

## DATING OF ANCIENT ICONS FROM KIEV ART COLLECTIONS

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**ABSTRACT.** Icon painting in the Ukraine is rooted in the Byzantine culture, after the conversion to the Christian religion. During the medieval epoch, Kiev became the artistic center for highly skilled icon painters. The icons were painted on wooden boards, specially made for this purpose. Historic dating of some even well-known icons is uncertain or not precise. Here we present for the first time radiocarbon dates for selected icons. Both liquid scintillation counting (LSC) and accelerator mass spectrometry (AMS) dating methods were applied, allowing intercomparison.

### INTRODUCTION

Icon painting in the Ukraine (as well as in other Slavic countries) succeeded the Antique and Byzantine cultures, following the conversion to the Christian religion (Bertie-Delagard 1910). Kiev and surroundings developed into a major location for icon art. The icon painters from Kiev were famous and highly skilled. They created icons which were very valuable and revered as precious relics. The most outstanding icons originate from the XIIth to the first half of the XIIIth century AD.

The artistic traditions originating in Kiev remained, even after the decline of the Kiev empire. The cultural center moved westward, to the Galitsco–Volynskoye principality. Here new art centers developed, and the Ukrainian art painting style was brought to perfection. Byzantine and West-Roman stylistic influences can still be recognized.

The XIV–XV centuries must be considered as the “Golden Age” of icon painting in the Ukraine. This is also recognized in architecture, such as the iconostasis. Icons become colorful and versatile in style; the artists are considered to be the National Painting School. The art centers in western Ukraine—Galitsia, Volyn and others—kept flourishing, despite wars ravaging the lands (Chlenova 1999).

### DATING THE ICONS

Historic dating of some even well-known icons is uncertain. For this reason, radiocarbon dating has been performed for selected icons. The icons are all painted on wooden boards, specially made for the purpose of icon painting. Chips of wood were taken from the edges of the boards, which correspond to the youngest treerings—i.e. material best representing the time of painting.

The wood was pretreated chemically using standard techniques, and <sup>14</sup>C dated by three laboratories: Kiev, Ukraine (laboratory code Ki), Groningen, Netherlands (laboratory code GrA), and Uppsala, Sweden (laboratory code Ua). The Kiev laboratory is conventional, using liquid scintillation counting (LSC) (Skripkin et al. 1998); Groningen and Uppsala use applied accelerator mass spectrometry (AMS) (Gott dang et al. 1995; Possnert et al. 1990).

This project also allows intercomparison of two <sup>14</sup>C methods (AMS and LSC), because the <sup>14</sup>C results can be compared to the historical dates (when known) of the icons.

The results are shown in Table 1. The <sup>14</sup>C dates are calibrated using the Groningen calibration program CAL25 (van der Plicht 1993), upgraded with the latest recommended calibration curve

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INTCAL98 (Stuiver and van der Plicht 1998). The probability of the calibrated ages is indicated by the  $1\sigma$  and  $2\sigma$  time-interval ranges. The numbers are rounded off. In cases where the range has two solutions, their relative probability is given in the last column of Table 1.

## DISCUSSION AND CONCLUSIONS

Seven icons were selected for  $^{14}\text{C}$  dating, all unique pieces of art. The  $^{14}\text{C}$  results are generally in agreement with the ages expected on historical grounds. It is known that the artists prepared wooden boards for each icon separately; the time between the preparation of the board and the actual painting of the icon was not more than approximately 10 years. For our  $^{14}\text{C}$  analysis, most samples were taken from the edges of the boards, which correspond to the youngest parts of the wood. Our  $^{14}\text{C}$  measurements are consistent with a short time span between wood preparation and actual painting.

Table 1  $^{14}\text{C}$  dating results for icons painted on wood

Lab nr	Icon	Historical date (cent. AD)	$^{14}\text{C}$ date (BP)	Calibrated age (cal AD)		Probability %
				$1\sigma$	$2\sigma$	
Ki-8018	St George with scenes from his life	XII–XIII	1010 ± 45			
Ki-8019	St George with scenes from his life		1055 ± 40			
Ki-8020	St George with scenes from his life		970 ± 40			
Averaged	St George with scenes from his life		1010 ± 25	1000–1025	985–1040 1140–1150	93 7
GrA-15255	The Intercession		XI	1030 ± 40		
Ki-8017	The Intercession		1065 ± 50			
Ki-8024	The Intercession		1050 ± 45			
Ki-8025	The Intercession		1090 ± 45			
Averaged	The Intercession		1055 ± 20	985–1015	905–915 975–1020	5 95
GrA-10120	The Virgin Hodegetria of Volyn	XIII–XV	600 ± 35			
Ki-8026	The Virgin Hodegetria of Volyn		645 ± 40			
Averaged	The Virgin Hodegetria of Volyn		620 ± 25	1305–1390	1300–1400	
GrA-10121	The Apostles Peter and Paul	XV	355 ± 35			
Ki-8027	The Apostles Peter and Paul		320 ± 45			
Ua-13482	The Apostles Peter and Paul		330 ± 65			
Averaged	The Apostles Peter and Paul		340 ± 25	1490–1525 1560–1630	1485–1640	35 65
GrA-15253	Boris and Gleb	XIII	815 ± 40			
GrA-15254	Boris and Gleb		775 ± 35			
Ki-8015	Boris and Gleb		790 ± 45			
Ki-8016	Boris and Gleb		840 ± 40			
Averaged	Boris and Gleb		805 ± 20	1220–1255	1215–1270	
GrA-15252	St George and the Dragon	XV	455 ± 35	1425–1465	1410–1485	
Ua-15999	St George and the Dragon		570 ± 50	1305–1415	1300–1435	
GrA-15256	Christ in Majesty	XV	450 ± 35	1425–1465	1410–1485 1605–1610	97 3

Here we briefly discuss the seven studied icons with their  $^{14}\text{C}$  dates; for a full description of the icons we refer to the literature (Chlenova 1999).

#### **Saint George with Scenes from His Life**

This is one of the oldest and precious icons studied (Figure 1; see Appendix for figures). It is a piece of Byzantine art, and represents the early stage of image iconography (Miliaieva 2000). The icon has been dated by art historians to the XII–XIIIth century AD.  $^{14}\text{C}$  dating shows that the wood icon is actually somewhat older—XIth century.

#### **The Intercession**

This is a wooden icon from Galitsia (western Ukraine), historically dated to the XII–XVth century AD (Figure 2). The icon is one of the oldest with the intercession theme. Also here,  $^{14}\text{C}$  dating shows that the icon actually dates from the XIth century. This old age raises questions concerning Kiev—or Byzantine—origin of the artwork.

#### **The Virgin Hodegetria of Volyn**

This icon (Figure 3) represents the time when Byzantine influence was about to disappear from the Slavic countries, including Ukraine. The expected age is XIII–XVth century AD.  $^{14}\text{C}$  measurement shows that the icon dates from the first half of the XIVth century.

#### **The Apostles Peter and Paul**

This icon (Figure 4) is described in historic literature, and supposed to date from the second half of the XVth century AD. A possible older date—even the XIIth century—could not be excluded, so confirmation by  $^{14}\text{C}$  was needed. The literature appears to be correct according to our  $^{14}\text{C}$  measurements.

#### **Boris and Gleb**

This icon (Figure 5) is now dated by  $^{14}\text{C}$  to the XIIIth century AD. The icon thus appears to be one of the earliest art monuments portraying these Russian Saints, sons of Prince Volodymyr who were canonized by the church in 1072 as martyrs.

#### **Saint George and the Dragon**

Two samples from different parts of the wood were selected for  $^{14}\text{C}$  analysis. One sample, representing younger treerings, was measured in Groningen (GrA-15252), the other sample was taken from a central part of the wooden board and is measured in Uppsala (Ua-15999). Indeed the  $^{14}\text{C}$  ages show this difference. The samples are about 25 annual rings apart, which is consistent with the measurements taking the calibration curve into account. The icon (Figure 6) dates from the second half of the XVth century.

#### **Christ in Majesty**

The “Christ in Majesty” theme is a focus for icon painting during the XV–XVIth centuries. Such icons were always placed at the center of the iconostasis. This icon (Figure 7) is very famous and originates from the village Malniv. It was painted in the second half of the XVth century by “the Rublevians” (Gordynskyi 1973). This is corroborated by  $^{14}\text{C}$  analysis (GrA-15256,  $450 \pm 35$  BP).

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APPENDIX: FIGURES 1–7

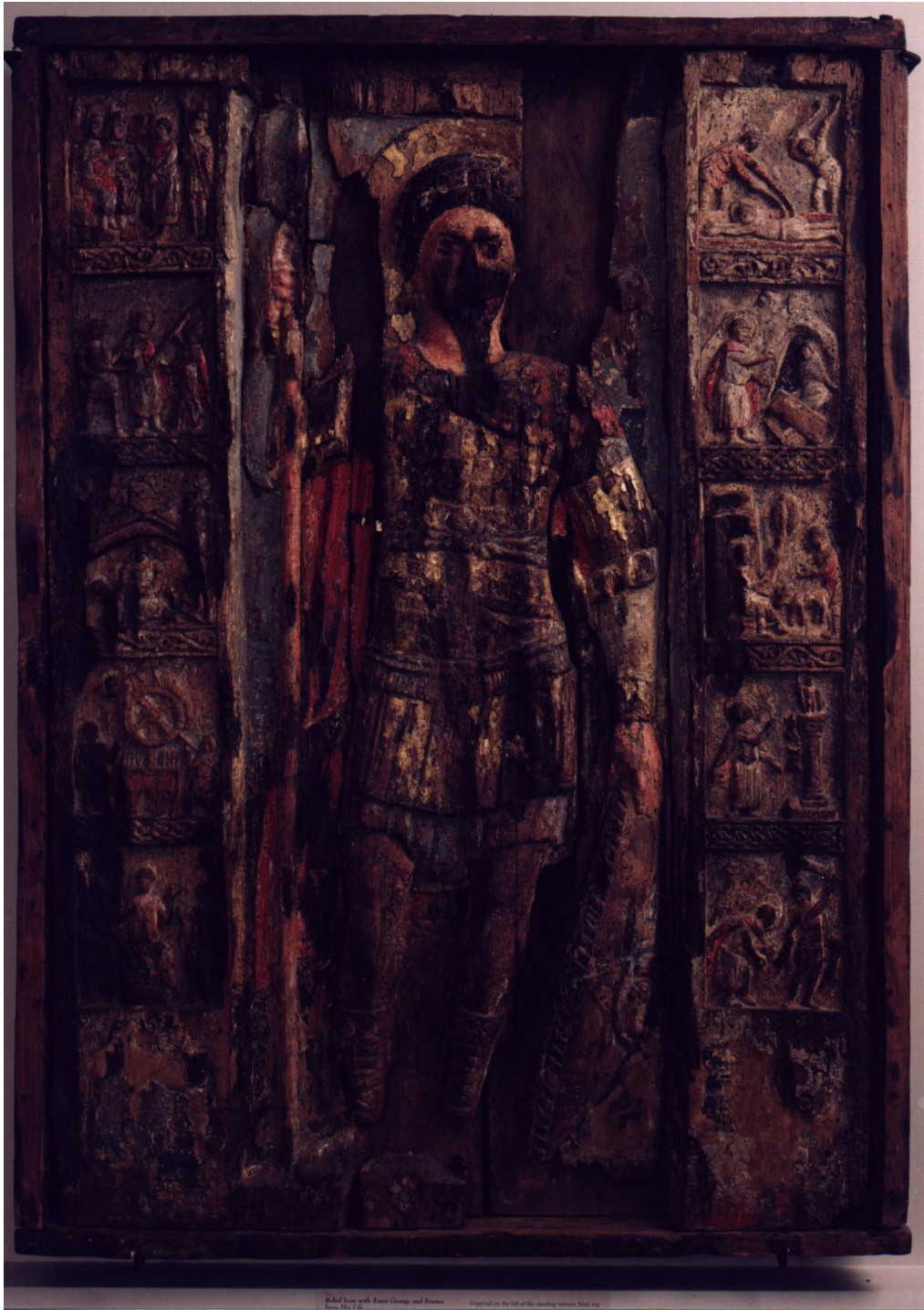


Figure 1 St George with scenes from his life



Figure 2 The Intercession



Figure 3 The Virgin Hodegetria of Volyn



Figure 4 The Apostles Peter and Paul





Figure 5 Boris and Gleb



Figure 6 St George and the Dragon



Figure 7 Christ in Majesty