

«Pepper's patches» on *Rangifer* pelage

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Abstract: We describe and give frequencies of occurrence of a rarely-mentioned pattern of spots in *Rangifer* pelage. We also show that the pattern was well-known to Palaeolithic humans who recorded it in their cave art. We also discuss some of the symbolic possibilities resulting from the recognition by Palaeolithic humans of the biological characteristics of the pattern in *Rangifer*.

Key words: *Rangifer*, caribou, reindeer, pelage, spots, Palaeolithic art.

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Rangifer, Special Issue No. 1, 1986: 227 - 234

Introduction

Virtually all descriptions of coat colour in *Rangifer* fail to mention a series of light-coloured patches or short vertical stripes that occur on the dorso-lateral or lateral surface of the thorax and lumbar regions and as irregular blotches on the upper lateral surface of the rump or hip region (Figs. 1, 2). These are not patches of worn pelage, breaks in the pelage over individual ribs, nor lumps and discoloured fur caused by subcutaneous warble larvae or their scars. These «Pepper's patches» consist of longer, stiffer hairs, sometimes twisted and of a lighter colour than the surrounding fur, from which they are sharply differentiated (Fig. 1a, b). Further studies are proceeding on the histological structure of the skin and hairs.

The earliest printed reference to these patches we can find is a woodcut in Caton (1877: 88) of a young female North American Woodland Caribou (*Rangifer tarandus caribou*). Flerov (1952) mentioned that: «...along the upper part of the trunk a pattern is sometimes developed in the form of 3 - 4 rows of poorly marked light

reddish-brown spots, which are lighter in the pelvic region and large, of a diameter twice the length of the eye» (p. 204). Geptner *et al.* (1961 volume 1: 307) stated: «... on the spine there is sometimes a dark stripe. By way of an exception (apparently frequently in Southern Siberia) along the spine there are not rarely outlined and weakly expressed rather large light-coloured spots....» Segal' (1962) mentioned «Inconspicuous... and vertical stripes in body colouring («tiger-like») which is peculiar to most Lappish reindeer (*Rangifer tarandus tarandus*) and is often apparent locally in Karelian domestic reindeer.»

They are shown in a photograph of a caribou museum display (Nowak and Paradiso, 1983: 1223), but are not mentioned by Akaevski (1939), Banfield (1961, 1974), Hall (1982), nor Sokolov and Chernyavaskii (1962).

To our knowledge the patches occur in the following Recent subspecies:

Rangifer tarandus tarandus (dom.) Figs. 1a, b. Because the patterned skins are valued by Saami the frequency in domestic reindeer may be greater than in wild groups. Illustrated in

Huhtanen (1970: 86, 93, 104 - 105) and Alaruikka (1964: 66). The patches are well-known to reindeer herders. The Saami name is «tjoesche» (Swedish Lapp) or «jovje» (Southern Swedish Lapp; John Jonassen, pers. comm).

Rangifer tarandus fennicus - Illustrated in Montonen (1974: 27, 63). From field counts by WP the patches occur in about 20% of the females in this subspecies. Fig 3.

Rangifer tarandus platyrhynchus - C. Cuyler (pers. comm. 1986) recently examined 40 + skins of this subspecies for us and found no Pepper's patches.

Rangifer tarandus terraenovae - Illustrated in Dugmore (1913: plates facing: 2, 12, 50, 106 and 158).

Rangifer tarandus groenlandicus - «Caribou Year» the filmed life-history by WP contains images of 1459 individuals, of which 220 are suitable for detailed visual analysis. Of this number, 5 (2 ♂, 3 ♀) or about 2.3%, exhibit Pepper's patches.

David Koamayok of Cambridge Bay, NWT, reported to A. Gunn (pers. comm., 1986) that caribou with Pepper's patches occur very rarely on Victoria Island. The skins were valued for clothing decoration.

Rangifer tarandus granti - Illustrated in Calef (1981: 56, 63, 111 and 147) but not mentioned in the text. «Caribou Year» also contains images of 79 *granti*, of which 16 are suitable for analysis. Only one (6%) exhibits Pepper's patches.

Rangifer tarandus caribou - See Fig. 4. Illustrated in Caton (1877) (see above). We believe it is significant that a similar woodcut of Barren ground caribou on p. 104 fails to show the patches. No mention is made in Caton's text.

Rangifer tarandus pearyi - occurrence not documented by us.

Discussion

Most known occurrences of Pepper's patches are in females and young. Individuals with the patches exhibit them in successive pelages (John Jonassen, pers. comm.). We suspect the reason the patches are rare among males is that their pelage is markedly modified from the basic pattern because of the importance of rutting behaviour (cf. Fig. 3). The patches appear to be more common in domestic reindeer than in wild caribou and, among caribou, to be more common in forest forms than in tundra forms.

In the *Cervidae* spotting occurs commonly as the spotted pelage in young of several genera and the spotted pelage of adults in, for example, *Cervus nippon* as well as *Axis* and *Dama*. Pelage characteristics of earlier times are usually speculative and rarely subject to proof. So it would be with Pepper's patches but for the fortunate natural history acuity of a relatively restricted population of early *Homo sapiens*, and for their probable cultural attention to them.

Fossil occurrence

These fossil representations of Pepper's patches are from the Upper Palaeolithic of France and Spain, about 19 000 to 10 000 years B.P.

The Abbé Henri Breuil, a prehistorian, noticed the marks when he drew an imaginary scene for his book «Beyond the Bounds of History» (1949: 78). His illustration shows «an artist of the time... finishing the painting of a

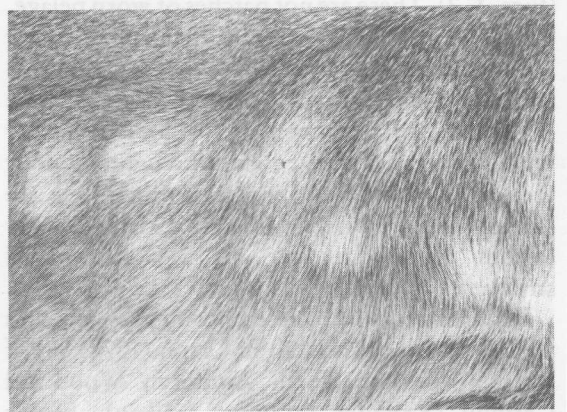
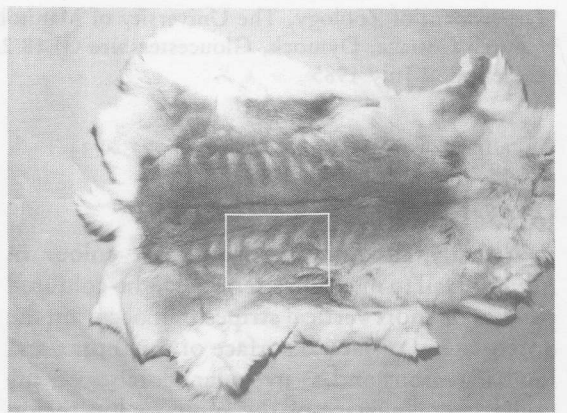


Fig. 1a. Skin of domestic *R. t. tarandus*. Commercial source, Finland.
b. Detail of a.

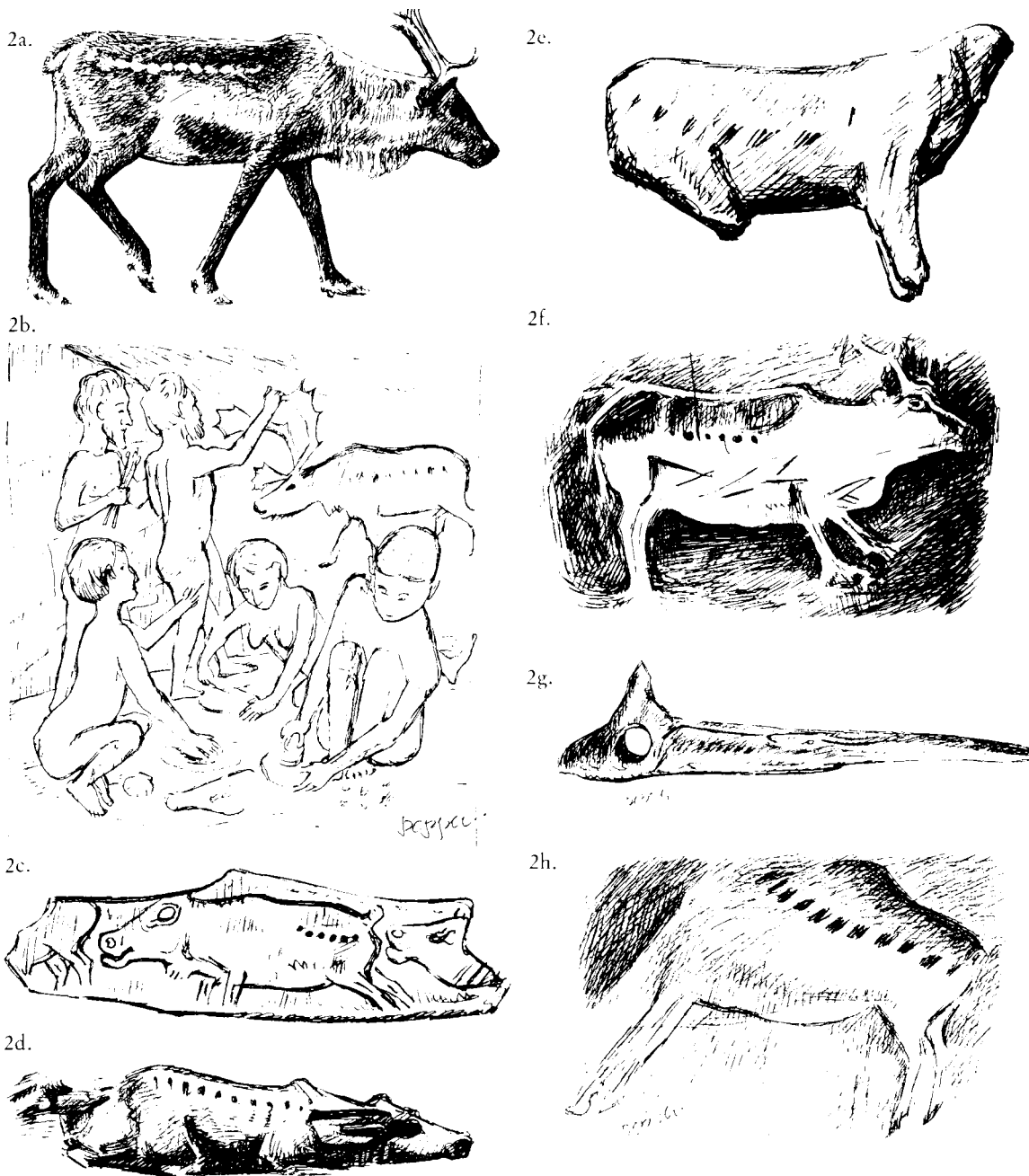


Fig. 2a. *R. t. tarandus*. ♀. Whipsnade Zoo. Sketch by H. P., 1982.
 b. «Grinding ochre and painting frescoes on rock». Redrawn by H. P. from Breuil (1949: 78)
 c. Reindeer engraved on bone, Massat; Ariège, France. Musée Ste. Germaine, Paris. Sketch by H.P.
 d. Reindeer sculptured in ivory; Bruniquel. British Museum, London. Redrawn by H.P. from Graziosi (1960: 34a).
 e. Reindeer carved on antler spear-thrower; Arudy. Musée Ste. Germaine, Paris. Redrawn by H.P. from Graziosi (1960: 36c).
 f. Rock wall painting; Les Trois Frères, near Montesguion, Arantés, Ariège, France. Redrawn by H.P. from Leroi-Gourhan (1968: 116).
 g. Female reindeer on «baton de commandement»; Laugerie Basse. Redrawn by H.P. from Graziosi (1960: 56b)
 h. «Spotted Reindeer»; La Mouthe. Redrawn by H.P. from Breuil (1952: 400).

reindeer, executed on a rock wall.» (Fig. 2b). Judging by the large antlers borne by the animal, the Abbé probably intended to show an adult male. He also marked a line of «patches» which, (as his recollection might have suggested), occur on examples of reindeer from La Mouthe (Dordogne: Fig. 2b). The «La Mouthe» drawings by the Abbé figure as interpretations in Fig. 343 and photograph (Fig. 347) in his book «Four Hundred Centuries of Cave Art» (1952) where the reindeer are called «spotted». There is no explanation for the marks in either book.

Sieveking (1976, 1979) mentioned them from both Bruniquel (Tarn-et-Garonne) and Arudy (Pyrénées-Atlantiques) with the comment that «the depiction of the animals' coats is very similar.» She failed to mention the possibility that the pattern might be natural (Fig. 2e). Guthrie (1984) did not mention Pepper's patches in his chapter «Ethological observations from Palaeolithic Art».

In apparent contrast to recent students of Palaeolithic art the actual prehistoric artists knew reindeer well. They were observant enough to select females for patchy coat patterning. An example from Massat (Ariège), (Graziosi 1960: plate 71b) shows a female reindeer with patches

(no antlers, no penile tuft shown) in typical urinating posture (in oestrus, perhaps) and an attentive animal (male?) immediately behind (Fig. 2c). The rutting theme is continued in the famous piece from Bruniquel (Tarn-et-Garonne) where a male follows a female, nose to rump, (Graziosi, 1960: plate 34a and b); here the marks are clearly depicted only on the sides of the female. Graziosi has illustrated both sides of the ivory carving with an extra explanation in the form of a drawing by Breuil of one view (1905) as 34b on his plate (Fig. 2d). A relief carved on antler from Mas d'Azil (Ariège) (Graziosi, 1960: plate 56b) might be a female reindeer judging by the weak antler form (Fig. 2g). This may be true also for the animal with patches (Leroi-Gourhan, 1968: Fig. 11; this paper, Fig. 2f). On the other hand, Las Monedas (Santander), a Spanish cave exhibiting reindeer, shows a female without patches (Leroi-Gourhan, 1968: plate 115). Could the patches sometimes have been used by the artists to indicate *femaleness*?

In support of this idea it is worth taking another look at the painted reindeer from the «sanctuary» of Les Trois Frères (Fig. 2f). (Breuil, 1952: Fig. 134). Breuil described 14 reindeer, only one of which is a male, with penile tuft.

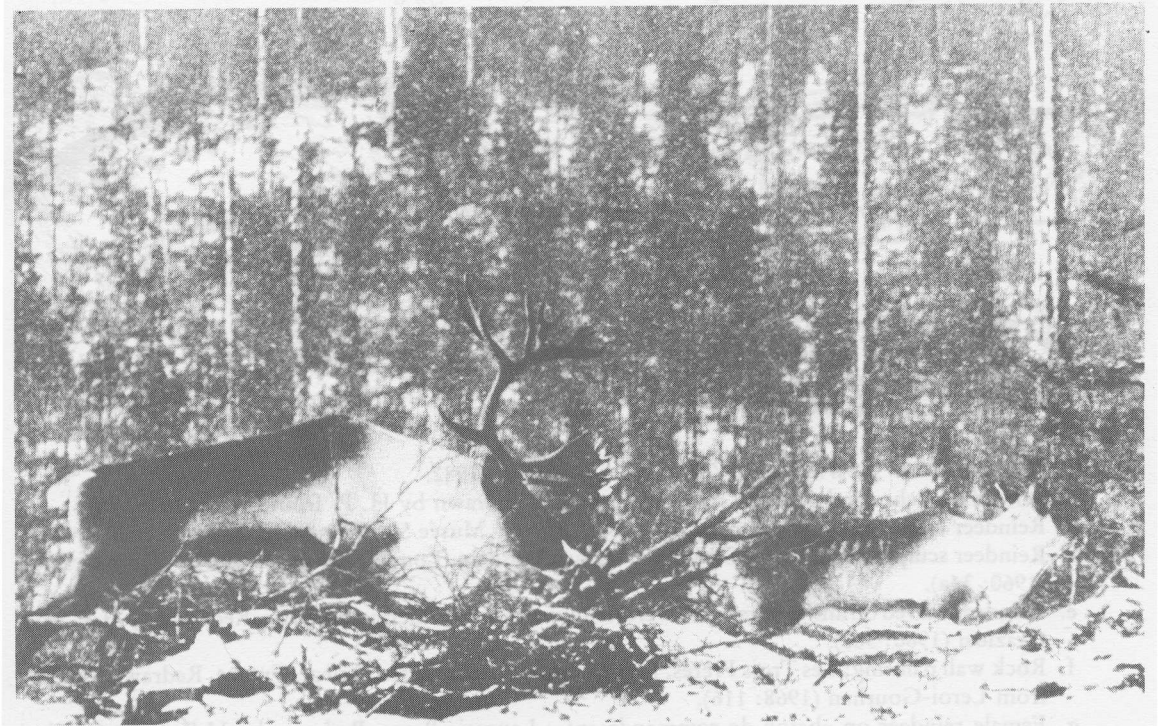


Fig. 3. *R. t. fennicus* ♂ and ♀; Finland, Kainuu region, Saksenlampi, 13 October 1973. Note the prominent Pepper's patches on the female. Photo by E. Vannanen.



Fig. 4. *R. t. caribou*; Ontario, 55°N. Lat., 81°15'W. Long, near Cape Henrietta Maria, March 1976. Individuals showing Pepper's patches are outlined. Photo by Fred Johnson.

Breuil (1952: Fig 139) has depicted from the same cave a mythical reindeer/monster as a female which also has patches (Fig. 5a). The monster from Lascaux (the «Unicorn») bears circular (female) patches on its side (Fig. 5b).

Speculations on cultural symbolism

The relationships of circle or dot/short stroke to animal forms in Palaeolithic artwork do not allow much room for elaborate interpretation. If the possibility of patches representing an atavistic survival is an acceptable natural explanation, they seem to have acquired a new significance for the Upper Palaeolithic artists who deliberately selected this feature for depiction. To see the light golden circles as solar/lunar female symbols might not be mere imagination. As the observer of a living female reindeer with patches finds the attention leads across the flank and rump to the area of the vulva, the eye-catching marks speak of magic, mystery

and sex, of light and re-creation to someone looking for a sign.

A symbol is a sermon in shorthand. It is reasonable to find the message of the dots transferred to an animal of another species. At Lascaux, an Aurochs (*Bos primigenius*) bears a row of spots across the upper ribs behind the shoulder. This is closer, perhaps, to the area of the heart and lungs than the vulva (Fig. 5c). The same vulnerable area is also marked in an Aurochs cow from Niaux (Ariège) (Fig. 5d) shown in Breuil (1952: Fig. 161) and at first sight perhaps not comparable with the patches under review. In the case of a cow being closely followed by a bull from Teyjat (Dordogne) (Fig. 5e) a single circle has been placed on the neck of the cow (Leroi-Gourhan: Fig. 486). A circle is usually a feminine symbol, but Leroi-Gourhan pointed out (1968) that a row of dots (circles) may indicate a masculine sign. To see such a masculine row representing the phallus and incorporating in the circles the female sign naturally placed to lead the imagination from

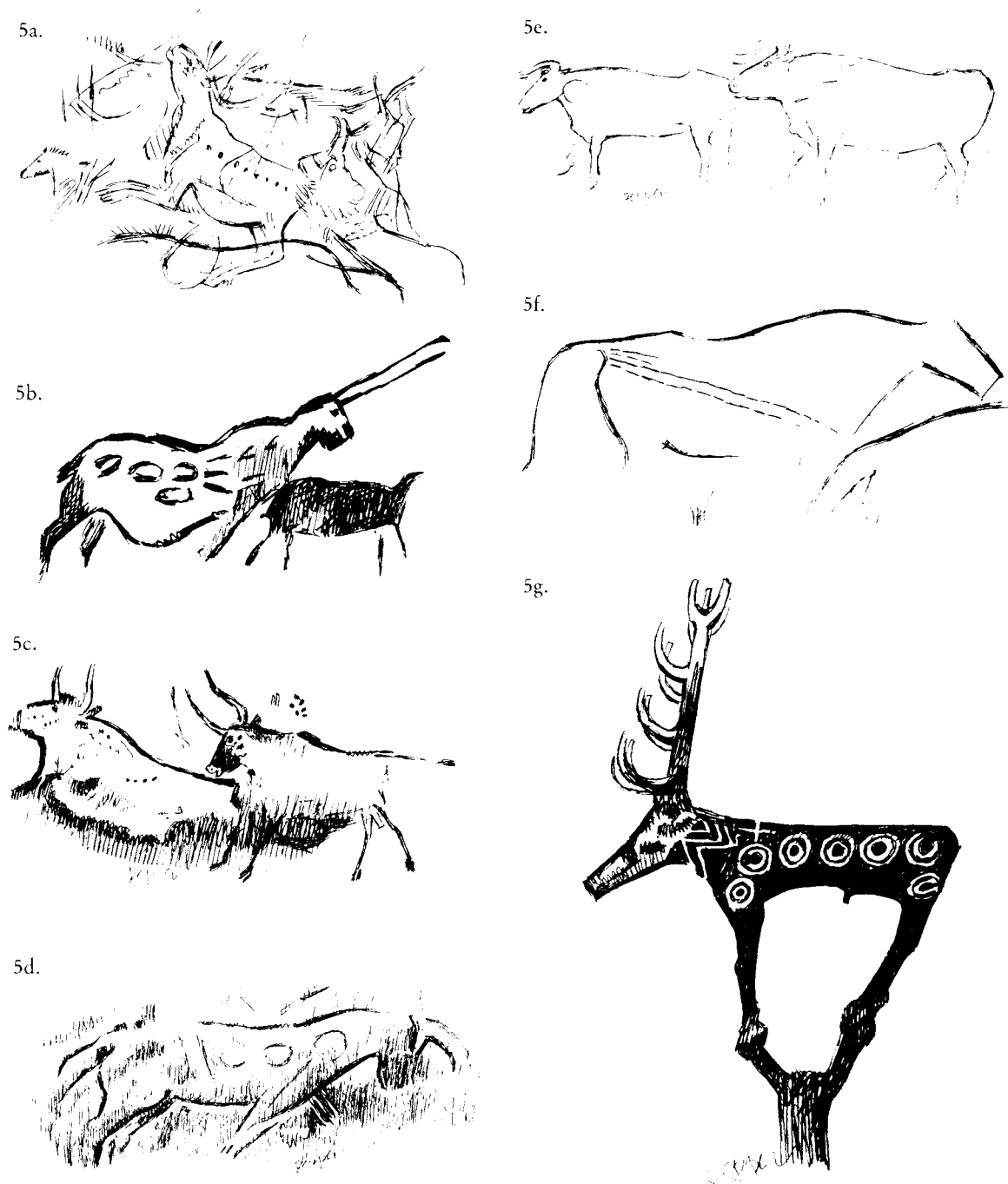


Fig. 5a. «Monster/reindeer»; Les Trois Frères. Redrawn by H.P. from Breuil (1952: 129).
 b. «Unicorn»; Lascaux. Redrawn by H.P. from Leroi-Gourhan (1968).
 c. Spotted aurochs cow (?) bearing a row of spots, and a bull; Lascaux. Redrawn by H.P. from Leroi-Gourhan (1968: 486).
 d. Cow aurochs; Niaux. Redrawn by H.P. from Breuil (1952: 161).
 e. Cow and bull aurochs; Teyjat. Redrawn by H.P. from Leroi-Gourhan (1968: 486).
 f. Cow aurochs; Pech Merle. Redrawn by H.P. from Leroi-Gourhan (1982: 121).
 g. Stag (Red Deer) with concentric rings and chevrons; Alaja Hüyük; northern Turkey. Turkish Historical Society. Redrawn by H.P. from Bibby (1962: pl. VIII).

vulva through the bodyline is to understand a purpose fulfilled by noting the marks (patches) on representations of female animals in the artwork. To add emphasis to the theme an example might be taken from the line drawing of an Aurochs cow from the Black Frieze, Pech-Merle (Leroi-Gourhan 1982: Figs. 102 and 121). Here, dots have given way to short, broken lines. Three pairs of lines are used to indicate the anal passage. Below, however, and extending from vulva to chest, are pairs of broken lines which may be seen as phallic (spear) from vulva (wound) to the heart and lungs. In a phrase, in fact - from «life» to «death» (Fig. 5f). In this sectioned cartoon are we to see a mimic of those natural patches, the illuminated line of femaleness which we are discussing in the case of female reindeer?

A post-script to the lateral line of dots might be found in the case of a red deer (*C. elaphus*) (male, self coloured as adult in life) from Alaja Hüyük in Northern Turkey (Bibby 1962: Fig. VIII). Created by «Battle-ax People» of the Russian Steppes over 4000 years BP, the stag, from a standard, bears seven pairs of rings along the body and rump (Fig. 5g). While body decorations of art objects have always been open to many designs and interpretations and the chevrons on the neck may represent an impression of the red deer stag adult mane, is it possible that the circles are a conventional design extending back to delineations of Pepper's patches on Palaeolithic reindeer and here continued as pattern long after the origin, source and purpose in decoration had been forgotten?

Acknowledgements

We are grateful to Dr. Tom Shay for his critical comments during the preparation of this paper. Reviewers Dr. C. R. Harington and Dr. D. Klein offered valuable comments and criticisms. We thank E. Vannanen and Fred Johnson for permission to use their photographs.

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