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BIRDS AND COSMOLOGY

Migratory birds and changing seasons

Although migratory birds can be seen at all latitudes, their presence and absence is nowhere felt as concretely and acutely as in the North. Birds migrate because the coming winter renders food resources scarce. Especially water-birds and waders are forced to leave, as the lakes and the sea freeze over. For humans, their departure thus signals the coming of autumn and the lean times of the year, months of cold and frost that posed a very real threat of death by starvation (Zvelebil and Jordan 1999: 199). Although this threat is no longer real, the mass migration of birds can inspire awe and a sense of melancholy at the passing of the summer even today. In prehistory, the effect must have been more pronounced, as bird populations were much larger and fowling was an important source of food.

Conversely, the return of migratory birds indicated spring and life – both concretely, in providing an important food resource for fowlers and egg poachers, as well as symbolically, with the courtship rituals and calls of birds reaffirming life and fertility. Migratory birds flying in large formations, such as ducks, swans and cranes, have thus been intertwined with the cyclical character of life, which is particularly prominent in high latitudes – reflecting the perception of the North as the world of extremes and contrasts. It is not surprising that several northern peoples (such as the Nganasan, Enets and Dolgans) have special rites for welcoming migratory ducks and swans in the spring (Napolskikh 1992: 9). It may even be that the migratory routes of birds are in part responsible for the general association of South with life and North with death, so omnipresent in northern circumpolar cosmologies. The ancient roots of this notion are represented in the orientation of graves in northern Fennoscandia, which almost throughout prehistory were oriented roughly along the north–south axis. Only with the advent of Christianity towards the late Iron Age did an east–west orientation become standard.

However, not all migratory birds inspired similar interest, either economically or symbolically. Although there has undoubtedly been much regional variation – for example, at some sites jays and ospreys seem to have been symbolically significant (Mannermaa 2013) – the emphasis seems to lie in those species that mass migrate in V-shaped formations consisting of thousands of birds, such as ducks, geese, cranes and swans. From a southerly perspective, swans particularly have been regarded as symbols of the North. For instance, in myths concerning the Hyperborean Apollo (i.e. Apollo of a northern origin), which go back to Homer and Hesiod, the god of light left Greece in the fall to spend the winter in the Far North and returned in the spring in a chariot drawn by northern swans (Figure 8.1).

Osteological studies (e.g. Mannermaa 2003; Mannermaa and Lõugas 2005) demonstrate the significance of fowling in the northern Baltic Sea region throughout prehistory, and while egg collecting is more difficult to attest, ethnographic sources indicate that it likewise formed an important part of the diet. Various ducks, gallinaceous species (such as grouses and capercaillies) and swans clearly dominate osteological material and appear to have been the species preferred by hunters, but the same species also feature prominently in iconography and various ritual contexts, indicating that the relationship between humans and birds went far beyond that of hunter and prey.

As we have seen (Chapter 5), water birds feature in the very birth of the world in Finno-Uralian mythologies and are possibly depicted in that function in Neolithic



FIGURE 8.1 Apollo depicted as riding on a swan on a Greek red-figured krater (c. 400–380 BC). Photo: British Museum.

rock art of Lake Onega. It is interesting to note that their depiction in rock art is mostly restricted to eastern Fennoscandia, where bird imagery occurs also in contemporary Typical Comb Ware pottery decoration (see Figure 3.2). Moreover, the ability of water birds to both fly, walk on dry land and dive underwater resonated with the circumboreal notion of a tripartite universe, rendering them the messengers *par excellence* between the different levels of cosmos – both real and imagined, geographical and spiritual.

In shamanistic understandings, travels to the upper world often take place in the shape of supernatural bird (Bäckman 1975), called *sáiva leddie* by the Sámi, whereas divers such as the common goldeneye (*Bucephala clangula*) were associated with the subaquatic lower world (Napolskikh 1992). The supernatural spirit-helper bird was often a capercaillie (*Tetrao urogallus*), and a recurring story recorded in Lapland relates a ‘hunting accident’, where a hunter shoots a flying capercaillie, but when he inspects the place where the bird fell, he finds a dead shaman instead. This folklore motif appears to have a very long history, as one of the scenes at the complex Bergbukten 1 panel at Alta (dated to ca. 4200 BC) may describe a similar incident. It shows a group of eight human figures arranged in a row, one on top of the other, with the last one touching the head of the second-to-last figure and oriented in a different way (Figure 8.2).

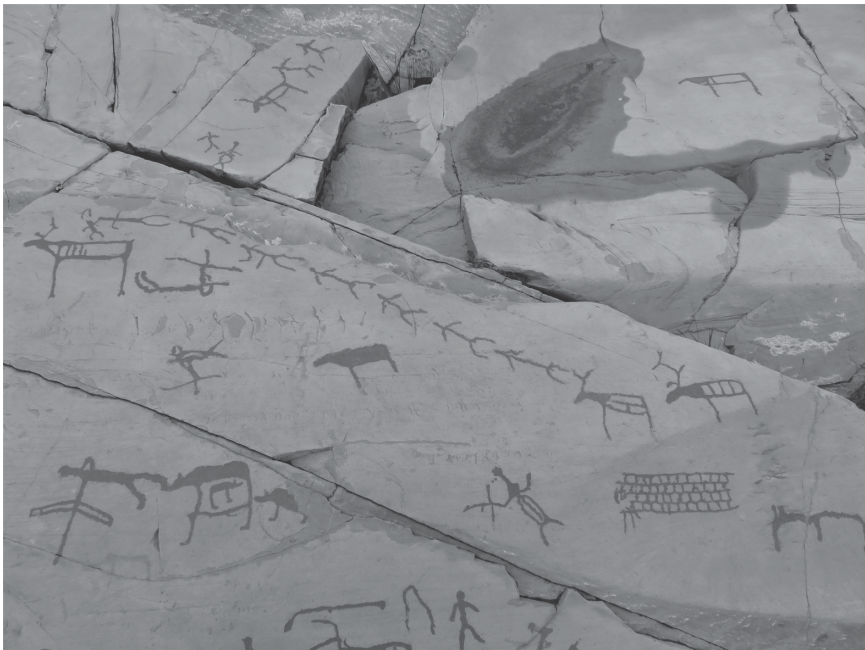


FIGURE 8.2 A scene from the rock carvings of Alta, northern Norway, which may be interpreted as showing a shamanic flight interrupted by an archer. Photo: Antti Lahelma.

Rather than a group of people walking, this may well be a case of time-sequenced action, as Gjerde (2010: 128) has suggested. Some reindeer figures are nearby, and Gjerde interprets the scene as representing a flying shaman who transforms from a reindeer to a shaman and then back into a reindeer. The two reindeer figures may or may not be associated with the scene – it is hard to be sure. However, it seems certain that a large human figure wielding a bow and arrow facing the group is, in fact, a part of the scene, because the fifth human figure in the ‘flying’ group appears to have an arrow embedded in the stomach region. The scene thus appears to depict a person shooting another person flying in the air and subsequently falling down from the sky.

Birds as persons

Swan bones feature particularly prominently in the Danish Mesolithic faunal material of the Ertebølle period, both as refuse and in burial contexts. For instance, the site of Aggersund has been suggested to be specialized camp for hunting swan (Möhl 1978), as all of the faunal material found consisted of Whooper swan bones, and swans occur also in Finnish Mesolithic and Neolithic finds (Ukkonen and Mannermaa 2017). This seems natural, as swans are large birds and, because they are slow and not very afraid of humans, fairly easy to catch. An adult Whooper swan yields about 5 kg of meat and was an important source of nutrition in Lapland until the early twentieth century when it was nearly hunted to extinction (Leinonen 2000). The Sámi also used swan bones, skin and feathers to produce various utensils. At the same time, though, there is much to indicate that the interaction between humans and birds such as swans and capercaillies was just as complex as – and in many ways resembled – that between humans and elk, as discussed in Chapter 4.

The famous Danish Mesolithic burial site of Vedbæk Bøgebakken, which is roughly contemporary with Aggersund, shows evidence of a very different or ‘non-economic’ relation with swans (Albrethsen and Brinch Petersen 1976). In Grave 8, the archaeologists uncovered a double burial of a roughly 18-year old woman and a newborn baby that had been placed on a swan’s wing. Overton and Hamilakis (2013) have discussed the Danish sites in their ‘manifesto’ for a social zooarchaeology as an example of the sensuous and affective relationship between two different – but sentient and autonomous – species, in an effort to move beyond the notion of animals as an exclusively nutritional or symbolic resource for humans. According to them, skinning a killed swan was an emotionally charged event, which involved sensory experiences such as seeing the red blood on white plumage, touching the skinned corpses with soft white skins and in general engaging with the dead animal (Overton and Hamilakis 2013: 218). Placing a dead baby on the wing of the animal, however, suggests a nurturing and protecting relationship.

The Neolithic carvings of Lake Onega are dominated by images of waterfowl, with at least 44% representing either swans or geese (Poikalainen 2004). Their ‘meaning’ evidently varies greatly depending on the compositional context, details of execution and relation to the physical features of the rock (see Lahelma 2012a), but some of these images seem to imply a co-essence between swans and humans.

Poikalainen (2006) has identified a series of images that seem to represent different stages of metamorphosis from swans with human features (such as a human foot instead of a webbed foot) to humans with swan features (such as a beak and a curved shape suggesting a swan's neck), signifying a type of ontological fluidity between the two species. Zhulnikov (2006: 42) also cites an example of a site from Neolithic Karelia, where all other faunal remains were buried scattered in the same refuse pit, while a skeleton of a swan was deposited complete in a separate pit – in effect given a proper burial.

Just as hunting elk was a sexually charged act, in which physical metamorphosis was an ever-present danger, fowling may likewise have involved imitating and seducing the prey. Tubular bone artefacts interpreted as flutes have been found in both Mesolithic and Neolithic contexts. While the interpretation of these artefacts is sometimes uncertain, experimental research carried out by the Rainio and Mannermaa (2014) on perforated artefacts found at the Middle Neolithic hunter-gatherer site of Ajvide on the Swedish island of Gotland confirmed that at least in that case they have indeed formed a two-piece flute. Use-wear analysis and ethnographic parallels from North America suggest that this type of flute was used for imitating bird calls.

The authors suggest that the flutes of Ajvide were used in fowling to attract birds towards the hunter but also consider the possibility that birds were imitated in religious rituals (Rainio and Mannermaa 2014: 96), as is common among Siberian foraging peoples (e.g. Siikala 1978: 134–136, 167–170). However, these purposes are not mutually exclusive, and the fact that the flute is made of swan bones seems significant as it brought the flute-player into intimate sensuous contact with the bird's physical remains. Mimicking a bird may have formed a part of both shamanic séances, ritual dances or plays and the effort of 'courting' the animal in connection with fowling. Such courting may be depicted in a famous rock art scene from Kanozero, Kola Peninsula, where a sexually aroused man wielding an elk-headed staff is shown facing a capercaillie (Kolpakov and Shumkin 2012).

Birds as guides and soul-birds

In most Indo-European languages, the name of the Milky Way associate its stars either with a road consisting of either milk (e.g. *Via Lactaea* in Latin) or snow (Sw. *Vintergatan*, or the 'winter road'), but among the Finno-Ugric peoples, the Milky Way was conceptualized as a huge flock of migratory birds (Kuperjanov 2002). Each star in the galaxy was thought to represent a bird-shaped human soul on its way to the otherworld that lay beyond the horizon, at the south-western end of the 'Pathway of Birds' (Finn. *Linnunrata*). The Estonian folklorist Andres Kuperjanov (2002: 52) cites a folklore account recorded at the parish of Keila, close to Tallinn, according to which:

The birds are led by a white bird, similar to a swan, with the head of a pretty maiden that all birds of prey fear. Hawks and eagles hide in the clouds from

it. In the summer it lives on top of a boulder in the North, watches the mid-night sun and is fed sweet northern berries by big birds. My grandmother's third husband, Jüri Nõmberg, was an old seaman and he saw how this white bird led a big herd of birds over the great sea towards land. It flew so low that its young maiden's face could be seen and a big tired hawk flew away from the ship's mast in fright.

It is worth noting that the constellation of Cygnus or Swan lies on the plane of the Milky Way, and the maiden-faced 'lead bird' mentioned in the story above may conceivably refer to the constellation. Its shape is readily recognizable as cross- or bird-like, and its stars are among the brightest in the night sky. Its present name and association with a swan is derived from the classical world, but Finno-Ugric peoples appear to have likewise recognized it and interpreted it as a long-necked water bird, and interestingly a second major constellation – that of the Great Bear – likewise finds a similar identification and interpretation in both Ancient Greece and the Finno-Ugric world (cf. Chapter 4). Heikki Simola (2001) points out that the orientation of the constellation, as it were, seems to 'show the way' to migratory birds, because the migratory path of Arctic geese at Lake Onega goes from south-west towards the north-east. In the April night sky, Cygnus lies close to the northern horizon and is oriented towards the north-east, whereas in October it lies close to the zenith and 'flies' towards the south-west.

In a Uralic context, water birds emerge both as symbols of the soul and as messengers between this world and the other. The Udmurts, for example, capture swans and send them swimming along the River Vyatka to deliver prayers to the Supreme Deity (Napolskikh 1992: 7), and the Khanty place carved wooden birds in graves to guide the deceased to the Otherworld (Zvelebil and Jordan 1999, fig. 6.11). Zhulnikov (2008: 41) describes a different type of present-day Khanty death ritual, in which a small hut was constructed to house a wooden effigy of the deceased. A duck was then killed and left in front of the doorway of the hut, its head oriented towards the north or the direction of the Land of Death. At the end of the ritual, the hut and the effigy were burned and the duck was boiled and eaten.

The Vepsians of southern Lake Onega region still maintain beliefs concerning swans and ducks as 'soul-birds' and taboos against hunting them (Vinokurova 2005). When a person slept, his or her 'free-soul' was thought to fly about in the shape of a bird, and when a person died, the soul escaped in the form of a bird. Wooden bird-sculptures that represent the soul of the deceased can sometimes still be seen on top of the wooden Orthodox crosses at Vepsian and Karelian cemeteries (Figure 8.3). In modern Finnish cemeteries, images of birds (typically small bronze sculptures of sparrows or swallows) are one of the most common symbols on tombstones, even though they bear no relation to Christian symbolism. While this may in part be rooted in national-romantic imagery, such as Zachris Topelius' (1818–1898) popular poem on a 'sparrow at Christmas morning' – in which a girl's deceased little brother appears as a sparrow – it nonetheless echoes ancient beliefs



FIGURE 8.3 A Greek Orthodox cross at the village cemetery of Suistamo, Karelia, with a bird symbol or ‘soul bird’ on top. Photo: Auvo Hirsjärvi/Finnish Heritage Agency.

and practices concerning soul-birds that were part of Finnish folk culture still in the early twentieth century (Haavio 1950).

Archaeologically, similar notions related particularly to water birds appear to emerge already in the Mesolithic, as exemplified by the burials of Vedbæk, Zvejnieki and Olenyi Ostrov, where bird body parts – and in some cases complete duck skeletons – have been argued to reflect the role of these animals in guiding the dead to the Otherworld (e.g. Zvelebil 2003; Mannermaa 2006). Bird’s wings and duck feet found at the Mesolithic cremation burial of Gøngehusvej 7 at Vedbæk (Brinch

Petersen and Meiklejohn 2003) may have served a similar purpose. The trend seems to continue into the Neolithic, as most finds of bird bones at Ajvide derive from wings of water-birds (Mannermaa 2008). In addition to bird bones, small carved figurines representing birds are occasionally found in Neolithic graves (Antanaitis 1998), such as Tamula in Estonia, where a bird figurine and two wing bones of a crane were found near the hands of a child (Jaanits et al. 1982; Kriiska et al. 2007).

Various early and later Neolithic pottery styles in the region also refer to water-birds, the most obvious examples being the occasionally occurring rows of swan or duck motifs in Typical Comb Ware pottery decoration (Utkin 1989; Pesonen 1996). In a few cases the birds are accompanied by human figures, as at the Kolomcy sherds found near Novgorod in Russia (Äyräpää 1953), where the anthropomorph has horns in its head, recalling highly similar figures in Finnish rock paintings. Images of birds and anthropomorphs cease to be made in the following late Comb Ware, but the association seems to persist, as feathers and eggshell fragments are sometime used as a temper in late Comb Ware (Huurre 1998). Moreover, the shape of both Typical and late Comb Ware vessels evokes the shape of an egg. Precisely why or how pots and waterfowl are related is difficult to guess, but it may be noted that the elk- and waterfowl motifs also manifest in the handles of contemporary wooden spoons, which Immonen (2002) suggests were used in communal food-sharing rituals following a hunt. Perhaps the pots decorated with water birds were likewise used in communal feasting associated with birds, such as the present-day Siberian rituals that celebrate the arrival of the first flocks of ducks and geese (Napolskikh 1992: 9) or the Khanty burial ritual described above.

Later manifestations of the significance of waterfowl can be found in Iron Age jewellery, where ducks and swans (and their feet in particular) are a common theme throughout the entire Finno-Ugric area, and in ethnographic materials such as traditional Karelian embroidery (*käspaikka*), which show several motifs – such as double-headed water-birds – that are thought to derive from a very distant past, possibly even related to the Neolithic carvings of Lake Onega (Säppi and Oino 2010).

Cranes and dwarfs

In Finno-Ugric cosmology, a paradise-like island known as the ‘Home of the Birds’ (Finn. *lintukoto*) lay beyond the south-western horizon, to where the Milky Way seems to lead. This otherworldly place where migrating birds fly to is known for instance among the Finns, Komi, Khanty and Mansi and seems to belong to the oldest stratum of Uralic myth (Napolskikh 1992). Because heaven and earth met here, the place was so low that a grown-up person could not stand straight. For this reason, it was populated by small human-like creatures (Finn. *lintukotolaiset*), who in some myths stole the eggs of the birds and waged a war against cranes (Berezkin 2007). The Finno-Ugric myths bear an astonishing resemblance to Ancient Greek myths concerning the state of war between Pygmies (Gr. *πυγμαῖοι*) – a race of dwarfs – and migrating cranes, a theme known as Geranomachy, which makes its first appearance already in the *Iliad* (Book III:5). According to Homer, the Pygmies



FIGURE 8.4 Dwarfs fighting cranes in Greenland. A vignette from Olaus Magnus' *Historia de gentibus septentrionalibus* (1555).

faced the cranes each winter in their homeland on the southern shores of the earth, by the shore of the World River or Oceanus (Gr. Ὠκεανός). The myth is subsequently reported by authors such as Herodotus, Aristotle and Pliny the Elder as an ethnographic fact, and it also features prominently in Ancient Greek and Roman art (Dasen 1993; Ovadia and Mucznik 2017). In the sixteenth century, it is repeated by Olaus Magnus who places the struggle in Greenland – a place that (from a Swedish perspective) lay at the extreme outer edge of the inhabited world (Figure 8.4).

According to Ovadia and Mucznik (2017: 152), it appears that Greek and Roman authors have never offered an explanation to the somewhat bizarre myth concerning Pygmies and cranes, and that modern authors have likewise failed to do so. Their interpretation is that it relates 'a real and true event, clothed in mythical vestment, in the Greek and Roman worlds, in which the Pygmies hunt the birds in order to consume their flesh' (Ovadia and Mucznik 2017: 165). In other words, it would describe real African hunter-gatherer tribes hunting cranes for food, an ethnographic reality perhaps witnessed by Greeks stationed in Egypt and later transformed into a myth. However, as Berezkin (2007: 68) points out, because 'the study of classical antiquities had been poorly integrated into the mainstream of anthropological research, the Pygmies [sic] and cranes motif was considered by many to be peculiar just for the Greeks'. The Finnish linguist Yrjö Toivonen (1937) demonstrated already in the 1930s that the same theme can be found in Finnic, Siberian and North American myths, and that a 'heliocentric' Greek origin for such a wide-spread motif seemed unlikely. If anything, it is more likely of a northern circumpolar origin.

Several observations can be brought about to support this notion. First, the Pygmies are described as minuscule in size, which fits well with the notion of a people living beyond the horizon where the world (in a flat-earth cosmology)

was very low. Significantly, the Greek authors generally located the Pygmies in the Upper Nile, that is, to the south of Greece and at the extreme reaches of the known world, while Strabo specified that since 'Oceanus stretches along the entire southern sea-board, and since the cranes migrate in winter to this entire sea-board, we must admit that the Pygmies also are placed by mythology along the entire extent of that sea-board' (cited in Ovadiah and Mucznik 2017: 155). In other words, he perceived them as a people located vaguely at the edge of the southern horizon, not in a specific geographic location. This suggests that the Greek myth may likewise be related to myths concerning the Milky Way as a pathway to a mythical land beyond the horizon – in Greece thought to lie in the south while in the northern regions generally located in the north-east end of the Milky Way.

The Common crane (*Grus grus*) is not just any bird but stands out from the crowd already because of its anomalously long legs and beak. As Russell and McGowan (2003) point out in their discussion on the symbolic role of cranes at Çatal Höyük, cranes resemble humans in a number of ways. They are bipedal, grow considerably tall (reaching ca. 120 cm in adults), and have a long lifespan (sometimes over 40 years) and social structure resembling that of humans. Most importantly, cranes dance. The dancing often takes place in formation, which can be initiated by a crane but also by a human imitating a crane. Moreover, cranes are by nature curious beings and can form a bond with humans, as testified by Jouko Alhainen, a Finnish birdwatcher dubbed by the press as 'the crane-whisperer', who has maintained an 'orphanage' for wounded cranes for over thirty years (Saarinen 2008).

Moreover, in Finno-Ugric myths, cranes also have a cosmological role. Cranes were thought to hold up the heavens, possibly because they are so tall and stand in an upright position (Lehikoinen 2009). This belief is reflected in contemporary Finnish language, where the ridgepole supporting the roof of a timber-built house is still known as *kurkihirsi* or 'crane beam'. Since buildings, whether conical teepees or rectangular houses, shape and replicate cosmology (see Chapter 3), the association of cranes with the ridgepole situates them in the very centre of the universe. The conflict with the 'dwarfs' at the outer extreme of the cosmos may perhaps be seen as a conflict between the centre and periphery, life and death or order and chaos. The theme of Geranomachy thus appears to be neither a burlesque parody nor a case of ethnographic observance of African tribes transformed into myth, but probably reflects the ancient cosmological notions of northern peoples adapted into a Graeco-Roman context. It may have been later elaborated based on explorers reports from the Upper Nile or Africa's west coast, as suggested by Dasen (1993), but such information hardly reached Greece in the age of Homer, when the myth already seems to have been commonly known by the Greeks.

In spite of this mythological importance – or perhaps because of it – cranes are rather invisible in the rich osteological and rock art material of the northern Stone Age, even if a few individual cranes are depicted at the carvings of Kola peninsula and Karelia (Kolpakov and Shumkin 2012). This puzzled Kristiina Mannerman (2008: 67), who surmised that the 'rarity of these species in the archaeological data may be the result of hunting restrictions or taboos'. Indeed, although swans have

commonly been hunted in Lapland, taboos appear to have existed further south in the historical period, and particularly in eastern Finland and Karelia swans were either revered or regarded as foul-tasting. In some folklore sources, killing a swan was compared to killing an angel, and among the Vepsians of Lake Onega swans were known as 'Gods' birds' (*jumalanlind*) (Vinokurova 2005). Such taboos may relate to the association of the swan with the Underworld, or the Land of Death, which it could reach thanks to its long neck.

Devil's swans

In addition to its pure white plumage, the exceptionally long neck of the swan is perhaps its most distinctive feature. It is, incidentally, also one of several features (such as monogamy, longevity and flying in V-shaped formations) that it shares in common with cranes. The long neck allows swans to reach water plants and their roots at depths not reached by other members of the *Anatinae* family, but among northern peoples, it has also associated the bird with the subaquatic Underworld. This association has been immortalized by the Finnish composer Jean Sibelius (1865–1957) in the tone poem called *The Swan of Tuonela*, a rather sinister avian swimming in the river that separates the land of the living from that of the dead ('Tuonela' being one of the mythological names in Finnish for the Land of Death). This association of swans with death and as messengers between the worlds also seems to be encountered already in classical literature: in *Phaedo* (84D–85B), Plato has Socrates saying that although swans sing in early life, they 'sing especially well when on the point of death, because they are about to go off to the god [Apollo] whose servants they are' – hence the association of 'swan song' with death. And because, being Apollo's birds, they are granted with the gift of prophecy, they do not sing from grief as they 'know beforehand that what is in Hades' realm is good – and they take delight in a different way that day than they have ever delighted before'.

The neck of the swan clearly fascinated the Neolithic inhabitants of Lake Onega, who sometimes depicted in rock art swans with an almost ridiculously long neck. The necks and heads of the swan figures, moreover, bear a special relation to cracks and fissures in the bedrock. For instance, at the cape of Besov Nos ('Devils' Cape'), two disembodied necks of a swan emerge from a rift, as if entering our world from underneath, while at the Karetskyi Nos locale a swan with a neck seven times the length of its body appears to plunge into a crack in the rock. Some images of swans have even incorporated a crack into the image so that a natural crack forms the neck of the swan (Lahelma 2012a).

Although the Finno-Ugric Otherworld could be reached through various means, such as diving into a lake bottom or travelling far up north, in Finnish–Karelian shamanistic folklore cracks in the rock commonly serve as portals into the world of the dead (cf. Chapter 2). This is reflected, for example, in the Finnish expression *langeta loveen*, 'to fall into a crack', which in traditional Finnish–Karelian *Kalevala*-metric poetry refers to falling into a trance. Swans entering a crack or



FIGURE 8.5 A Neolithic carving of a swan at Lake Onega has been superimposed by a Greek Orthodox cross probably in the late medieval period. Photo: Antti Lahelma.

emerging from one thus appear to symbolize the passage of the soul (either of a deceased person or of a shaman) between this world and the Lower World.

Because swans were associated with the Lower World, which in a Christian interpretation might be understood as equivalent with Hell, the images of swans may have been viewed as pagan or even ‘evil’ by medieval Christian missionaries entering the region. This is indicated by the fact that, in addition to the central figure of the Lake Onega complex (a large human figure locally known as Bes or ‘The Devil’), one of the swan figures at Besov Nos has been superimposed by a carved Greek Orthodox cross (Figure 8.5). The crosses have been dated on stylistic grounds to the fourteenth or fifteenth century AD, and it has been suggested that they were made by the monks of the nearby monastery of Muromsk.

Solar swans?

In addition to the swans, one of the most emblematic types of motif at Lake Onega are so-called lunar and solar symbols. Most are the shape of the crescent, circle or semicircle, from which one or two straight lines project, sometimes forming a loop. There is much variation (at least twenty-five different types can be identified), and their interpretation has raised some discussion, but the suggestion made by Ravdonikas (1936) that they are associated with the sun and the moon has today won wide acceptance. They are not found everywhere at the carving area, but are

concentrated on specific locales, such as Peri Nos. This has prompted Zhulnikov (2006) to suggest that those locales were devoted to observing astronomical phenomena. The orientation of the 'rays' is likewise not random. At Peri Nos, three groups can be identified – one with rays toward the north, the other towards the east, and the third towards south-west – possibly signifying orientations of cosmic significance. East, of course, is the direction of sunrise, and north that of the Finno-Ugric Land of the Dead. South-west may have acquired significance as the direction to which the Milky Way seems to lead and from which, as noted above, migratory water birds arrive to Lake Onega.

The sun also affects the manner in which the carvings can be observed. At noon they are barely visible but become increasingly visible in oblique light and are best observed at sunset, in a sense making them alive and active. As the position of the sun shifts, new figures become visible, while others disappear. Moreover, the granite of Lake Onega is extremely smooth, polished by countless glaciations, and can be shiny and luminous when not covered by lichen, as is the case at the rock art locales located immediately on the lakeshore. Since luminosity and shininess is cross-culturally associated with supernatural power, the cliffs themselves may have carried associations with light and sun.

One of the best-known carvings of swans at Besov Nos differs from the rest in that a solar symbol is clearly intentionally attached to its neck (Zhulnikov 2006), raising a question if swans were also associated with the sun. As suggested by the composition of Bolshoy Guri (see Chapter 5), they appear to have been associated with the Creation, where according to folklore accounts the yolks of the Cosmic Egg formed the sun in the sky. The so-called 'cosmic swans' that occur throughout the Onega carving region, with a body consisting of three concentric semicircles, may belong to the same theme of swans and cosmogony. However, the figure of Besov Nos may also refer to myths and associations that are lost to us. A mythical solar deer or elk, which carries the sun between its antlers, is widely known among the northern circumpolar peoples (Jacobson 1993) and may have been preceded by other solar creatures. It is intriguing that, as already noted, in classical myth Apollo – who is strongly associated with the sun – rides in a chariot drawn by swans, and in some myths, Phaeton, the son of Helios or the divine sun – is associated with the constellation of Cygnus. This might seem like a vague correspondence, but perhaps worth considering since the number of parallels between northern cosmology and Greco-Roman myth seems to be surprisingly high.