

Novgorod Temple Rings and Pendants, A Reconstruction.
Marya Kargashina **DRAFT**



Context

History and use

Temple rings or temple ornaments are a type of jewelry found throughout areas of Russian, Slavic and Byzantine influence from approximately 500 CE throughout the medieval period. They are found in female graves at the temple/head/ear area, and are often considered a marker of Slavic identity, and have been suggested by Avdushin to signal a more specific tribal affiliation, such as Novgorod Slovene, Severian, Polonian, Radimichi, Krivichi, or Viatichi. (Avdushin, Sedov) These 'tribal' designators are also used to classify temple rings by shape. The metals used could be bronze, other copper alloys, iron, or less commonly gold or silver. (Beaton, Ristovska, Sedov)

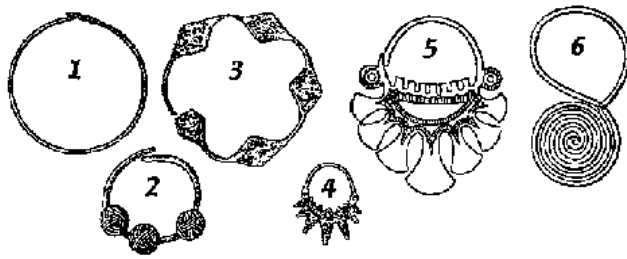


Fig. 1 The major types of russian temple rings. 1 Krivichi, 2 Polonian, 3 Novgorod, 4 Radimichi, 5 Viatichi, 6 Severian.

Source: Beaton, Peter. *Temple Rings in Rus*. Web. 27 Aug. 2016.

Temple rings could be worn a variety of ways: as if an earring, in the hair, attached directly to a leather or textile headdress, or hanging on a leather or textile strap attached to a headdress, such as a headband, hat or scarf, or on a metal chain, possibly hanging from another temple ring attached in one of the previous ways. Multiple sets were worn, and no correlation of type and wearing style has been observed, and multiple types of temple ring are observed in the same grave. (Ristovska)

Novgorod style temple rings take the form of a wire with 2-5 rhomboidal shields or flanges formed at intervals, with the whole then bent into a ring. The rhomboidal Novgorod style temple rings are found from the 10th to the 14th centuries, with some changes in design over time. (Ravdin, Sedov, Sedova)

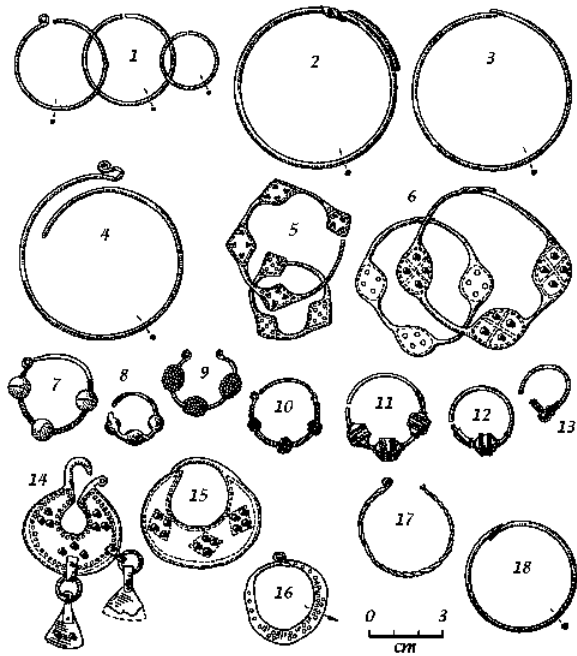
Extant examples.

Fig. 2. Finds of various dates from Vologda, 5-6 are Novgorod style.

Source: Beaton, Peter. *Temple Rings in Rus*. Web. 27 Aug. 2016.

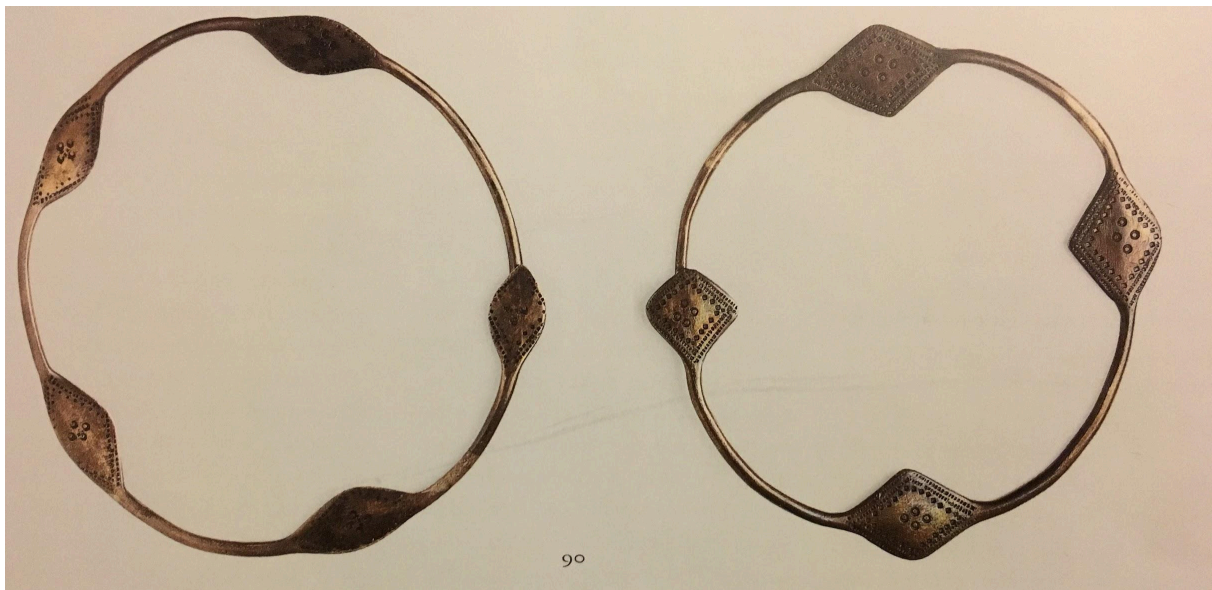


Fig.3 11th-12th c silver temple rings found in Novgorod. Approx 3" diameter.

Source: Petrova, E. N., C. Griffith Mann, Peter Bray, and Kenneth MacInnes. *Sacred Arts and City Life: The Glory of Medieval Novgorod*. Baltimore: Palace Editions, 2005. Print.



Fig. 4. Finds from Novgorod held by the Novgorod State Museum, 11-12th c.
Source: "Medieval Novgorod." Novgorod Metal Artifacts. Web. 01 Oct. 2016.

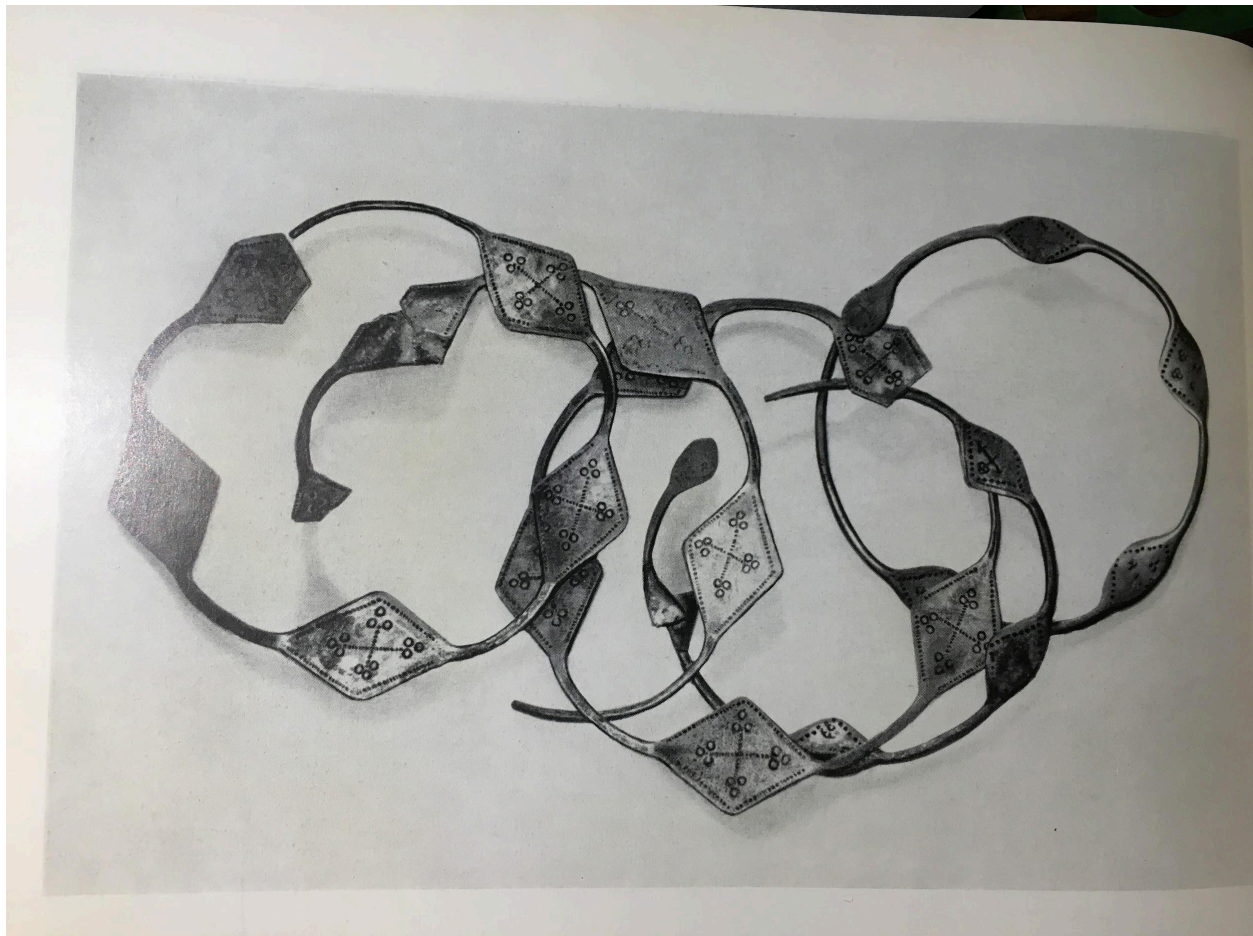


Fig. 5. 12th c, silver. No location given.
Source: Rybakov, Boris Aleksandrovich. *Russian Applied Art of Tenth-thirteenth Centuries*. Leningrad, Aurora, 1971. Print.



Fig. 6. 11th-12th c, silver. No location given.

Source: Zhuravlev, Andrey, Ed. *Sokrovisha Oikymeni: Pered Nashestviem*. Moscow: Book House, 2005. Print.

Fig. 7. Likely 12th c, no date or location given.

Source: Tomsinskii, S. V. *Drevnaia Rus*. Saint Petersburg: Mvou Irmumaz, 2007. Print.

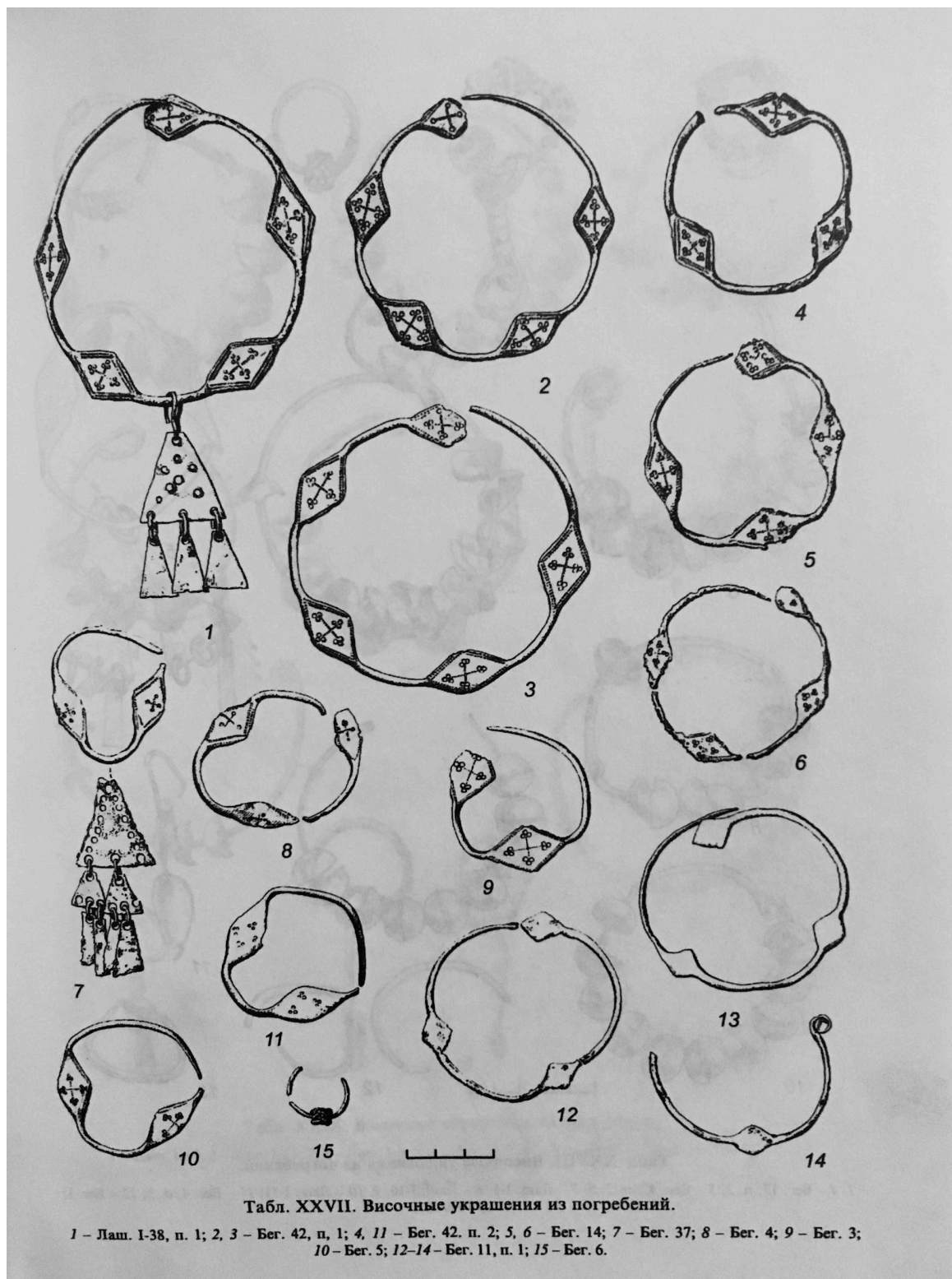


Fig. 8. Bronze temple rings and pendants found in Vodskaya, likely 12th c.

Source: Ryabinin, E. A. Vodskaiā Zemliā Velikogo Novgoroda: Rezul'taty Arkheologicheskikh Issledovaniī 1971-1991 Gg. S.-Peterburg: "Dmitrii Bulanin", 2001. Print.

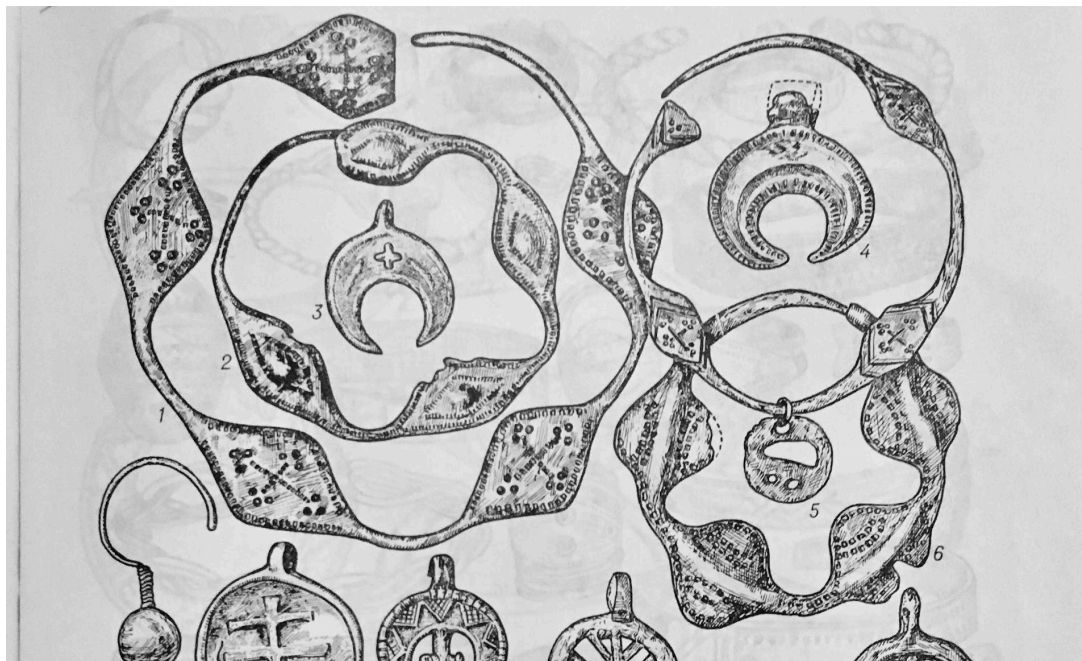


Fig. 9 Temple rings and other jewelry from variety of timeframes, found in the Novgorod region. Nos. 2 and 5 are typical of later styles.

Source: Sedov, V. V., and B. A. Rybakov. *Vostochnye Slaviâne v VI-XIII Vv.* Moskva: Izd-vo "Nauka, ", 1982. Print.

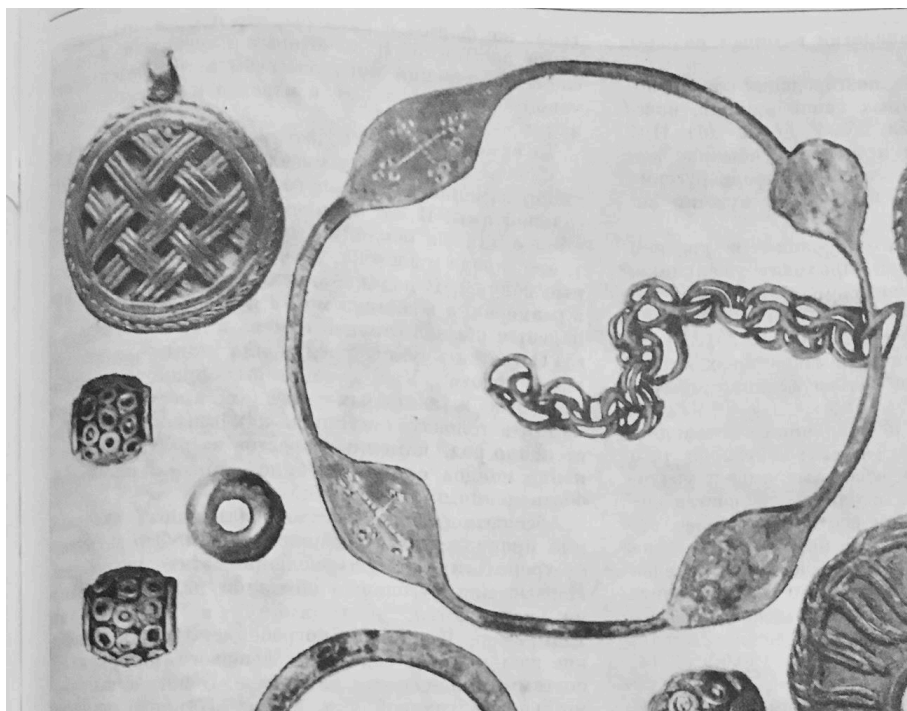


Fig. 10. Temple ring from Krapivna.

Source: Sedov, V. V., and B. A. Rybakov. *Vostochnye Slaviâne v VI-XIII Vv.* Moskva: Izd-vo "Nauka, ", 1982. Print.

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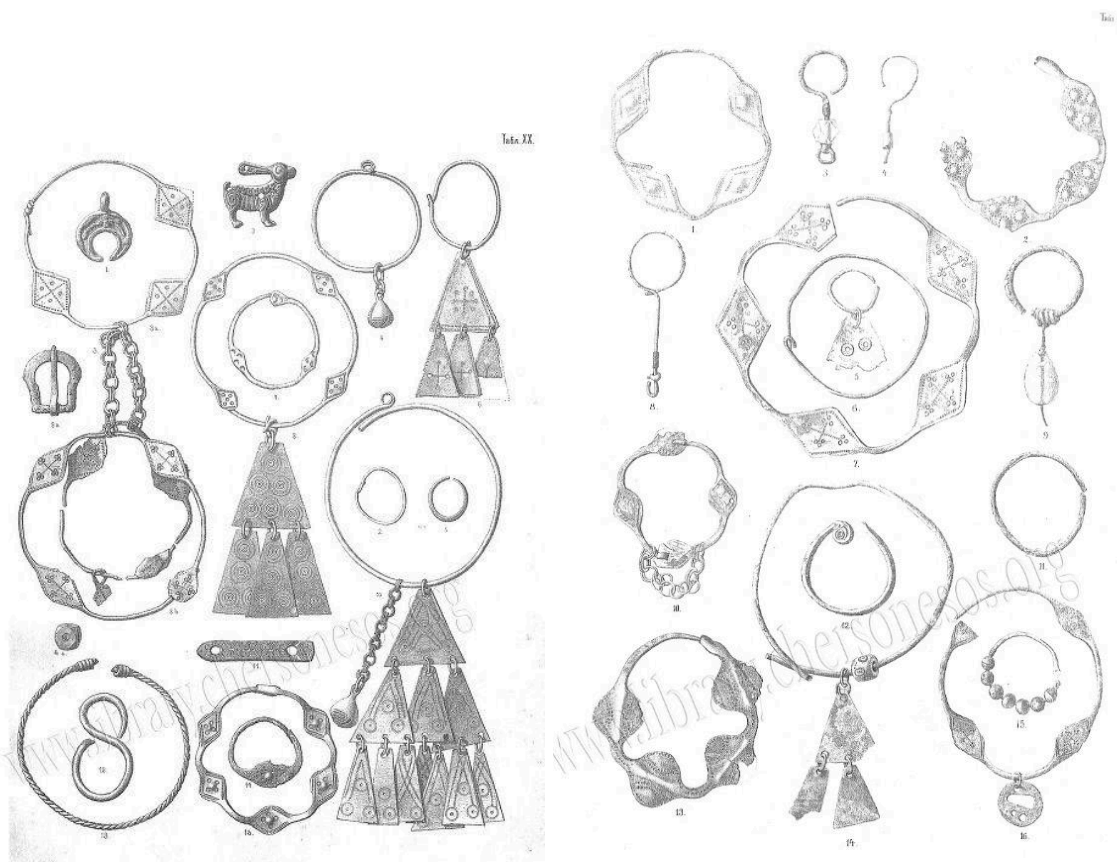


Fig. 11. Temple rings, pendants, and other finds from Gdov, various dates

Source: Glasov, V. N. *Gdovskii Kurgany Y Raskopkakh.* 'Materialy Do Arkheologii Russi no 29' S-Peterburg, 1903. Print

Fig. 12. Temple rings, pendants, and earrings from St Petersburg, various dates

Source: Ivanovo, L. K. *Kurgany S-Peterburgskoi Guberni,* 'Materialy Do Arkheologii Russi no 20' S-Peterburg, 1896. Print.

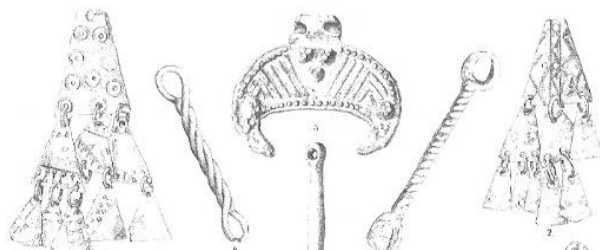


Fig. 13. Tiered pendants, lunula, and other finds from St Petersburg, various dates

Source: Ivanovo, L. K. *Kurgany S-Peterburgskoi Guberni,* 'Materialy Do Arkheologii Russi no 20' S-Peterburg, 1896. Print.

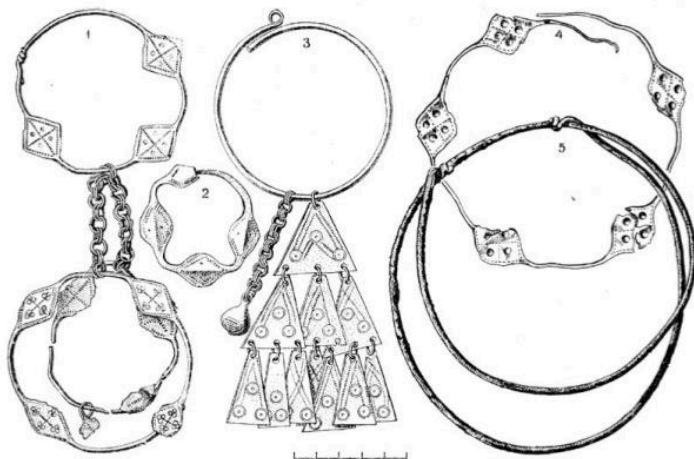


Fig. 14. A range of Novgorod style temple rings, various dates.

Source: Ravdin, T. V. *Semilopastnye Visognie Koltza*, 'Problemy Sovietskoi Arkheologii' Moskva, 1978. Print.

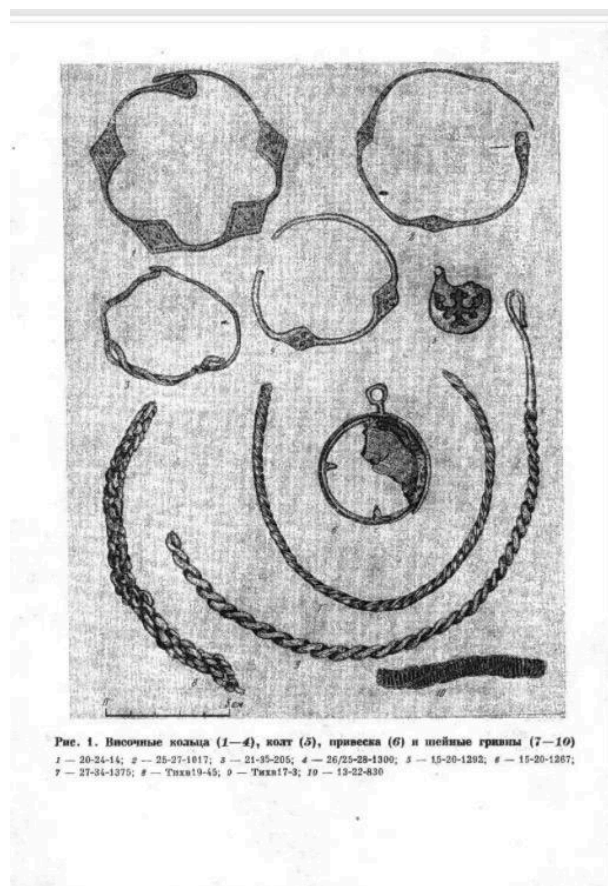


Рис. 1. Височные кольца (1—4), колты (5), привеска (6) и шейные гривны (7—9)
 1 — 20-24-14; 2 — 25-27-1617; 3 — 21-35-205; 4 — 26/25-28-1300; 5 — 15-20-1292; 6 — 15-20-1287;
 7 — 27-34-1375; 8 — Тухна19-45; 9 — Тухна17-3; 10 — 13-22-830

Fig. 15. Temple rings and other jewelry from Novgorod. Various dates. Bronze.

Source: Sedova, M. V. *Ūvelirnye Izdeliia Drevnego Novgoroda: X-XV Vv.* Moskva: Izd-vo "Nauka", 1981. Print.

Geographic distribution

Novgorod style temple rings are found mostly, but not only in northwest Russia, both in the city and villages. They are most often found in the core area around Novgorod, but are found elsewhere in European Russia as well, as seen in figure 16. Examples pictured include the town of Novgorod, its outlying regions, such as Vodskaya, Gdov and Vologda, and St Petersburg. See figures 2,3,4,8,10-12, and 15.

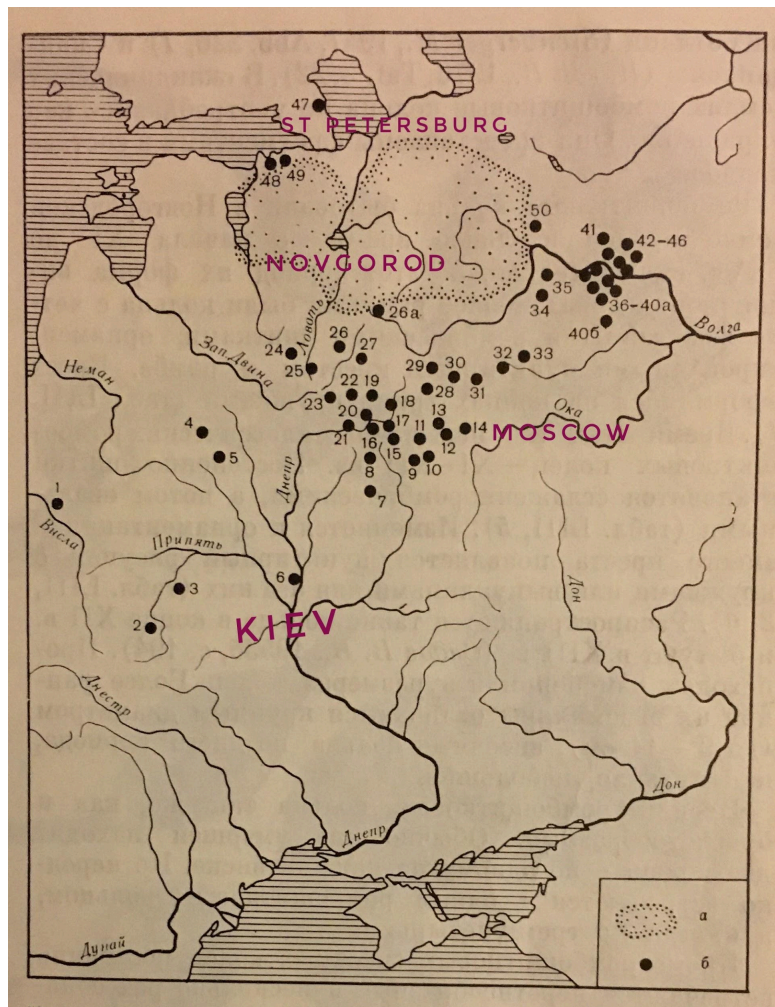


Fig.16. Distribution of Novgorod style temple ring finds. Key- a core area, b outlying finds.
 1-Drogichin; 2 Peresopnitsa, 3-Zaluzh'ye; Radoshko Vichi; 5- Selishche, 6 Chaplin; 7 -Pil'nya; 8 Knyazhoe 9 obrosel'ye; 10 Kurgan'ye, 11 Kolchino; Leono My Vo; 13 Shatuny; 14 15- Volochek tyshino; 17 Berezovka; 18-Kharlapovo, Novoselki 20 -Mazi 21- korobino; 22-Yeliseyevichi; Saki novo; 24 Shakelevo; 25- Usvyaty; 26- Selyan', Zaluch'ye 27- Ugyumovo; 28 Nikol'skoye; 29 Khilovo: Kras nyy Stan, 31 Cherkizovo 32- Chernikhovo Melezh Lysaya: 37 skaya dacha; 34 Belogo st'ye; 35 Velikoye: 36 39- P'yankovo: 40 Pogorelka, Kotochizhevka; 38- Dubeny 40a Koryakovo; 406- no; 41 Tatarinovo 42 Te- 44 -Yelkotovo; 45 o: 43- Bol'shoye Andreykovo Mar'inskoye; 46- Turygino Rautu; Begunitsy; 49 Kopor'ye; 50

Kabozha

Source: Sedov, V. V., and B. A. Rybakov. *Vostochnye Slaviane v VI-XIII Vv.* Moskva: Izd-vo "Nauka, ", 1982. Print.

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Decoration

Engraved and punched decoration is common in Novgorod area metalwork, and the motifs are shared between rings, temple rings and bracelets in particular. (Sedov, Sedova)

The decoration, size, and form of the Novgorod style temple rings changed over time, with larger rings being generally being earlier. (Sedov) Temple ring diameters range from approximately 1.5" to 5" . The decoration on the rhomboid shields varies as well; Ravdin and Sedov propose a classification scheme wherein earlier rings have a cross with three dots at each end, later adding more developed exterior lines, and in a middle period a more oval shield form, and still later dimensional bulges, lines or dots. However, newer earlier (10th-11th) finds of the more ovoid shape suggest this distinction is not clear cut. (Sedova, Petrova et al.) Figures 3, 5, 8, 11, and 15 include examples of the ovoid shield variant. My reconstructions suggest that the difference between sharp rhomboidal shields and more ovoid shields is a matter of technique and/or time spent, as I found that the ovoid version is easier and faster to create. The date issue is muddled further by the more recent use of temple ring typology (as compared to temple rings found in denochronologically dated Novgorod city layers) to date graves in the hinterlands. (Rybainin, Sedova)

Trapezoidal tiered pendants are typical additions, though they are not always found. (Ryabinin) Other hanging ornaments such as chains, bells, danglers and other temple rings are occasionally found as well. (Sedov, Ivanovo, Glazov) The pendants are also found with other simpler types of temple rings, as well as separately, presumably after falling off the associated ring.. Pendant decoration often but does not always echo temple ring decoration, and can be minimal as in figures 8 and 11 or more extensive as in figures 10, 12, and 13.



Fig.17 Examples of types of shield/flange decoration and shape: top row bulbous, middle row ovoid, bottom row rhombic. Dots, dotted lines, and crosses are all typical, with a cross and /or diamond outline being common to the non bulbous types. Sources: l-r, Ivanovo, Ivanovo, Sedov, Sedov, Tomsinskii, Rybakov, Zhuravlev, Glasov, Petrova et al.

Reconstruction

These temple rings are based on the Novgorod rhomboidal style, and use two different possible methods of manufacture.

Materials

I chose to use copper for one version as it was easily accessible and affordable for me. Many examples of temple rings have been found in copper alloys, with at least one copper temple ring found in Minino outside Novgorod. (Beaton, Brisbane et al, Ryabanin)

My second pair and their pendants are fine silver, based on both the several examples of Novgorod style temple rings in silver, and the ease of working of fine silver versus an alloy.

Tools

The tools I used included round and flat hammers, a small beaked anvil, rocks, tongs, single and wiggle gravers, punches, a chisel, a torch for annealing, and a rolling mill.



Fig. 18. Tools from the Novgorod State Museum, hammers, files, shears. 10th-14th c.
Source: "Medieval Novgorod." Novgorod Metal Artifacts. Web. 01 Oct. 2016.

With the exception of the torch and rolling mill all these would have been available to a jewelry maker in medieval Novgorod. Copper, its alloys, and silver were all available. Annealing would have been done in a fire. (Thompson, Brisbane et al.)

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Process

Both pairs of rings were forged from wire. At this timeframe both drawn and rolled wire were available (Newberry, Sedova) Drawn wire uses a draw plate after forging down to a larger square wire, and rolled wire is an square wire twisted and rolled between two rocks to smooth and round it. (Cahill). This is the older technique. Both strip folded and twisted wire were found in Minino, an outlying settlement of Novgorod. (Brisbane).

For the silver temple rings I chose to use a (later period) rolling mill towards the end of the wire making process to save time and physical wear and tear. I selected a size of approximately 2in in diameter as being in the middle of the range of sizes found.

Based on experimentation, I believe there are multiple ways to make Novgorod style temple rings. I selected forged processes (shaping with hammer and anvil) based on the observed differences in thickness between flanges and wire sections, as well as the grooves and twists in the wire sections that can be explained by forging, particularly in figure 7. Compare the details in the transition from wire to flange. My forged piece shows a typical compression line at the transition between wire and flange, which is also seen on the extant temple rings. See figure 19 below. Sedova suggests that some of these temple rings were cast, but does not explain her reasoning. I would not expect casting to explain either the compression lines at the transitions, the difference in thickness between flange and wire portions, nor the tapered long wire ends, unless forged temple ring had been used as a model.

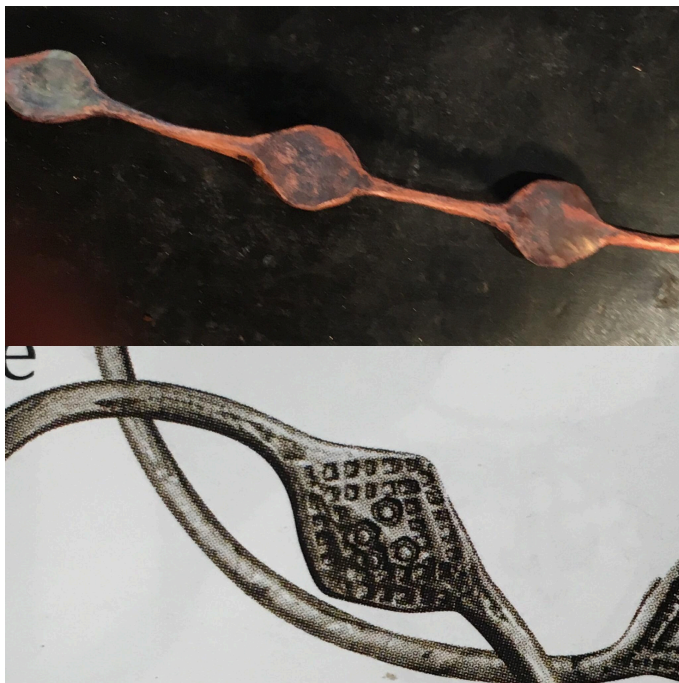


Fig. 19. Comparison of shield/wire transitions.

Source: Marya Kargashina/Jessica Smith-Carlock and Tomsinskii

Copper temple rings

For the copper pair I started with pre existing copper wire. The first step was to forge the lumps that would become the flanges. I gradually worked both the flanges and wire sections, flattening and lengthening respectively. See figure 20 below.



Fig. 20. Steps 1 and 2 of forging.

Source: Marya Kargashina/Jessica Smith-Carlock

The flanges were expanded with a ball peen hammer, after the wire and transition sections were work hardened. This helped to control the shape of the flanges. This step is in progress in figure 21. Near the end of the forging process the wire sections were given a half twist each, to better round and lengthen them, as seen in figure 22.



Fig. 21. After ball peen hammer.

Source: Marya Kargashina/JessicaSmith-Carlock



Fig. 22. Twist added between flanges.

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Source: Marya Kargashina/JessicaSmith-Carlock

Finally, the flanges were flattened, the wire sections rounded, and the whole ring bent into a circle, as in figure 23.

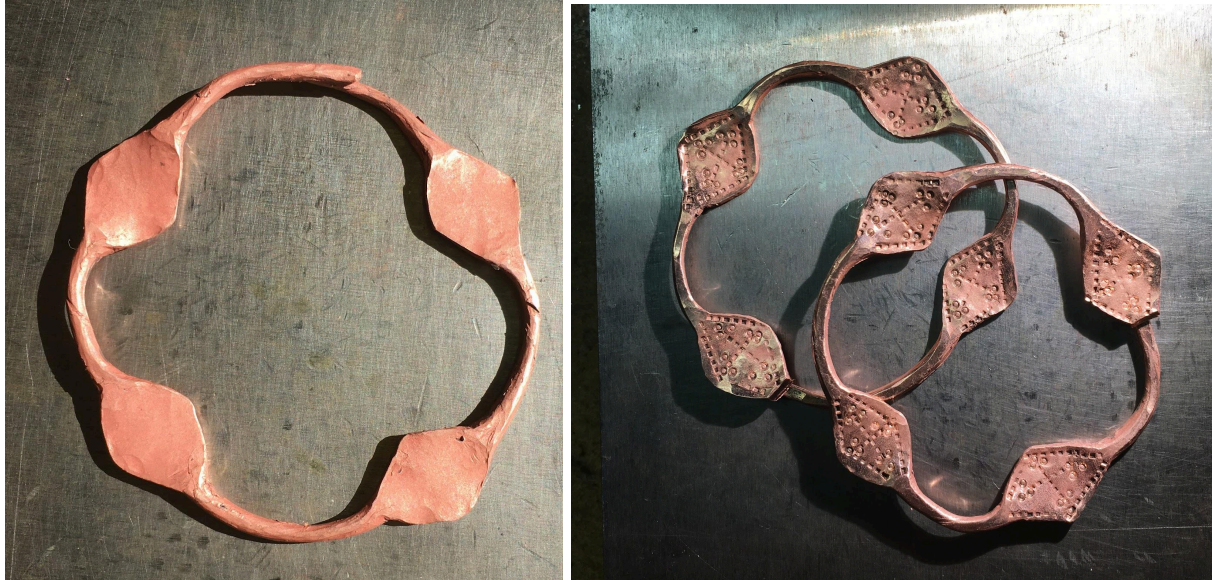


Fig. 23. Ring bent into circular form.

Source: Marya Kargashina/JessicaSmith-Carlock

Fig. 24. After decoration.

Source: Marya Kargashina/JessicaSmith-Carlock

The whole temple ring was flattened again by hammering with a flat hammer on a flat anvil to create the square section in the wire portions seen in the extant examples.

Decoration was done with punches, following the example of the rings pictured from Rybakov. The final wire section was chiseled off to better match the examples as well. This process was repeated for the second ring. The temple rings in final form are illustrated in figure 24.

Silver temple rings

The silver pair started as a cast silver ingot, see figure 25. This was hammered to lengthen in square section (figures 26-28) and eventually twisted and then rolled between two rocks to smooth into wire.



Fig. 25. Starting silver ingot.

Source: Marya Kargashina/JessicaSmith-Carlock



Fig. 26. Forging out the ingot into a square rod, part 1.

Source: Marya Kargashina/JessicaSmith-Carlock



Fig. 27. Forging out the ingot into a square rod, part 2.
Source: Marya Kargashina/JessicaSmith-Carlock



Fig. 28. Forging out the ingot into a square rod, part 3.
Source: Marya Kargashina/JessicaSmith-Carlock

This was almost a day's work. I am slower than a professional would be. At this point the bar stock was further lengthened with the rolling mill, as seen in figure 29.



Fig. 29. Using the rolling mill.
Source: Marya Kargashina/JessicaSmith-Carlock

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Fig. 30. Smoothing the twisted wire between rocks.
Source: Marya Kargashina/JessicaSmith-Carlock

Fig. 31. The final wire.
Source: Marya Kargashina/JessicaSmith-Carlock

The square stock now was twisted with a vise and tongs, then rolled between rocks to smooth and lengthen, with annealing as necessary.

On this set I was looking for a profile more like the top ring in figure 7, with the ovoid smaller flanges, and I theorized this would be feasible by simply flattening from wire. These rings were worked at the same time, flattening and gradually expanding the flanges (figures 32-33). A light touch is needed to avoid over thinning the flanges.



Fig. 32. Starting the flanges.

Source: Marya Kargashina/JessicaSmith-Carlock

Fig. 33. Expanding the flanges.

Source: Marya Kargashina/JessicaSmith-Carlock

I then lengthened the wire section by forging, first in square section, then in round. This gave me two wires with five flanges each (figure 34).



Fig. 34. Temple rings before bending.

Source: Marya Kargashina/JessicaSmith-Carlock



Fig. 35. Finished silver temple rings.

Source: Marya Kargashina/JessicaSmith-Carlock

I followed the same process of bending into a ring, flattening and decorating. The decoration on these was done with a wriggle graver and a punch, after the top ring in figure 7 and the top right ring in figure 5. The finished rings are approximately 2" in diameter, in the middle of sizes encountered for temple rings of this style.

Process for pendants.

The trapezoids were cut out of sheet silver scraps with shears, engraved with punches following loosely the two pendant sets in Figure 8, holes drilled with a bow drill, and assembled with jump rings. To attach the pendants I twisted square wire and bent it into a figure eight shape, matching the hanging hooks seen in Figure 8. This was threaded onto the temple rings and tightened. This process can be seen in figures 36-38.



Fig. 36. Drilled silver trapezoids.

Source: Marya Kargashina/JessicaSmith-Carlock

Fig. 37. Assembled pendants.

Source: Marya Kargashina/JessicaSmith-Carlock



Fig. 38 Temple rings and pendants assembled.
Source: Marya Kargashina/JessicaSmith-Carlock

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