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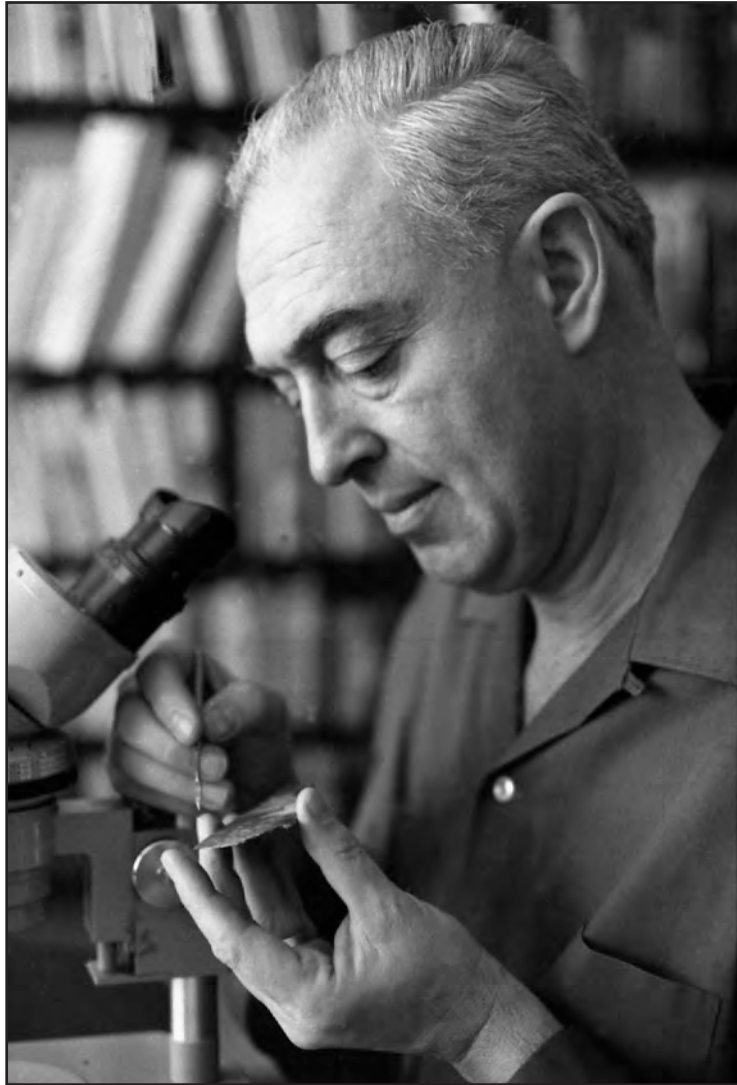
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*Alexander Marshack (1918-2004)*



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Edited by Paul G. Bahn



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## SEALS FROM THE MAGDALENIAN SITE OF GÖNNERSDORF (RHINELAND, GERMANY)

Gerhard Bosinski and Hannelore Bosinski †

On the Gönnersdorf slate plaquettes we recognized 12 seals. Like the other animals (Bosinski and Fischer 1980; Bosinski, in press), the drawings are on plaquettes of different sizes, and are found together with many other lines, often

cut-marks (Figure 5.1) and sometimes also other representations (Figure 5.2).

The Gönnersdorf seals are sometimes portrayed very exactly and with many details depicted (Figure 5.3). Nevertheless, identification of

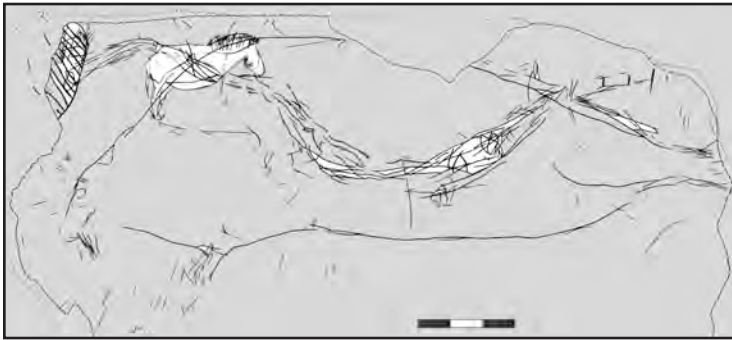


Figure 5.1 Gönnersdorf.  
Plaque 256.



Figure 5.2 Gönnersdorf.  
Plaque 163.

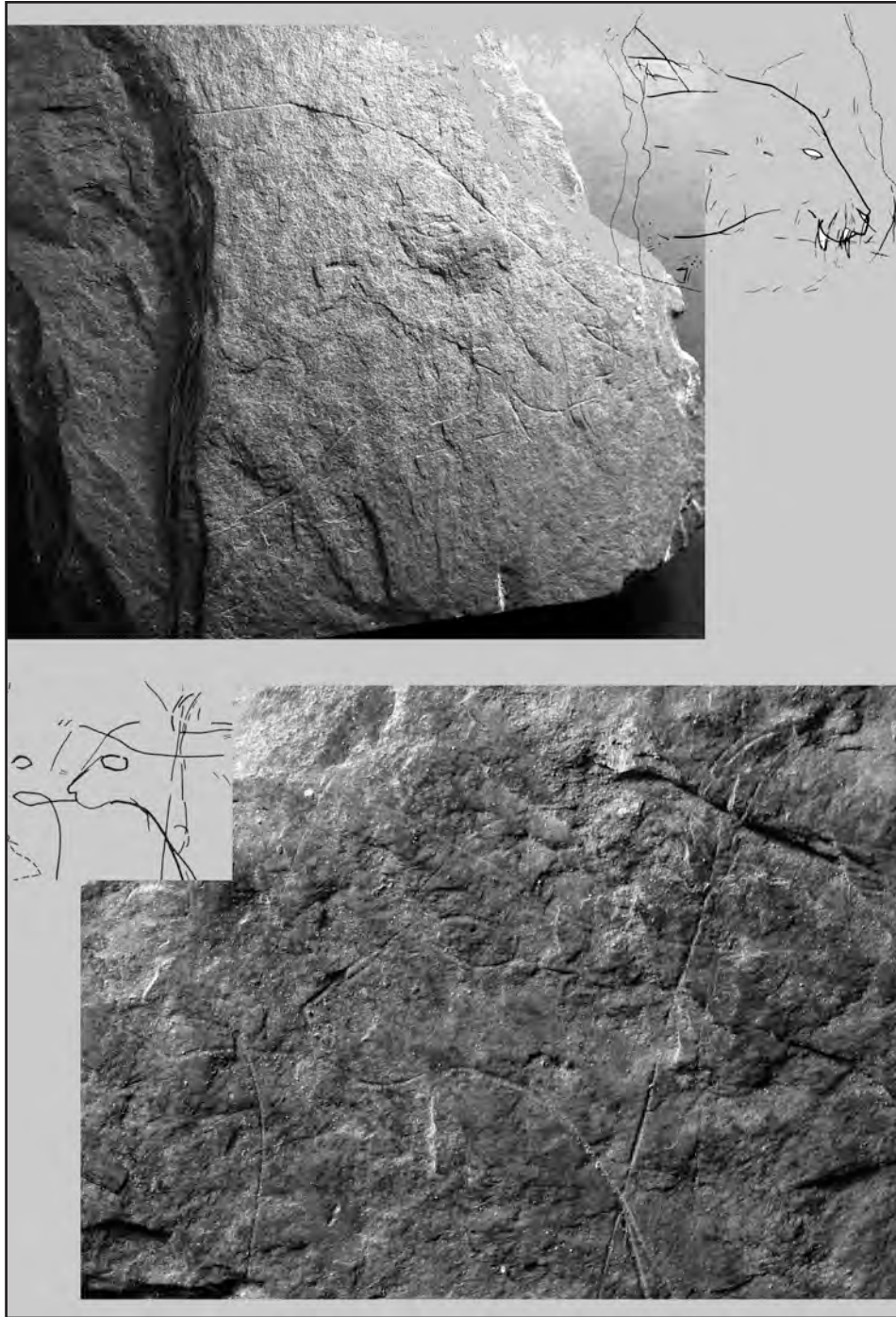


Figure 5.3 Gönnersdorf. Heads of seals 59 B and 96, 2.

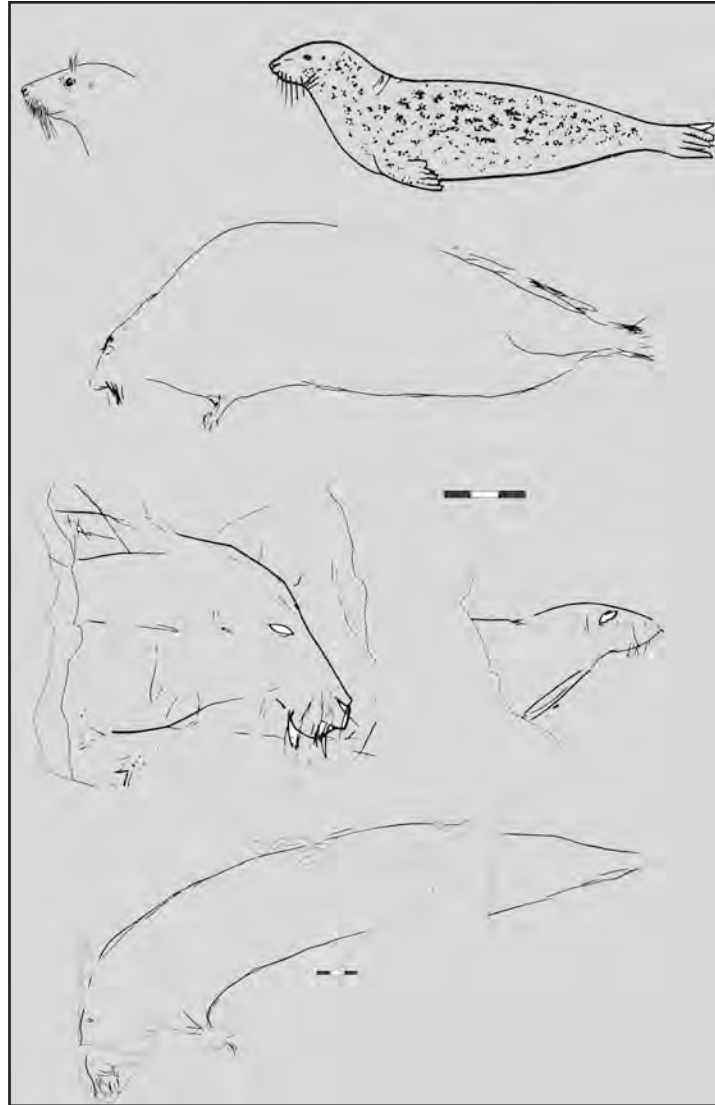


Figure 5.4 Gönnersdorf. Grey Seals (*Halichoerus grypus*).

the species of seal is limited in its scope, since the drawings represent the outline and some details of the animals (eye, beard), but not the color and other details on which depends the determination of different species.

The depicted animals are true seals (Phocidae). According to D. Robineau, Paris,

some pictures represent Grey Seals (*Halichoerus grypus*). “D’après la forme de leur museau, allongé et non séparé de la boîte crânienne par un resaut, plusieurs phoques de Gönnersdorf peuvent être déterminés, avec vraisemblance, comme des phoques gris (*Halichoerus grypus*).” Robineau was referring to representations 59 B,



163, 2 and 287, 2; using the same criteria we may add the big figure 256, 1 (Figure 5.4).

An animal dictionary (Görner and Hackethal 1988:307) says of Grey Seals:

Gestreckte Schnauze und kegelförmiger Kopf. Die Tiere sind viel grösser als der Gemeine Seehund. ... Die Nasenlöcher liegen bei den Tieren weit auseinander... Vorkommen: Küsten Islands, Grossbritanniens, Irlands, der Färöer-Inseln, in der Nord- und Ostsee, Ostküste Kanadas. Bevorzugt Meeresteile mit Felsriffen und Klippen sowie Fels- und Geröllküsten.

Lebensweise: Die scheuen Tiere leben meist in kleinen Gruppen oder Rudeln. Während der Paarung, zur Wurfzeit und während des Haarwechsels halten sie sich an Land auf... Die Nahrung besteht vorzugsweise aus Fischen. Weichtiere und Krebse werden auch angenommen.

Robineau recognized a second species, characterized by a step between mouth and skull:

Une autre espèce au moins est représentée, qui se distingue du phoque gris par un museau court séparé de la boîte crânienne par un resaut, mais il n'est possible de déterminer l'espèce dont il s'agit.

Robineau was referring to pictures 96, 2 and 283; we would add the big head 270 B (Figure 5.5).

Due to the form of its head, this species could be the Common Seal (*Phoca vitulina*), the Ringed Seal (*Phoca hispida*), the Harp Seal (*Phoca groenlandica*) as well as the Bearded Seal (*Erignathus barbatus*), as we determined in an earlier publication (Bosinski and Bosinski 1991). The most obvious would be the Common Seal (*Phoca vitulina*; Figure 5.5).

The animal dictionary says of this animal:

Gedrungener Körper, grosser runder Kopf mit grossen Augen, an der Schnauze lange weisse Tastborsten. Grundfärbung graugelb

bis graubraun... Die schmalen Nasenöffnungen sind v-förmig... Vorkommen: Europäische Atlantikküste (einschliesslich Nordsee) bis Spanien, Küsten Nordamerikas und des Nordpazifiks. Nachweise in der Ostsee sind selten. Einzelne Tiere wandern gelegentlich in grösseren Flüssen (z.B. Elbe) stromaufwärts. Bevorzugt werden ungestörte Küstengewässer mit flachen Sandbänken und Wattenmeere. Lebensweise: ... Ausserhalb der Paarungszeit sind es meist Einzelgänger, aber sie können auch gesellig in unterschiedlich starken Rudeln leben... Jungtiere können weite Wanderungen unternehmen. An Land sind die Tiere unbeholfen. Am häufigsten kann man sie ruhend auf Sandbänken beobachten. ... Die Nahrung besteht aus Fischen, Krabben, Krebsen und Weichtieren... (Görner and Hackethal 1988:302).

The remaining drawings are fragmentary or schematic, and cannot be determined to species (Figure 5.6).

It is primarily the completely preserved animal figures 163, 2 and 256, 1, but also the sketches 284 and 286, which display the streamlined body-shape of seals (Figures 5.4-5.6). The spread fore-fin of seals 93, 2; 96, 2; 163, 2; 256, and 286 indicate swimming animals. The head has a big eye and sometimes a bearded mouth (96, 2; 163, 2; 59 B; 256, 1; 287).

In front of seal 96, 2 there are two pointed ovals which may belong to the depiction, perhaps representing respiration bubbles (Figure 5.3).

An intended connection between seal-images and other figures may be proposed for plaquette 163 (Figure 5.2). In the upper left part of this slate, with its greenish-gray, humpbacked surface, there is the drawing of a little horse. The seal, orientated to the left, is almost complete and covers the plaquette. The very irregular surface, with

higher and lower steps, did not affect the skilful drawing at all. The head is represented with a big eye and a beard. The streamlined body-shape is well depicted, with only the fore-fin projecting out of the contour. The backline is interrupted by a flaking of the slate's surface. The tail ends on the right edge of the plaquette. In addition there is a bundle of lines which runs wave-like over the upper part of the slate, crossing the small horse and the seal. In the upper left corner this bundle starts from an oval-like figure filled with oblique lines, and only partially preserved. To the right this bundle terminates in an elongated point which is subdivided by some vertical lines. The thickest part of the bundle is placed inside the seal.

This thick plaquette is almost complete, and already had its present form when the figures were drawn.

Most of the seal representations (7 images) were found in Concentration I, including the adjoining Eastern part of the excavation (Figure 5.7). This applies to the complete seal on plaquette 163 (Figure 5.2), the detailed head 59 B (Figure 5.3), seals 70 B, 4 and 93, 2 (Figure 5.6) as well as 96, 2 (Figure 5.3:9), the seal on plaquette 283 (Figure 5.5), and the big eye - perhaps belonging to a seal - on fragment 289 (Figure 5.6).

This concentration, partly destroyed by the foundation-pit of a house which led to the discovery of the site, represents the ground-plan of a habitation. Deeper parts of the cultural layer contained a hearth and more than 30 small pits, mostly cooking pits (Bosinski 1979). According to the analysis of the hunted animals, this dwelling

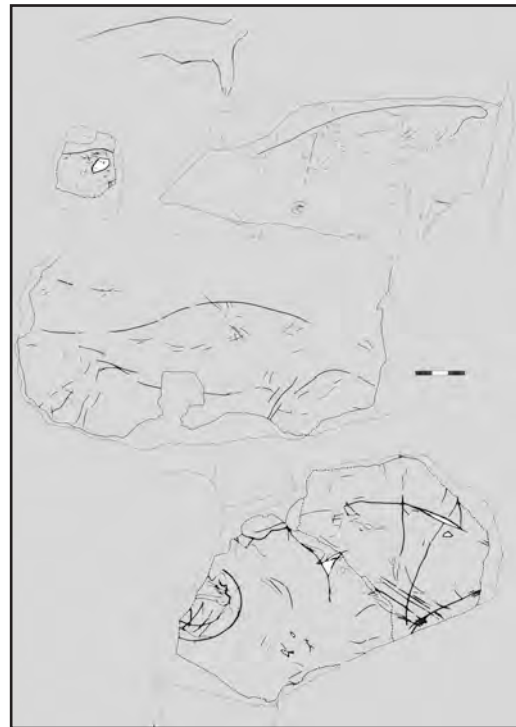


Figure 5.5 (upper right) Gönnersdorf. Seals with a step between mouth and skull, possibly *Phoca vitulina*.  
Figure 5.6 (lower right) Gönnersdorf. Seal-representations not identifiable to species.

was occupied in the winter (Poplin 1976). The flint material used for the artifacts indicates that this group came from the North (Floss 1994). The raw material includes Baltic flint which occurs in the Northern Central European lowlands, to which it was transported by glaciers.

Many drawings come from this concentration. In addition to 227 female depictions (Bosinski, d'Errico and Schiller 2001) we have recognized 149 images (mostly partial) of animals, including mammoth (66), horse (27), rhino (12), reindeer and deer (8), aurochs and bison (8), ibex (4), birds (4), bear (3), saiga (2), fish (2), wolf (1), lion (1), and turtle (1), as well as the seven seal pictures (Bosinski and Fischer 1980; Bosinski in press).

In Concentration IIa there were two plaquettes with seals (Figure 5.7): the Grey Seal 287, 2 (Figure 5.4), and the big head 270 B (Figure 5.5). The structure and subdivision of this dwelling were very similar to those of Concentration I (Sensburg 2004). The preliminary analysis of the bone-material indicates a summertime stay (Poplin 1978). The raw material used comes from the Meuse region, 100 km northwest of Gönnersdorf (Floss 1994).

From Concentration IIa we have 51 female depictions and 90 animal representations. Especially numerous are horse (35) and birds (15). In addition there are mammoths (7), reindeer and deer (6), aurochs and bison (6), ibex (4), rhino (3), saiga (2), bear (2), fish (2), turtle (1), and frog (1), as well as the two seals (Bosinski and Fischer 1980; Bosinski, in press).

From Concentration III and its southeastern spur we also have two plaquettes with seals (Figure 5.7). Plaquette 256 with an elongated, almost complete seal (Figure 5.1) was found in the central part of the concentration, and plaquette 286, with a sketch of the animal (Figure 5.6), in the southeastern part.

Concentration III is much smaller than Concentrations I and IIa, but also represents the ground-plan of a habitation with pits and fireplaces (Terberger 1997). The prey seems to indicate that this dwelling was used in the winter. The artifacts' raw material is more diversified and possibly mixed (Floss 1994; Terberger 1997). But there are components (Kieseloolith, Chalcedony) which point to the Mainz Basin, about 100 km south of Gönnersdorf.

On the slates from this concentration we have recognized 20 females and 14 animals, including horses (5), birds (2), wolves (2), and mammoth (1), as well as the two seals. Considering the small number of images, the two seals are remarkable.

Finally, plaquette 284 with a schematic seal (Figure 5.6), was discovered on the northern fringe of the excavation, between a tent-ring (Concentration IV) and an outdoor fireplace (Figure 5.7). In this northern area the drawings are very sparse, and it has been supposed that the engraved plaquettes found were taken from other concentrations and used in this zone without any notice being taken of the drawings (Bosinski, d'Errico and Schiller 2001:298).

### Depictions of seals in the Magdalenian

Representations of seals from the Magdalenian are known from 14 sites (Figure 5.8). In Central Europe, besides Gönnersdorf there is only one image from Andernach representing a swimming animal with a big eye and a streamlined body-shape (Figure 5.9). The central part of the drawing has flaked off, but there would have been room in front of the damage to preserve the fore-fin. Possibly it is indicated by an oblique line inside the body. Or perhaps it is not a seal - from its head it would be the Common Seal (*Phoca vitulina*) - but an otter that is represented.

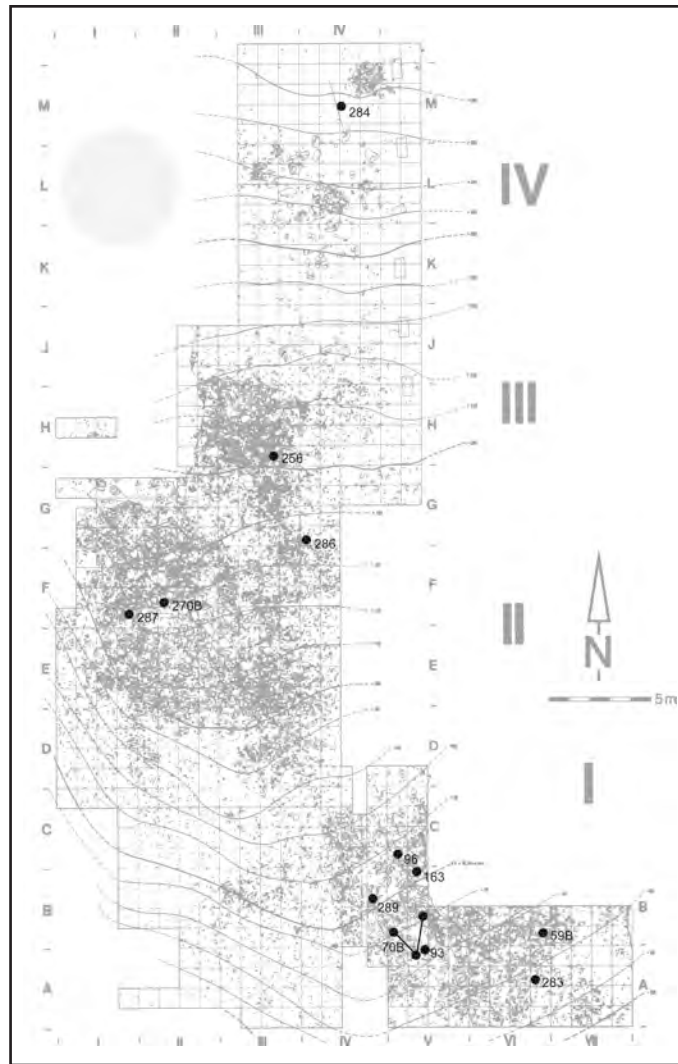


Figure 5.7 Gönnersdorf. The plaquettes with seal representations in the excavation area.

The seal-depictions of Western Europe were published by de Sonneville-Bordes and Laurent (1983) and more recently by Serangeli (2001, 2002, 2003).

The scene on the bâton de commandement from Montgaudier (Charente), made famous by Alex's classic study (Marshack

1970), depicts two seals (the head type corresponds to Grey Seals, *Halichoerus grypus*), and salmon, eels, feathered lines, and other figures that are difficult to interpret. The seals could be a male and female, both swimming as indicated by the movement of their tail-fins. Salmon and eels indicate that the scene is taking place in the water.

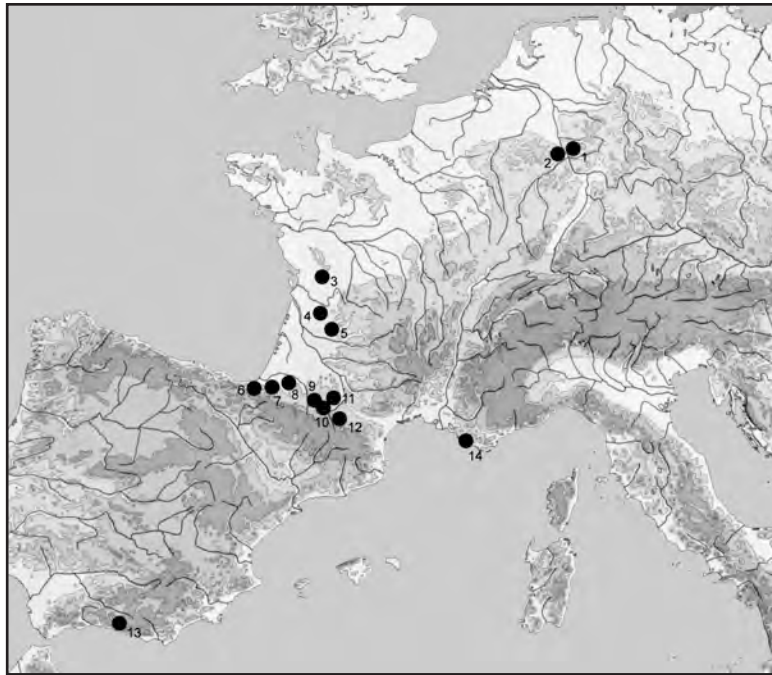


Figure 5.8 Representations of seals in the Magdalenian: 1 Gömmersdorf; 2 Andernach; 3 Montgaudier; 4 Abri Mège; 5 Abri Lachaud; 6 Duruthy; 7 Isturitz; 8 Brassempouy; 9 Gourdan; 10 Grotte Enlène; 11 Mas d'Azil; 12 La Vache; 13 Nerja; 14 Grotte Cosquer.

Two fragments of baguettes demi-rondes from the Abri Mège at Teyjat (Dordogne) also display compositions including seals. The smaller piece depicts a seal seen from above. Its bent body was described by Henri Breuil: “...au moment où il saute à l'eau, les pattes antérieures étalées, celles de derrière redressées au-dessus du bassin” (Capitan et al. 1906:210). Behind this animal the head of another seal is preserved.

The engravings on the bigger fragment are, according to Breuil: “...un animal fantastique qui tend la tête vers une figure plus compréhensible, un quartier de phoque; on voit sans peine les deux pieds pennés, se rattachant à l'arrière-train isolé”. This image, which looks like the cut-off tail of a seal, as well as the “animal fantastique” in front of it, are seen by de

Sonneville-Bordes and Laurent (1983:71) as butchering a seal, and they suppose that some lines engraved behind the head and above the tail of the “animal sautant” also indicate how to butcher a seal.

Other representations are found in the foothills of the French Pyrenees. On a bone fragment from Le Mas d'Azil (Ariège) there are engraved seals (Serangeli 2003:72). A rib-fragment from La Vache (Ariège) preserves the front part of a seal, and another seal is depicted on a bird bone (Thiault and Roy 1996:318). From the Grotte Enlène (Ariège) comes an image of a seal carved on an antler chisel (Clottes and Courtin 1995:134) “trouvé dans les déblais des anciennes fouilles. Magdalénien moyen” (letter from R. Bégouën, 26 Sept. 2005).



Figure 5.9 Andernach (Rhineland). Seal. After G. Bosinski 1994.

In the cave of Gourdan (Haute-Garonne) Piette found a baguette demi-ronde with the drawing of a seal with a big eye, a beard, and hatched patterns inside the body; from the position of the fore-fin this is a swimming animal. “Le Phoque présentait, quand on l’a sorti de terre, des traces très nettes d’un semis de petites mouchetures noires, faites avec de la couleur et qui se sont entièrement effacées depuis” (Piette 1907:110).

Also from Piette’s excavations comes the engraving of a seal found in the Grotte du Pape at Brassempouy (Landes). This animal, too, is swimming as is the case with a seal depicted on a bear tooth from Duruthy near Sorde-l’Abbaye (Landes), already mentioned by Piette in a comparison with his finds.

The figure of a seal carved in the contour découpé technique out of a rib was found in the Magdalenian of Isturitz (Pyrénées-Atlantiques). The seal’s tail is still linked to the rib. The fore-fin is engraved in a distorted way inside the body, dependent on the technique used. In addition, on a plaquette from Abri Lachaud (Dordogne) a drawing of an animal with a raised head, an eye, and an indicated fore-fin may represent a seal (Serangeli 2003:fig. 4.1:18).

The engravings from Morin (Gironde) and La Madeleine (Dordogne), also mentioned by de Sonneville-Bordes and Laurent (1983), have to

be excluded. The animals on the bâton de commandement from Morin with their large mouths and square-like heads do not resemble seals. And the “seal” from La Madeleine literally dissolved after the new relevé by Tosello (2003:34 and figs. 302–303).

Further images are known from cave-art. The determination of two seals from La Peña de Candamo (Clottes and Courtin 1995:fig. 128) remains uncertain. But the painted, spindle-like animals from Nerja near Málaga are likely to represent seals (Dams 1987). The cave is near the Mediterranean coast; this led to their identification as Monk Seals (*Monachus monachus*), the only seal species of the Mediterranean.

The seals from the Grotte Cosquer near Marseilles are very different from the spindle-like type of Nerja (Clottes and Courtin 1995). Often they are merely sketches, and it happens that the hairs of the beard shift to the mouth (Figure 5.10). These figures are among the younger representations in this cave, dating to the transition from Solutrean to Magdalenian and almost contemporary with Lascaux. In view of the geographical position of the Grotte Cosquer, Monk Seals were thought of in this case too. Lines or bundles of lines associated with the seal-images are a special attribute of the Grotte Cosquer, and seem to represent weapons (spears).

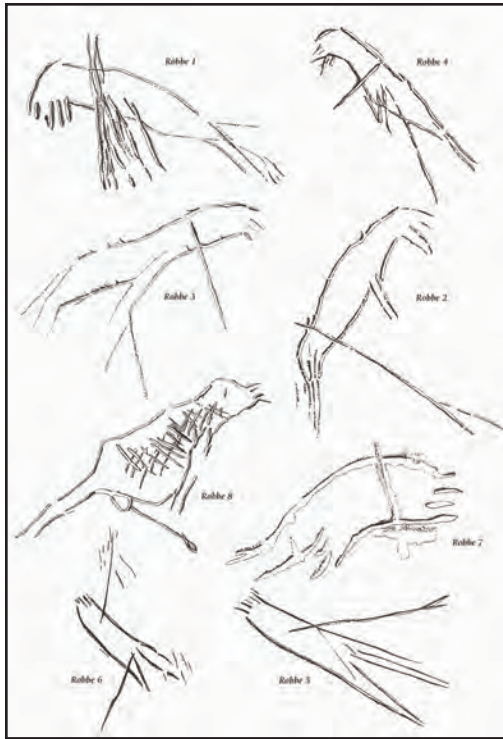


Figure 5.10 Grotte Cosquer (Bouches-du-Rhône). Speared seals. After J. Clottes and J. Courtin 1995.

### Sealing in the Magdalenian

De Sonneville-Bordes and Laurent (1983:79) assumed that the representation of seals at the end of the Upper Palaeolithic could have been caused by climatic changes. But it seems more reasonable that these images of seals in Magdalenian art reflect the growing economical importance of sealing.

Upper Paleolithic sites with seal bones are mostly situated along the Spanish and Italian coasts, where the coastlines have not changed much since Magdalenian times (Serangeli 2003; Figure 5.2). But in Northern Central Europe the ocean shore was at that time more than 200 km to the north and northwest. Even if

younger seals, especially *Phoca vitulina*, migrate upstream in the bigger rivers, it can be ruled out that seals lived during the Magdalenian in the Middle Rhine Region, then about 500 km from the mouth of the Rhine and the ocean. This is supported by the absence of seal bones in the prey remains at Gönnersdorf.

Without any doubt the artists knew these animals very well. They remembered the images and were able to draw them without any hesitation or mistakes. It seems very likely that people from Gönnersdorf went to the faraway coast. In addition to the seal representations, the images of two water-turtles may be another clue to their stay at the ocean-shore (Bosinski and Bosinski 2005). Above all, the human group which used Concentration I at Gönnersdorf had relations with the North. This concerns the raw material of the stone artifacts (Baltic flint), but also the numerous representations of mammoth (66) and rhino (12; Figure 5.7), animals which are almost absent in the Gönnersdorf bone material and which lived in a northerly landscape.

Common Seals (*Phoca vitulina*) and Grey Seals (*Halichoerus grypus*), as represented at Gönnersdorf, only occasionally come ashore, and perhaps were hunted during these times. Possibly the animals were also captured near their breathing-holes in the ice.

However, sealing with boats and harpoons would have been much more successful. The use of spears seems proved by the Grotte Cosquer representations (Figure 5.10). In the later Magdalenian these spears were armed with harpoon-heads and thrown with the atlatl. In a certain way this could explain the Magdalenian harpoons whose use for fishing or horse- and reindeer-hunting appears rather questionable.

Knowledge of boats cannot be excluded when we realize that in Japan, already in the early Upper Palaeolithic, a special kind of obsidian was

used which came from Kozushima, a volcanic island about 50 km offshore, that could only be reached by boat (Ono 1995). But up to the present, Magdalenian sealing sites on the shores of the Atlantic or North Sea remain unknown, because they are flooded.

#### **About the authors**

Gerhard Bosinski and Hannelore Bosinski †  
3 Place Mazelviel, 82140 St-Antonin-Noble-Val,  
France; E-mail: bosinski@orange.fr.

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