

# BIRCH (*BETULA*, BETULACEAE) BARK HORNS AND SIMILAR INSTRUMENTS IN NORWAY

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## ABSTRACT

Wooden horns wrapped in coiled birch bark (Norwegian: *lur*) have a long history in Norway, dating back at least to the 7th century AD. By the Vikings, they were used for various signalling purposes, e.g. during battles. More recent uses are generally peaceful—to celebrate the opening of fairs, announce bishop visitations etc. In the 19th century, playing such instruments was as a popular past-time when herding cattle, and, if needed, to scare off predators (bears, wolves, etc.) or signal for help. Common throughout the southern part of Norway, such instruments gained symbolic importance during the 19th century national revival.

## RESUMEN

Los cuernos de madera envueltos en corteza de abedul enrollada (en noruego: *lur*) tienen una larga historia en Noruega, al menos hasta el siglo VII AD. Los Vikingos, los usaron con varios propósitos de señalización, ej. durante las batallas. Los usos más recientes son generalmente pacíficos—para celebrar el comienzo de ferias, anunciar visitas de obispos etc. En el siglo XIX, tocar tales instrumentos fue un pasatiempo popular cuando se cuidaba el ganado, y, si era necesario, asustar a los depredadores (osos, lobos, etc.) o como señal de auxilio. Comunes por toda la parte sur de Noruega, tales instrumentos ganaron una importancia simbólica durante el renacimiento nacional del siglo XIX.

## INTRODUCTION

Plants are versatile raw materials, and wood and bark can be used to produce a vast range of utensils. McCune and Prendergast (2002) drew attention to the use of birch (*Betula*) for making musical instruments or simple wooden horns in Europe, commenting on examples from Finland, Norway and Switzerland, based on specimens in Kew's Economic Botany Collection. No primary data from Norway were included, and a rather eclectic selection of other sources was used—but then, very little information is available in English. This paper aims at a comprehensive review of such wooden, bark-covered horns (Norwegian: *lur*) in Norway—history, materials, traditions, and uses.

For a botanist living in the far north of Norway, a striking aspect of the Norwegian birch bark horn tradition is its geographical distribution. Such instruments are well known and deeply rooted in folk tradition of the south, and rare in the north—despite the fact that ideas, traditions and innovations are easily transmitted along Norway's long coast, always a major communication route. The difference is certainly not due to topography, which is equally rugged in the north, suggesting a similar need for signalling instruments. This aspect has been overlooked in available literature, and trying to explain it is a second goal of this article.

### Etymology

The root meaning of the Norwegian word *lur* (old Norse *lúðr*) is a hollowed-out piece of wood, not necessarily a musical instrument (Christiansen 1952a, 1952b; Holtsmark 1946). The Norse god Heimdall possessed a famous example, *Gjallarhorn*. According to Norse mythology, and the poems of the younger Edda, “he has a *lur* called *Gjallarhorn* and his *lur* playing can be heard everywhere.”

A brief definition of such instruments is found in a late 17th century manuscript by Thomas Bloch, comprising a dictionary of terms used in Fyresdal, Telemark: “*Luu*, Instrumentum est, ut tuba, factum è ligna excavato, betulæ cortice circumvolutum, qvò pastores sonitum dant ad arcendos à pecoribus ursos et lupos,—is an instrument, made as a trumpet of hollowed out wood, wrapped in birch bark (Fig. 1), which the shepherds



FIG. 1. A typical Norwegian *lur* is covered by a coil of birch bark, serving both a decorative purpose and to keep the two halves of the interior wooden kernel together while blocking leakages.

blow to scarce bears and wolves away from the cattle” (Bloch 1956:23). Knud Leem’s Norwegian dictionary, compiled in the 1740s, offers a similar explanation: “A *lur*: an almost one fathom [1.73 m] long instrument made of wood (Fig. 2), and covered with birch bark, which the peasant girls use to blow, mostly in summer, when they are herding the cattle, partly for amusement, but also to scare off the bear” (cited from Hannaas 1923:120). An anonymous, late 18<sup>th</sup> century dictionary manuscript from Surnadal in Trøndelag provides similar information: [an instrument] “(.) for blowing, so that the sound can be heard loudly among the surrounding hills, and the bears in particular are scared and driven away from the cattle” (Hagland 1986:47).

The term *lur* has also been applied to a variety of other objects, e.g., hollow plant stems (Christiansen 1952a, 1952b; Myrvang 2010), which were frequently used as simple pipes, e.g., by children. In toponyms, it may refer to the occurrence of plant species with this characteristic, e.g. *Angelica sylvestris* L. (Myrvang 2010:186).

### History

As noted by McCune and Prendergast (2002), a wooden horn or *lur* was found in the Oseberg Viking burial ship, dendrochronologically dated to 834 AD. The specimen was 107 cm long and had a diameter of 4 cm at the broad end (Grieg 1928; for an illustration, see Christensen et al. 1994:134 or Vollsnes 2001:49). In a recent archaeological review of the Oseberg find (Christensen et al. 1994), the specimen is considered somewhat enigmatic, as a “scepter, blowing *lur* or ???”, but the description (Grieg 1928:270–271) fits a typical *lur*—a meter-long, wooden tube, tapering towards one end, consisting of two halves, with a somewhat irregular interior hollow—and there is hardly any reason for interpreting it otherwise, even though it had not been covered with



Fig. 2. This medium-sized instrument (length: 1.53 m) is easily carried, weighing a mere 520 g. Author's collection. Photograph by Mari Karlstad.

bark. Instead, the two halves were kept together by bands, attached in five incised rings. This technique is typical of Viking-age or older specimens (Vollsnes 2001:49) but was still used in parts of Norway as long as such instruments were commonly made, i.e., throughout the 19th century (Gundersen 1994:19).

An even older specimen from Norway was found in the Kvalsund ship burial, unearthed at Herøy in western Norway and dated to about 600 AD. It contained a short *lur*, 72.5 cm long, with a diameter at the widest end of 4.5 cm (Shetelig & Johannessen 1929:70). The short length may suggest that it had not been used as a musical instrument but perhaps as a kind of megaphone (Shetelig & Johannessen 1929:39). Similar wooden megaphones were used by fishermen in northern Norway until perhaps a hundred years ago (Christiansen 1952b:108).

### Making and materials

Several authors provide notes on how to make a *lur*. The most frequently used technique was to make two separate halves from a single piece of wood. It should be noted that Norwegian wooden horns are not exclusively made from birch wood and birch bark. This choice of material may have been most typical for the coastal districts, where *Betula* species are the predominant forest trees. Indeed, according to the original publication (Grieg 1928:270), the Oseberg *lur* noted by McCune and Prendergast (2002) was made of beech (*Fagus sylvatica* L.); more recent authors (Vollsnes 2001:49; Gundersen 1994:19; Sevåg 1966:10) state that the material used was yew (*Taxus baccata* L.), but no reason for doing so is given, and no revision of the original material has been carried out (Arne Emil Christensen, pers. comm.).

In many areas, not least inland, conifers were preferred as raw material for the interior wooden tube. In

southeastern Norway, spruce (*Picea abies* (L.) Karst.) was frequently used. Trees that had grown slowly were preferred. In the Hallingdal area, pine (*Pinus sylvestris* L.) was considered the best raw material (Gundersen 1994:22–23), not least because suitable working material could be found as preserved, subfossil stems in the mires; such material was considered less “fat” than fresh pines. Living pines could also be used; if so, they were split lengthwise from the bottom end. A single log could produce numerous instruments (Gundersen 1994:23).

The material chosen for the tube had to be of a certain minimum size, as the central part of a stem was avoided (Gundersen 1994:23). The halves were hollowed out, by knife or other tools. Using a knife would usually produce a more or less square interior hollow (Gundersen 1994:23). The two halves were then re-assembled. Some would glue them together, but others considered this to give instruments of inferior quality (Gundersen 1994:23). This is why they are wrapped in bark; a long, coiling strip of birch (*Betula*) bark served to keep the two halves together. Making the *lur* air-proof was essential, and the bark would also block potential holes or leakages. In addition, it obviously had a decorative function.

Instruments could also be made from bark only, coiling it up into a small cone, usually some 40 to 60 cm long (Nupen 1992:16). In addition to birch, bark of rowan (*Sorbus aucuparia* L.), alder (*Alnus* spp.), and the larger *Salix* species could be used (Hooker 1837; Christiansen 1952b; Høeg 1974; Nupen 1992; Dahl 2005:303). Even these simple instruments could survive for years but may have served mostly for children’s amusement (Hooker 1837).

Birch bark for the covering coil of a conventional *lur* was cut from the trees in spring or early summer (Gundersen 1994:24; Dahl 2005:303). Straight, tall-grown trees were preferred, as only these would yield bark of suitable quality—preferably white and with few scars (see discussion). With a knife, a spiral was incised, starting at suitable height, and the outer layer of the bark peeled off, so that one exposed the green, interior part (Gundersen 1994:24). The white outer skin was then removed, leaving the detached, yellow-brown part ready for use or almost so; the margins might need some trimming. The bark was attached to the *lur* while still fresh. Winding it onto the *lur* could start from either end. The start would lock itself. At the far end, the bark strip could be locked by inserting it under the coil. Small wooden plugs were often used as an additional way of securing the end. An experienced cutter could make very long coils; Hatledal (1997:6) mentions specimens up to 6 and 7 m long. He also noted that the trees survived, forming what he terms *korpebark* (“raven bark”) at the cut.

A detailed description of how to make a *lur* is provided by Ola Hola, based on traditions in Møre og Romsdal County, western Norway (Hola 2000:66–67). In this case, pines were preferred for the wooden core. The trees were cut before Christmas, while the moon was waning. They were split lengthwise, placed beneath a roof, and left drying for one year. From this material, a tube was prepared, some 80 to 90 cm long, with an interior diameter of about 6 mm at the thinnest end, gradually increasing to 14 mm towards the other end of the tube, until 14 cm was left. From this point, the diameter increased rapidly towards the outermost part (*sopen*), which had a diameter of about 10 cm. The wooden frame was 2.5 to 3 mm thick, except at both ends, where it was thicker. The *lur* was now covered with birch bark. This could only be done in summer. A fine, even-surfaced, young birch was chosen, and the bark cut spiral-wise downwards with a sharp knife. Each incision should be about 18 mm apart, so that the bark could be sliced off as long bands. The outermost skin was peeled off. The initial end of the strip was tapered so that it was only half as wide as the rest. Starting at the mouth-piece, the bark was wound onto the tube, with an overlap for each layer of about 3 mm. The bark should be attached tightly, so that it was stretched a little; this would press the two halves of the tube together. If the bark needed mending, it was done in the same way as at the start of the tube. The end was attached with three small wooden pins. Before the *lur* was used, clean water was poured through it. Instruments could also be made from a single piece of wood. This would avoid the risk of holes or leakages, but the preparation would be much more difficult.

### Shape and dimensions

The typical shape is that of a long cone, simply because it produced the best sound. A cylindrical *lur* was a bad instrument (Gundersen 1994:23). The diameter at the widest end could be some 85 to 100 mm (Gundersen

1994:2; Hola 2000:66). The mouth-end had a diameter of 10–12 mm or less (Fet 1991:23). Some horns were simply cut at the mouth-end; others had a more elaborate mouth-piece. The latter could also be loose and made of wood, horn, or bone.

The Kew example of a Norwegian *lur*, depicted by McCune and Prendergast (2002), is 158 cm long. This is a medium-size instrument according to Norwegian standards. Both much shorter and much longer instruments were made. The shortest, known as *stuttur* “short lur,” *notatut* etc., could be a mere 30 to 40 cm long (Nupen 1992:15), while in other areas 60 cm was considered a minimum (Gundersen 1994:24). A typical *lange-lur* “long lur” would be about 150 cm, i.e., similar to the Kew specimen. Much longer examples were sometimes produced. The longest instruments made in the Hallingdal area exceeded 3 m (Gundersen 1994:24), but these were probably rare exceptions.

The collections at Norsk Folkemuseum (Norwegian Folk Museum) in Oslo contain about twenty specimens; most are of the medium-sized *langelur* type, i.e., more or less similar to the Kew specimen; four are of the *stuttur* type. Two deviant, short specimens made of bark only are described as *orelur*, i.e., made of alder (*Alnus* sp.). Photographs of all these can be seen at museum’s home page ([www.norskfolke.museum.no](http://www.norskfolke.museum.no)).

At Stange in Hedmark, Embret Mæhlum was known for his fine *lur* playing. In the 1880’s, he made an unusually large specimen, and it is unlikely that a larger *lur* was ever made:

“But this large *lur*, he made after returning home [from America], and he had worked on it for a whole year. It was completed in 1886. He found a knotless spruce up in Præstmark’n. He cleaved it along the middle, and then he started to hollow it out, so that a thin pipe extended all through it. Then, he wrapped the *lur* in pieces of birch bark and glued it together. It was very well done.” (...) “He also made a stand for it, on which he placed the *lur* when he was playing. The *lur* was enormous. It was 5.39 meters long. I believe it must have been the largest *lur* in the world but its weight was no more than 3.6 kilos” (Engen 1991:103).

The motivation for making instruments of varying length was two-fold, practical and musical. A very long instrument could not easily be carried around, e.g., when herding livestock. This was a task often carried out by children, which again would require rather short and small instruments. Musical considerations would rather motivate long instruments. The longer the instrument, the more different tones it could make (Gundersen 1994:24; Nupen 1992:15). In addition, the loud sound of a large specimen could be heard far away. The sound produced would still vary a lot between individual instruments, and some were better than others. At least locally, holes could be drilled in the side of the *lur* to provide further musical variation (Mørch 1964:182).

### Purpose

In the Norse-Icelandic sagas, the *lur* is more frequently mentioned than any other musical instrument (Vollnes 2001:48), though there is nothing to suggest that its use during the Viking age was for entertainment. Most references point to a military use, as a signal during war and battles, e.g., to board ships, to rally at the king’s standard, attack, or withdraw. The only old Norse law that explicitly mentions the *lur* is the *hirdskrá*, a military code for the royal guard (Sevåg 1966:10). At least some Norwegian kings possessed a personal specimen, *konúngs lúðr*, “the king’s *lur*.” The instrument of king Sverre (c. 1150–1202) even had a name, *Andvake*, and seemingly produced a special sound that his soldiers could recognize and know that they were called for (Vollnes 2001:51). When Scottish mercenaries—hired by the Swedish king—tried to march through Gudbrandsdalen in SE Norway towards Sweden in 1612 (see Michell 1886), a *lur* was used to signal their approach to the log trap that killed many of them. It was launched “just as they paused to listen to Prillar-Guri, who stood on top of the slope on the opposite side of [the river] Lågen and blew a *lur*” (Botten-Hansen 1853:63), or so the legend says—whether true or not. Local tradition has been busy embellishing the peasants’ victory story with additional details, e.g. that the Scots took revenge by introduction *Cicuta virosa* L. to the area—and to Norway; both claims are at odds with reality (Alm 2015).

If need be, the instrument could also be used to signal the presence of thieves and other criminals (Nystugun 1950:120–121). The *lur* was also used as a calling signal at more peaceful occasions, e.g., during assem-

blies of various kinds. The latter use declined by the 13th century, when the Christianization of Norway had led to churchbells taking over the old calling function of the *lur* (Vollnes 2001:54).

Among the many legends related to the Black Death in Norway, a favorite topic is the desolation met with afterwards, frequently in terms of a single survivor in each isolated settlement. Their presence was ascertained by the sight of smoking chimneys or, according to local lore, by signalling with wooden horns, e.g., at Rauland in Vinje, Telemark (Berge 1940:123), and at Kvikne in Nord-Fron, Oppland (Klonteig 2007:73).

As noted by McCune and Prendergast (2002), wooden horns were frequently used as herding instruments, in particular in high summer when the herds were moved to separate summer farms (Hornemann 1808:404; Lie 1914:186; Bjerknes 1945:50; Holtvedt 1945:124; Svarteberg 1968:50; Perstølen 1970:90; Svare 1973:241; Sem 1983:11; Engen 1991:103). The horns could signal that the herd had been located or be used to ward off predators, especially bears and wolves (Hagemann 1889:121; Slingsby 1904:87, 1966, 1998:58, 70; Hannaas 1923:120; Frølich 1924:161; Sagen 1950:246; Holtvedt 1945:125, 1953:138; Høgåsen 1949:139; Perstølen 1969:21–22; Sandåker 1976:61; Lodoen 1989:64; Tomasgard 2004:41; Dahl 2003:185, 2005:303; Nupen 2003:60), or simply to relay signals (Rise 1933:66). A *stuttlur* “short *lur*” in the collections of Norsk Folkemuseum (depicted in Nupen 1992:17) is inscribed 1862, the year it was made. An accompanying note tells its origin: “I also have a *lur* of birch which my father made in 1862 to scare off wolves and lynx when he was herding the goats.” According to folk tradition, the bear was scared by the sound of a *lur*, whereas most claim that he enjoyed the tunes of the *prillarhorn*, which was made from a goat, sheep, or cow horn (Skar 1911:96; Mørch 1964:181; Perstølen 1970:94–95; Gundersen 1995:73). From the Oslo area, Holtvedt (1953:138) noted that bears disliked the sound of the *lur*: “But the best thing to do was to blow the *lur* close to his ear; he did not like the sound. He wanted it quiet.” In his childhood in Hornindal (Hordaland, western Norway), before emigrating to the U.S.A., I.N. Lodoen used his *lur* to ward off an attacking bear while herding cattle and sheep:

“The cows had formed a circle and the sheep were tightly grouped. Calves and younger animals were surrounded for protection. The situation was tense. A big, black bear stood close to me and was about to catch his prey. What could I do, and what should I do in this critical situation? I had no other weapon than my *lur*. It appeared a weak weapon against such a bear. But I started blowing the *lur*. Did I blow hard? I must have done so, for I frightened the beast. He ran and ran without halting, and disappeared up the mountain side at the other side at full speed. The battle was won and the herd saved. It took some time for the cattle to calm down, and the sheep to comprehend. After a while, I was able to drive the animals down to the summer farm, and all was well. The sound of the *lur* had been heard, and people came running to help me” (Lodoen 1989:61–62).

At least once, the *lur* was put to more prosaic use in order to chase off a bear, as noted from Vefsn in Nordland, North Norway:

“The bear took a sheep once grandma was herding. She ran after him and hit him with a long, large *lur* she had. The bear was about to carry the sheep across a brook, but now he let the sheep loose, and attacked grandma instead. He bit her in her thigh, and she had a large wound” (Svare 1973:240–241).

It was obviously better to chase off the bear with the loud sound of the *lur*. The sound’s ability to carry far is the point of a humorous folk tale, describing a fabulously large cow:

“(…) and the distance between her horns was so large, that if there was a herder sitting on each horn blowing a *lur*—some even said trumpet blowers—they could not hear each other” (Holtvedt 1953:144).

In the 19th century, the sound of the *lur* was an integral part of the landscapes of southern Norway and encountered almost everywhere (Søegaard 1868:100). It is frequently mentioned (e.g., in tourist travel accounts), often in more or less romantic settings such as in an account of a visit to mountains of Telemark in 1834: “At

first, we passed over a wooden bridge, beneath which the rapids of Måneelven [the river Måna] raged, and so, while the *lurs* were sounding up in the mountains, our alpine travel commenced” (Hammerich 1840:36). The English mountaineer W.C. Slingsby encountered children with wooden horns at several occasions, e.g., at Hellesylt in Stranda, western Norway, in 1875:

“Near Indre Haugen we met at different places children carrying a ‘lure’—a long wooden horn or trumpet, seven to nine feet in length, formed by two split and hollowed pieces of wood put together and bound firmly by birch bark, out of which material a bell mouth of five or six inches diameter is also formed. The boys blew these ‘lurer’ most vigorously in order to frighten away the bears which had just killed two cows at Haugen” (Slingsby 1904:87).

The instrument is also mentioned in early accounts of the folklore of Norway, e.g., in the legends recorded by S.O. Wolff in Telemark:

“Countless and differing sounds almost numb the ear, among them the chiming of bells and the tune of the *Luur*, which come from the rivulet, where some children are standing with their fishing rods” (Wolff 1828:74, reprinted in Wolff 2014:137).

“She blew her *Langeluur* [long *lur*] so that *Veirmaalet* [the dwarf’s speech, i.e., the echo] answered from all the *krag*s, and you could easily tell, where Guro Dalen’s summer farm was situated” (Wolff 1833:14, reprinted in Wolff 2014:82–83).

As a herding instrument, the *lur* was still frequently heard during the last half of the 19th century. It features prominently among the sounds noted by Ernst Bjercknes in the Krødsherad area of SE Norway during a summer visit in 1883:

“For a long time, we had heard the sounds of bells and the mooing sound of the cows from both sides of the mountains; now the siren calls of the dairy maids were added, and the cows answered. It turned into a beautiful antiphony, sometimes accompanied by the *lur* or the roaring sound of a *prillarhorn*. It all melted into a glorious symphony of captivating beauty in the still, warm summer night” (Bjercknes 1945:50).

Tourists visiting the Hjartdal area of Telemark in 1899 heard similar sounds: “Day and night you hear the sounds of *lur*, calling [for cows], and chiming bells” (Dahl 2005:264), and the sounds of nearby Fyresdal were much the same: “There I heard the tunes of a *langelur* [long *lur*], and I turned towards the sound, and far away below Raufjell I saw a fine herd grazing. The shepherd girl stood on a big stone with the *lur* in her hand, and a small boy was sitting nearby on a tussock” (Lie 1914:186). Even in the vicinity of Oslo, the capital, the *lur* was frequently heard:

“When they were at Oppkuven, they heard all the blowing of *lurs* on the summer farms at Krokskaugen—Come home now! Come home now! they signalled to the cow[s] both from Vakersetra and Heggelisetra and Gagnumsetra and other summer farms as well” (Holtvedt 1945:56).

A *lur* could be used for any kind of signal and was useful for communicating across the often steep terrains of Norway (Perstølen 1970:91), not least in foggy weather. In some areas, dairy produce was shipped down the steep mountain sides attached to wires, and a *lur* could signal that a new batch was on its way down (Nupen 1992:15). In western Norway, a short wooden horn or *notatut* was used to signal that shoals of herring had arrived. The sound of a *lur* could easily be heard on the other side of a fjord (Fet 1991:23; Nupen 1992). Others used it to signal that a meal was ready (Holtvedt 1945:125). It was also useful if you got lost in the forest or mountains (Holtvedt 1945:169–170). Bakke (1990:219) provided some further details from Fræna in Møre og Romsdal, western Norway. Here, the instrument was used to signal meals or the end of the working day. Some would also agree on a way of translating the sounds produced into words, in which case questions, as opposed to statements, were indicated by repeating the signal twice.

As noted by Ile (1960), from the Øyer area of interior SE Norway, a *lur* could serve as a past-time for herders but would sometimes be put to more serious use:

“Quite a few herders had a *never-lur* [birch bark horn], but they were mostly used by boys, rarely girls. The *lur* tones could be heard for a long distance. A *bokkehaunns-stut* [instrument made from a goat horn] was more common, both with girls and boys. Both the *lur* and *stut* were mostly used for fun and as a past-time. However, if some danger occurred, or an accident struck (for instance that predators were at large, or a cow had collapsed), so that the herder needed immediate help, he could sound a signal or alarm. Furthermore, it is likely that the well-known sounds of *lur* and *stut* could help in keeping the cattle collected, and perhaps entice them to return home at night” (Ile 1960:62).

Opedal (1984) provides two examples of the instrument’s use to keep livestock safe in the Kinsarvik area of Hardanger (Hordaland, western Norway):

“There was a lot of bears at Tjøflot. At Storahøytrædet, the dairy maids stayed in a chalet while herding. The bear came at night, and so they had to go outside with *neverlurar* and scare him off” (Opedal 1984:109).

“The bear would ravage the sheep.—At Djønno, they had to keep them in a fence at night. We could hear the herdsman blow his *lur*, and how he hit the chalet’s timber walls to scare the bear” (Opedal 1984:109).

It should be noted that not all references to a *lur* or *neverlur*, even in this context, refer to the musical instrument. Five more records in Opedal’s vast collection of Hardanger folklore may be included to avoid confusion. In these cases, in Kvam and Ulvik, the kind of *neverlur* used to chase the bear was not an instrument but simply a curled-up piece of birch bark, set on fire to scare the beast:

“And now, the bear was walking around the summer farm. Then, another dairy made put a burning *neverlur* out through the door opening. This scared him” (Opedal 1984:130).

“At another occasion, the bear came to the summer farm. It was in the evening, and the cattle got wild. She heard how he padded about sniffing in front of the chalet. Then, she set birch bark on fire and opened the door. And there the bear stood! And she pointed the *lur* at him. He turned around at once (...)” (Opedal 1984:130).

“Afterwards that summer, the dairy maids alighted *neverlurar*, so that they could keep the bear away” (Opedal 1984:135).

“At Kleivsæter, my grandmother (born 1834) put *neverlurar* on fire to ward off the bear. She followed him with the fire and said: “Burn, burn the fur!” Then, the bear got scared and left the summer farm, running up the mountain slopes” (Opedal 1984:139).

“Every now and then, the bear would haunt the summer farms. The dairy maids alighted *neverlurar* and tied them to long sticks, and pushed it into his fur. Then he ran” (Opedal 1984:121).

At Hornindal in western Norway, a herding boy used his *lur* to alert his family when both he and his flock of sheep had been taken by an avalanche during the late 19<sup>th</sup> century:

“I had a *lur*. It was made of birch bark and five foot long. I carried the *lur* with me everywhere. The sound it made could be heard for a long distance. I had used this instrument so much that it was not difficult for me to produce a loud sound. When the avalanche had passed and I saw what had happened to many of the sheep, I started blowing the *lur* loudly and for a long time. And they heard me at home! After a while, help came, and we collected the dead sheep. The meat and skins could still be used” (Lodoen 1989:62–63).



In his account of the “life of a Norwegian peasant family”, Botten-Hansen (1854) noted that children might play the *lur* after finishing the day’s herding:

“In particular, they were happy when they returned from the mountains, and the herd, well-fed by the fat grass and tired of being chased by the horseflies, settled in the summer-farm yard, ruminating while waiting to be placed in the stall. Then, Ole stood alongside Marit, who was busy knitting, playing his *lur* so beautifully that the surfeited cattle, despite their laziness, would turn their heads against him, (...)” (Botten-Hansen 1854:43).

In southern Norway, the *lur* was such an integral part of farming practice that even the subterraneans, who according to folk tradition were also herding cattle, could not do without them. At Krondalen in Jostedal, people had “seen a herd belonging to the subterraneans with a dairy maid, dog and pack horse etc. heading for [the glacier] Krondalsbreen, accompanied by the sound of song and *lur* tones” (Asbjørnsen 1850:69). A legend from Flatdal in Seljord, Telemark relates how some mythical maidens played *lur* on a Sunday and enticed a whole crowd of people attending sermon to leave the church in order to listen. The disturbance lasted until the vicar also came outside and admonished the disturbing maidens to go into the rock (Schwach 1921:19). According to the witch trials of Finnmark, northernmost Norway, even the devil played a *lur* while entertaining witches at black sabbaths (Bætzmann 1865:47).

Some were obviously more skilled at blowing a *lur* than others. Embret Mæhlum at Stange in Hedmark, mentioned above, gained his nickname of Tuter-Embret [“hooter-Embret”] from his skills. He obviously enjoyed playing, for

“each year on the 17th of May [Norway’s national day] he climbed up to this vast pine at Stortøsti. There, he placed the *lur* in the cleft of the pine, and stood there playing national songs” (Engen 1991:103).

Embret visited numerous other locations with his instruments. Another skilled player, Andreas Ullevålseter, allegedly could blow his *lur* in such a way as to accompany traditional dancing (Holtvedt 1945:125). At Hornindal in Hordaland, Renda-Hans was another reputed *lur* blower (Løvliid 2000).

Nowadays wooden horns are mostly used for festive purposes, e.g., to signal the opening of fairs (Sevåg 1966:16) or other special occasions (Engen 1991:105) and at the opening ceremony of the 1994 Winter Olympic Games at Lillehammer. Such use is well rooted in past traditions. There are several accounts of similar use during the 18th and 19th century, at the opening of banquets and to welcome clerical dignitaries, e.g., at bishop visitations (Wiel 1802–1805; Mehllum 1891:17; Myhre 1928; Vollsnes 2001:72). During the 19th century national revival, the *lur* served as a kind of national symbol. It is featured on the front cover of a Norwegian ABC book (Austlid 1880) and in romantic illustrations of peasant life (e.g., Østgaard 1852, as frontispiece in some reprint editions). Wooden horns are depicted in some foreigners’ accounts of travels in Norway, e.g., Brace (1859; plate facing p. 56). W.H. Breton encountered the instrument in the Romsdalen area of western Norway:

“While engaged in forcing my way on one side of the valley, I heard the notes of a horn, and discovered that the broken acclivities of the enormous bank, although to the eye ascent seemed impossible, admitted of pasturage for a few sheep. These were attended by a youthful shepherd, who performed his rude music upon a horn four feet in length, and made of wood; an instrument I had seen before” (Breton 1835:272–273).

### **Ethnicity**

All traditions noted above refer to the Norwegian majority population. It should be added, though, that similar instruments were used by the Finnish ethnic minority of the Finnskogene (“Finn forest”) area of southeast Norway (Lindtorp 1940; Jenssen 2007:35). A *neverlur* (Finnish: *torvi*) from this area is described as follows: “For a long time, *næverlurv* (*torvi*) and buck horns (*pukinarsarvi*) were the only instruments heard at Finnsko-

gene, and some people were masters at using them. Birch bark horns and buck horns were mostly used by herders in forest and field, and their tunes could be heard for miles among the cliffs” (Lindtorp 1940:97).

#### DISCUSSION

The birch is hardly mentioned in classical Greek and Roman sources, playing no role in their homelands (de Cleene & Lejeune 2003:150). A cursory treatment is included in book XVI of Pliny’s *Historia naturalis*, where it is first referred to as a Gallic tree (XVI:74), noting its “remarkable white colour” and the use for various utility purposes (Rackham 1968:437). Pliny also comments on its use for withies (XVI:176, Rackham 1968:501) and the quality of the wood (XVI:209, Rackham 1968:525).

The birch is much more important in the north. It features prominently in the traditions of Central and Northern Europe and northern Asia, both in a religious context and as a utility. In Norse mythology, the tree was dedicated to Thor, the god of thunder and lightning.

Birch bark has been used for various purposes, e.g., as thatching on roof. Being strong and flexible, it has also been used to prepare baskets and shoes in Norway. Birch bark baskets (Norwegian: *neverkont*) were frequent all over the country and are still sometimes prepared and used. Birch bark shoes were previously much used by the Finnish ethnic minority of southeastern Norway (Matson 1908; Østberg 1935). Both these uses are also well-known in neighboring Sweden (Hasselrot 2005; Rosén 2005). Being highly inflammable, bark was and still is frequently used to light fires and has also served in torches (de Cleene & Lejeune 2003:157). Like many other kinds of bark, it could be used for tanning. The thin, inner bark has been used on wounds in both Norwegian and Sámi folk medicine.

Since antiquity, birch bark has also served as writing material (de Cleene & Lejeune 2003:157). The Sanskrit name *bhurja* means “the light tree or a tree with bark one can write on.” In Norwegian sources, such use is first mentioned in the late 16th century by Peder Claussøn Friis (Friis 1632, reprinted in Storm 1881). He noted that bark was used for letters and as practicing material for children who were learning to write. Birch bark was still used for this purpose in the 18th century (Frimann 1885; Schübeler 1885:482).

A complex and dissected topography may have contributed to the prevalence of birch bark horns in Norway. They were once common all over southern Norway but seemingly little used further north. The distribution map in Fig. 4 is based on the same multitude of sources used for compiling this paper. It is likely to reflect the general pattern, even if most instruments have of course been made, used, and discarded without making it into literature or museum collections.

The sources are silent in terms of what kind of birch was used. Given the straight growth and the size of the stem, one may assume that *Betula pendula* Roth provided better bark and winding material than the lower, more crooked and richly branched *Betula pubescens* Ehrh. This may explain the absence or sparsity of *lur*-type instruments in northernmost Norway. The distribution of *Betula pendula* tapers rapidly out towards the north, and the species is sparse or absent in the three northernmost countries (Hultén 1971: map 597), mirroring the distribution of recorded instruments shown (Fig. 4).

The three northern outposts may deserve a comment. They are found, from south to north, in Vefsn and the Salten (Beiarn-Saltdal) area of Nordland, and in Bardu, Troms. In the Vefsn area, ropes served as a substitute for *Betula* bark, tying the two halves of the wooden kernel together (Fig. 3). Further north, the Beiarn-Saltdal area in Nordland, Saltdal in particular, has a favorable local climate, with hot and dry summers and a northern exclave of *Betula pendula* var. *lapponica* (Lindq.) Hämet-Ahti (see map in Elven 2013). The Bardu area lacks *Betula pendula*. It was, however, settled by people migrating north from interior SE Norway from the late 18th century onwards, thus coming from within the main distribution area of the *lur* (Fig. 4). They brought with them the tradition of making wooden horns and perhaps even some instruments. Thus, the distribution of the birch bark horn tradition within Norway is likely to reflect the availability of suitable winding material (i.e., bark from *Betula pendula*) rather than the need for or will to produce such instruments further north. Similar studies in Sweden or Finland may confirm this pattern.

It should be noted, though, that other predominantly ethnic Norwegian traditions taper out towards the



FIG. 3. Norwegian female with a somewhat deviant *lur*, secured by a coiled-up rope, photographed in 1970 at Mjåvatn in Vefsn, Nordland, north Norway, by Arnt Bakke (photo archive of Tromsø museum, TSNF 9731).

north, where local communities are more diverse and may be of either ethnic Norwegian, Sámi, or Finnish origin or a mixture of these. The tradition of planting *Rhodiola rosea* L. on roofs as a supposed (or apotropaic) protection against fire is widely known in southern Norway, extending northwards into Nordland to the Beiarn area of Salten (Alm 2004), with a pattern almost identical to the distribution of the *lur*. The unique Norwegian tradition of using *Linnaea borealis* L. to treat shingles (herpes zoster) is also widespread in southern and central Norway but unknown further north (Alm 2006).

Sweden, with a more gentle terrain but as wide distances, can compete in terms of the number of wooden horns on record, e.g., in the collections of Nordiska museet (18 of these are depicted in Lid & Solheim 1936). Kjellström (1994) provides a brief, general account of “Scandinavian bark horns.” More or less similar horns were used in Finland, e.g., to scare off bears (McCune & Prendergast 2002), but also featured in folk music (Austerlitz 2000).

Kew’s Economic Botany Collections contain examples of birch bark horns from Norway, Finland, and Switzerland (McCune & Prendergast 2002), thus adding another European country with substantial topographic relief. In his lexicon of musical instruments, Sachs (1964) defines the *lur* simply as “das skandinavische Alphorn” (“the Scandinavian Alp horn”), although the Swiss *Büchel* horns deviate in shape from the simple Scandinavian tubes and include a convoluted, more or less trombone-like wind tube (Geiser 1976). Some of the Swedish birch bark horns depicted by Lid & Solheim (1936) approach this type.

In all these cases, modern means of communication has removed the need for signalling with wooden horns. Their survival into the present depends solely on their status as traditional instruments arousing some national pride (Fig. 5), the special sound produced, and the sheer beauty of well-made objects. Modern *lurs* are also used by some players of folk music.

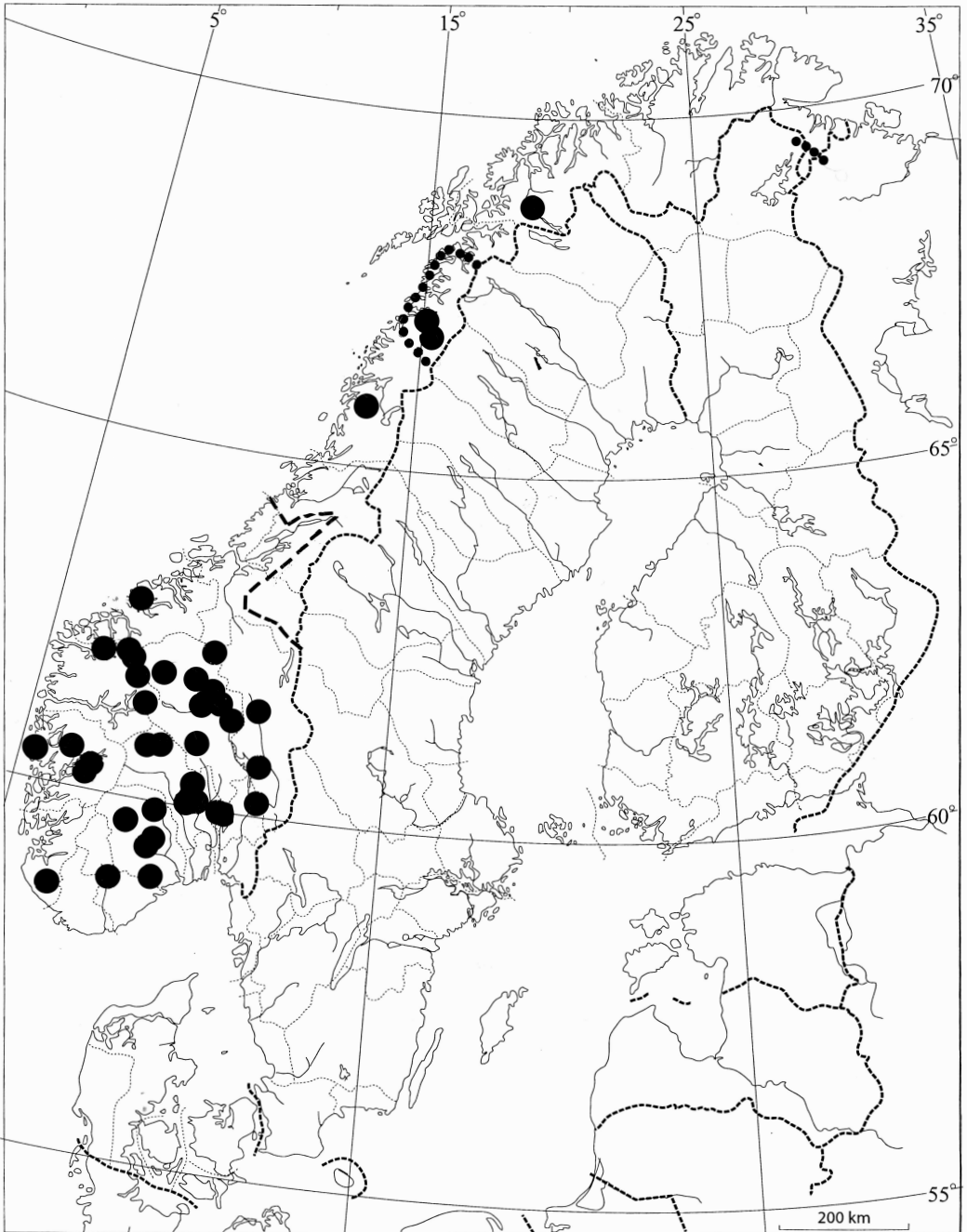


FIG. 4. Map showing geographical distribution of the Norwegian wooden horns mentioned in text. The approximate northern limit of *Betula pendula* as a common feature of lowland forests is indicated by a hatched line, and two disjunct, northern areas of *B. pendula* var. *lapponica* by dotted lines.



Fig. 5. Early 20th-century postcard showing two Norwegian females in national costumes, one knitting and the other blowing a *lur*.

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