. Evidently, the animal is foreign to the soil and probably was one of the gift items brought by the Indian Satrapi. Faunal record from archaeological sites in Iran confirms the presence of aurochs and domestic cattle (*B. taurus*) but artistic morphological variations indicate that the shorthorn cattle were also included.

The artefacts recovered from the Treasury of Persepolis include some of the seal stamps that represent zebu or *Bos indicus* as well as other types of bovines, lions, ibex and leopard (?) etc. Seals (Nos. 40-41) depict two two-winged man-ibex in profile, below which is the relief of a humped bull (Schimdt 1953, Plate 11 PT4 1022). Another broken seal of a humped bull shows expanded horn cores and dewlap (Schimdt 1953 Seal No. 41, Pl. 11 PT4 979, Fig. 13). While an intact seal has a complete bovine figure (possibly a sub adult), which is humpless, and in right profile. It has been identified as possibly of a bullock (?) with both fore legs thrown forward as though showing hind legs in walking position (Schimdt 1953 Pl 14, PT 4 944 Seal No. 70, Fig. 13a-c). Interestingly the earthen Rhyton with the head of the bull, housed in the Field Museum at Persepolis, retains the aurochs anatomy in its head and horn cores (fig.14). Even



Fig. 12: : Procession of gift bearing delegations, Eastern stairway of Apadana Palace (After: *The Omen of Fars: Iran Touring and Tourism Organisation, Shiraz 2003: 50-51*).

Achaemenid ivories from Donjon (Mecequenem 1947: Fig. 56) have a winged bull with a raised left fore limb against the wall. It is a similar posture to that of its combat with lions and strongly suggests a wild variety.

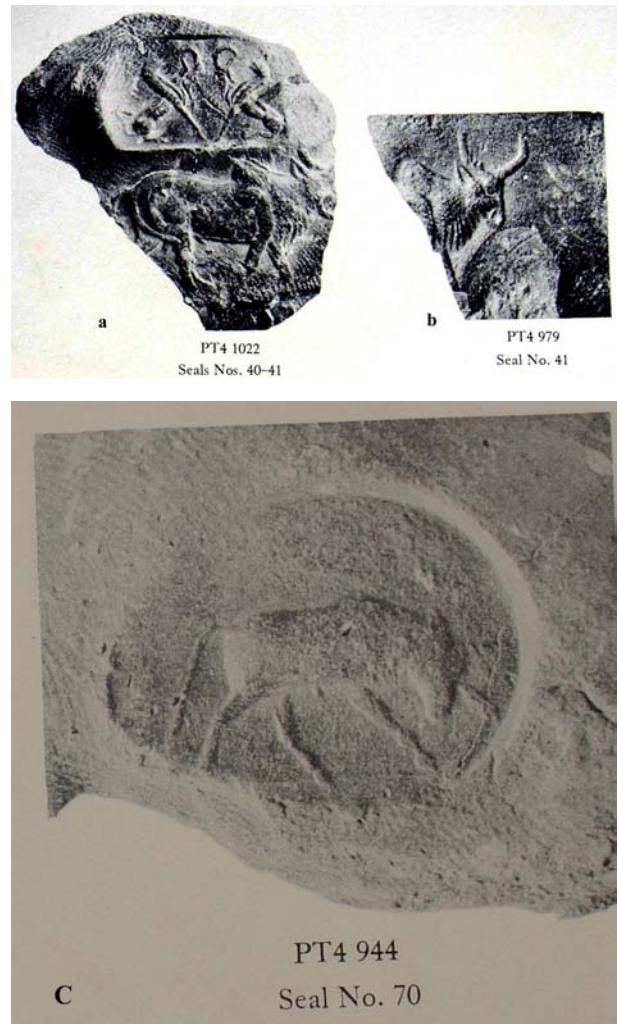


Fig. 13: a-b: Zebu, c: Humpless bullock stamp seals from Treasury of Persepolis (After: Schimdt 1953, Plate 11 PT4 1022 and 979; Seals No. 40-41 and 41; Pl 14, PT, 944 seal No.70).

Biogeography and Early History of Lion and Bull

Based on geographic range and differences in morphology, the modern lion is divided into eight subspecies (Hemmer 1974). The Asian lion has been identified as *Panthera leo ssp. persica* Meyer, 1826. It tends to be smaller than its African cousins.





Fig. 14: Earthen rhyton showing auroch- like head of a bull (From author's personal archive).

Among the Asiatic sub-specie, unlike the African ones, the mane is relatively sparse, short and darker in colour. Mane being short, the ears are visible all the times (Negal *et al.* 2003). The Asiatic lion has thicker elbow tufts and a longer tail tuft than its African cousins (Prater 1965).

In the light of the reference to Asiatic lions and large bovines' (bull) representation in ancient Persian art, it is worthwhile to review the early history of these animals which have left impeccable impressions on the society that was amply familiar with the prowess and majesty of such beasts. Lions originated in East Africa in the Late Pliocene,

about 5-1.8 million years ago (Turner and Anton 1997). Towards the Late Pleistocene (100-10 kya) period they were most wide spread large terrestrial mammals with a range inclusive of Africa, most of Eurasia and N America (Stringer 2002, Yamaguchi *et al.* 2004 and Kurten 1968). Genetic evidence suggests that two distinct lineages of lion existed in Western Eurasia towards the end of Pleistocene viz. Holarctic cave lion (*Panthera leo spelaea*) and modern lion (*Panthera leo*). A multi-regional origin model is based on morphological similarities between Middle Pleistocene European lion (*P. l. fossilis*) and modern North African-Asian lion. Modern lions had a population bottleneck in the antiquity of 74k -203k that may have obliterated the morphological characteristics, considered a result of long term *in situ* evolution (Yamaguchi *et al.* 2004). Genetic evidence reveals a single African origin model of lion. It also shows their recent dispersal from sub-Saharan Africa into North Africa-Asia (O'Brien *et al.* 1987). Study supports three geographical populations viz. North African – Asian, southern African and middle African (Barnett *et al.* 2006). The range of the lion in North Africa and South-West Asia formerly stretched across the coastal forests of northern Africa and from northern Greece across southwest Asia to eastern India. Today the only living representatives of the lions once found throughout much of South-West Asia occur in India's Gir Forest (Nowell and Jackson 1996). It is a small, protected population in India's Gir Wild life Sanctuary in Gujarat, adjoining Sind province of Pakistan. The physical evidence of lions may be sparse in archaeological record of West Asia. However genetic data confirm the existence of lion in ancient Persia (Barnett *et al.* 2006).

As regards cattle phylogeny, all the domestic cattle have derived from the wild aurochs, *Bos primigenius*, which had a wide geographical distribution ranging from the west coast of the Pacific through Asia and Europe to the eastern coast lands of the Atlantic Ocean, and from the northern tundra southwards into India and North Africa. The aurochs is of Indian origin where the first known representative of the genus *Bos* viz. *Bos planifrons* Rut. appears from the early Pleistocene period. Subsequent to its origins in the Indian Sub-Continent, the ancestors of cattle spread into Europe



and Africa during the Pleistocene period. One of its descendents, aurochs evolved during the latter part of Pleistocene, and moved westwards into South West Asia giving rise to two branches, one proceeding along the southern coastal region of the Mediterranean and reaching as far as North West Africa. These were the southern aurochs that were considered a link between the *Bos primigenius* and Asian *Bos namadicus*. The other branch of early aurochs evaded the Mediterranean in the north and reached Europe subsequently (Zeuner 1963; Bökönyi 1974; Epstein and Mason 1984 and Payne 1991).

Lion and Bull: Skeletal Evidence

The distribution of lion during the Pleistocene period in Iran is evidenced from a few cave sites like Wezmeh in Kermanshah and Khorramabad, that have reported the presence of Asiatic Lion or *Panthera leo* (Mashkour *et al.* 2008 and Smith 1986). During the Mid Holocene, lion has been reported from the northern part of Central Plateau and in Qubrestan, Quazwin plain (Mashkour 2002) and in Tal-I-Tiblis, Kerman (Bökönyi 1967). The site of Jarmo in Zagros region has probably yielded the remains of lion, which has been dated to the Neolithic (PPN) period (Stamphli 1983). However, none of the Chalcolithic and Iron Age culture sites in Luristan, Fars, Kuzistan, and Kermanshah valley report the skeletal evidence of lion. Leopard is the only larger member of the cat family Felidae, reported at Aceramic and Ceramic Neolithic sites in Luristan and Kermanshah (Potts 1999 and the references given therein). During medieval times, between the 13th and 18th centuries A.D., lions were widespread in southwestern Iran (Etemad 1985). The historic distribution included the Caucasus to Yemen and from Macedonia in Greece to present-day India through Iran, Afghanistan and Pakistan. Aristotle and Herodotus refer to the presence of lions in the Balkans (Wood, 1983). When King Xerxes of the Achaemenid Empire advanced through Macedonia in 480 B.C., it is reported by Herodotus (Book vii: 124-126) that lions killed several of his baggage camels. Their occurrence in the Caucasus was the northernmost population of lions and the only place in the erstwhile Soviet Union's territory that lions

lived till historic times (Bartosiewicz 2009). These lions became extinct in Armenia around the year 100 A.D. and in Azerbaijan and southwest Russia during the 10th century A.D. The Caspian tiger also inhabited the region and the Persian leopard apart from Asiatic Cheetahs (*Acinonyx jubatus venaticus*) introduced by Armenian princes for hunting. The last sighting of an Asiatic Lion in the region between Shiraz and Jahrom in Fars province was reported in 1944 (Heaney 1944). Yet another report comes from Khuzistan province where the carcass of a lioness was found on the banks of the river Karun (Guggisberg 1961). Paucity or absence of the lion in archaeological record however, does not mean the lack of existence of the animal in this region for its presence here till recent times is known to be a fact. The idea of such a large predator and its near-natural morphological depiction would not have been possible unless these animals were observed very closely.

Aurochs (*Bos primigenius*) is one of the most commonly occurring large bovines in association with wild sheep, wild goat, boar, deer and gazella in protohistoric sites in southwest Asia. The aurochs has a wide distribution throughout the Pleistocene cave and open-air sites. Some of the Chalcolithic sites have yielded their remains along with the domestic, *Bos Taurus* in Fars, Kuzistan and Kerman shah (Potts 1999; Alizadeh 2006). It appears logical that even if the aurochs did not survive until the historical times in West Asia, the lion-bull combat seals, figurines and terracotta from Elam and pre-Elam record point to the continuation of its artistic manifestation. It culminates into one of the best artistic representations of animal's power and behaviour chiselled in rocks of ancient Persia.

Conclusion

Studies of animal representations in art, whether painted or sculpted, need not be confined to the realms of iconography and mythology alone but they also need to be regarded as sources which can provide fresh insights into the dynamics of the contemporary animal world. Regardless of how much artistic manipulation has gone into creating the motif, certain features of the basic zoo-morphology



are bound to rule the stylistic development. Animals in art are a direct reference to their interaction with human populations and complement faunal studies which are primarily based on skeletal assemblages. It is a continuation of the faunal record with ethnology manifested in cultural fabric of the society. This is one attempt to illustrate the possibilities based on the Lion-bull motifs of Persepolis.

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