JOURNAL OF NORTHERN STUDIES Vol. 12 • No. 1 • 2018, pp. 73–91

INGVAR SVANBERG

Ethnomycological Notes on *Haploporus odorus* and other Polypores in Northern Fennoscandia

ABSTRACT This study focuses on the use of polypores in northern Fennoscandia, especially the now rare *Haploporus odorus*, which was once used by Sami and Swedish peasantry in the north. However, other taxa that were culturally salient are also discussed. Polypores have been used for health-related, technical and other purposes. The use of some of the taxa, such as *Fomes fomentarius* and *Fomitopsis betulina*, has been widely known over Eurasia and beyond, while *Haploporus odorus* has been utilized only by the North American Plains tribes and in northern Scandinavia. From cultural historical information, ethnographical data and observations reported in travelogues, the ethnomycological significance of five bracket fungi species in northern Fennoscandia has been identified.

KEYWORDS polypores, ethnobiology, folk medicine, aromatica, material culture, repellents, tinder

Introduction

Ethnomycology is the study of the bio-cultural aspects of human-fungal interactions (Yamin-Pasternak 2011).[1] In 1997, Professor Robert A. Blanchette at the University of Minnesota published a fascinating article about the past importance of the aromatic bracket fungus *Haploporus odorus* (Sommef. Fr.) Bondartsev & Singer to North American Plains Indians such as Cree, Káinawa and Siksika.[2] They used this particular fungus on their sacred robes and necklaces, as a component in folk remedies, and as protection against certain ailments (Blanchette 1997). Blanchette's article is of great ethnomycological significance and is often quoted by ethnobiologists. Less often mentioned in ethnobiological literature is the fact that the same taxon, which is distributed across the northern hemisphere's circumboreal region, was also used in northern Sweden (Svanberg 2011). Folk mycology is of course also an important aspect of the northern cultures. I dedicate this article to Professor Håkan Rydving, who has devoted himself to the study of these northern cultures (for instance Rydving 2010).

Fungi are neither animals nor plants but are in a category of their own. They are actually more closely related to animals than to plants. There are many kinds of fungi, including molds and yeasts. Those known as bracket fungi, conks, shelf fungi or polypores comprise a group of fungi with a characteristic shape. Most of them inhabit living or dead tree trunks consuming the wood, but some soil-inhabiting polypores form mycorrhiza with trees, such as the edible *Albatrellus ovinus*. Around 200 taxa of polypores are known by mycologists from Fennoscandia, but only a handful of these were culturally salient in the traditional folk biology in the northern part of Norway, Sweden, Finland, Karelia and the Kola Peninsula in Russia.

Some species of bracket fungi have been used for various purposes in Europe and Siberia since time immemorial (Corner 1950; Herklau & Dörfelt 2015). A nice proof of that was the remarkable discovery of fungal objects among the equipment of the so-called *Iceman*, the well-preserved Chalcolithic human body found in the Central Alps in September 1991. A bag was filled with tinder material from the tinder bracket fungus, *Fomes fomentarius*. In addition two pieces of birch conk, *Fomitopsis betulina*, were tied on to the leather strings (Peintner & Pöder 2000). The interpretation of the latter species has been disputed by scholars (Capasso 1998; Tunón & Svanberg 1999). Both taxa are well known in the ethnomycological literature and have been widely used for various purposes in Eurasia. The ethnomycology of a few other taxa has also been described from various parts of Europe (Allen & Hatfield 2004; Grienke *et al*. 2014; Papp *et al*. 2015).

Use of Fungi in Northern Fennoscandia

With the exceptions of Russians, Orthodox Finns, Karelians and Vepsians in Karelia, and Ingrian Finns of Ingria, mushrooms (primarily milk caps) have rarely been used as traditional food in northern Fennoscandia (Byhan 1926; Erixon 1951; Egardt 1954; Eidlitz 1969; Härkönen 1998; Arntzen 2000). We have a few records that some Sami communities near the Murmansk railway occasionally used mushrooms as food (Eidlitz 1969). Komi households used dried mushrooms when fasting, together with dried fish, turnips and fermented cabbages (Sjögren 1861). With a few exceptions, the northern region definitely belongs to what several scholars have categorized as the mycophobic or mushroom-despising part of the world (Wasson & Wasson 1957; Lévi-Strauss 1970; Yamin-Pasternak 2008; Svanberg *et al*. 2011).

However, this has changed during the twentieth century and nowadays urbanites, especially of the middle class, pick wild mushrooms for consumption as a pastime in many parts of Scandinavia and Finland (Egardt 1954; Härkönen 1998; Klintberg 1998). Around 40 per cent of the population in Finland pick mushrooms for food. The figure is quite high in Sweden, too (Turtiainen *et al*. 2012). Commercial harvesting of wild mushrooms for domestic consumption and export also exists. Edible fungi have actually become increasingly popular non-timber products of the northern forests. Tax-free earnings from mushroom picking, an opportunity in Finland since 1972, provide an important source of extra income for rural households but also for immigrants and foreign seasonal workers (Svanberg 2012; Turtiainen *et al*. 2012).

A few fungi species have traditionally been used in folk therapy, especially puffballs, *Bovista* and *Lycoperdon*. A wound from a cut is sprinkled with dust of the ripe fungus (Qvigstad 1932; Suhonen 1936; Brøndegaard 1971; Høeg 1974; Steen 1961; Klintberg 1998). In the northern region, some taxa are also known in folklore, for instance *Crucibulum laeve*, *Fuligo septica*, *Lycogala epidendrum* and *Mucilago spongiosa* (Suhonen 1936; Høeg 1974; Svanberg 2011). We will leave the importance of mould and yeast aside here (for examples from northern Scandinavia, see Svanberg 2004*a*).

Another interesting example of a local and little known practice in northern Sweden is the utilization of a dry mushroom as bait in rigged squirrel traps (Henriksson 1978). This practice is mentioned as early as 1749 in an academic dissertation about hunting in the province of Jämtland (Nordholm 1749). Using bracket fungi, for instance *Hapalopilus rutilans*, for dyeing wool is a recent practice in Fennoscandia (Sundström & Sundström 1983).

However, throughout the circumpolar area, a number of polypore taxa have been known in the local folk biology. This paper examines the traditional use of bracket fungi among the Sami, Finnish, Norwegian and Swed-

ish speakers in northern Fennoscandia from an ethnobiological point of view. It discusses various taxa that have traditionally been known and their various uses, which have been identified in the cultural historical sources examined. Although only a few species have been used in the North, they had a surprisingly large number of purposes. The fruit bodies of these polypores have been utilized for fire-making, material culture, medicinal purposes, technical equipment, tools, toys and other goods, and as food, odorants and repellents, thus making life easier for hunters, farmers, nomads and settlers in the boreal and subarctic regions of the north.

Material Examined

Sources of information with data on the activity context between brackets and people are of various kinds (Svanberg *et al*. 2011). Our sources dates back to the seventeenth century, but data about uses can also to some extent also still be recorded. We find written information about the use of bracket fungi as early as 1610s. Natural historian Sigfrid Aronius Forsius (1952) mentioned a fungus in a manuscript from 1611, most probably referring to the birch polypore, which was used to protect needles from rust. He also referred to the Swedish myconym *ticka*, which is still in use (Svanberg 2011). In 1671, Johannes Schefferus described a cure for burns using tinder bracket among the Sami (Svanberg 2005). Dean Olof Broman mentions the use of several brackets in northern Sweden in a manuscript from the 1720s (Broman 1911–1953). Peter Artedi, a contemporary and close friend of Carl Linnaeus when they were young students, compiled a brief flora of his native Nordmaling in Ångermanland in 1729. He recorded folk names and information on the use of two species (Artedi 1985). Carl Linnaeus's voyage from Lapland 1732 is a very good source for ethnobiologists interested in former use of various biological taxa. He also noted down observations of the use of polypores (Linnaeus [1732] 2003).

During his Lapland tour, Linnaeus recorded that young Sami men used the scented fungus *Haploporus odour* as a fragrance when courting. In his *Flora lapponica*, he described how Sami bachelors stored

> it carefully in a pouch further down on their belly, in order that the sweet fragrance it sends forth might make them more pleasing to their nymphs. Oh you ridiculous Venus, who in foreign lands have at your service coffee and chocolate, sweets and preserves, wines and lemonades, precious stones and pearls, gold and silver, silks and pomades, dancing and feasting, music and merrymaking! Here you must content yourself with a tasteless fungus. (Linnaeus 1737)

Fig. 1. Tinder bracket, *Fomes fomentarius* (Gramberg 1913).

He recorded this information on 3 June, 1732 in Lycksele Lappmark in the Ume River valley (Linnaeus [1732] 2003). In his travel diary, Linnaeus also reported the use of a few other bracket fungi among the Sami and the peasantry in northern Sweden.

Linnaeus's travelogues became exemplars for a whole generation of scholars and developed a genre of topographical literature including information of ethnobiological interest (Svanberg *et al*. 2011). Several of his contemporaries and successors therefore also reported the use of polypores, usually referring to birch polypore and tinder polypore (for instance Pehr Kalm and Anders Tidström).

Ethnographical studies from northern Fennoscandia sometimes also have information on the use of polypores in the material culture. Another important source material for our understanding and knowledge is the questionnaires and records in the language and folklore archives in Sweden. With due diligence and observance of source criticism, I have screened the available cultural historical data in ethnographic reports, travelogues, local historical accounts, dialect dictionaries, mycological (botanical) handbooks, as well as folklore and folk-life records in the archives with a view to finding and analyzing information on the use of bracket fungi in northern Europe. Biocultural domain analysis is used to investigate how socio-cultural groups understand the biota in their surroundings (Svanberg 2007; Svanberg *et al.* 2011).

The Bracket Fungi Folk-Taxa

In the folk taxonomy, the fruit bodies of the polypores have sometimes been regarded as fungi, known as *sopp* in Swedish, but in northern Scandinavia the tree-living fungi were usually known as a separate folk biological category and have therefore been classified as *ticka*, *tjuka* or *sypp* in Swedish and *kjuka* or *kåte* in Norwegian dialects (Svanberg 2011; Høeg 1974). The generic name in Finnish is *känsä* or *kääpä*, in Karelian *käznä*, in Vepsian *käzn* and in Komi *baka*/*бака* or *bakatshak*/*бакатшак* (Suhonen 1936). The following taxa are of cultural importance in the north.

1. Tinder bracket, *Fomes fomentarius* (L.) Fr., 1849, is a mainly Holarctic taxon, found all over Europe, North Africa including Canary Islands, Asia and North America. The species is indeed the true tinder ("amadou" or "esca") fungus, used to make and transport fire. It is known as *knuskkjuke*, *knusk*, *knjosk*, and *fyrsvamp* in Norwegian, *fnöskticka* in Swedish, *koivun känsa*, *taulakääpä* in Finnish and *duovlečatná* in North Sami, *tjádná* in Lule Sami, and *duvle* in South Sami (Høeg 1971; Høeg 1974; Svanberg 2011; Suhonen 1936; Andersson 1866; Qvigstad 1901). In Russian, it is known as *guba ognivnaya*/*губа огнивная*, *vrachebnaya gubka*/*врачебная губка* and

zhagra/*жагра* (Annenkov' 1878). Among the Sami, it was burned on the skin in the manner of moxibustion (Steen 1961). It has been widely used all over the northern hemisphere to make amadou, a kind of tinder (Harding 2008; Chlebicki 2010). In the collection of the Royal Armoury (*Livrustkammaren*), Stockholm, there are a few textiles made of *Fomes fomentarius*, as well as a jacket, a cap and a bag. It has also been used as a styptic by surgeons, barbers and dentists (Roussel *et al*. 2002; Svanberg 2011; Grienke *et al*. 2014).

2. Fire sponge or false tinder conk, *Phellinus igniarius* (L.) Quél., 1886, known as *eldticka* in colloquial Swedish, *tøndrekjuke* or *ildkjuke* in Norwegian, and *arinakääpä* and *pakkula kääpä* in Finnish (Høeg 1974; Svanberg 2011; Suhonen 1936). This fungus measures 5–20 centimetres in diameter. It has a widespread distribution all over the Holarctic. As fungi expert and ethnomycologist Robert A. Blanchette (2001) has pointed out, this species was actually widely used as a masticatory or for smoking purposes among Native Americans. In Europe it was used for making tinder (Allen & Hatfield 2004; Chlebicki 2010). Its smoke was regarded as being effective against mosquitoes (Linnaeus 1737; Høeg 1974).

3. Birch conk or Birch polypore, *Fomitopsis betulina* (Bull.) B.K. Cui, M.L. Han & Y.C. Dai, 2016 (Syn. *Piptoporus betulinus* (Bull. ex Fr.) P. Karst), known as *björkticka*, *björksopp*, *björksvamp*, *snösko*, *snöläppa*, *snösopp*, *snöticka*, *snösopp* (Dalecarlia) and *vitticka* (Uppland) in Swedish, *knivkjuke* in Norwegian, *stohkkečátná* in North Sami and *pökkelökääpa* and *äimäkääpä* in Finnish (Svanberg 2011; Linnaeus 1755; Høeg 1971; Suhonen 1936).[3] In South Sami and Malå Sami it was known as *tjaanaa* and *duövlee*, respectively (Qvigstad 1901; Hasselbrink 1985; Schlachter 1958), Lule Sami as *sváhppa* (Andersson 1866), while the Sami in Jukkasjärvi call it *känsä*, a loan from a local Finnish dialect (Hansegård 1971). Sami nomad Johan Turi called it, probably humorously, *suomiki komso*, 'Finnish cradleboard' (Svanberg 2004*b*). In Russian, it is commonly known as *berezovaya gubaka*/*березовая губка* (Annenkov' 1878). It is widely distributed in Eurasia and North America. The fruiting body of the birch conk has a rubbery texture, which becomes corky with age. Ethnobotanical data from pre-industrial Northern Europe indicates that this fungus has had various non-medical uses, for instance to protect metal-blades from rust, to sharpen razors and as toys, cork or needle pads (Linnaeus 1755; Retzius 1806; Fries 1864). The latter use is the reason why it has been called *nåldyna*, *nålsopp*, *nålticka* and *nåltäta* in northern Sweden.[4] Charcoal produced from it has been used as an antiseptic agent (Høeg 1974; Thoen 1982; Peintner & Pöder 2000; Svanberg 1998; Klintberg 1998; Allen & Hatfield 2004).

In eighteenth-century Västergötland, it was used in veterinary medicine against a bacterial disease (*rödsot*) in sheep (Tidström 1978). In *Flora svecica* 1755, Linnaeus noted that the birch conk was used instead of cork in bottles (Linnaeus 1755; Retzius 1806). It was therefore called *korksopp*, 'cork fungus,' especially in Gotland and in Bohuslän. According to Rothof (1762), well-dried birch conk could be used as floats on fishing nets and fishing lines. From nineteenth-century Småland, there is information that the soft part of the fungus was cut into pieces and used by children in the village schools to erase what they wrote on their slates (Klintberg 1998; Svanberg 2011).

4. Chaga mushroom, *Inonotus obliquus* (Fr.) Pilát, 1942. Its range includes the boreal areas of northern Europe, Central Europe, Russia, Korea and North America. The English name is derived from Russian *chaga*/*чага*, which in turn is derived from the word for the fungus in Komi (Kalima 1927). In contemporary Norwegian, it is known as *kreftkjuke*, in Swedish *sprängticka*,

Fig. 2. False tinder conk, *Phellinus ignarius* (Gramberg 1913).

in Finnish *pakurikääpä* and in North Sami *báhkkečátná*. During the Second World War, it was used as a coffee substitute in Finland. Some traditional health-related practices are reported from parts of Fennoscandia, especially in Finland and the Olonets region in Karelia, but also in the Russian North (Dunn 1973; Grienke *et al*. 2014). The Khanty used chaga tea for stomach ailments, but also for cleansing skin and sores (Saar 1991). It has become increasingly sought after in the health food trade and illegal harvesting now occurs in northern Sweden (Pegler 2001; Johansson 2016). Its use is also reported from Native North Americans (Gottesfeld 1992). Nowadays, this polypore is very much discussed on websites, including Nordic ones, dealing with alternative health and natural remedies.

5. Scented bracket, *Haploporus odorus* (Sommerf.) Bondartsev & Singer, 1944, has a fragrant anise-like scent, which persists even after drying. It usually grows on old goat willow, *Salix caprea*, in moist woodlands, hence its old folk names *sälgfucka* (Hälsingland, Härjedalen), *sälgsyppa* (Jämtland), *sälgsippa* (Medelpad), *sälgsvamp* (Hälsingland), *sälgticka* and *sälgtjuka* (Härjedalen, Ångermanland) (Wasenius 1751; Modin 1911; Modin 1916; Keyland 1919; Fridner 1926).[5] However, names such as *dofttjuka*, *godlukttjuka* and *lukttjuka* (Lappland, Västerbotten, Ångermanland, Jämtland) also reflect its strong smell (Linnaeus 1755; Gudmundson 1958; Fries 1975; Artedi 1985; Ryd 1995; Svanberg 2018). It can grow up to 20 centimetres. Native North Americans, especially the tribes of the Northern Plains, also used this species to ornament sacred robes, human scalp necklaces and other cultural properties. In addition, it was a medicinal component used for protection against illness (Blanchette 1997).

6. Forest lamb, *Albatrellus ovinus* (Schaeff.) Kotl. & Pouzar, 1957, is a species common all over Scandinavia and Finland. It is edible and rather commonly gathered in contemporary Sweden. However, this is not an old tradition but a result of the mushroom propaganda in pamphlets, handbooks, newspapers and periodic publications, which started in the 1860s and continues today (Svanberg & Nelson 1992). It is, for instance, discussed as "a healthy and important food, and is very good both raw and cooked." It has a long "shelf-life" and can be easily dried (Smitt 1863). Most contemporary cookbooks mention this species as a delicious mushroom when eaten young. It is easy to recognize, easy to harvest and easy to prepare. It has also been used as false truffle in Swedish liver pâté (SOU 1966:71). However, this fungus is a relatively newcomer in the Scandinavian food culture. A few other polypores are also mentioned as being edible in the propaganda literature but are still of insignificant importance as food (Smitt 1863; Hartman 1874).

Used in Various Biocultural Domains

It is likely that many peasants in the past seldom distinguished various polypores from each other, especially those used for tinder (Høeg 1974). Also taxa found on the same species of trees could be difficult to distinguish from each other, depending on which criteria the folk mycologist used when they observed various taxa in the field. Therefore, it can sometimes be hard to determine which scientific taxa the emic concepts refer to. However, many quite detailed observations have confirmed that the local people of the north had no difficulty differentiating between the various taxa they used for fire-making and making drinks, as spice, perfume or mosquito repellent, and in folk therapies.

Brackets for fire-making and tinder. Using tinder seems to have been an important biocultural domain in the encounter between fungi and human. In northern Fennoscandinavia, fungi, especially *Fomes fomentarius* and *Phellinus ignarius* were used to produce tinder, but also to carry fire. Norwegian mountaineers gathered them in large numbers and sold them to others (Høeg 1974; Svanberg 2011; Heltzen 1975).

Brackets in folk therapy. Linnaeus describes in his itinerary from the summer of 1732 that the Sami in Jokkmokk used *Fomes fomentarius* growing on the south side of birch trees for a kind of moxa-theraphy.

> An amount the size of a pea is placed on the sore place, ignited with a birch twig and allowed to burn away gradually. It is placed where the pain is worst and the treatment is often repeated two or three times. This causes sores which often remain open for six months but which must not be treated, being left instead to heal of their own accord. It is used against all pains: headaches, stings, stomach aches, gouty and rheumatic pain, etc. It is a universal remedy among the Lapps. (Linnaeus [1732] 2003)

The method was previously described by Johannes Schefferus in 1671 (Steen 1961; Svanberg 2005). Hungarian ethnographer and linguist Ignác Halász gave a detailed description of its use among the Sami in Pite Lappmark. The fungus was burned to cure pain in the knee, rheumatic pain and ears leaking pus (Halász 1893). Sami nomad Johan Turi wrote in the early twentieth century that a small piece of birch polypore, probably referring to *Fomes fomentarius*, was burned directly on the affected area for toothache, fractures, rheumatism, headache and pneumonia (DuBois & Lang 2013). There are many ethnographical records of this very interesting folk therapy from the entire Sami distribution area (see Drake 1918; Qvigstad 1932; Svanberg & Lindin 2004; see also Steen 1961 for many references). It was still in use among the Skolt Sami in the 1930s (Nickul 1948). This kind of moxa-therapy

is also known from the Sami on the Kola Peninsula (Sjögren 1828; Kharuzin 1890). Finnish ethnologist Ilmar Manninen (1933) wrote an interesting comparative study of the use of moxa-theraphy among northern peoples. It seems to have been used by folk-healers from Lapland in the west to Japan in the east (Dunn 1973; Saar 1991). This species was also included in the pharmacopeia and used by surgeons and dentists as a blood clotting agent (Roussel *et al*. 2002).

Brackets as repellents. Linnaeus noted in 1732 that the Forest Sami in Pite Lapmark burned *Phellinus ignarius* to create smoke in order to rid their huts of mosquitoes (Linnaeus 1737). According to his travel diary entry on 3 June in the Lycksele Lappmark, Linnaeus was shown *Phellinus igniarius* which the Sami used to cover both themselves and their reindeer in smoke as their main remedy again mosquitoes. When the mosquitoes were numerous, the reindeer returned home and small smoking fires were burned around them morning and evening. Feeling the efficacy of this, the reindeer would lie down and sleep. Both *Fomitopsis betulina* and *Phellinus igniarius* have been widely used by Sami people in northern Scandinavia for the purpose of protecting people and domestic animals from mosquitoes (Laestadius 1831; Zetterstedt 1833; Nordlander 1947; Pettersson 1999). Among the peasantry in northern Sweden, *Haploporus odor*us was used as an insect repellent in clothing storage chests (Nordermann 1961; Ågren 1976).

Brackets as material culture. At Åbacka in Västerbotten, Linnaeus observed on 27 May 1732 a bracket fungus hanging on the wall in a house which was used as a pin-cushion. This fungus was probably a *Fomitopsis betulina*. This has been a common use for birch conk in the northern part of Sweden. Lisa Johansson reports from southern Lapland that it was good way to secure needles, because they did not come loose and fall down. The *nåltjuka* was nailed to the wall near the window, so high up that it was out of the reach of children (Ågren 1976). This use has been reported from all over northern and central Sweden (Axelson 1852; Berglund 1935; Bergfors 1947; Paulaharju 1966) and from the Sami in Norrbotten (Hansegård 1971).[6]

Brackets as food and drink. Björn Collinder (1953) published an interesting passage on the use of a bracket, maybe false tinder conk, *Phellinus ignarius*, as a coffee replacement during the Second World War. This use has been recorded from various Sami groups as far south as Malå parish in Västerbotten (Schlachter 1958; Svanberg 2012). American ethnobiologist Myrdene Anderson (2000) describes how Norwegian Sea Sami children made a hot drink from a bracket they found on birch trunks. Infusion from *Fomitopsis betulina* fruiting bodies has been popular in Russia and elsewhere for its nutritional and calming properties (Peintner & Pöder 2000; Grienke *et al.* 2014). Much attention has recently been given to *Inonotus obliquus*,

commonly known as chaga mushroom in the popular literature. It was locally known as *pakurikääpi* in northern Finland and was used among the Skolt Sami as a tea herb (Magnani 2016). It has become popular as a health food, usually served as a liquid. Perhaps the above-mentioned authors confuse the birch conk with the chaga. According to reports, chaga has been used in North European, Russian, Siberian, and Japanese folk medicine. It is nowadays said to have many beneficial health functions such as immune modulating and anti-cancer activities therapies.

Brackets as a spice. *Haploporos odorus* has been used by peasants to flavour snuff (Dalecarlia), brown cheese (Härjedalen, Hälsingland, Jämtland, Ångermanland), gruel (Härjedalen), rice pudding (Härjedalen) (Tidström 1955; Modin 1911; Modin 1916; Keyland 1919).

Brackets as a perfume. In the Lycksele area, the Sami showed Linnaeus *Haploporus odorus* which had a pleasant scent and was used as a fragrance. On 3 June, 1732, he noted in his travel diary that young Sami men used this fungus to arouse love in the girls and to win their favours (Linnaeus [1732] 2003). The practice of using this fungi for its pleasant scent in storage chests has been recorded as recently as the mid-twentieth century in various parts of northern Sweden: Härjedalen, Ångermanland, Västerbotten, Norrbotten and Lappland (Modin 1911; Berglund 1935; Bergfors 1947).[7]

Brackets as toys. Making balls from *Fomitopsis betulina* occurred in Norway and Sweden, and was probably known as early as the Viking age (Liestøl 1919). The brackets were shaped into balls by cutting them with a knife. Such balls are still made today. They could also be used for making doll's heads (Tillhagen & Dencker 1949; Høeg 1971; Høeg 1974; Klintberg 1998; Olsson 2009).

Fig. 3. Birch conk, *Fomitopsis betulina* (Palmstruch 1804).

Conclusion

It is well-known from all over Eurasia that polypores have been used in traditional medicine, for fire-making and for various technical purposes. Thanks to findings connected with the so-called *Iceman*, we have documented records of early use of two common species of polypores, both still in use in many parts of northern Eurasia. From northern Scandinavia, there are records of a handful of taxa. One of the most interesting is the scented fungus bracket *Haploporus odoratus*. Its use by humans has earlier been described in the ethnomycological literature of the North American Plains tribes. However, it has also been utilized by Sami and Swedish peasants in northern Sweden, and there are also a few records from Finland and Russia (Niemelä 2003). In Sweden, it was used as a seasoning in cheese and bread, and as a perfume in clothing storage chests, in personal items, and as an aromatic spice for church-goers. Its use as a scentic agent was recorded by Peter Artedi in 1729 and Carl Linnaeus in 1732, and has been known across northern Sweden until the mid-twentieth century. Due to ecological changes, this fungus is now rare and thus protected. Gathering this protected species is therefore no longer allowed.

NOTES

[1] The research presented here was funded by the Bank of Sweden Tercentenary Foundation (DNR J 2004-0548).

[2] Scientific names are taken from Index Fungorum (www.indexfungorum.org; accessed August 2017).

[3] See also Växtnamnsregistret, Umeå University.

[4] Also ULMA 22 759 (Edsele, Ång.).

[5] Also ULMA 2353 (Hede, Härj.); ULMA 1919:8 (Fjällsjö, Ång.); ULMA 3294:1 (Norsjö, Vbt.); ULMA 7890 (Färila, Häls.); ULMA 16 944:2 (Vilhelmina Lpl.); ULMA 19 857 (Vilhelmina, Lpl.); ULMA 2383 (Lycksele, Lpl.).

[6] Also ULMA 22 759 (Edsele, Ång.).

[7] Also ULMA 3294:1 (Norsjö, Vbt.); ULMA 2383 (Lycksele, Lpl.); ULMA 1919:8 (Fjällsjö, Ång.); ULMA 22 989 (Borgsjö, Med.).

REFERENCES

Archives

Institute for Language and Folklore, Uppsala: folklore records, dialect records (ULMA)
Department of Language Studies, Umeå University, Umeå: *Växtnamnsregistret*.

Literature

Ågren, K. (1976). "Skrivet och berättat om vilda växters användning" ['Written and told about the use of wild plants'], *Västerbotten*, 1976:3, pp. 97–166.

Allen, D.E. & Hatfield, G. (2004). *Medicinal Plants in Folk Tradition. An Ethnobotany of Britain and Ireland*, Portland: Timber Press.

Anderson, M. (2000). "Sámi children and traditional knowledge," in *Ecological Knowledge in the North*, eds. I. Svanberg & H. Tunón, Uppsala: Swedish Biodiversity Centre, pp. 55–70.

Andersson, N.J. (1866). "Nya bidrag till Qvickjocks-traktens flora," ['Recent contributions to the flora of Kvikkjokk'], *Botaniska Notiser*, 1866, pp. 119–125.

Annenkov', N.I. (1878). Анненковъ, Н.И. *Ботаническій словарь* ['Botanical dictionary'], St. Petersburg: Imp. Akadmiiya nauk.

Arntzen, M.W. (2000). "Mushrooms in Norwegian folk culture, 1900–1960," in *Food from Nature. Attitudes, Strategies and Culinary Practices*, ed. P. Lysaght, Uppsala: The Royal Gustavus Adolphus Academy for Swedish Folk Culture, pp. 73–80.

Artedi, P. (1985). *Peter Artedi och Nordmalings flora jämte en levnadsteckning och en utredning av släkten Artædius* ['Peter Artedi and his flora of Nordmaling, with a biography and a study of the family Artædius'], Umeå: Johan Nordlander-sällskapet.

Axelson, M. (1852). *Vandring i Wermlands elfdal och finnskogar* ['A tour in the river valley and the Finn-forests of Värmland'], Stockholm: P.Ad. Huldberg.

Bergfors, G. (1947). "Från självhushållets dagar i ett ångermanländskt jordbrukarhem" ['From the days of subsistence economy in a peasant home in Ångermanland'], *Ångermanland*, 4, pp. 59–76.

Berglund, J. (1935). "Växter som läkemedel och i folkliga arbetsmetoder i Ångermanland" ['Plants as medicine and in popular technology in Ångermanland'], *Ångermanland-Medelpad. Årsbok för Västernorrlands Läns Hembygdsförbund*, 1935, pp. 42–56.

Blanchette, R.A. (1997). "*Haploporus odorus*. A sacred fungus in traditional Native American culture of the Northern Plains," *Mycologia*, 89, pp. 233–240.

Blanchette, R.A. (2001). "Fungus ashes and tobacco. The use of *Phellinus igniarius* by the indigenous people of North America," *Mycologist*, 15, pp. 4–9.

Broman, O. (1911–1953). *Glysisvallur och öfriga skrifter rörande Helsingland* 3 ['Glysisvallur and other texts about Hälsingland 3'], Uppsala: Glysisvallurkommitéen.

Brøndegaard, V.J. (1971). "*Lycoperdon* und *Bovista* in der Volksmedizin," *Pharmazeutische Zeitung*, 16, pp. 1065–1070.

Byhan, A. (1926). "Die finnischen Völker," in *Illustrierte Völkerkunde*, 2:2, *Europa und seine Randgebiete*, hrsg. G. Buschan, Stuttgart: Strecker und Schröder, pp. 909–1022.

Capasso L. (1998). "5300 years ago, the Ice Man used natural laxatives and antibiotics," *The Lancet*, 352, p. 1864.

Chlebicki, A. (2010). "Zawiłości etymologiczne i znaczeniowe nazw 'huba' i 'hubka,'" ['The complexities of etymology and meaning of names of the touchwood and tinders'], *Wiadomości Botaniczne*, 54, pp. 35–39.

Collinder, B. (1953). *Lapparna. En bok om samefolkets forntid och nutid* ['The Lapps. A book about the Sami people in history and today'], Stockholm: Forum.

Corner, E.J.J. (1950). "Report on the fungus-brackets from Star Carr, Seamer," *Proceedings of the Prehistoric Society*, 16, pp. 123–124.

Drake, S. (1918). *Västerbottenslapparna under förra hälften av 1800-talet* ['The Lapps of Västerbotten during the latter part of the nineteenth century'], Uppsala: Almqvist & Wiksell.

DuBois. T.A. & Lang, J.F. (2013). "Johan Turi's animal, mineral, vegetable cures and healing practices. An in-depth analysis of Sámi (Saami) folk healing one hundred years ago," *Journal of Ethnobiology and Ethnomedicine*, 9:57, pp. 1–17. doi.org/10.1186/1746-4269-9-57.

Dunn, E. (1973). "Russian use of *Amanita muscaria*. A footnote to Wasson's Soma," C*urrent Anthropology*, 14, pp. 488–492.

Egardt, B. (1954). "Svenskarna och svampmaten" ['The Swedes and mushroom as food'], *Rig*, 37, pp. 33–44.

Eidlitz, K. (1969). *Food and Emergency Food in the Circumpolar Area*, Uppsala: Uppsala University

Erixon, S. (1951). "Surviving primitive gathering in the Nordic countries," *Folk-Liv*, 14–15, pp. 95–102.

Forsius, S.A. (1952). *Physica (Cod. Holm D 76)*, Uppsala: Lundequistska bokhandeln.

Fridner, G. (1926). "Svenska växtnamn i Degerfors socken och angränsande trakter samt några uppgifter om en del växters användning m.m." ['Swedish plant names in Degerfors parish and adjacent areas together with information about their use, etc.'], *Västerbotten*, 1926, pp. 266–277.

Fries, E. (1864). *Botaniska utflygter* 3 ['Botanical excursions'], Stockholm: Zacharias Hæggströms Förlag.

Fries, S. (1975). *Svenska växtnamn i rikssprå̊k och dialekt* ['Swedish plant names in standard language and dialect'], Umeå: Umeå University.

Gottesfeld, L.M.J. (1992). "Use of cinder conk (*Inonotus obliquus*) by the Gitksan of northwestern British Columbia, Canada," *Journal of Ethnobiology*, 12, pp. 153–156.

Gramberg, E. (1913). *Pilze der Heimat. Eine Auswahl der verbreitetsten essbaren, ungeniessbaren und giftigen Pilze unserer Wälder und Fluren in Bild und Wort* 2, Leipzig: Quelle u. Meyer.

Grienke, U., Zöll, M., Peintner, U. & Rollinger, J.M. (2014). "European medicinal polypores. A modern view on traditional uses," *Journal of Ethnopharmacology*, 154, pp. 564–583.

Gudmundson, G. (1958). "Översikt av fäbodväsendet i Lit och Kyrkås efter 1800-talets början" ['An overview of the summer pasture institution in Lit and Kyrkås after the beginning of the nineteenth century'], *Lits hembygdsförbunds skriftserie*, 9, pp. 9–89.

Halász, I. (1893). *Svéd-lapp nyelv* 5. *Népköltési gyűjtemény a Pite lappmark Arjepluogi egyházkerületéből* ['Swedish Sami languages 5. Collection of traditional folklore from the district of Arjeplog in Pite Lappmark'], Budapest: Kiadja a Magyar Tudományos Akadémia.

Hansegård, N.-E. (1971). *Finnish Loanwords in Jukkasjärvi Lappish Classified According to their Meaning*, Uppsala: Almqvist & Wiksell.

Harding, P. (2008). *Mushroom Miscellany*, London: HarpersCollins.

Härkönen, M. (1998). "Uses of mushrooms by Finns and Karelians," *International Journal of Circumpolar Health*, 57, pp. 40–55.

Hartman, C. (1874). *Skandinaviens förnämsta ätliga och giftiga svampar* ['Scandinavia's most important edible and toxic mushrooms'], Stockholm: E.M. Giron.

Hasselbrink, G. (1985). *Südlappisches Wörterbuch* 3, Uppsala: Dialekt- och folkminnesarkivet i Uppsala.

Heltzen, I.A. (1975). *Ranens Beskrivelse 1834* ['A Description of Rana in 1834'], Bodø: Rana museums- og historielag.

Henriksson, H. (1978). *Popular Hunting and Trapping in Norrland*, Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien.

Herklau, H. & Dörfelt, H. (2015). "Feuer-Pilze. Zur Geschichte der Beherrschung des Feuers mit Hilfe von Pilzen," *Boletus*, 36, pp. 13–24.

Høeg, O.A. (1971). "Sopper" ['Fungi'], in *Kulturhistoriskt lexikon för nordisk medeltid* 16, Malmö: Allhem, sp. 434–437.

Høeg, O.A. (1974). *Planter og tradisjon. Floraen i levende tale og tradisjon i Norge 1925–1973* ['Plants and tradition. The flora in living dialects and tradition in Norway 1925–1973'], Oslo: Universitetsforlaget.

Johansson, L. (2016). "Svamptjuvar härjar i länet" ['Mushroom thieves rage in the province'], *Örnsköldsviks Allehanda* 4 March.

Kalima, J. (1927). "Syrjänisches Lehngut im Russischen," *Finnisch-Ugrische Forschungen*, 18, pp. 1–56.

Kalm, P. (1746). *Pehr Kalms Wästgötha och Bahusländska resa förrättad år 1742. Med anmärkningar uti historia naturali, physique, medicine, oeconomie, antiquiteter etc.* ['Travels in Westergothia and Bohuslän in 1742. With notes on the natural history, physic, medicine, economy, antiquities, etc.'], Stockholm: Lars Salvius.

Keyland, N. (1919). *Svensk allmogekost* 1 ['Swedish peasant foods 1'], Stockholm: Svenska teknologiförenings förlag.

Kharuzin, N.N (1890). Харузин, Н.Н. *Русские лопари (очерки прошлаго и современнаго быта)* ['Russian Sami. Sketches of the past and modern life'], Moscow: Izd. Tovarishchestva Skoropechatni A.A. Levensona.

Klintberg, B. af (1998). "Paddehattar. Äldre folkliga uppfattningar om svamp i Sverige" ['Fungi. Traditional popular perceptions of mushrooms in Sweden'], in *Kuttrasju. Folkloristiska och kulturhistoriska essäer*, Stockholm: Norstedt, pp. 53–67.

Laestadius, P. (1831). *Journal af Petrus Laestadius, för första året av hans tjenstgöring såsom missionaire i Lappmarken* ['Petrus Laestadius's journal for his first year as a missionary in Lappmarken'], Stockholm: Haeggström.

Lévi-Strauss, C. (1970). "Les champignons dans la culture," *L'Homme*, 10, pp. 5–16.

Liestøl, K. (1919). "Ordet sopp i folkevisene" ['The word mushroom in folk songs'], *Maal og Minne*, 1919, pp. 115–117.

Linnaeus, C. (1737). *Flora lapponica*, Amstelodami: Salomon Schoeten.

Linnaeus, C. (1755). *Flora svecica*, Stockholm: L. Salvius.

Linnaeus, C. [1732] (2003). *Iter Lapponicum, Dagboken. Lappländska resan 1732* ['Iter Lapponicum. A diary of the Lapland journey 1732'], Umeå: The Royal Skyttean Society.

Magnani, N. (2016). "Reconstructing food ways. Role of Skolt Sámi cultural revitalization programs in local plant use," *Journal of ethnobiology*, 36, pp. 85–104.

Manninen, I. (1933). "Über die *Moxibustion* in der Volksmedizin der Nordvölker," *Mémoires de la Société finno-ougrienne*, 67, pp. 256–266.

Modin, E. (1911). "Växtnamn samt folkliga bruk och föreställningar rörande växter i Härjedalen" ['Plant names, popular uses and perceptions regarding plants in Härjedalen'], *Svenska Landsmål och Svenskt Folkliv*, 114, pp. 697–737.

Modin, E. (1916). *Gamla Tåsjö. Anteckningar om hembygden* ['Old Tåsjö. Notes on the homeland'], Sollefteå: A.-B. Dahlbergs Bokhandel.

Nickul, K. (1948). *The Skolt Lapp Community Suenjelsijd during the Year 1938*, Stockholm: Geber.

Niemelä, T. (2003). "Käävät kiinnostavat kovakuoriaisia – ja ne tutkijoita" ['Polypores are interesting to beetles—and those to researchers'], *Luonnontieteellinen keskusmuseo*, 2003, pp. 10–11.

Nordermann, M. (1961). "Städning och kroppsvård" ['Cleaning and care'], in *Lossen. Liv och arbete vid en härjedalssjö*, Stockholm: Almqvist & Wiksell, pp. 113–114.

Nordholm, A. (1749). *Jämtelands djur-fänge* ['Hunting in Jämtland], Upsala: Diss.

Nordlander, J. (1947). *Ångermanländska folkminnen från 1800-talets förra hälft* ['Folklore from Ångermanland from the first part of the nineteenth century'], Stockholm: Björck & Börjesson.

Olsson, G. (2009). "Leka med växter" ['Playing with plants'], *Svensk Botanisk Tidskrift*, 103, pp. 274–278.

Palmstruch, J.W. (1804). *Svensk botanik* 3, Stockholm: Nordström.

Papp, N., Rudolf, K., Bencsik, T. & Czégényi, D. (2015). "Ethnomycological use of *Fomes fomentarius* L. Fr. and *Piptopterus betulinus* Bull. P. Karst. in Transylvania, Romania," *Genetic Resources and Crop Evolution*, 64, pp. 101–111.

Paulaharju, S. (1966). *Ödebygdsfolk. Från Nordsveriges finskbygder* ['The people of a sparsely populated region. From the Finnish-speaking areas of northern Sweden'], Stockholm: Natur och Kultur.

Pegler, D. (2001). "Useful fungi of the world. Amadou and Chaga," *Mycologist*, 15, pp. 153–154.

Peintner, U. & Pöder, R. (2000). "Ethnomycological remarks on the Iceman's fungi," in *The Iceman and his Natural Environment*, eds. S. Bortenschaler & K. Oeggl, Wien: Springer.

Pettersson, O.P. (1999). *Nybyggares dagliga leverne. Nybyggare i Vilhelmina i mitten av 1800-talet* ['Settlers daily live. Settlers in Vilhelmina parish in the mid-nineteenth century'], Umeå: Dialekt-, ortnamns- och folkminnesarkivet.

Qvigstad, J. (1901). "Lappiske plantenavne" ['Sami plant names'], *Nyt Magazin for Naturvidenskaberne*, 39:4, pp. 303–326.

Qvigstad, J. (1932). *Lappische Heilkunde*. Mit Beiträgen von K.B. Wiklund, Oslo: Aschenhoug & Co.

Retzius, A.J. (1806). *Försök til en Flora Oeconomica Sveciae Eller Swänska Wäxters Nytta och Skada i Hushållningen* 1 ['A Swedish economic flora, or the economic uses and disadvantages of Swedish plants 1'], Lund: Joh. Lundblad.

Rothof, L.W. (1762). *Hushålls-Magasin, Första delen om Hushålls-Ämnen Til Deras nytta, bruk och skada, Beskrefne Uti Oeconomiska Föreläsningar* ['Household Magazine, first section on household substances and their uses and disadvantages, described in economic lectures'], Skara: kongl. priv. boktr.

Roussel, B., Rapior S., Charlot C., Masson C.-L. & Boutié, P. (2002). "Histoire des utilisations thérapeutiques de l'amadouvier [*Fomes fomentarius* (L. Fr.]," *Revue d'histoire de la pharmacie*, 90, pp. 599–614.

Ryd, L. (1995). *Kvinnor i väglöst land. Nybyggarkvinnors liv och arbete* ['Women in land without roads. The life and work of women settlers'], Stockholm: Dialogos.

Rydving, H. (2010). *Tracing Sami Traditions. In Search of the Indigenous Religion among the Western Sami during the 17th and 18th Centuries*, Oslo: Novus forlag.

Saar, M. (1991). "Fungi in Khanty folk medicine," *Journal of Ethnopharmacology*, 31, pp. 175–179.

Schlachter, W. (1958). *Wörterbuch des Waldlappendialekts von Malå und Texte zur Ethnographie*, Helsinki: Suomalais-Ugrilainen Seura.

Sjögren, A.J. (1828). *Anteckningar om församlingarne i Kemi-Lappmark* ['Notes about the parishes of Kemi Lappmark'], Helsingfors: J. Semelii Enka.

Sjögren, J.A. (1861). *Die Syrjänen. Ein historisch-statistischphilologischer Versuch*, St. Petersburg: Kaiserlichen Akademie der Wissenschaften.

Smitt, J.W. (1863). *Skandinaviens förnämsta ätliga och giftiga svampar* ['Scandinavia's most important edible and toxic mushrooms'], Stockholm.

SOU (1966:71). O*tillbörlig konkurrens. Betänkande av utredningen om illojal konkurrens* ['Unfair competition. Report of the investigation of unfair competition'], Stockholm: Esselte.

Steen, A. (1961). *Samenes folkemedisin* ['Sami folk medicine'], Oslo: Universitetsforlaget.

Suhonen, P. (1936). *Suomalaiset kasvinnimet* ['Finnish plant names'], Helsinki: Suomalaisen Eläin- ja Kasvitieteellisen Seuran.

Sundström, C. & Sundström, A. (1983). *Färga med svampar* ['Dyeing with mushrooms'], Västerås: Ica Bokförlag.

Svanberg, I. (1998). "The use of wild plants in the Faroe Islands 1590–1990," *Svenska Linnésällskapets Årsskrift*, 1996–1997, pp. 81–130.

Svanberg, I. (2004*a*). *Folkbotaniska uppgifter från Borgsjö socken i Medelpad. Gullik Gulliksson anteckningar från 1955* ['Folk botanical records from Borgsjö parish, Medelpad. Gullik Gulliksson's notes from 1955'], Uppsala: Maral Production.

Svanberg, I. (2004*b*). "Samiska växtnamn och folkbotaniska uppgifter hos Johan Turi" ['Sami plant names and folk botanical information in the writings of Johan Turi'], *Svenska Landsmål och Svenskt Folkliv*, 127, pp. 43–50.

Svanberg, I. (2005) "Ethnobotany," in *The Saami. A Cultural Encyclopedia*, eds. U.-M. Kulonen, I. Seurujärvi-Kari & R. Pulkkinen, Helsinki: Suomalaisen Kurkjallisuuden Seura, pp. 104–105.

Svanberg, I. (2007). "'The Lapps chew this root a lot.' Milk parsley (*Peucedanum palustre*) in Sami plant knowledge," in *Cultural Interaction between East and West. Archaeology, Artefacts and Human Contacts in Northern Europe*, eds. U. Fransson *et al*. (Stockholm Studies in Archaeology 44), Stockholm: Department of Archaeology, pp. 328–330.

Svanberg, I. (2011). *Folklig botanik* ['Folk botany'], Stockholm: Dialogos.

Svanberg, I. (2012). "The use of wild plants as food in pre-industrial Sweden," *Acta Societatis Botanicorum Poloniae*, 81, pp. 317–327.

Svanberg, I. (2018). "Doftticka (*Haploporus odorus*) som doftspridare i klädkistor och smakgivare i mat," *Saga och Sed. Annales Academiae Regiae Gustavi Adolphi*, 2017, pp. 105–120.

Svanberg, I. & Lindin, L. (2004). "'Dock brukas åtskilliga i curer i synnerhet hos lapparna.' Pastorskan Sophia Forsners anteckningar om folkmedicin hos Åselesamerna på 1700-talet" ['"Many remedies are used especially by the Lapps." Sophia Forsner's notes on folk medicine among the Sami of Ångermanland in the eighteenth century'], in *Västernorrland – Sameland. Om samisk närvaro i Ångermanland och Medelpad*, eds. M. Bergvall & P. Persson, Härnösand: Länsmuseet i Västernorrland, pp. 229–239.

Svanberg, I., Łuczaj, Ł., Pardo-de-Santayana, M. & Pieroni, A. (2011). "History and current trends of ethnobiological research in Europe," in *Ethnobiology*, eds. E.N. Anderson, K. Adams, D. Pearsall, E. Hunn & N.J. Turner, Hoboken NJ: Wiley-Blackwell, pp. 191–212.

Svanberg, I. & Nelson, M.C. (1992). "Bone meal porridge, lichen soup, or mushroom bread. Acceptance or rejection of food propaganda 1867–1868," in *Just a Sack of Potatoes? Crisis Experiences in Past and Present Societies*, ed. A.J. Häkkinen, Helsinki: Societas Historica Finlandiae, pp. 119–147.

Thoen, D. (1982). "Usage et legendes lies aux Polypores," *Bulletin Trimestriel de la Société Mycologique de France*, 98, pp. 289–318.

Tidström, A. (1955). *Resa genom Dalarna 1754* ['A Dalecarlian tour in 1754'], Falun: Dalarnas Fornminnes- och Hembygdsförbund.

Tidström, A. (1978). *Resor i Västergötland 1756 och 1760* ['Travels in Westrogothia in 1756 and 1760'], Uppsala: Föreningen för Västgöta litteratur.

Tillhagen, C. H. & Dencker, N. (1949). *Svenska folklekar och danser* 1 ['Swedish folk games and dances 1'], Stockholm: AB Bokverk.

Tunón, H. & Svanberg, I. (1999). "Laxatives and the Iceman," *The Lancet*, 353, pp. 925–926.

Turtiainen, M., Saastamoinen, O., Kangas, K. & Vaara, M. (2012). "Picking of wild edible mushrooms in Finland in 1997–1999 and 2011," *Silva Fennica*, 46, pp. 569–581.

Wasenius, P. H. (1751). *Norrländska boskaps skötseln med några små anmärkningar uti korthet sammanfattad och beskrewen* ['Cattle breeding of the Swedish North with some remarks concluded and described'], Stockholm: Kongl. Tryckeriet.

Wasson, V. & Wasson, R.G. (1957). *Mushroom, Russia and History* 2, New York: Pantheon Books.

Yamin-Pasternak, S. (2008). "A mean of survival, a market of feasts. Mushrooms in the Russian Far East," *Ethnology*, 47, pp. 95–107.

Yamin-Pasternak, S. (2011). "Ethnomycology. Fungi and mushrooms in cultural entanglements," in *Ethnobiology*, eds. E.N. Anderson, K. Adams, D. Pearsall, E. Hunn & N.J. Turner, Hoboken NJ: Wiley-Blackwell, pp. 213–230.

Zetterstedt, J.W. (1833). *Resa genom Umeå Lappmarker i Vesterbottens Län, förrättad år 1832* ['A tour in Ume Lappmark, Västerbotten County, in 1832'], Örebro: N.M. Lind.

AUTHOR

Ingvar Svanberg, b. 1953, is an ethnobiologist and Senior Research Fellow at the Institute of Russian and Eurasian Studies, Uppsala University, Sweden. His research interests include cultural zoology, domestic animal keeping and traditional use of plants and other organisms. He has written numerous books and scientific articles on a wide range of topics.

ingvar.svanberg@ires.uu.se