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“Jesuit” Rings in Trade Exchanges between France and New France: Contribution of a Technological Typology toward Identifying Supply and Distribution Networks

Caroline Mercier

A recent study of “Jesuit” rings uncovered in the province of Quebec has led to the development of a technological typology based on shaping and decorative techniques. This typology revealed the existence of four main ring models, each of which has its own chronological and geographical distribution. The aim of this article is to demonstrate that the differential distribution of these four models reflects supply and distribution networks in France and New France.

Une étude menée récemment sur les bagues dites « jésuites » mises au jour dans la province de Québec a permis d'élaborer une typologie technologique basée sur les techniques de mise en forme et de décoration. Cette typologie a révélé l'existence de quatre principaux modèles de bagues qui possèdent chacun leur propre répartition chronologique et géographique. Cet article tente de démontrer que la répartition différentielle de ces quatre modèles reflète des réseaux d'approvisionnement et de distribution en France et en Nouvelle-France.

Introduction

Archaeologists have long recognized the potential for using “Jesuit” rings to date contact period sites. These rings are unset copper-alloy finger rings exchanged between European colonists and Native Americans in the 17th and 18th centuries, popularly referred to as “Jesuit” rings but used widely throughout colonial society. Archaeologists first viewed the objects as chronological markers (Quimby 1938: 25–26; 1966: 76) and later became interested in stylistic variation as a means to refine this chronology. This shift resulted in the development of the first classifications in the early 1970s. These typologies were based on stylistic and morphological attributes, such as design motif, plaque shape, and decorative technique (Cleland 1972; Stone 1974; Wood 1974). Since the 1990s, however, several researchers have focused on the rings’ technological attributes, such as decorative technique (Walthall 1993) and alloy composition (Ehrhardt 2004; Mason and Ehrhardt 2009). That said, stylistic attributes remain important classification criteria (Mason 2010).

A recent study of Jesuit rings found in the province of Quebec has shown that the above mentioned classifications do not apply well to the material from Quebec (Mercier 2011: 8–9). This study also revealed that, to date, these

typologies have overlooked a fundamental attribute: shaping technique. Indeed, a technological typology based on shaping and decorative techniques, developed in the course of this study, has proven useful for establishing a Jesuit ring chronology. Additionally, this research focuses on the changes that affected these rings as of the late 17th century and throughout the 18th century (Mercier 2011: 70–73). While these changes were long thought to stem from style drift (Cleland 1972), this hypothesis has been called into question on numerous occasions over the past decade (Mason 2003: 246–253; 2010; Mason and Ehrhardt 2009: 60–61).

The technological typology discussed here was developed using 118 unset rings made of copper or silver alloy. Of that number, 106 display the characteristic attributes of Jesuit rings: they are made of copper alloy and have a geometric (round, oval, or octagonal) or heart-shaped plaque decorated with religious or secular motifs. The rings were recovered from 33 archaeological sites in Quebec dating from the late 16th to the late 18th century. A number of rings come from two private collections, one of which was amassed by amateur archaeologist Joseph Bérubé and the other by the collector William H. Coverdale.

This technological typology has revealed the existence of at least four different models of Jesuit rings. The results obtained with this classification system were compared with

those of a stylistic typology based on design motif and plaque shape. They also were compared with the results of an alloy composition analysis using laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) and energy-dispersive x-ray fluorescence spectrometry (EDXRF). None of these analyses supported a chronology based on style drift. Throughout the French regime (1604–1763), Jesuit rings seem to have been an inexpensive form of jewelry, decorated with motifs that had a sentimental, or a religious, or magico-religious connotation (Mercier 2011: 122–123, 128). Based on the archaeological contexts and spatial distribution of the different technological types, however, each one had a specific chronological and geographical distribution (Mercier 2011: 70–73).

In this article, I will attempt to demonstrate that the differential distribution of the various Jesuit ring models reflects supply and distribution networks (Mercier 2011: 73).¹ To that end, I will briefly describe the models defined with the technological typology. I will also examine their chronological and geographical distribution in the province of Quebec, as well as in other parts of North America for which literature is available. I will then propose hypotheses on the rings' place of origin in France and identify the political and economic events that affected their distribution in New France.

Technological Typology

Several different shaping and decorative techniques were used to make these unset rings. Jewelers made different models using varying combinations of these techniques. A typology based on shaping technique enables the rings in the collection to be divided into three separate classes: cast rings (T1), cut-and-soldered rings (T2), and stamped-and-soldered rings (T3). Different types and varieties in each class can be identified on the basis of decorative technique and morphology (TAB. 1). This classification system revealed the existence of at least four different models of

1. Carol I. Mason formulated a similar hypothesis using a preliminary stylistic typology developed with two collections of L-heart rings (Mason 2010: 383–385). In my opinion, however, a technological typology is more useful for identifying and interpreting these networks.



Figure 1. Cast ring with engraved decoration and decorative grooves (T1.2.1), CeEt-621-1E10-45. (Photograph by the author, 2005.)

Jesuit rings. The characteristics of each type are obvious enough to be distinguished by simple visual examination.

Cast Rings (T1)

Casting is the shaping technique best represented in the collection. This technique involves shaping molten metal in a mold. Several casting methods were used in jewelry making, particularly lost-wax casting, reusable-mold casting, and cuttlefish-bone casting (Arminjon and Bilimoff 1998: 76–102). Due to the limits of visual examination, it was impossible to identify, for the purposes of the typology discussed here, which of these methods were used to make the cast rings in this study. A recent archaeometallurgical analysis by archaeologist Kathleen Ehrhardt, however, revealed that most of the rings in her sample were manufactured with reusable molds (Mason and Ehrhardt 2009: 62).

The rings in Class T1 were decorated using three different techniques: casting (T1.1), engraving (T1.2), and casting reworked with chiseling or engraving (T1.3). Four types of cast rings can be identified on the basis of decorative techniques and morphological variations. Two of these models correspond to Jesuit rings (T1.1.1 and T1.2.1), while the other two correspond to signet rings (T1.2.2) and *fede*, or clasped-hand, rings (T1.3 and T1.3.1). The methods used to make these last two models are not discussed in this article.

The Jesuit rings shaped by casting all have an oval plaque as well as decorative grooves



Figure 2 Cast ring with cast decoration and decorative grooves (T1.1.1). BiFi-23-2B17-168. (Photograph by Lise Jodoin, Department of History, Université Laval, 2005.)

(two or three) at the junction of the plaque and the band. Engraving (T1.2.1) is the most common decorative technique observed in the collection. It involved cutting into the surface of the metal with a cutting tool such as a graver or an etching needle (Arminjon and Bilimoff 1998: 137) (FIG. 1). Casting (T1.1.1) was

no doubt the easiest decorative technique since the motif was applied in relief during the shaping process (FIG. 2). This technique, however, is represented only to a limited extent in the collection.

Cut-and-Soldered Rings (T2)

The second method of ring manufacture observed in the collection combined several different techniques for fashioning the plaque and joining it to the band. I call it the “cutting-and-soldering” method based on the two main techniques used.

The plaque was fashioned by cutting out small geometric (round, oval or octagonal) or heart-shaped pieces from a large metal plate, probably with a saw (Loosli, Merz, and Schaffner 1981: 33). The band was fashioned with a piece of wire made by casting a metal rod in an ingot mold and then elongating it by hammering or by pulling it through a drawplate (Ouvrard 1973: 10–11; Arminjon and Bilimoff 1998: 111–112). The wire was then bent into a curved shape using chain-nose pliers or by hammering it on a mandrel

Classes, Types and Varieties		No. of rings
Class T 1	Cast rings	84
Type T 1.1	With cast decoration	4
Variety T 1.1.1	With decorative grooves *	3
Type T 1.2	With engraved decoration	74
Variety T 1.2.1	With decorative grooves *	69
Variety T 1.2.2	In the form of a signet ring	4
Type T 1.3	With cast decoration reworked with chiseling or engraving	6
Variety T 1.3.1	With openwork and cast decoration reworked with chiseling	1
Class T 2	Cut and soldered rings	25
Type T 2.1	With engraved decoration *	22
Variety T 2.1.1	With engraved decoration and wrigglework *	1
Type T 2.2	With die-impressed decoration *	1
Type T 2.3	With engraved and die-impressed decoration *	1
Type T 2.4	With no decoration *	1
Class T 3	Stamped and soldered rings	9
Type T 3.1	With stamped-embossed decoration *	9

Table 1. Technological typology of unset rings.

* The types and varieties correspond to Jesuit rings.

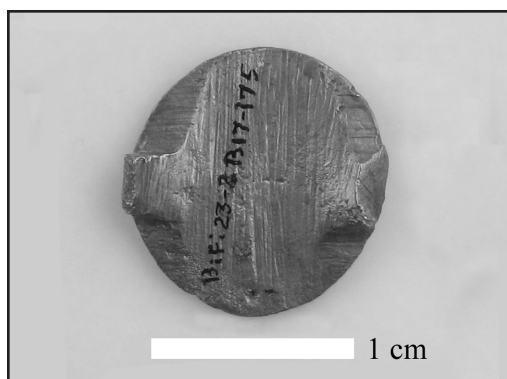


Figure 3. Traces of filing on a cut and soldered ring (T2). BiFi-23-2B17-175. (Photograph by the author, 2006.)



Figure 4. Cut and soldered ring with engraved decoration (T2.1). BiFi-5-1W2-59. (Photograph by the author, 2005.)



Figure 5. Cut and soldered ring with engraved decoration and wrigglework (T2.1.1). JB-203. (Photograph by the author, 2006.)



Figure 6. Cut and soldered ring with die-impressed decoration (T2.2). CeEt-30-27C91-1. (Photograph by the author, 2005.)

(Ouvrard 1973: 12; Loosli, Merz, and Schaffner 1981: 71, 89).

The last step involved brazing, or soldering, the plaque and the band together (Ouvrard 1973: 13; Arminjon and Bilimoff 1998: 322–323). The Class T2 rings in the collection, however, bear few traces of this process, possibly because of careful finishing. Indeed, several have striations on the back of the plaque (vertical ones in the middle and horizontal ones around the edge) as if they had been filed (FIG. 3). It is also possible that these rings were cast from a model made using the cutting-and-soldering method. In fact, this hypothesis is supported by the Ehrhardt archaeometallurgical analysis (Mason and Ehrhardt 2009: 62).

The rings in Class T2 were decorated in three different ways. The most common technique was engraving (T2.1) (FIG. 4). In

addition, one of the rings had a combination of engraved decoration and wrigglework. This style was isolated as a distinct variety, T2.1.1. Wrigglework involved making zigzag lines with a special graver, known as a wriggle tool (Arminjon and Bilimoff 1998: 142) (FIG. 5). One of the rings may have been decorated by stamping with a die (T2.2). This technique involved impressing a concave motif on the surface of the metal with a tool known as a die, which had a raised design at one end (Arminjon and Bilimoff 1998: 133) (FIG. 6). The third decorative technique observed on the rings in this class used a combination of engraved and die-impressed designs (T2.3) (FIG. 7). This group also includes a ring with no decoration (T2.4).

Stamped-and-Soldered Rings (T3)

The third method of ring manufacture combined several different techniques. I call it

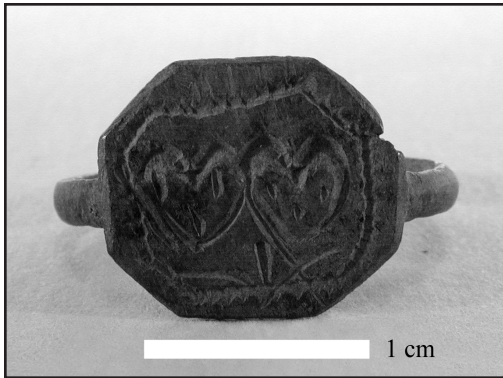


Figure 7. Cut and soldered ring with engraved and die-impressed decoration (T2.3). BiFl-5-1AP2-109. (Photograph by the author, 2005.)



Figure 8. Stamped and soldered ring (T3.1). DcEs-1 04.1508. (Photograph by the author, 2006.)

the “stamping-and-soldering” method because of the two main shaping techniques.

The method used to make the plaque was probably similar to that used for striking coins and medals. The first step consisted of hammering out a small piece of metal, called a blank. Once the blank was the desired size, it was placed in a matrix, or concave stamp, which is a recessed metal mold containing the shape and decoration of the object to be made. The blank was then struck with a hammer or a machine (fly press or drop hammer) to transfer the stamp’s design to the plaque (Arminjon and Bilimoff 1998: 53–61). Since this technique gave the object both its shape and decoration at the same time, the rings in Class T3 have only stamped embossed designs (T3.1) on oval plaques (FIG. 8).

The band was probably made and soldered to the plaque using the same technique as the cut-and-soldered rings (T2). Although several T3 rings displayed obvious signs of soldering (FIG. 9), others had none. It is possible, therefore, that some of the rings in this class were cast from models made using the stamping-and-soldering method. This hypothesis is once again supported by the work of Kathleen Ehrhardt (Mason and Ehrhardt 2009: 62).

Chronological and Geographical Distribution

Province of Quebec

An analysis of the archaeological contexts of the Jesuit rings recovered in the province of



Figure 9. Traces of soldering on a stamped and soldered ring (T3). CeEt-30-27E51-54. (Photograph by the author, 2006.)

Quebec has demonstrated that these rings were found on sites dating from ca.1575–1600 to ca. 1770–1780.² Most of the rings however, were associated with archaeological contexts from the 17th century and the first third of the 18th century.

The analysis also showed that the four main types identified by the technological typology were not used simultaneously (FIG. 10).³ The oldest type, Variety T1.2.1, was present throughout the study period, although it seems to have been more common in the 17th century. The three other types appear between ca. 1650 and ca. 1685. It is hard to narrow down the

2. This timeframe was defined on the basis of only 64 rings. It excludes rings with no archaeological context (private collections and chance discoveries), rings from disturbed or secondary deposits, and rings found on sites occupied continuously for more than a century.

3. Figure 10 is based on 58 rings. Four were excluded because no minimum dates were available for them.

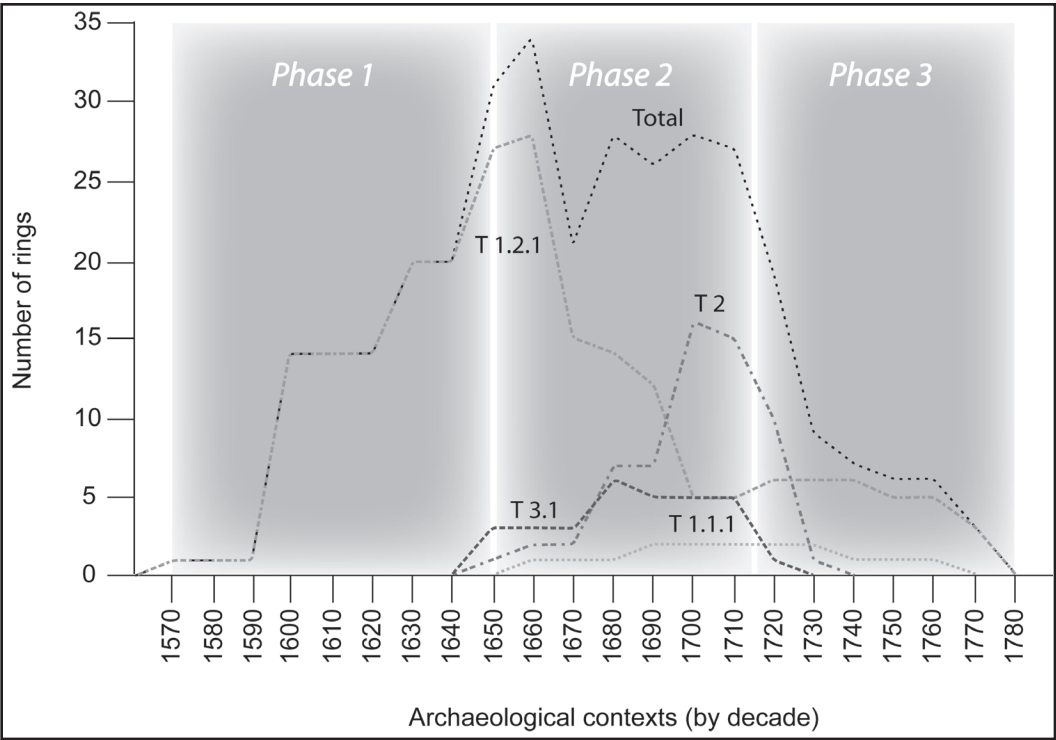


Figure 10. Chronological distribution of the main types of Jesuit rings found on archaeological sites in Quebec.

Technological types and varieties								
Historic Regions	T1.1.1	T1.2.1	T2.1	T2.2	T2.3	T2.4	T3.1	Total
Canada- Pays d'en Bas	2	37	19	1	1	1	7	68
<i>Quebec</i>	0	15	5	1	0	0	3	24
<i>Trois-Rivieres</i>	1	10	1	0	0	0	0	12
<i>Montreal</i>	1	12	13	0	1	1	4	32
Canada- Attikamek country	0	1	0	0	0	0	0	1
Canada- Traite de Tadoussac	1	21	0	0	0	0	3	25
Rupert's Land	0	0	2	0	0	0	0	2
Undetermined (Coverdale collection)	0	9	1	0	0	0	0	10
Total	3	68	22	1	1	1	10	106

Table 2. Geographical distribution of the main Jesuit ring models in the Province of Quebec.

period in which the Variety T1.1.1 was used, as it is represented by only a small number of rings from uncertain contexts. Rings in Class T2 and Type T3.1 are used through ca. 1727–1734 and ca. 1713–1716, respectively. A ring from the wreck of the *Machault*, which sank in the Restigouche River in 1760,

shows that Variety T2.1.1 was still in circulation in New France (1604-1763) at the time of the British conquest (1759–1763). The *Machault* was part of a rescue fleet entrusted with providing supplies to the troops defending Montreal (Beattie and Pothier 1978: 7; Sullivan 1986: 91).

The geographical distribution of the four models was not uniform throughout Quebec. This is especially true of Varieties T1.1.1 and T1.2.1, which were most common in the eastern part of the province, and Class T2, which was predominant in the west. This trend is even clearer when Quebec is divided into its four historic geopolitical regions, which reflect cultural identities and settlement patterns during the French regime (TAB. 2, FIGS. 11-14).

Most of the T1.1.1 and T1.2.1 rings are from the main area of European settlement in Canada (1608–1763), the St. Lawrence Valley.⁴ The rings are distributed almost equally among Quebec (1608–1764), Trois-Rivieres (1643–1764), and Montreal (1644–1764). In addition, these types are the most common types of rings uncovered in the two Amerindian territories that made up the *Traite de Tadoussac*⁵ (1652–1842) and the Upper Saint-Maurice. The former was the private preserve of the Montagnais for many years, while the latter was first occupied by the Attikameks and then by the Tête-de-Boules. These nations had close ties with merchants and missionaries in Quebec City and Trois-Rivieres (Clermont 1982: 17–20, 27, 41; Guitard 1984).

Class T2 rings are well-represented in the St. Lawrence Valley. They were more numerous, however, in the historic administrative district of Montreal. Two examples were also found in the Lake Abitibi region, which was officially part of Rupert's Land⁶ (1670–1870), a vast territory granted to the Hudson's Bay Company. This concession deprived the French of an important source of furs. As a result, several merchants, many of whom were from Montreal, set up illegal trading posts in the Lake Abitibi region to intercept Algonquins travelling to James Bay to trade with the British (Ethnoscop 1984: 32; Roy 2002: 15–20). The French took control of the James Bay posts between 1686 and 1713 (Ethnoscop 1984: 24).

4. As of the late 17th century, the St. Lawrence Valley was sometimes called the Pays d'en Bas in opposition to the Pays d'en Haut (Havard 2003: 12, 52, 60–64).

5. The territory of the Montagnais became part of New France in 1652. From then on, it was called the *Traite de Tadoussac* and was leased to individuals or private companies. The *Traite de Tadoussac* was incorporated into the *Ferme du Domaine du roi* in 1674 (Guitard 1984; Bouchard 1989: 234).

6. The French called this area Baie d'Hudson, and sometimes Baie du Nord.

It is more difficult to determine the geographical distribution of Type T3.1 rings, probably because few examples have been found in the province. Those recovered thus far are distributed in comparable proportions in the historic administrative districts of Quebec and Montreal, and the *Traite de Tadoussac*.

Other Parts of North America

The chronological and geographical distribution of the four Jesuit ring models becomes even clearer when available data for other parts of North America are taken into account.

A review of the literature supports not only the early date of Variety T1.2.1, but also the preferential distribution of Varieties T1.1.1 and T1.2.1 in the northeastern part of the continent (FIG. 11). Indeed, a few T1.2.1 rings have been found on sites occupied by the Hurons, Petuns, and Neutrals during the second quarter of the 17th century (Smith and Mattila 1989; Fitzgerald, Knight, and Lennox 1994; Garrad 1994) on the eastern shore of Lake Huron and around Lake Ontario.⁷ Several examples have also been recovered in Iroquoia (New York State), in archaeological contexts dating from the middle of the 17th century to the first third of the 18th century (Wood 1974; Bradley 2007: 123). Lastly, a small number of T1.2.1 rings were found in the northern part of the Thirteen Colonies (1607–1775), more specifically in the area that is now New England. These rings come from archaeological sites dating to the second half of the 17th century (Thomas 1973; Turnbaugh 1984; Crane 1997: 61–62). Only one other ring belonging to Variety T1.1.1 has been identified outside the province of Quebec. It comes from the Pompey site (1655–1680) in Iroquoia (Beauchamp 1976: 174–175).

The distribution of Class T2 and Type T3.1 rings extended further west and south than that of the rings mentioned above (FIGS. 12–13). Indeed, the rings in Class T2 and Type T3.1 occur in large numbers in Iroquoia (Wood 1974; Beauchamp 1976) and in the western part of the Pays d'en Haut (1671–1763), especially around Lake Michigan and in the

7. This region was incorporated into the Pays d'en Haut, which officially came under French control in 1671 (Havard 2003: 67).

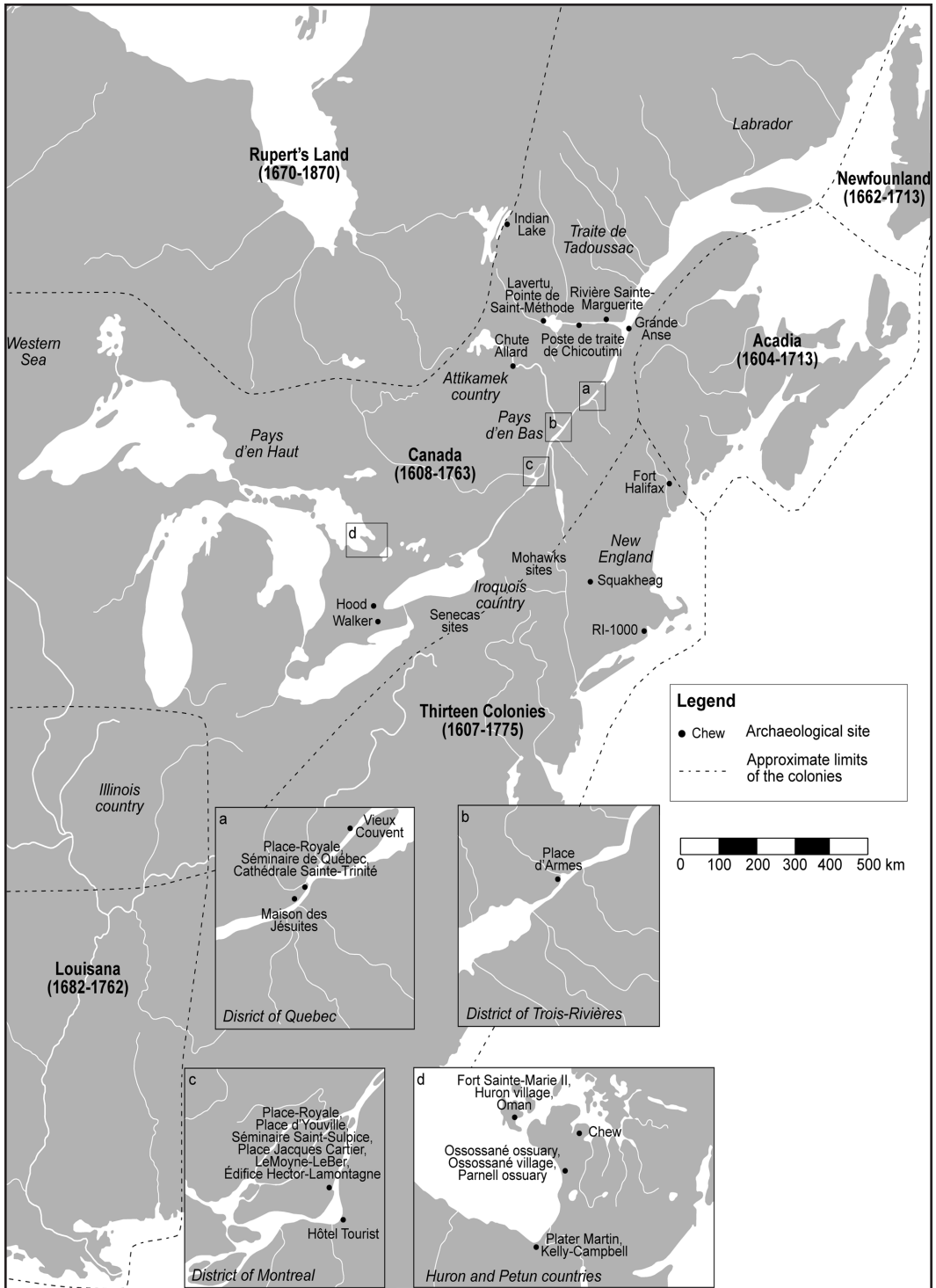


Figure 11. Geographical distribution of Variety T1.1.1 and Variety T1.2.1 rings on archaeological sites in North America. (Map by the author.)

Illinois Valley⁸ (Brown 1943; Cleland 1971; Mason 1976; Mainfort 1977; Hauser 1982; Arthurs 1983; Walthall 1993). Examples have also been found on archaeological sites in Louisiana⁹ (1682–1762) (Neitzel 1965; Brain 1979; Brain 1988; Walthall 1993). This is not to mention the roughly 1500 Type T3.1 rings found in the wreck of *La Belle*, which went down in Matagorda Bay in 1686. The cargo of this vessel was to be used for founding a colony at the mouth of the Mississippi River (Mason 2003: 246; Bruseth and Turner 2005: 89–90). Lastly, a small number of Type T3.1 rings have been found in Acadia, New England (Crane 1997: 61–63) and James Bay (Kenyon 1986). Both models appeared at the earliest in the third quarter of the 17th century, and seem to have been introduced within only a few years of each other in Iroquoia (1650s–1660s), the Pays d'en Haut (1660s–1670s) and Louisiana (1680s). Type T3.1 dates to around 1720–1730, while Class T2 remained in circulation until approximately 1770–1780.

Supply Network in France

My research suggests that the four Jesuit ring models identified using the technological typology came from at least three distinct supply areas in France. There are enough affinities between the rings of types T1.1.1 and T1.2.1 to believe that they came from the same workshop or from a small group of workshops using the same manufacturing techniques. This may also be the case of the Type T3.1 rings, since they are homogeneous. In contrast, the wide variability of the rings in Class T2 point to a more complex reality. Based on information from both sides of the Atlantic, these different ring types can be associated with at least three ports involved in trade with New France: La Rochelle, Bordeaux, and Rochefort.

La Rochelle

The commercial port of La Rochelle played a dominant role in transatlantic trade between France and her North American colonies.

8. The Illinois Valley (or Illinois country) was part of the Pays d'en Haut before it was annexed to Louisiana in 1717 (Havard 2003: 19).

9. Louisiana was founded in 1682 and became a colony independent from Canada in 1699 (Havard 2003: 72).

Ships bound for New France were outfitted in this port as of the early 1530s (Augeron and Tranchant 2004: 33). It was not until around 1627–1630, however, that vessels from La Rochelle transported supplies to Canada on a regular basis. The number of ships outfitted for this purpose increased in the 1640s and continued to climb throughout the second half of the 17th century (Delafosse 1951; Bosher 1993b). Despite a troubled period beginning around 1685 (Augeron 2004: 181–183), La Rochelle merchants were the lead players in trade with Canada until roughly 1715–1720. They were displaced by merchants based in Bordeaux in the early 1740s (Pritchard 1976: 195–197, 207–209; Young 1995: 16).

In light of the archaeological contexts of the Jesuit rings found in North America, Variety T1.2.1 seems to have been shipped from La Rochelle. Indeed, the date of this variety corresponds closely to the port's most active period, i.e. the second quarter of the 17th century to the early 18th century. Variety T1.1.1 also may have been shipped from La Rochelle, even though it appears a bit later, i.e. around the third quarter of the 17th century. In Quebec, Variety T1.2.1 rings have been found on the properties of merchants involved in trade between Canada and La Rochelle; for example, on the LeMoyné-LeBer site in Montreal, whose owners included Charles Le Moyné (1626–1685), Jacques Le Ber (ca. 1633–1706) and Antoine Pascaud (ca. 1665–1717) (Bilodeau 1990: 54–55; Ethnoscop 2000: 42–48). This variety been recovered on the Place d'Armes in Trois-Rivières, in a sector occupied by the homes of Pierre Petit (ca. 1670–1737) and Joseph Petit, Sieur de Bruneau (1645–ca. 1724) (Delafosse 1951: 482; Gendron, Y. 2006: 49–51, 60–61, 82). Lastly, T1.2.1 rings have been unearthed in Quebec City on the site of the Paradis House, occupied by Philippe Gauthier de Comporté (1641–1687) and Jean-André Lamaletie (1718–1774) (Lapointe and Labrèche 1990: 1–3; Jean and Proulx 1995: 147). Unfortunately, the archaeological contexts of these rings are not precise enough to associate the rings with these merchants definitively. Nevertheless, they lend support to the theory of a link between La Rochelle and Variety T1.2.1.

According to information available in France, Varieties T1.1.1 and T1.2.1 seem to

have been made in Poitou (FIG. 14). In the 17th and 18th centuries, a large share of the goods shipped from La Rochelle were produced in that province and then sent to La Rochelle by barge on the Sèvre Niortaise River (Guillemet 2008). This project studied several rings similar to those of Variety T1.2.1 in ethnological collections from Poitou dating to the second half of the 18th century and the 19th century (Deloche 1929: 98–99; Gendron, C. 1992: 139–145; Joannis 1992: 89). A few rings of this type were recovered from archaeological sites in the neighboring province of Touraine (Zadora-Rio and Galinié 1992: 146), which was linked to Poitou by the Vienne River, one of the main tributaries of the Sèvre Niortaise (Guillemet 2008).

Bordeaux

The commercial port of Bordeaux also played an important role in transatlantic trade. The first ships bound for New France were outfitted in this port as early as the 1520s (Marzagalli 2004: 207). Regular trading with Canada began as early as 1671, with at least one vessel being sent from this port every year. This trade relationship seems to have become well established around the mid-1680s, although the number of ships fitted out to carry goods to Canada seems to have been relatively low until the beginning of the 1740s (Pritchard 1976: 196–200; Bosher 1994a: 164, 481; Marzagalli 2004: 208–210). Unlike merchants in La Rochelle, those in Bordeaux took little interest in Canada; for them, the port of Quebec was often no more than a stopover in triangular trade between France, New France, and the West Indies (Butel 1974: 36–37; Huetz de Lemps 1975: 563–566).

Archaeological data from North America suggest that Class T2 rings were taken aboard vessels in Bordeaux. First, the date of these rings coincides quite well with the port's main period of activity; these rings appeared around the third quarter of the 17th century and became the most common model of ring in roughly the second quarter of the 18th century. Second, it should be noted that a Variety T2.1.1 ring was found on the wreck of the *Machault* (1760), a frigate outfitted by a shipowner in Bordeaux (Beattie and Pothier 1978: 11; Bosher 1992: 168).

My research in France enabled me to identify a ring in the Musée d'Aquitaine de Bordeaux

with many similarities to those of Type T2.1.¹⁰ A few rings related to this type have also been observed in ethnological collections from Poitou (Deloche 1929: 98–99). Therefore, the origin of Class T2 rings should be looked for in the former provinces of Gascogne, Guyenne, Languedoc and Limousin (FIG. 14). In the 17th and 18th centuries, these provinces supplied Bordeaux with most of the goods destined for France's North American colonies. These towns were connected to one another by the Garonne River and its main tributaries, the Dordogne, Lot and Tarn (Butel 1974: 92–101).

Rochefort

The Rochefort naval base, for which construction began in 1666, was another Atlantic port involved in trade between France and her North American colonies as of the third quarter of the 17th century. This military port also was the transit point for most goods offered as diplomatic gifts to Amerindians (Kaouk 2008: 269). Ships from Rochefort ensured the surveillance and defense of New France in addition to transporting supplies to the colonial administration, royal troops, and various royal construction sites (fortifications and shipyards) (Bosher 1993a: 56–59; Augeron 2008: 159).

Archaeological discoveries in North America suggest that Type T3.1 rings originated in the port of Rochefort. The *La Belle* (1686) wreck yielded several hundred rings of this model. This vessel, which was built and outfitted in Rochefort, was part of a convoy led by the explorer René-Robert Cavelier de La Salle (1643–1687) on his last expedition to the mouth of the Mississippi (de Bry 2004). Carol I. Mason has noted that the distribution of Type T3.1 rings follows the route taken by this explorer and his associate, Daniel Greysolon Duluth (ca. 1639–1710), as well as by the survivors of the *La Belle* (1686) (Mason 2010: 384–385).

This type of ring appears to originate inland from Rochefort. In the 17th and 18th centuries, goods were transported by barge on the Charente River between the port of Rochefort and the main production centers in

10. I would like to thank my colleague Robert Nadeau, who supplied me with a photograph of an unset ring (16th–18th centuries) on exhibit at the Musée d'Aquitaine de Bordeaux.

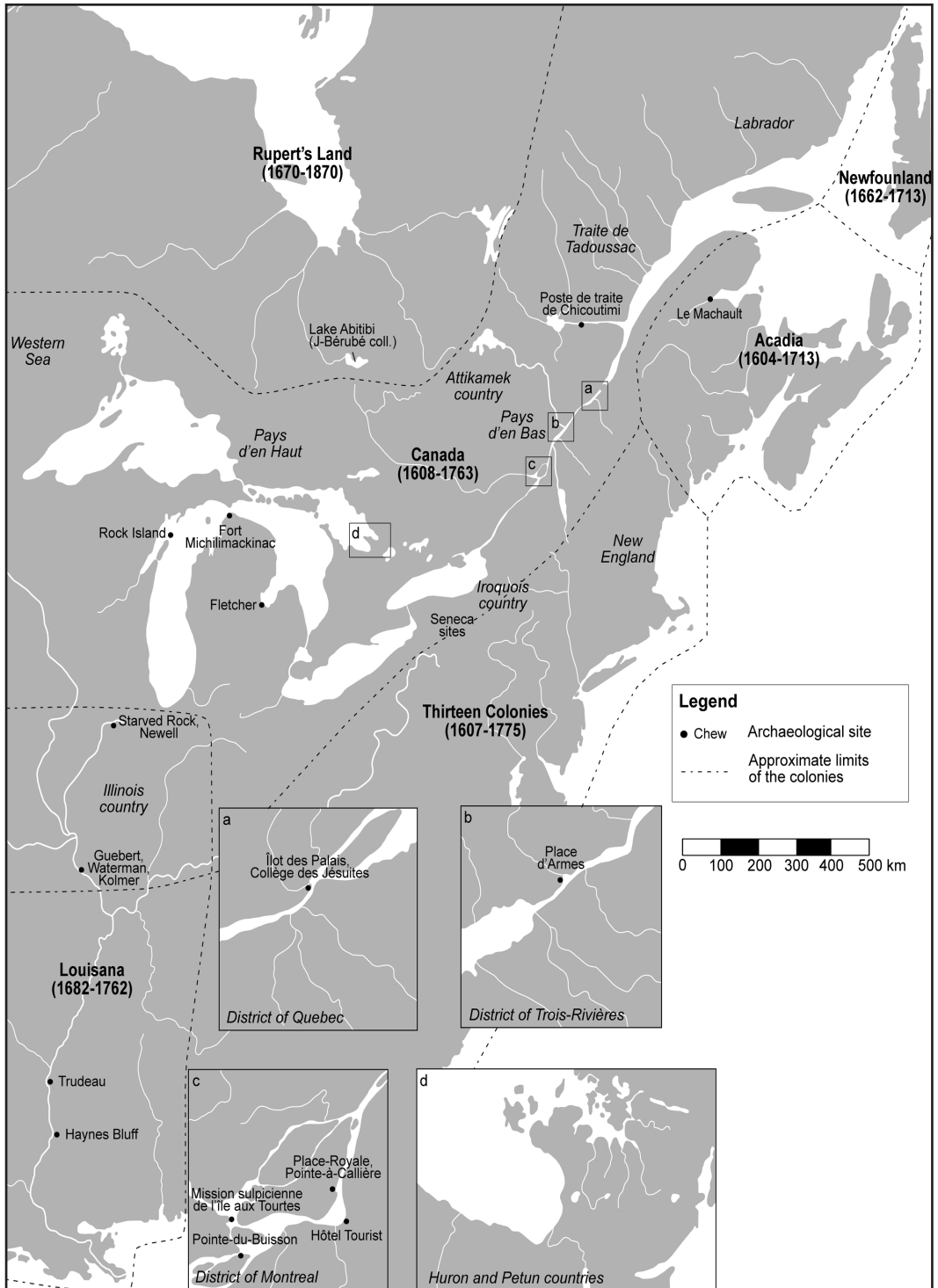


Figure 12. Geographical distribution of Class T2 rings on archaeological sites in North America. (Map by the author.)

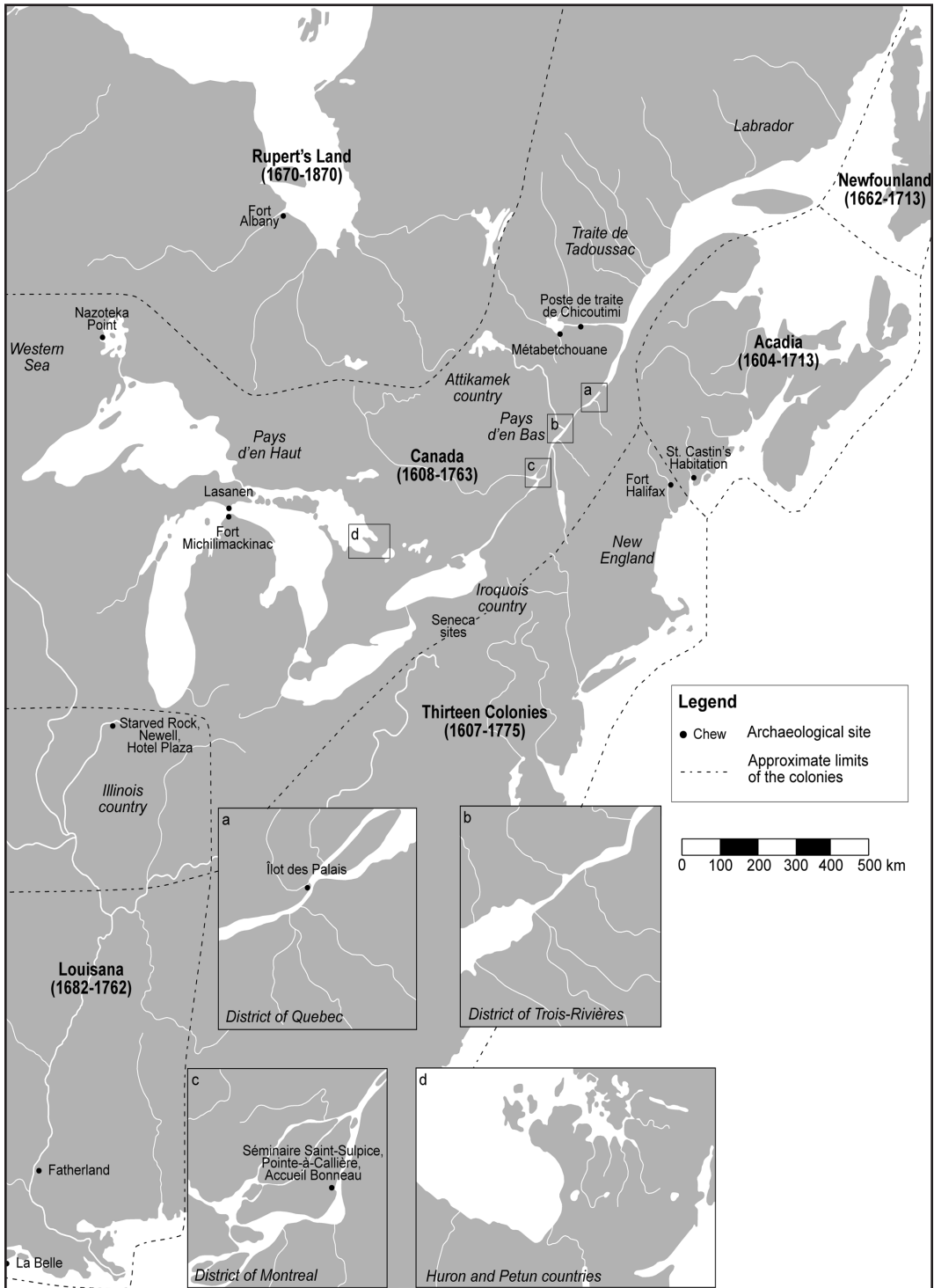


Figure 13. Geographical distribution of Type T3.1 rings on archaeological sites in North America. (Map by the author.)

Angoumois,¹¹ Aunis, and Saintonge (FIG 14). The naval base was also supplied by roads from Dordogne and Limousin (Augeron 2008: 159–160; Guillemet 2008).

In short, if my hypotheses are accurate, diversification of the Jesuit ring models distributed in New France as of the third quarter of the 17th century may have been due to interactions with two new ports in France. Even though outfitters and merchants had to deal with a new supply network, however, they seem to have tried to obtain rings that were similar to those which had been offered to Amerindians for close to half a century, i.e. unset copper-alloy rings with a plaque decorated with motifs that had a sentimental, religious, or magico-religious connotation. It was only the rings' manufacturing techniques that changed depending on the supplier.

Distribution Networks in New France

The chronological and geographical distribution of the main Jesuit ring models shows that their period of use in New France can be divided into at least three main phases: an introductory phase (1575–1650), a peak phase (1650–1715) and a decline phase (1715–1780) (FIG. 10). Each of these three phases can be divided into two shorter periods, namely, a transition period (a) and a stabilization period (b). Each main phase was marked by economic and political events that seem to have affected the rings' chronological and geographical distribution.

Since the rings passed through the hands of several different players between the time ships entered port and the time the rings were acquired by Amerindians, it is hard to reconstruct the commercial networks that underpinned their distribution. The rings were probably unloaded in the ports of Tadoussac and Quebec and then shipped by boat to Trois-Rivières, Montreal, and Chicoutimi before being distributed to people who came into contact with Amerindians (Guitard 1984; Jean and Proulx 1995: 187–190, 313–321; Carpin 2008: 260–261). In addition, due to trade

between allied nations, some rings ended up well beyond the borders of New France.

It is important to remember that some colonial merchants had correspondents in more than one port in France (Bosher 1987: 37); therefore, a merchant could obtain several different models of rings. Probably, the king's representatives also could choose from several different models, as shown by the fact that Class T2 and Type T3.1 rings were found together in the king's storehouses at the Intendant's Palace (1684–1713) in Quebec City. Lastly, it should be pointed out that goods stored in these storehouses were sometimes sold retail (Jean and Proulx 1995: 153); therefore, individuals could have acquired Type T3.1 rings to trade them with Amerindians.

Phase 1: Introduction (1575–1650)

Phase 1 corresponds to the period when Jesuit rings were first introduced into New France. Archaeologists usually situate this event in the second quarter of the 17th century (Mason 2003: 242). Research in the province of Quebec, however, has shown that at least one ring pre-dates that period. This ring is from a layer relating to the occupation of the inner courtyard of Champlain's first habitation (1608–1624) and, perhaps, even to contacts between Europeans and Amerindians prior to the founding of Quebec (ca. 1575–1600 to 1608). In any case, the number of rings in circulation was probably limited in Phase 1a (1575–1625) and then increased in Phase 1b (1625–1650). The only model on offer was Variety T1.2.1. Its geographical distribution was concentrated in the St. Lawrence Valley and the Traite de Tadoussac, as well as in Attikamek, Huron, and Petun countries.

Before 1663, the king tasked third parties, either individuals or companies, with the administration and settlement of New France in exchange for a trade monopoly in Tadoussac and the St. Lawrence Valley. The 1588–1627 period was somewhat chaotic since the trade monopoly changed hands several times. When the monopoly was granted to the *Compagnie de la Nouvelle-France* (or *des Cents-Associés*) (1627–1645) and then the *Communauté des Habitants* (1645–1663), the

11. Angoumois was a former region of France that occupied most of what is now the department of Charente.



Figure 14. Presumed origin of Jesuit rings in France. (Map by the author.)

situation stabilized to some extent (Bouchard 1989: 41–49, 233; Jean and Proulx 1995: 89–92). Since these two companies did most of their business in La Rochelle, a growing number of ships were outfitted in this port as of the second quarter of the 17th century (Delafosse 1951: 474–476; Bosher 1993b: 305–306, 312). This shift may explain why Variety T1.2.1 rings were predominant in Phase 1b.

Except for a few interpreters and explorers, few civilians ventured beyond the St. Lawrence Valley until the mid-17th century (Havard 2003: 65). Furs were obtained from Amerindians who occasionally traveled to the

trading posts in Tadoussac (1599), Quebec (1608), Trois-Rivières (1634), and Montreal (1642) (Guitard 1984; Dechêne 1974: 171–173). It is not surprising, therefore, that Phase 1 rings are concentrated in the main area of French colonial settlement in Canada and in the territories occupied by their first allies, the Montagnais and Hurons.

Phase 2: Peak (1650–1715)

Phase 2 corresponds to the period when the number of Jesuit rings was at its peak. It is characterized by a diversification of the models available in New France. Variety

T1.1.1, Class T2, and Type T3.1 made their appearance in Phase 2a (1650–1685) and existed alongside Variety T1.2.1 throughout Phase 2b (1685–1715). Phase 2 was also characterized by the expansion of the rings' distribution into Iroquoia, the western part of the Pays d'en Haut, Rupert's Land, Louisiana, Acadia, and New England. In the province of Quebec, the peak phase also coincided with an increase in the number of rings in circulation.

The peak phase was marked by numerous political and economic changes that seem to have had a major impact on the rings' distribution. One of the most important changes was the decision by Louis XIV (1660–1715) to take New France in hand. The creation of the royal government (1663) led to a major reorganization of administration and commercial activities. From then on, a sovereign council was responsible for governing the colony. Moreover, trade was free. The monopoly granted to trading companies covered solely the export of furs (Dechêne 1974: 143–144; Bouchard 1989: 234–236; Jean and Proulx 1995: 109–112).

Several measures also were adopted during this phase to spur the development of New France. One was aimed at increasing the number of exploration voyages to the north (Hudson Bay), the west (Pays d'en Haut) and the south (Louisiana). The goal was to expand France's possessions, forge alliances with Amerindians, discover new resources (minerals and furs), and find a navigable route to Asia (Mathieu 2001: 62–65; Havard 2003: 66–67). Measures also were taken to dispatch troops and build a first network of forts (Bosher 1993a: 58–59; Balvay 2006: 28–29, 63–67), as well as to stimulate trade and boost the number of outfitted ships bound for Canada (Bosher 1993a: 62–63).

Changes had begun to occur in commercial activities and exploration well before the creation of the royal government. The destruction of Huronia (1648–1652) by the Iroquois and the gradual liberalization of trade (as of 1650–1652) under the *Communauté des Habitants* had already given rise to the *course des bois*, with unlicensed traders taking to the woods to exchange European items for furs. Trading expeditions were not common in the 1650s, but their frequency began to increase over the next decade due to the pacification

of the Iroquois (1665–1667) (Dechêne 1974: 173–179; Wien 1998: 166–175; Havard 2003: 66–68). Investments by the king that created conditions favorable to many merchants in both the colony and France stimulated commercial activities (Bosher 1994b: 20, 26). Slow reorganization following the breakdown of the trade network led to the introduction of a fur-trading license system in 1681 (Dechêne 1974: 173–179).

Given the territorial expansion and reconstruction of the fur trade that characterized Phase 2, it is not surprising that the distribution area of Jesuit rings stretched from Rupert's Land to the Pays d'en Haut and Louisiana during this period. The emergence of these rings in Iroquoia may well reflect sustained diplomatic efforts on the part of the French to pacify the Five Nations and maintain good relations with them over the next few decades.

Earlier, it was proposed that the diversification of Jesuit ring models coincided with a change in the supply network in France. Based on the political and economic context in New France, this diversification also coincided with an increase in the number of players involved in transatlantic trade and French-Amerindian relations. First, there were the king's agents, whose arrival in the colony might explain the introduction of T3.1 rings. These agents included the intendant and the king's storekeeper, who were responsible for providing the colonial administration and the king's troops with supplies; explorers, who were entrusted with investigating the region and founding new settlements; the governor and various officials, who were in charge of maintaining alliances with the Amerindians; and military officers and soldiers, who were responsible for defending the colonies. There were also French merchants who, as of 1650, were authorized to export trade goods to the colonies for their own account. They boosted their shipments of these goods when the royal government liberalized trade in the 1660s. Initially, it was mainly merchants from La Rochelle who had representatives in the port of Quebec. Soon, however, a multitude of peddlers, sometimes from other ports in France, came to try their luck in the colony (Dechêne 1974: 212–215; Wien 1998: 166–167, 180–181). The arrival of these merchants might

explain the appearance of Variety T1.1.1 and Class T2 rings.

The differential geographic distribution of the various Jesuit ring models (T1.1.1 and T1.2.1 vs. T2 and T3.1) may have resulted from a break that developed between Quebec and Montreal merchants in the second half of the 17th century. On account of its geographical location, Montreal soon became the staging area for exploration and trading expeditions to the west. As a result, merchants based in this city played a dominant role in the fur trade in the Pays d'en Haut and Louisiana (Dechêne 1974: 173; Jean and Proulx 1995: 82). The merchants in Quebec City, for their part, focused their activities on the *Traite de Tadoussac* (Bouchard 1989: 189–190). Some also set up illegal trading posts on the south shore of the St. Lawrence¹² and were thus able to trade with the Malecites (or Etchemins), Abenakis, and Micmacs, three nations whose territories included parts of Canada, Acadia, and New England (Bouchard 1989: 132–134; Johnson and Martijn 1994: 30–35).

The growth in commercial activities stemming from the reorganization of the trade network and the exploitation of new fur-supply territories soon led to a glut of beaver pelts on the European market. In fact, the market collapsed in the mid-1690s. In 1696, a royal decree ordered the abolition of the fur-trading license system and the abandonment of the Pays d'en Haut forts, except Fort Saint-Louis des Illinois, Fort Frontenac, Fort Saint-Joseph des Miamis and Fort Michilimakinac (Havard 2003: 71; Balvay 2006: 31–32).

The difficult economic situation in Phase 2b does not seem to have had a major impact on the chronological and geographical distribution of Jesuit rings. In Quebec, it was only Variety T1.2.1 that became less common as of the 1670s, probably due to competition from new models or to the difficulties encountered by La Rochelle merchants starting in 1685 (Augeron 2004: 181–183). The stability of the other models may have been a result of the War of the League of Augsburg (1688–1697)

and the War of the Spanish Succession (1702–1713). These conflicts prompted Louis XIV to build a new line of forts in Canada and Louisiana (Havard 2003: 72; Balvay 2006: 32–35). Thanks to the sizeable expenditures incurred by the king to defend the colonies, transatlantic trade continued and even grew (Bosher 1994b: 22).

Phase 3: Decline (1715–1780)

Phase 3 corresponds to the period when Jesuit rings fell into decline. This trend began in Phase 3a (1715–1730) and probably accelerated in Phase 3b (1730–1780). It manifested itself through a decrease in the number of rings in circulation in the province of Quebec. The decline began in the early 18th century, but became more obvious after the first third of the century. Phase 3 was also characterized by a decrease in the number of models available in New France. Class T2 and Type T3.1 rings disappeared from Quebec around 1727–1734 and 1713–1716, respectively. As for Variety T1.2.1, it declined in the early 18th century and disappeared completely around 1770–1780. Elsewhere in North America, Variety T1.2.1 and Type T3.1 disappeared around the end of the first third of the 18th century. Only Class T2 rings survived until roughly 1770–1780.

With the signing of the Treaty of Utrecht (1713) just after the War of the Spanish Succession (1702–1713), a long period of peace began in New France. The peace was only broken 30 years later by the War of the Austrian Succession (1744–1748) and the Seven Years' War (1756–1763) (Mathieu 2001: 136, 144). However, the Treaty of Utrecht had major consequences for the colonies; it not only recognized Great Britain's supremacy over Rupert's Land and Iroquoia, but obliged France to transfer a large part of Acadia and Newfoundland (1662–1713) to the British (Mathieu 2001: 139).

The reopening of the beaver market in Europe fostered the recovery of the fur trade. Western trading posts were reoccupied as of 1715 and the fur-trading license system was

12. Prior to 1685, the south shore of the St. Lawrence was part of the *Traite de Tadoussac*. Subsequently, seigneuries were granted in that region and incorporated into the historic administrative district of Quebec (Guitard 1984; Aubert de la Chesnaye 2005: 11, 17–19).

reinstated in 1716 (Balvay 2006: 35). Nonetheless, changes had occurred from the previous phase. The fur-supply area was now limited to the St. Lawrence Valley, the *Traite de Tadoussac*, the Pays d'en Haut, Louisiana, and, as of the 1730s, the Western Sea (1731–1763) (Trudel 1968: 87–88; Mathieu 2001: 147–149). In addition, the role of the military had grown. In 1718, the king granted fur-trading licenses¹³ to post commanders and officers appointed to serve in the Pays d'en Haut. These officials formed partnerships with merchants and voyageurs to exploit the areas under their command (Allaire 1987; Balvay 2006: 214–216). Many officers and commanders participated directly in the fur trade until the mid-1730s. After that, several of them leased their licenses to merchants (Allaire 1987: 418–424).

Major changes also took place in the transatlantic trade network. To offset a funding shortage that began in Rochefort in 1705, the king turned to his partners for help in financing the war effort. His partners consisted of merchants, especially from La Rochelle, who were accustomed to supplying the North American colonies (Bosher 1994a: 294–295). Thus, many of these merchants were able to continue their commercial activities in spite of the beaver crisis. A large number, however, were not reimbursed after the signing of the Treaty of Utrecht and ran into financial difficulties (Bosher 1994a: 296–298; 1994b: 24–25). In fact, only a few of the La Rochelle merchants who had outfitted ships bound for New France in the late 17th century were still involved in these activities by the early 1740s. When hostilities resumed, the king turned to merchants in Bordeaux to outfit ships destined for Canada (Bosher 1994a: 469–471; Marzagalli 2008: 209–210).

Based on the economic context of Phase 3, the decline in Variety T1.2.1 rings may have stemmed from the difficult financial situation faced by La Rochelle merchants in the years following the Treaty of Utrecht. The predominance of Class T2 rings, on the other hand, might reflect the growing role of Bordeaux merchants in supplying New France. The disappearance of Type T3.1 may be due to the financial problems of the Rochefort arsenal or to decreased involvement

of post commanders and officers in the fur trade as of the 1730s.

The reduction in the total number of rings in circulation could stem from a change in Amerindian consumption patterns. An analysis of Montreal merchants' inventories has revealed a gradual decline in the demand for adornments in favor of textiles, clothing, and notions between the middle of the 17th and the first quarter of the 18th century¹⁴ (Dechêne 1974: 151–160). Subsequently, the demand for adornments remained fairly stable until the end of the French regime¹⁵ (Anderson 1994: 105–109). This shift may be due to the changes in dress observed among several Amerindian nations in the American Northeast following the introduction of European goods (Whitehead 1980: 11–26; Phillips 1988: 67–83; Karklins 1992: 12–97). Another possible contributing factor was the growing popularity of silver ornaments by the second quarter of the 18th century (Karklins 1992: 50, 95–97). Therefore, we must envisage the possibility that Jesuit rings were supplanted by new models. These models may well have included *fede* rings (T1.3 and T 1.3.1) made of silver-bearing metal, since the contexts in which such rings first appear on archaeological sites in the province of Quebec date from around 1730–1740 (Mercier 2011: 63).

Conclusion

I hope I have demonstrated that a technological typology, based on shaping and decorative techniques, helps to provide a better understanding of Jesuit rings. This typology allows for the establishment of a fairly precise chronology for the four main types of Jesuit rings available in New France. As a result, these rings may be used as chronological markers more often in the future. This technological typology also has provided an alternative hypothesis for the cause of the changes that occurred in Jesuit

13. From 1723 to 1728, the system of fur-trading licenses was replaced by a permission system in order to supply posts in the Pays d'en Haut (Allaire 1987: 419).

14. Between 1650 and 1720, the proportion of adornments in stock with Montreal merchants fell from 20% to 3%, while that of clothing, textiles and notions rose from 30% to 53% (Dechêne 1974: 151–160).

15. Adornment purchases accounted for 3.73% of expenditures incurred by voyageurs acquiring supplies from Montreal merchants for posts in the Pays d'en Haut between 1715 and 1760, while clothing, textiles and notions accounted for 62.85% of such expenditures (Anderson 1994: 105–109).

rings in the late 17th century: changes not the result of style drift but of diversification of the ring models in circulation. What is more, the typology identified a phenomenon that strongly resembles supply and distribution networks. This analysis pays special attention to the rings' archaeological contexts, follows the rings in time and space, and situates observations within the political and economic context of trade between France and New France.

This research suggests that there were three separate Jesuit ring supply networks in France. Of the four ring models identified by the typology, two seem to have been made in Poitou and shipped from La Rochelle, a commercial port that was particularly active in sending supplies to Canada between ca. 1627–1630 and ca. 1715–1720. A third model seems to have been shipped through Bordeaux, a commercial port that began to outfit ships destined for Canada regularly in 1671 and that played a dominant role in trade from ca. 1740 to ca. 1760. This model may have been made in Gascogne, Guyenne, Languedoc, or Limousin. The fourth and last model seems to have been associated with Rochefort. This military port, which was active from 1666, was supplied by production centers in Angoumois, Aunis, Dordogne, Saintonge, and Limousin. For reasons that are still unclear, the supply of Jesuit rings to Rochefort declined at the end of the first third of the 18th century.

This research has shown that the period of use of Jesuit rings can be broken down into three main phases in New France: an introductory phase (1575–1650), a peak phase (1650–1715), and a decline phase (1715–1780). Each was marked by political and economic events that seem to have affected the rings' distributions. Two transition periods may be at the origin of the changes that occurred in the late 17th and early 18th centuries. During the 1650–1685 transition period (Phase 2a), the rings' distribution area expanded, models were diversified, and the number of rings in circulation rose. This period coincided with a restructuring of the fur-trade network, an increase in the number of exploration voyages, and an increase in the number of players involved in transatlantic trade and French–Amerindian relations. In contrast, during the

1715–1730 transition period (Phase 3b), the number of rings and available models declined. This period also coincided with changes in the organization of the fur- and transatlantic-trade networks. It followed on the heels of a difficult juncture, marked by war and the collapse of the beaver market.

To continue this research on supply and distribution networks, Jesuit rings uncovered in other parts of North America, i.e. outside the province of Quebec, will have to be studied in greater depth. In addition, attention should to be focused on the contribution of the commercial and military ports that helped to supply New France but were not considered in this article (Rouen, Dieppe, Saint-Malo, etc.). Lastly, it is important to continue the research in France to identify the place of manufacture of each ring model. This research would no doubt provide a host of new information on Jesuit rings, regardless of their method of manufacture, the meaning of their decorative motifs, or the way these rings were used in 17th- and 18th-century French society.

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