



DOMESTIC ANIMALS AND PLANTS IN FINNISH MEDIEVAL CHURCH WALL PAINTINGS FROM ZOOARCHAEOLOGICAL AND ARCHAEBOTANICAL PERSPECTIVE

ABSTRAKT

HUSDJUR OCH VÄXTER I FINLANDS MEDELTIDA KYRKOMÅLNINGAR UR ETT ARKEO-OSTEOLOGISKT OCH ARKEOBOTANISKT PERSPEKTIV

Denna artikel behandlar medeltida kyrkors väggmålningar och speciellt växt- och husdjursmotiven i dem. Synvinkeln är inte konsthistorisk utan skribenterna behandlar ämnet ur ett osteologiskt och arkeo-botaniskt perspektiv. Målningarna med djurmotiv härstammar från 19 olika medeltida kyrkor medan växtornamentiken kommer från två olika finska medeltida kyrkor. Bildmotiven i dessa kyrkor jämförs med den historiska och arkeologiska informationen om medeltidens djur och växter. Husdjur och växter har haft många symboliska betydelser genom historien. Dessa har även påverkat hur och i vilket sammanhang man har behandlat dem i väggmålningarna.

Det har inte varit lätt att måla djur och växter som inte existerat i Finland och det syns i målningarnas rätt så omväxlande resultat. Man kan se en lokal påverkan där man bytt ut de främmande elementen med bekanta motiv från den egna miljön. Till exempel fåren i de finska målningarna härstammar från en kortsvensad nordisk ras samtidigt som de för Central-Europa typiska långsvansade fårrasen saknas i de finska kyrkomålningarna. Djur- och växtmotiven i den finska kyrkorna berättar om symbolik, traditionella seder och vardagens realiteter.

INTRODUCTION*

For medieval people the church building was the center of medieval life; they served as the site and space of everyday religious and community activity. Since most people did not know how to read, paintings, sculptures, and stained glass windows of the churches taught people stories from the



Fig. 1. Some of the Finnish medieval church interiors are richly decorated. Hattula Holy Cross Church interior. Photograph by Auli Bläuer.

Bible and helped them to worship (Fig. 1). The aim of this paper is to examine the animals and plants presented in wall paintings of the medieval churches in Finland, and compare them to the information derived from written sources as well as zooarchaeological and archaeobotanical data of medieval animals and plants. Information on medieval animals and plants in Finland has traditionally been acquired from written and archaeological sources. At present, even disciplines such as genetics and isotope analysis are involved in the study of animals and plants in medieval everyday life.¹ Animal bone material and plant remains recovered from archaeological excavations provide detailed information about past animal and plant species. Animals and plants as Christian

allegories have always been well known and widespread and therefore they often appear in medieval church paintings, depicting stories of the Bible from the Creation to the Last Judgment, saints, apostles and the legend of the Virgin Mary (Fig. 2). In this paper, we examine medieval wall paintings from the zooarchaeological and archaeobotanical perspective, studying the effect that animals and plants from real life had on these paintings. This comparison can, in turn, reveal details about the painters. This study concentrates on plants of economic and symbolic importance in the Biblical world and on domestic animals in Finland.

Analysis of medieval animal bone assemblages and macrofossil samples from archaeological excavations have revealed plenty of information about past animals and plants. For example, animal bone material can be used to study the abundance and economic significance of domestic animals and details of their appearance, such as horns and their size.² Plant remains can reveal information about domesticated plants and their use as well as the utilization of different wild plants or imported exotic fruit.³ Detailed studies of medieval cereal grains can give information about the types and varia-



Fig. 2. Paintings include both animal and plant motifs. Flight to Egypt, Hattula Holy Cross Church. Photograph by Auli Bläuer.

tion of cultivated species.⁴ Medieval textile finds can reveal details of sheep wool and linen use, quality and colour.⁵ Historical sources sometimes describe quantities and qualities of domestic animals and grain harvests.⁶ In a few written sources animals are described with details such as their colour.⁷ Modern descendants of medieval animals and especially their DNA can be used to research the population history of certain species.⁸ Also ancient DNA derived from medieval animal bones can contribute to knowledge of these animals.⁹

Finnish medieval churches and wall paintings have been researched previously by several scholars.¹⁰ Animal and plant motifs have been studied by e.g. Helena Edgren (horse-trading motif)¹¹ and Jouni Issakainen (plant representations in St Michael's Church in Turku dating from the early 20th century).¹² Iconographical research has been successfully used to study animals and plants and their importance and meaning.¹³ Wall paintings were made by professional painters and master-builders, however, it is not exactly known, who the painters were.¹⁴ Most probably they came outside the borders of modern Finland: thus, the painting details can include local influences.¹⁵ Earlier researchers have found some details in the paintings that could represent local fauna and flora. These include a bear attacking cattle in Hattula church, and Adam and Eve covering their nakedness with birch leaves in wall paintings of Hattula church (Fig.3) and Lohja church.¹⁶

The interpretation of the wall paintings, however, is not straightforward. Animals and plants that are present in the wall paintings of medieval churches do not necessarily represent concrete Finnish animals and plants. Firstly, these wall paintings describe Biblical or Apocryphal stories that are not located in Finland. Thus, in the pictures animals and plants of foreign origin can be present. Secondly, the motifs and style could have been copied from books or model books.¹⁷ Moreover, different animal and plant species have their own symbolic meaning and therefore are not always meant to be realistic, such as the winged ox of St. Luke. Animals and plants have also some common symbolic meanings. For example, plants can represent different phases of the life cycle. A desiccated flower is a symbol of death and a withered plant is a sign of the fragility of life.¹⁸ Also, painters of the pictures were not necessarily from the area of modern Finland or even from the Kingdom of Sweden.¹⁹ In that case, the painter could have taken animals and plants of his own country as models for the motifs of the paintings.

Zoological and botanical iconographic depictions from wall paintings differ from the evidence derived from written sources or archaeological excavations. Representations in art may shed light on the variety of medieval domesticated animals and plants as well as their symbolic meaning.²⁰ Comparing data from archaeological and written sources with wall paintings enables us to form a more complete picture of animal and plant use, meaning and symbolic value in medieval Finland.

MATERIAL AND METHODS

This article is based on two independent papers held in conference on Church Archaeology in the Baltic Sea Region 2013 in Turku, Finland. Therefore analysis of animals and plants is based on different source material. A total of 76 pictures of domestic animals were collected from 19 churches (Table 1). Plant depictions were researched only from the churches of Hattula and Lohja, and this sample has to be seen as preliminary. The churches used in this study are from the Finnish

Species	Nr of pictures
Cattle	22
Cattle (?)	1
Sheep	19
Sheep (?)	2
Horse	16
Horse/donkey	4
Donkey	1
Donkey (?)	1
Goat	2
Pig	2
Pig (?)	2
Chicken	1
Duck /goose(?)	1
Dog?	1
Dog	1
Total	76

Table 1. The number of different animal species present in wall paintings.

	Location	Dating	Painted by the same group
1	Espoo	ca. 1500-1510	Espoo, Siuntio, Rauma
2	Hattula	1510's	Hattula, Lohja
3	Katariina (Turku)	1470-1490	Kaarina, Kalanti, Laitila, Parainen, Perniö, Sauvo, Taivassalo
4	Kalanti	ca. 1470-1471	Kaarina, Kalanti, Laitila, Parainen, Perniö, Sauvo, Taivassalo
5	Korppoo	Mid- 15th century	
6	Laitila	ca. 1483	Kaarina, Kalanti, Laitila, Parainen, Perniö, Sauvo, Taivassalo
7	Lohja	1510's	Hattula, Lohja
8	Maaria	ca. 1440-1450	
9	Mynämäki	1430-1450	
10	Nousiainen	1430's	
11	Parainen	1486	Kaarina, Kalanti, Laitila, Parainen, Perniö, Sauvo, Taivassalo
12	Pernaja	1440's	
13	Perniö	ca. 1460-80	Kaarina, Kalanti, Laitila, Parainen, Perniö, Sauvo, Taivassalo
14	Pyhtää	1510's	
15	Rauma	Early 16th century	Espoo, Siuntio, Rauma
16	Sauvo	1472	Kaarina, Kalanti, Laitila, Parainen, Perniö, Sauvo, Taivassalo
17	Siuntio	1510's	Espoo, Siuntio, Rauma
18	Taivassalo	1467-70	Kaarina, Kalanti, Laitila, Parainen, Perniö, Sauvo, Taivassalo
19	Turku Cathedral	1470's	

Table 2. Churches used in this study and the dating of their paintings (Sources: Hiekkänen 2007; Helsinki, National Board of Antiquities, The Picture Collections, Iconographical Collection).

mainland and the wall paintings date from the 15th or early 16th century (Table 2).²¹ The locations of studied churches are presented on Map 1. For the animals, the visited churches were selected with the help of a collection of pictures of the wall paintings in the archives of the Finnish National Board of Antiquities.²² This study includes all churches where well preserved wall paintings with domestic animals were observed during the archive search. The study is based on digital photographs taken in the churches during the summer season of 2013.²³ Animal and plant species were identified by using both their appearance and the context of the picture, meaning the Biblical or Apocryphal story or the saint that is represented. Medieval art was conventional and help for species identification can be found in contemporary art.

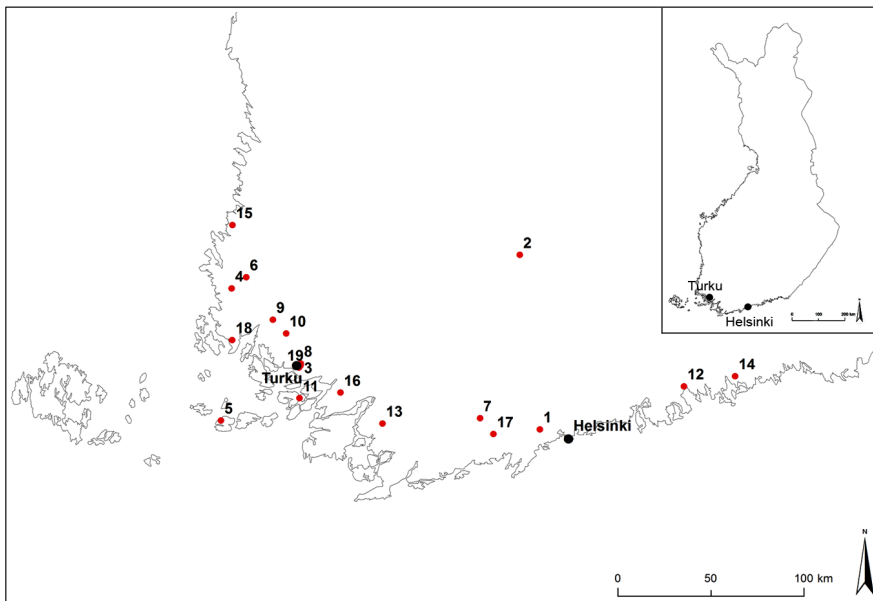
Still, the species presented in the pictures are sometimes difficult to identify due to vague details. Therefore, the species identification remains uncertain for some animals and plants.²⁴

RESULTS

THE IDENTIFICATION OF ANIMALS

Cattle are the most abundant species in the studied wall paintings; this is due to the abundance of the winged ox of St Luke's symbol (14 out of 22 cattle) (Table 3, Figs. 4–17). However, cattle are also represented in the Biblical or Apocryphal stories (Table 3, Figs. 18–22) and in pictures depicting secular life (milking) (Table 3, Figs. 23–25). In the Great Flood painting in Lohja Church there is one animal identified as uncertain cattle (Table 3, Fig. 26).

Sheep are also a common motif. The sheep is used as the symbolic animal representing Christ or Saint Agnes (Table 3, Figs. 27–31). They are also common in Biblical or Apocryphal stories as herded or sacrificed animals and present in pictures where a thief is stealing a lamb (Table 3, Figs. 32–39). In the Great Flood painting in Lohja Church there are two animals which were identified in the present connection as uncertain sheep (Table 3, Figs. 40–41).



Map 1. Finland with the locations of the churches studied in this paper, listed in Table 2. Source: Mapinfo World Map 2014.

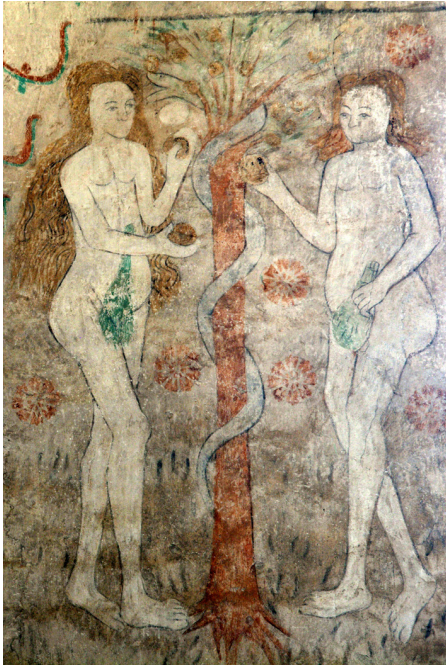


Fig. 3. Adam and Eve covering their nakedness with leaves. Hattula Holy Cross Church. Photograph by Auli Bläuer.

Horses are also well represented in the paintings. They are often part of action: being ridden (e.g. by St. George), in tournament, or pulling a sledge (Table 3, Figs. 42–48). In the paintings representing secular life horses are being sold (Table 3, Figs. 49–53). Only one of the equines in the paintings is clearly identifiable as a donkey, with long ears, grey colour, small stature and a donkey-like tail (Table 3, Fig. 54). Five other animals could be donkeys according to their Biblical context (Jesus Enters into Jerusalem, the Flight into Egypt and the Nativity scene).²⁵ However, only the one in Espoo Church could be perhaps interpreted as a donkey: the rest look more like horses with short ears and horse-like tails (Table 3, Figs. 20, 55–57).

Only two definite pictures of pigs were found, both associated with Saint Anthony (Table 3, Figs. 58–59). Two uncertain ones in Siuntio are otherwise quite pig-like, especially a female one with visible teats. However, the tail of the male resembles more that of a dog (Table 3, Figs. 60–61). The possible pigs relate to paintings of Moses and Aaron and could be part of a tale of dietary taboos, in which the eating of pigs is forbidden.²⁶ Goats are present in one painting, possibly representing the tree of life in Maaria Church in Turku (Table 3, Fig. 62)²⁷. Domestic birds are present as a cock (symbol of Christ) and a possible duck or goose – a white bird with webbed feet (Table 3, Figs. 63–64). A dog or probable dog can be found in two paintings, in one as a hunting companion and in the other as a herd dog (Table 3, Figs. 47, 65). In the latter, the identification of the species is uncertain. However, as the animal has paws instead of hooves, it sits in a dog-like position, wears a harness of some kind and is positioned near the shepherd, its interpretation as a dog appears justified.

The paintings also contain information about the physical appearance of the animals. With one exception, cattle are painted with horns. The only polled bovine is in a Nativity scene in Rauma Church (Table 3, Fig. 21). The

FIG. NO	LOCATION	SPECIES	COLOUR	OTHER ATTRIBUTES	CONTEXT
4	Parainen	Cattle	Brown		St. Luke
5	Espoo	Cattle	Black	Ox	St. Luke
6	Hattula	Cattle	Brown	Ox	St. Luke
7	Kalanti	Cattle	Brown	Ox	St. Luke
8	Katariina	Cattle	Brown	Ox	St. Luke
9	Laitila	Cattle	Brown	Ox	St. Luke
10	Lohja	Cattle	Brown	Ox	St. Luke
11	Perniö	Cattle	Brown	Ox	St. Luke
12	Pyhtää	Cattle	Brown	Ox	St. Luke
13	Rauma	Cattle	Brown	Ox	St. Luke
14	Sauvo	Cattle	Brown	Ox	St. Luke
15	Siuntio	Cattle	Grey	Ox	St. Luke
16	Taivassalo	Cattle	Brown	Ox	St. Luke
17	Turku	Cattle	Brown	Ox	St. Luke
18	Hattula	Cattle	Brown		Angel's revelation to Joakim
19	Lohja	Cattle	Brown		Golden calf
20	Taivassalo	Cattle	Brown		Nativity scene
21	Rauma	Cattle	Brown	No horns, calf?	Nativity scene
22	Hattula	Cattle	Brown		Paradise, being mauled by a bear
23	Lohja	Cattle	Brown		Milking
24	Espoo	Cattle	Brown	Cow	Milking
25	Kalanti	Cattle	Brown	Cow	Milking
26	Lohja	Cattle (?)	Brown		The great flood
27	Hattula	Sheep	White	Longer tail?	St. John the baptist
28	Perniö	Sheep	White		St. John the baptist
29	Taivassalo	Sheep	Grey		St. John the baptist
30	Lohja	Sheep	White		St. Agnes
31	Hattula	Sheep	White		St. Anges
32	Lohja	Sheep	White	Horns, male	
32	Lohja	Sheep	White	female	
33	Lohja	Sheep	White	3 sheep	Angel's proclamation to shepherds
34	Hattula	Sheep	White		Angel's revelation to Joakim
35	Hattula	Sheep	White	3 sheep	Abel's sacrifice
36	Lohja	Sheep	White	2 sheep	Sacrifices to the golden calf
37	Espoo	Sheep	White		Thief carries a lamb
38	Espoo	Sheep	White		Thief carries a lamb

Table 3. The list of figures of animals. The complete set of figures are available only in the online version of this article (to be published in June 2017).

FIG. NO	LOCATION	SPECIES	COLOUR	OTHER ATTRIBUTES	CONTEXT
39	Kalanti	Sheep	White		Thief carries a lamb
40	Lohja	Sheep (?)	White		The great flood
41	Lohja	Sheep (goat?)	White	Horns, male?	The great flood
42	Korppoo	Horse	NA		Relates to St George slaying the dragon-motif
43	Espoo	Horse	White		St George slaying the dragon
44	Maaria	Horse	NA	2 horses	Turnament
45	Nousiainen	Horse	Brown		Turnament
45	Nousiainen	Horse	Grey		Turnament
46	Korppoo	Horse	NA	2 horses	Tournament
47	Korppoo	Horse	NA		Hunter with its dog
48	Pernaja	Horse	NA		With sledge
49	Espoo	Horse	White		Horse trade
50	Espoo	Horse	White		Horse trade
51	Hattula	Horse	White		Horse trade
52	Kalanti	Horse	Brown		Horse trade
53	Lohja	Horse	White	2 horses	Horse trade
54	Lohja	Donkey	Grey		Jesus rides to Jerusalem
55	Espoo	Donkey (?)	White		Jesus rides to Jerusalem
3	Hattula	Horse/donkey	White		Flight to Egypt
56	Lohja	Horse/donkey	Grey		Flight to Egypt
57	Hattula	Horse/donkey	White		Jesus rides to Jerusalem
20	Taivassalo	Horse/donkey	White		Nativity scene
58	Kalanti	Pig	Brown		St. Antonius
59	Mynämäki	Pig			St. Antonius
60	Siuntio	Pig (?)	Brown	female	Moses and Aron
61	Siuntio	Pig (?)	Brown	male?	Moses and Aron
62	Maaria	Goat	NA	2 Goats	Eating the tree of life?
63	Maaria	Chicken	NA	Rooster	
64	Lohja	Duck/goose (?)	White		Paradice
47	Korppoo	Dog	NA		Hunter with its dog
65	Hattula	Dog (?)	White		Angel's revelation to Joakim

Table 3. The list of figures of animals. The complete set of figures are available only in the online version of this article (to be published in June 2017).

colours and details in the wall paintings in this church were heavily restored in 1891. The central part of the picture was destroyed and the Infant Jesus in the painting is therefore copied from Kalanti Church.²⁸ There is no copy of the original picture before the restoration work: the survived archive copy already includes the added Infant Jesus.²⁹ In this copy the polled bovine is present and its original colour (red) is marked. We can thus assume that this animal was present in the original painting. In the copy, there is no sign of the horns or that horns would have been once present but were destroyed.

Cattle horns are always painted as upward-pointing and in a lyre shape. Most of the sheep in the wall paintings are polled, however one certain sheep (likely ram) and one uncertain sheep are horned (Table 3, Figs. 32, 41).

In some paintings, animals have a certain colour. Cattle are usually reddish brown, with two exceptions: the winged oxen of St Luke in the churches of Espoo and Siuntio are black and grey. Horses are white, grey or brown, and the donkey is grey. Sheep are always white. Pigs in the paintings are brown. The possible dog in Hattula church is white. All the animals are painted with only one colour with no apparent spots or markings.

Cattle and horses in the paintings are very small in stature, as was usual for the medieval time (see below, discussion). For example, in the picture where a bear is attacking a cow, bull, or ox both are approximately the same height (Table 3, Fig. 22). The attacked animal has full-grown horns and is thus not likely to be a calf or young animal. Modern cattle are notably taller than bears.³⁰ In some paintings, cattle and horses are represented together with humans (e.g. Table 3, Figs. 23–25, 49–53). Also in these pictures, the animals are smaller than their modern counterparts.

Pigs in the paintings have an arching back and their form resembles that of wild boars more than modern domestic pigs. Sheep have short tails, except one with unclear tail length (Table 3, Fig. 27).

THE IDENTIFICATION OF PLANTS

In the churches of Hattula and Lohja plants are present on all parts of the church walls, ceilings and arches (Table 4, Fig. 1). The most abundant plants are very petite and small leaved climbers and some of them are painted with two colours. One of their suggested functions was to fill empty space on the walls³¹ and therefore climbers were not meant to represent specific plant species. Climbers are divided in this study into three different types, named as types A, B, and C (Table 4, Figs. 66–70). Type A consists of oblong and roundish (sometimes also acute) leaves, divided into three to four opposite pairs (Table 4, Figs. 66, 69) and climber type B consists of oblong and acute

FIG. NO	LOCATION	PLANT	DESCRIPTION	SCENE
66	Hattula	Climber - type a	Oblong and roundish leaves, divided into three to four opposite pairs, green and brownish color	Christ appears to Maria Magdalena
67	Hattula	Climber - type b	Oblong and acute leaves, divided into several opposite pairs, green and brownish color	Legend of Sant Christopher (Golden Legend)
68	Hattula	Climber - type c	Oblong and acute leaves, on one side of the stem, brownish color	Flight to Egypt
69	Lohja	Climber - type a	Oblong and acute leaves, divided into three opposite pairs, green and brownish color	Last Judgement; group of angels
69	Lohja	Climber - type b	Oblong and acute leaves, divided into several opposite pairs, green and brownish color	"
69	Lohja	Vine - type a	vine with ablong and acute leaves, divided into several opposite pairs, green and brownish color together with 5-finger vine leaves, brownish color	"
70	Lohja	Climber - type c	Oblong and acute leaves, on one side of the stem, brownish color	Peasant Cain
71	Hattula	Rose	Eight petals arranged around the stamen	Agony of the Christ
72	Lohja	Rose	Five petals arranged around the stamen	Last Judgement
73	Lohja	Rose	Four petals arranged around the stamen	Family tree
74	Hattula	Clove		Pelican feeding her chicks
75	Lohja	Clove	Four petals arranged around cross-like cluster of petals	Saint Barbara
76	Hattula	Lily	Stylized	Saint Thomas
77	Lohja	Lily	Stylized	Bread from heaven
78	Lohja	Pomegranate	Stylized	
79	Hattula	Lily	Seedling of a lily in a pot	Annunciation to Mary
80	Hattula	Grape vine	Small grapes, bold brownish stem	
81	Hattula	Grape vine	"	
82	Lohja	Grape vine	"	

83	Hattula	(Grapes)	grapes not visible, in a bag	Return from the Promised Land Canaan
84	Lohja	(Grapes)	grapes not visible, in a bag	Return from the Promised Land Canaan
85	Lohja	(Grapes)	wine	Feast of the Sinfuls
86	Hattula	Pomegranate	Stylized	Virgin Mary protecting mankind
87	Hattula	Pomegranate	Stylized	Legend of the Holy Cross and Empress Helen
88	Hattula	Apple and thistle		Last Judgement
89	Lohja			Last Judgement
3	Hattula	Birch, apple	Branches	Creation, Adam and Eve in Paradise
90	Lohja	Birch	Branches	Creation, Expulsion from the Garden of Eden
91	Hattula	Birch, apple	Branches	Creation, Expulsion from the Garden of Eden
92	Hattula	Birch, roses	Branches	Creation, Expulsion from the Garden of Eden
93	Lohja	Trees		Creation of Eve
2	Hattula	Date palm		Flight to Egypt
94	Lohja	Date palm		"
95	Lohja	Willow		Jesus Enters Jerusalem as King of Israel
96	Hattula	Palm	Branch	Saint Barbara
97	Lohja	Olive trees		Garden of Gethsemane
98	Hattula	Dog rose		Christ carrying the Cross

Table 4. The list of figures of plants. The complete set of figures are available only in the online version of this article (to be published in June 2017).

leaves, divided into opposite pairs (Table 4, Figs. 67, 69). Types A and B are both painted with two colours, green and brownish. In climber type C, however, the leaves are not in pairs, but only present on one side of the stem. Some of these could have originally belonged to type B, but the green painted leaves on the other side of the stem have perhaps been destroyed or they have vanished over the centuries (Table 4, Figs. 68, 70).

Besides climbers, highly versatile assortments of stencil-painted flowers have been depicted on the walls (Table 4). Stencil-painted flowers are divided here into groups of roses (Table 4, Figs. 71–73), cloves (Table 4, Figs. 74–75), lilies (Table 4, Figs. 76–77), and pomegranate flowers (Table 4, Fig. 78). Roses have been further divided into three different types according to the number of the petals. Cloves and lilies have been divided into two types according to their general appearance (Table 4). The rose is a symbol of Christ, who died on the cross and rose from the dead; therefore five petals of the rose symbolize the five wounds of Christ.³² Furthermore, the rose is used to represent the maternal love and pain of the Virgin Mary, whereas lilies are figurative manifestations of her purity and innocence.³³ Even if stencil-painted lilies are common, only one lily as a plant as a part of a painting has been depicted. The seedling of a lily in a pot can be seen in the story of the Annunciation of Mary (Table 4, Fig. 79) where the lily symbolizes her purity. In general, stencil-painted roses are more often abundant in the depictions than lilies. Roses are often connected with the scenes where Jesus or the Virgin Mary is present, while lilies seem to be connected mostly with paintings of apostles or saints.

The grape vine (*Vitis vinifera*) is well present almost everywhere in the Hattula and Lohja churches (Table 4, Figs. 80–82). Grape vine is depicted in a very detailed manner, as can be seen on the carefully painted leaves, which are divided into five lobes, and very curly tendrils. However, the size of the bunch of grapes resembles more a bunch of currant berries (*Ribes* sp.) than real grapes. This can be due to the painter's lack of knowledge. As a plant, the vine is a strong symbol of life as well as wine, the drink made of grapes. In ecclesiastical art, Christ has been represented as a vine since the 13th century.³⁴ Although it has great importance as a symbol, the grape vine is not present in Biblical depictions in the wall paintings. Only in the story of the Return from the Promised Land of Canaan two spies are carrying a bag, which according to the Bible story contains grapes (Table 4, Figs. 83–84).³⁵ A jug of wine can be seen, for example, in a scene of the Feast of the Sinful (Table 4, Fig. 85).

The pomegranate is a symbol of fertility, and it is generally regarded as a symbol of the Virgin Mary.³⁶ Symbols of pomegranates, according to the person they are associated with, can be seen stencil-painted on the Virgin

Mary's dress and among other stencil-painted flowers around the wall paintings (Table 4, Fig. 86). Moreover, pomegranates are present also on Empress Helen's dress (Table 4, Fig. 87). Stencil-painted pomegranates are depicted only in Hattula Church, whereas at Lohja church the Virgin Mary has stars on her dress, while the Empress Helen's dress is without any motifs.³⁷ Fruits are depicted for example in the pictures of Saints Knut and Olaf, who are both holding an apple as a symbol of kingship. In the scene of the Holy Trinity in Hattula Church, an angel is holding something that could be an apple in the left hand and in the right hand the bud of a thistle (Table 4, Fig. 88). In general, the thistle is a symbol of violence and pain.³⁸

According to commonly held lore, Adam and Eve ate an apple in Paradise, but the Bible does not mention which fruit they ate.³⁹ Thus, in Holy Scriptures the Latin word *malum* means both "apple tree" and "evil", it was deduced that the tree of knowledge in Genesis was an apple tree.⁴⁰ It would be logical that they ate fruit from a fig tree (*Ficus carica*), because the fig is the first plant or fruit mentioned by name in the Bible:⁴¹ 'Then the eyes of both were opened, and they knew that they were naked; and they sewed fig leaves together and made themselves aprons' (Genesis 3:6–7). According to this text in the Bible, Adam and Eve should have aprons made of fig leaves, but in the churches of Hattula and Lohja, the scene of the Creation is depicted in a slightly different way; Adam and Eve are both wearing a bunch of green leaves made of deciduous tree (Fig. 3) (Table 4, Figs. 90–92). Similarities can be found in several churches in Sweden, where at the scenes of Creation Adam and Eve are also depicted wearing a bunch of green leaves.⁴² In Germany, however, at the scene of Creation, the bunch of green leaves clearly originate from flowers.⁴³

Trees are very common in wall paintings, being used to divide different scenes and to create boundaries between private and public (Table 4, Fig. 93). In general, trees are symbols of life.⁴⁴ The Bible stories can give clues of what tree is represented in the painting. The date palm (*Phoenix dactylifera*), for example, can be seen in the story of the Flight to Egypt (Fig. 2) (Table 4, Fig. 94). According to the legend, Jesus as a child performed a miracle by forcing the branches of a date palm to bend so his family could have fruit to eat. The date palm is also a symbol of victory, resurrection and salvation.⁴⁵ The date palm is a very tall tree, growing up to a height of 10–20 metres. In the wall painting, however, the date palms are rather small and the trees look like plum trees with dark purple fruit. The size of the painted trees can, of course, be due to the availability of space on the wall at the church.

A very interesting detail concerning a palm tree is related to the Biblical story of Jesus entering Jerusalem as the King of Israel. According to the Bible a crowd of people scattered palm branches in front of him as he rode into

Jerusalem. A small man called Zacchaeus wanted to see who Jesus was, but because he was short he could not see over the crowd. So he climbed a sycamore-fig tree (*Ficus sycomorus*) to see him.⁴⁶ Nonetheless, the branches which Zacchaeus are holding in the wall painting in Lohja Church (Table 4, Fig. 95) are very thin and resemble more willow (*Salix* sp.) or birch. The frond of a palm is associated with certain martyrs.⁴⁷ Saint Barbara has been depicted holding a tower in her left hand and the frond of a palm tree in her right hand (Table 4, Fig. 96).

The olive leaf has symbolized peace, a new life and hope throughout the history of mankind.⁴⁸ The best-known place for olives in the related Bible story was Gethsemane, where Jesus went with his disciples to rest and pray. In the story of Garden of Gethsemane, olive trees are depicted in the wall paintings (Table 4, Fig. 97). In many of the scenes the trees resemble olive trees, as in the scenes of the Christ appearing to Mary Magdalene and Creation of Eve (see Table 4, Figs. 66, 93). In Christian art throughout Europe, olive and palm trees as well as fig trees are often depicted together due to the similarities of their symbolism.⁴⁹

Flowers depicted in above-mentioned scene of Garden of Gethsemane (see Table 4, Fig. 97) belong to the species of anemone (*Anemone* sp.), which also grows at present in Jerusalem. The iconographic significance for anemone is associated with death and grief, and therefore in many episodes representing the Crucifixion of Jesus Christ, one can see anemones near or under the cross.⁵⁰ In the scene a single standing sprout of willow is also depicted. Thistle and dog rose (*Rosa dumalis*) as well as any other thorny plant are symbols of violence and pain.⁵¹ Jesus is often depicted wearing a crown of thorns, symbolizing his many passions as can be seen for example in the scene of Christ carrying the Cross (Table 4, Fig. 98).

DISCUSSION

The animal species in the wall paintings and their abundance was compared with their numbers and status in real life. Cattle are the most abundant species in many medieval bone samples and in tax records, followed by sheep.⁵² Horses were the most valuable animals with high status value, even if they were not abundant compared with other domestic mammals. In zooarchaeological sources pigs and goats are less numerous than cattle and sheep. Goats and pigs had inferior status and meaning in the medieval animal husbandry system. They were not kept at every farm.⁵³ Dog and domestic birds were not taxed and their numbers thus cannot be studied from written sources. In

medieval animal bone material, dog and possible domestic duck bones are present, while not especially abundant.⁵⁴

The three most abundant or important animal species in the wall paintings are the same as in other medieval sources: cattle, sheep and horse. However, this is partly due to the general animal symbolism of medieval Christian art: especially the abundance of sheep is related to their presence in the Biblical scenes. Everyday activities presented in the wall paintings include cattle being milked and horses being sold or pulling sledges. Horses are also present in paintings depicting tournaments. These paintings reflect the importance of cattle and horses in the animal husbandry system and their high status within medieval society.

As far as is known from the osteological material and historical sources, donkeys did not exist in Finland during the medieval period. In Central European medieval art, Jesus rides to Jerusalem and the Holy Family flees to Egypt with a donkey.⁵⁵ As only one of the possible donkeys in the Finnish paintings is recognizable as such and not as a horse (Table 4, Fig. 54), it is possible that painters of these pictures had never actually seen a live donkey. Some of the riding animals in these pictures might be their conception of a donkey-like animal or copied from source books; some are likely to be just horses.

Cattle horns in the wall paintings are lyre-shaped and point upward. However, cattle horns from zooarchaeological material reveal more variation in both shape and size. Polled cattle are not present in the bone material.⁵⁶ The heavy-handed restoration process in Rauma Church could be responsible for the lack of horns in the Rauma painting, even if in the copies of the original painting the animal seems to be polled. It is also possible that the Rauma picture represents a calf rather than an ox, even if this contradicts the traditional depiction of this motif in medieval art. As oxen were harnessed by using their horns, it is not likely that polled oxen existed in medieval Finland.⁵⁷

Both horned and polled sheep are present in the medieval bone material. Males had horns but some ewes were hornless.⁵⁸ Thus, sheep in the wall paintings represent in that sense realistic sheep present in medieval Finland. Many of the sheep in the paintings are lambs and lacking horns due to their young age.

In the paintings only white sheep are present. However, the medieval textile finds and written sources both indicate that in medieval Finland other colours were also present in sheep.⁵⁹ The preference for white sheep in the paintings is likely to be related to their use as a symbol of innocence and Christ. Some 16th-century written sources describe the colour of the horses. For example in Hollola in 1559 and 1562 brown, black and grey horses are

described, with various white markings.⁶⁰ Medieval sources of the colour of cattle are not available. During the post-medieval period, however, the animal stock appears as a colourful herd: brown, black, white and grey animals were present and different white markings were common.⁶¹ The colour of the horse and cattle in the paintings seems to follow a simplified pattern and real-life variation is not present in the paintings. The brown colour of the pigs could well represent the colour of the local wild pig-like variety, as does their general shape which corresponds to the medieval bone material.

The size of the animals in the pictures compared to humans and other animals is quite realistic. During the medieval period, cattle, horse, sheep, goats and pigs were smaller than modern animals. This was mainly because of the poor quality and quantity of fodder especially during the winter feeding period, when animals were often starving.⁶² For example, the average withers height of cows in the Turku medieval bone material is only 106 cm.⁶³

The sheep in the medieval Finnish wall paintings in this study have short tails (possible exception: Table 4, Fig. 27). In modern Europe there are two types of sheep: the Nordic short-tailed sheep and the long tailed sheep, common in Central and Southern Europe.⁶⁴ In the medieval paintings originating from Central Europe sheep exhibit long tails.⁶⁵ According to DNA studies, sheep arrived in Europe in two different waves. First came the more primitive sheep, which was later replaced mostly by the fine-wool sheep.⁶⁶ This difference in the types of sheep present in medieval Europe can be observed in the wall paintings. The painters thus did not copy every detail of the paintings from the Central European source books and instead the animals more likely represent local – or at least Nordic – animals.

The most common plant motifs in wall paintings in the churches of Hatula and Lohja are various climbers, grape vines, roses, lilies and numerous trees. The precise identification of the plant species is challenging owing to the lack of details in paintings and the scale of the plants, which is highly fictional. Therefore, it is often almost impossible to distinguish, for example, a date palm or apple tree from any other fruit tree. Clues, however, can be found in the Biblical stories and with the help of descriptions of the plant in the Bible, some conclusions of the species can be made and a list of plants and trees which are depicted in the wall paintings can be compiled. Because of their great symbolic importance in Christian allegory, foreign plants were included to the paintings, even if artists were not familiar to the native plant or tree. In some cases plants of foreign origin are replaced by local plants, namely fig leaves with local deciduous trees and a palm frond with a branch of willow or birch. For example, in the scene Adam and Eve in the Paradise a bunch of deciduous trees resemble a whisk made of birch.⁶⁷ Notably, the palm

tree only grows in hot climates, and therefore palms in cooler climates were substituted with branches of local trees, such as yew, willow or olives. In some Christian countries the name of Palm Sunday is replaced with the names of these trees, as in Yew Sunday, or by the general term Branch Sunday.⁶⁸ In the Finnish tradition, palm fronds are replaced by branches of willow on Palm Sunday, when children decorate branches of willows with colourful feathers. The willow in the painting of Garden of Gethsemane could also indicate the painters' contact with local flora.

Seeds of figs and grape pips have been found at archaeological sites in Finland, but of course at the time local people had no idea of the appearance of the plant itself or fresh fruit. All exotic fruits in medieval Finland were imported here as dried figs and raisins. Fruit trees and vines were of great importance in Biblical times and they are important attributes of iconographic symbols in Christianity. But how familiar were these exotic fruits to people who lived at the towns of Hattula or Lohja? Plants depicted in wall paintings cannot be compared with the everyday life of medieval people in Finland, because the plants or trees mostly represent species that do not grow here, neither in medieval times nor at present. With reference to the Biblical stories, plants in wall paintings represent olive trees, fig trees, date palms and apple trees, of which only apple were familiar to local inhabitants from the poorest peasant to the richest merchant. Also the grapevine and grapes were strange to most of the local people and especially pomegranates were totally unknown. Due to the fact that all these fruits were exotic and were imported here from rather distant countries, their status value, and price, must have been high.

In archaeobotanical sources from the 13th to the 16th centuries seeds of figs are present. Grape pips are very rare and olive stones are totally absent from the Finnish material.⁶⁹ Nevertheless, figs and grapes must have been imported as dried fruit, and the fresh fruit was familiar only to people who had travelled abroad. Most of the archaeobotanical finds of the above-mentioned exotic fruits in Finland can be connected to Turku Castle and other abodes of the upper class in medieval times. Fig has been mentioned as a medicine in the so-called Herbal of Naantali Monastery, one of the earliest historical sources in Finland.⁷⁰

CONCLUSIONS

Finnish medieval wall paintings offer interesting insights on the medieval people's perception of real and symbolic animals and plants. Pictures in the

wall paintings consist of a complex mixture of symbols and real-life action, of foreign and domestic flora and fauna. Foreign animals and plants are often painted with few correct details, indicating that the painter had never seen one in real life. These foreign elements could have also been replaced by other more familiar ones like horse for donkey or willow for palm tree. However as the wall paintings served as study material for Christianity, Biblical or Apocryphal stories and their symbolism, some elements in the paintings were mandatory and conservative, even if foreign to the local people.

Even if Christian symbolism and the motifs in the wall paintings were largely rigid, details were sometimes drawn from the local nature. Adam and Eve covering their nakedness with local deciduous branches, a bear attacking cattle, willow replacing palm trees and short-tailed sheep all indicate influences from Nordic fauna and flora. Animals presented in the paintings are realistic in their external appearance, but only represent a simplified selection of the total variance of horn shape and colour.

NOTES

* Due to the limitations of this article's paper version the majority of figures mentioned in this study will be published in the online version of this article (June 2017).

¹ Bläuer & Lempiäinen-Avci 2013, 422–432.

² Bläuer 2015.

³ Lempiäinen T 2007, 97–118.

⁴ Onnela 2004.

⁵ Kirjavainen 2002, 346–351; Kirjavainen & Riikonen 2005, 30–44.

⁶ E.g. Vilkuna 1998; Rasila, Jutikkala & Mäkelä-Alitalo 2003.

⁷ E.g. Hausen 1904, 233.

⁸ Tapio & Kantanen 2001, 37–39.

⁹ Niemi & *al.* 2013.

¹⁰ E.g. Wennervirta 1937; Stigell 1974; Nilsén 1986; Edgren 1993, Edgren 1997; Hiekkänen 1994; Fält 2012.

¹¹ Edgren 1985, 70–79.

¹² Issakainen 2005, 173–177.

¹³ E.g. Yapp 1987, 15–73; Ruuskanen 1992; Sillasoo 2006, 61–70.

¹⁴ Hiekkänen 2003, 80, 30.

¹⁵ Wennerwirta 1937, 209–210; Myrdal, 2012, 55.

¹⁶ Wennervirta 1937, 209–210.

¹⁷ E.g. the *Biblia Pauperum* ('Paupers' Bible') or *Speculum Humanae Salvation-*

- is ('Mirror of Human Salvation'). Wennervirta 1937; Edgren 1997, 52; Henry 1987, 32–38; Nilsén 1986, 515; Scheller 1995; Lindberg 1998, 35–67.
- 18 Lempäinen P 2001, 5–8.
- 19 Gardberg 1957, 21–22; Nilsén 1986, 8–16; von Bonsdorff 1993, 51–52.
- 20 E.g. Sillasoo 2009, 76–89.
- 21 Hiekkanen 1994; Hiekkanen 2007.
- 22 Helsinki, National Board of Antiquities (NBA), The Picture Collections, Iconographical Collection.
- 23 Authors wishes to thank Tanja Ratilainen and Eija Tarvainen for their help during the fieldwork, and Tanja also for her enthusiastic and patient help for taking the photographs and editing them.
- 24 Scientific plant names of the Finnish plant species correspond to the nomenclature provided by Mossberg & Stenberg 2003. Nomenclature of plants occurring in the Old World correspond to Zohary 1982.
- 25 In Central European sources the equines in these pictures are donkeys, e.g. *Biblia pauperum* 1987.
- 26 Leviticus 11:7.
- 27 The goat is also present as the heraldic animal of Bishop Konrad (Conradus) Bitz in three churches (Kalanti, Taivassalo and Kalanti)
- 28 Riska 1990, 54–55; Hiekkanen 2007, 249.
- 29 Helsinki, NBA, The Picture Collection, Iconographical Collection 4.2.3 (Jeesuksen syntymä, Rauma).
- 30 Bear is approximately one m high at the shoulders, modern dairy cattle ca.150 cm.
- 31 Edgren 1997, 42.
- 32 Lempäinen P 2001, 61.
- 33 Impelluso 2004, 118; Lempäinen P 1981, 50–51; Lempäinen P 2001, 42–45, 57–63; Alakurtti 2006, 11–31.
- 34 Lempäinen P 2001, 204–207.
- 35 Zohary 1982, 54.
- 36 Impelluso, 2004, 145; Lempäinen P 2001, 187.
- 37 Edgren 1993, 69.
- 38 Impelluso 2004, 143; Lempäinen P 2001, 115. Holy Trinity is often depicted angels playing lute and trumpets or tubes as in Lohja Church (Table 4, Fig. 92).
- 39 Zohary 1982, 70.
- 40 Impelluso 2004, 149.
- 41 Zohary 1982, 58.
- 42 <http://medeltidbild.historiska.se/medeltidbild/visa/foto.asp?imageId=9012102>; <http://medeltidbild.historiska.se/medeltidbild/visa/foto.asp?imageId=9016517>; <http://medeltidbild.historiska.se/medeltidbild/visa/foto.asp?imageId=9307107>, visited 10 May 2016.

- 43 <http://www.artflakes.com/en/products/the-expulsion-from-the-garden-of-paradise>, visited 10 May 2016.
- 44 Väisänen 2011, 98; Caneva 2010, 108.
- 45 Lempiäinen P 2001, 248; Väisänen 2011, 52.
- 46 Zohary 1982, 68.
- 47 Lempiäinen P 2001, 248; Väisänen 2011, 52.
- 48 Impelluso 2004, 43; Lempiäinen P 2001, 191.
- 49 Impelluso 2004, 43; Lempiäinen P 2001, 191.
- 50 Impelluso 2004, 108.
- 51 Lempiäinen P 2001, 116.
- 52 Nummela 2003, 151; Tourunen 2008, 147; Bläuer 2015, 54–55.
- 53 Nummela 2003, 151; Tourunen 2008, 147; Bläuer 2012, 170–172; Bläuer 2015, 129, 137.
- 54 Tourunen 2008; Mannermaa 2011, 179.
- 55 E.g. *Biblia Pauperum* 1987.
- 56 Tourunen 2008, 162; Bläuer 2015, 87–88
- 57 Vilkuna 1936, 55–98.
- 58 Tourunen 2008, 102–103.
- 59 BFH 3, 233; Kirjavainen & Riikonen 2005, 30–44.
- 60 E.g. Luukko 1957, 524.
- 61 E.g. Oja 1961, 191; Viikki 2003, 337.
- 62 Bläuer 2015, 57–61.
- 63 Tourunen 2008, 152.
- 64 Ryder 1981, 381.
- 65 E.g. <<http://bestiary.ca>>, collection of animal pictures from medieval manuscripts, visited 2 April 2014. Also, in the altarpiece of Kalanti Church (early 15th century, in the collections of National Museum) attributed to Master Francke from Northern Germany sheep with long tails are present. E.g. Räsänen 2006, 56–72. Detailed picture where tails of the sheep clearly visible published in Immonen 2013, 186.
- 66 Chessa & al. 2009, 523–535.
- 67 Wennervirta 1937, 208–209.
- 68 Lempiäinen P 2001, 244.
- 69 Lempiäinen T 2007, 108.
- 70 Masonen 1985.

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