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BEADS FROM THE HUDSON'S BAY COMPANY'S PRINCIPAL DEPOT, YORK FACTORY, MANITOBA, CANADA

Karlis Karklins and Gary F. Adams

There is no other North American fur trade establishment whose longevity and historical significance can rival that of York Factory. Located in northern Manitoba, Canada, at the base of Hudson Bay, it was the Hudson's Bay Company's principal Bay-side trading post and depot for over 250 years. The existing site of York Factory is the last of a series of three posts, the first of which was erected in 1684. Completed in 1792, York Factory III functioned as the principal depot and administrative center for the great Northern Department until the 1860s when its importance began to wane. It then entered a long period of decline which ended in 1957, when the post was finally closed. Subsequent archaeological work at the site has revealed many structural features and associated artifacts including a large and varied assemblage of beads, mostly glass, which are the subject of this report.

HISTORICAL BACKGROUND

Perched on the west bank of the Hayes River in northern Manitoba just a few kilometers from Hudson Bay (Figure 1), York Factory's position was to gather furs and manage one of the largest tracts of land ever controlled by a single, private company. For nearly 300 years, York Factory – named for James, the Duke of York, second governor of the Hudson's Bay Company – was the Hudson's Bay Company's trading post, entrepôt, port of entry, management headquarters, shipyard, distribution center, and home for up to 120 employees. In peak summer months, its population could exceed a thousand people including Homeguard Indians, tripmen, sailors, and trappers. Though the first expedition of the *Nonsuch* in 1668 was destined to taste the Nelson River, it was not until 1682 that the first post was established. In that year, French interests under Pierre Radisson, Company interests under Zachariah Gillam and John Bridger, and a private New England group under Benjamin Gillam arrived at the mouths of the Hayes and Nelson Rivers. It was the start of 275 years of continuous fur-trade occupation at this location.

Intrigue, warfare, and circumstance caused York Factory and its short-lived competitor posts to change hands

half a dozen times in two separate international conflicts. It witnessed a naval engagement and suffered three direct attacks. The factory was rebuilt seven times and was the base of operations for such fur trade personalities as Pierre Radisson, James Knight, Henry Kelsey, Samuel Hearne, Andrew Graham, James Isham, Joseph Colin, George Simpson, James Hargrave, and Joseph Fortesque. It figured in many issues of importance in the development of the Hudson's Bay Company and the evolution of Canada including control of Hudson Bay, the French and Indian wars, Arctic and western exploration, the Dobbs Affair, the 1810 HBC reorganization, westward expansion, the settling of Red River, the 1821 amalgamation with the North West Company, and the search for the Franklin expeditions.

The story of the York Factory beads is intimately linked to the story of York Factory III. The history of this occupation actually began on 24 August 1782. Four days earlier Jean-François de Galoup, Comte de Lapérouse, fresh from the sacking of the Prince of Wales Fort, arrived at the Hayes River. Sighting the *King George*, a 26-gun HBC ship at Five Fathom Hole, he decided to attack York by foot. He landed cannons, mortars, and 250 men opposite the site on the Nelson River and marched them overland. Chief Factor Humphrey Marten capitulated immediately, having already managed to get most of the furs out of the fort. York was occupied by the French and then razed on 1 September.

One significant result of this act was that it forced a much-needed physical reconstruction of York Factory so that it could meet the economic changes already in progress. York was no longer a trading post and had not been for some time. The many forts of the 17th and 18th centuries had been designed to service Indians traveling from the interior to trade, but since 1774, York had been a regional center for an ever-expanding hinterland that began with the construction of Cumberland House. York Factory's role was changing with meteoric rapidity. In 1782, there was already a second inland post, Hudson House, and numerous trading parties spread throughout the hinterland. The first big change came

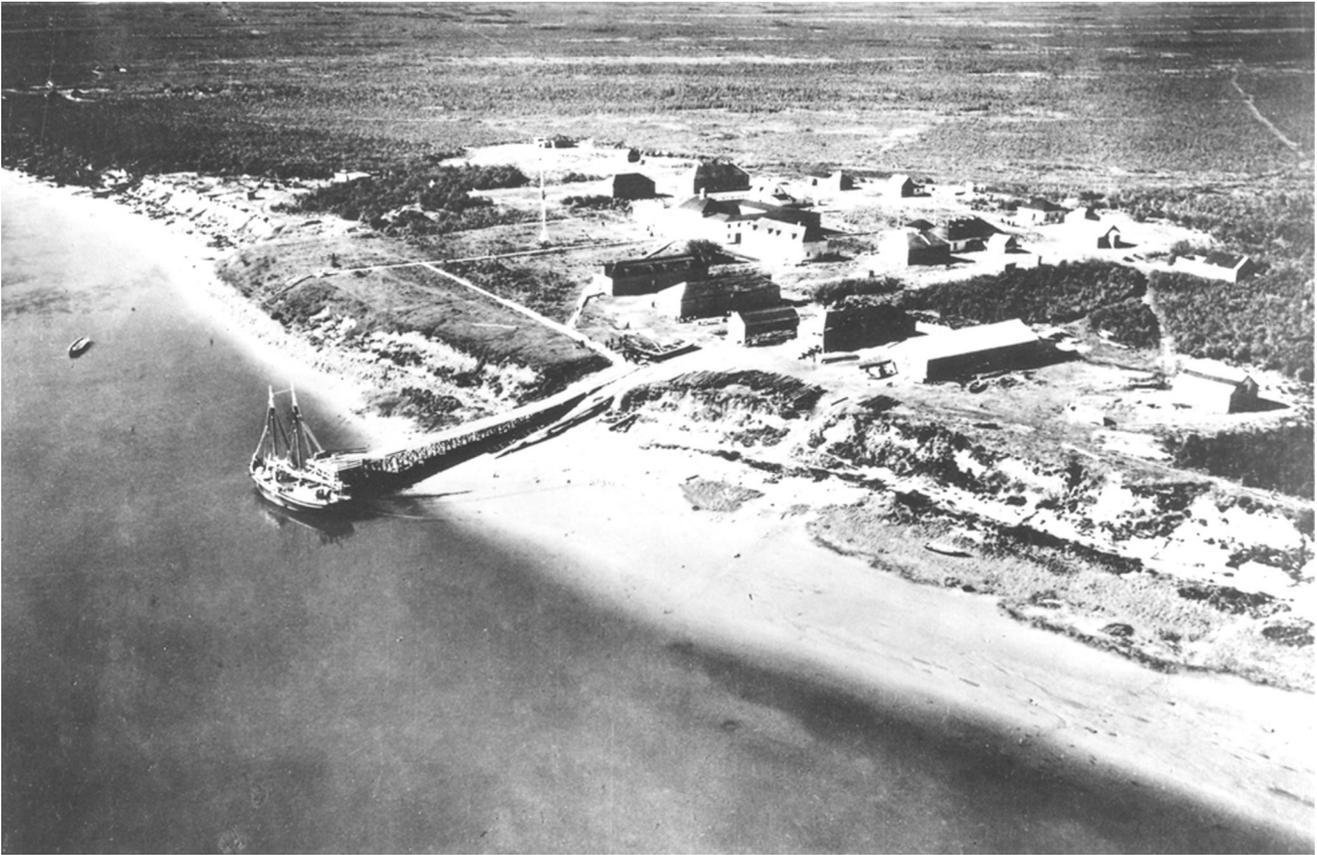


Figure 1. Aerial view of York Factory around 1925. Only the centrally located depot and a small building to its rear remain today (Public Archives Canada/Neg. no. PA-41571).

in 1786 when it was dictated that all effort be put into inland trade. Of the 112 men assigned to York, approximately three-quarters would be sent inland, including the chief factor, William Tomison. The “resident” or second in command left in charge of the “factory” was Joseph Colen.

Consequently, to keep operations at York going and to prevent even further trade losses in the aftermath of the French attack, an immediate replacement was necessary. Two prefabricated buildings were assembled in 1783 and 1785 as interim structures. In 1786, Colen began the construction of a large flanker-style fort as was traditional along the bay. Work progressed until May 1788, when a spring flood devastated the site.

The day after the flood waters peaked, the intrepid Colen manned a canoe with two other men and paddled up one of the footpaths until they reached dry ground. Their landing point was where York Factory III now stands. The partially assembled buildings at the flood-prone site were dismantled and moved to the new location. The operations were formally relocated in 1791. The new fort, called the Old Octagon in later years, was the base of operations until

the 1820s when a rebuilding period would see the factory’s character change again.

The increasing number of posts in the interior strained the administrative system to the point that in 1810, York, Churchill, and the Saskatchewan and Winnipeg rivers posts were formed into the Northern Department, managed from York. The following year was to see the arrival of the first Selkirk settlers who wintered at York and used it as a port of entry and supply. The amalgamation of the Hudson’s Bay Company with the North West Company in 1821 further enhanced the role of York Factory. Throughout the 1830s and 1840s it controlled the accounting, distribution, and transportation of virtually every commodity between Fort William in what is now western Ontario and the Rocky Mountains and from the American frontier to the Arctic Ocean.

It was during this period that the Old Octagon was razed and the “Great House” – the three-storey depot that still dominates the site today – was constructed. This held a quantity of goods and provisions sufficient to meet the demands of the northern trade for a period of two years. It

was also a manufacturing center for sundry trade goods. By the 1860s, however, it had become more practical to bring goods into Rupert's Land by way of St. Paul, Minnesota, and Red River. As a result, York entered a long period of decline that ended in 1957 when the post was officially closed. The Hudson's Bay Company transferred ownership of the site to the Government of Canada in 1968. It was subsequently declared a National Historic Site under the jurisdiction of Parks Canada.

In its heyday, York Factory III consisted of more than 50 buildings with the massive depot at its center (Figure 2). Unfortunately, human depredation and shore erosion have caused the disappearance of almost all of the structures. Only the depot, the adjacent one-room library, and the stone walls of a nearby magazine have survived to the present day.

THE ARCHAEOLOGY

The archaeological investigation of York Factory began in 1970, when James V. Chism and Karlis Karklins performed a preliminary assessment of the site and its archaeological and architectural components (Chism and Karklins 1970). A thorough survey followed in 1978, when Gary Adams led a team of three archaeologists to examine and identify the historical resources of the site and any problems associated

with them. Their report demonstrated how much York Factory had suffered for its role. Of the first five building phases – over 120 years of history – not a trace remained. The two York Factory III phases (1788-1920s and 1920s-1957) were represented by one magnificent standing structure, the Depot Warehouse, and a graveyard. The majority of the site was defined entirely by its archaeological resources and the Hayes River was actively eroding the bank, sending structures and artifacts tumbling into the river.

Parks Canada formally launched a four-year archaeological program to rescue some of the most endangered resources by excavating and recording individual features and collecting associated artifacts. A series of surveys, testing programs, and structural excavations yielded a mass of information. The work concentrated on the riverbank resources, an area about 70 meters wide and over one kilometer long. One of the first conclusions was that York Factory was exceptional. First of all, a 190-year occupation in a single swampy location had created a major stratigraphic sequence. The area along the riverbank typically contained at least four stratigraphic zones with numerous other layers and events. Further inland this would increase to over a meter of archaeological deposits. The Subarctic environment created excellent conditions for preservation. The ground is saturated with water and seldom exceeds 5°C in temperature. While this condition is hard on

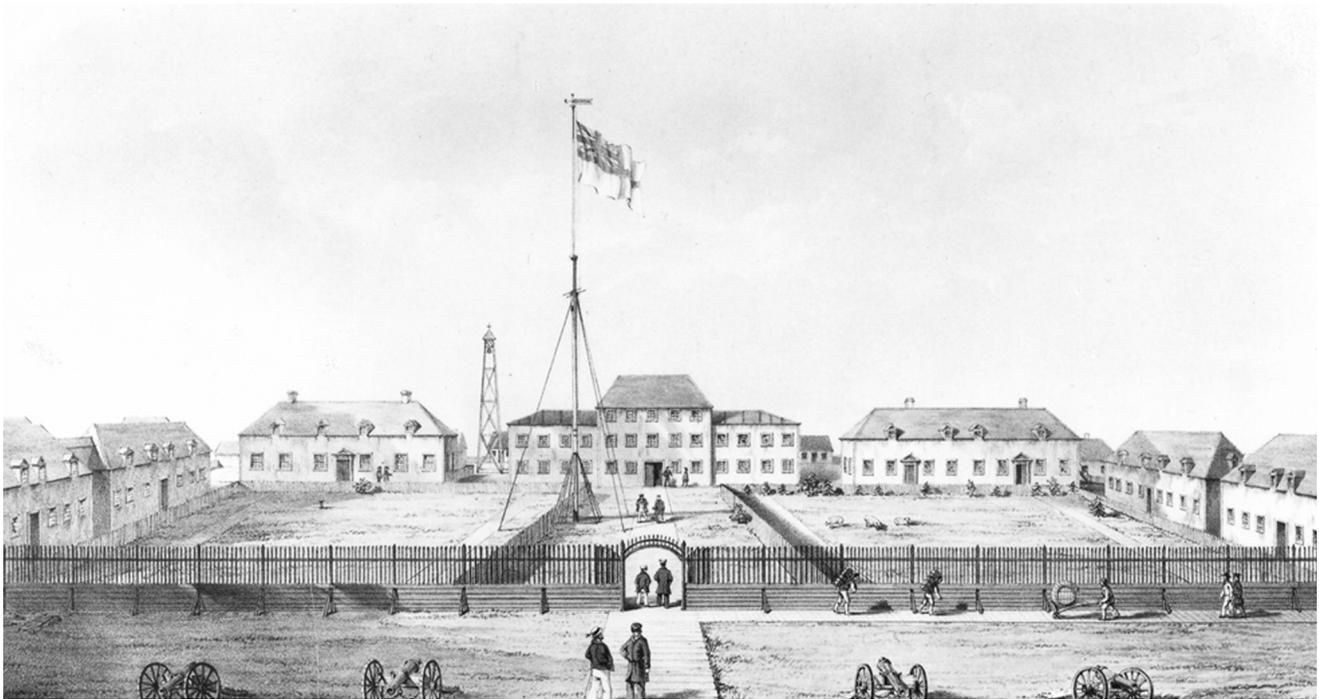


Figure 2. York Factory in 1853; the Depot is situated in the center. The illustration is purportedly based on a sketch by Chief Trader Alexander H. Murray (Public Archives Canada/Neg. no. C-16826).

some iron artifacts and tends to cause spalling of ceramics, it is a wonderful preservative for cloth, wood, paper, and leather.

Another source of amazement was the sheer size and scale of the site and the natural factors affecting it. Approximately 30 primary company structures were typically 10 m by 15-30 m in size and were supplemented by over twice as many other buildings. The site is over a kilometer long and its entire length is being eroded at a rate of about a half meter each year. Initial evaluation in 1983 identified 33 structures in immediate danger (Adams 1983).

Finally, the archaeologists discovered that the detailed state of the historical documentation for York Factory could provide an unequaled opportunity for research of all kinds. A proper archival study can augment virtually any analysis with detailed information seldom seen for archaeological sites.

The archaeological project provided a comprehensive study of the resources along the riverbank. Only one possible building from the early period was encountered, the 1799 Launch House, but eight structures from the second phase were partially salvaged. The Dog Meat House, Oil Cloth Factory, Ice House, East Fur Store, Inland Cargo House, Canoe Shed, 1840 Boat House, and 1916 Boat House all received from 2% to 38% excavation while all the extant remains of the Sawpit were salvaged. In addition, excavation exposed portions of the front palisades, boardwalks, drainage systems, and some specific features such as a dock ramp, timber storage facilities, a firepit, a warping box, and some unidentified features. Of particular note are the Native encampments. Historically, all traders were obliged to set up camp outside the palisades so the remains of these camps are all situated in the area between the front palisade and the river. Basic descriptions for each operation related to this work have already been published in a series of internal manuscripts (Adams 1982b, 1983, 1985; Adams and Burnip 1981).

Subsequently, a major internal report was completed to summarize the recovered artifacts (Lunn 1985). The salvage project also spurred several artifact-specific studies including ceramics (Hamilton 1982), Carron stoves (Moat 1979), arts and crafts (Adams 1982a), and personal artifacts of the early 19th century (Adams and Lunn 1985). The present bead study was also initiated as part of this project.

In August of 1989, Gary Adams led a team to mitigate resources in response to an environmental impact assessment for the development of a site staffing facility. The location of the staffing facility was to be in the area to the back and upstream from the main post. This was in the vicinity of the 1930s schoolhouse that burned down and close to several

barns which were built in the previous century (Donaldson 1981). The impacted area did not directly encompass any major structure but it did manage to provide interesting archaeological contexts and artifacts. Once the areas where the staffing facility footings would go had been investigated, the crew spent two days examining the eroding remains of a limekiln located along the riverbank just south of the dry-dock area.

In the early 1990s, a new challenge faced the archaeologists at York Factory. The most visible and spectacular feature of the site is the Hudson's Bay Company warehouse and packing room, called the Depot. This building, over 150 years old and imposing in its scale even when constructed, became the central focus of the entrepôt's activities over time, consolidating almost all of them under one roof. The Depot is massive, measuring about 30 m square, with an internal courtyard measuring 11 by 16 m. This wood-frame building was constructed in sections over a seven-year period beginning in 1831.

By 1990, the ground floor had severely deteriorated and sunk into the saturated soil. As a result of the vertical displacement, the substructure composed of heavy squared-timber floor joists, sleepers, and mud sills no longer provided necessary structural support. It was decided that a long-term Depot conservation and management strategy needed to include the structural stabilization and repair of the building which would begin in 1992. The planning process recognized that there would be the remains of an earlier occupation under the Depot. Therefore, a team of archaeologists led by Peter Priess arrived in 1991 to remove fill and excavate subsurface remains between the floor joists (Figure 3). What they found were the well-preserved remains of the "Old Octagon" (Ebell and Priess 1993). In the following two years, additional remains were found when the floor was completely removed and insulation and drainage trenches were excavated outside the Depot walls and in the courtyard. In a three-year period of conflicting objectives, mediation, compromise, and frustration, building engineers, restoration crews, and archaeologists worked to restore the Depot while protecting and salvaging as much of the Old Octagon as possible. In addition to cellars, foundations, and fireplaces from the earlier occupation, the crew discovered many subsurface attributes from the Depot. Working through very difficult conditions, they also recovered three pieces of intact beadwork, as well as a bear-claw necklace, clothing remnants, a felt hat, three human molars (containing large caries), and other fragile artifacts too numerous to mention.

In the late 1990s, efforts at York Factory concentrated on resource monitoring. Every year since 1996, a team has gone onto the site to monitor the archaeological resources most threatened by riverbank erosion and other destructive



Figure 3. Excavations being conducted inside the Depot at York Factory (Parks Canada/9K-1591T).

agents. Most of this work has entailed little excavation. In 2000, however, a loading platform was salvaged near the Lower Pier and part of the pier itself was examined in 2002. The two field seasons also involved the partial recovery of the 1857 Church of St. John.

THE BEAD INVENTORY

The various York Factory excavations produced a total of 28,598 beads. All but eight of these are made of glass and represent all four major manufacturing categories: drawn, wound, mold pressed, and blown. Three ceramic (Prosser-molded) beads are also represented, as are specimens of metal (2), plastic (2), and bone (1). In all, 277 varieties are represented.

The glass beads are classified using the taxonomic system developed by Kenneth E. Kidd and Martha A. Kidd (1970) as expanded by Karklins (2012). Varieties that do not appear in the Kidds' lists are marked by an asterisk (*) followed by a sequential letter for ease of reference. The

York Factory laboratory number (YF #) is also included so that future researchers may easily find specific varieties when examining the collection. Complex bead shapes are identified using Beck (1928).

The color names and codes used are those provided in the *Munsell Bead Color Book* (Munsell Color 2012) and the names generally correspond to those used by the Kidds. Diaphaneity is described using the terms opaque (op.), translucent (tsl.), and transparent (tsp.). Opaque beads are impenetrable to light except on the thinnest edges. Specimens that are translucent transmit light but diffuse it so that an object (such as a pin in the perforation) viewed through them is indistinct. A pin in the perforation of a transparent bead is clearly visible.

All measurements are in millimeters. A plus sign (+) after a measurement indicates that it is of an incomplete specimen.

The beads have generally been assigned to two principal occupation periods: 1) the late 18th and 19th centuries, and 2) the 20th century. The former period encompasses the

1788-1831 occupation of the original fort (the Octagon) situated beneath the extant Depot which was constructed between 1831 and 1837. It also includes the subsequent occupation of the Depot until about 1870, by which time the majority of the earlier bead varieties were no longer current. The beads attributed to the 20th century doubtless also include some used in the late 19th century but were primarily used during the first half of the 20th century. In those cases where it was possible to narrow these temporal ranges, more-specific dates are provided.

Where possible, the dates provided for the different varieties are based on their archaeological contexts. In poorly dated contexts, they are based on comparable material from firmly dated loci at the site or from other contemporary sites and, in some cases, on specific physical attributes and the type of manufacture of the beads.

Drawn Glass Beads

The 28,194 beads in the drawn bead category comprise 98.6% of the York Factory bead assemblage. They were produced from segments of glass tubing drawn out from a gather of molten glass. Prior to the 20th century, the drawing was done manually (hand drawn). A mechanical means (inclined downdrawing) to accomplish this was perfected and patented in 1917 by Edward Danner of the Libby Glass Company, Toledo, Ohio (Ross 2005:43). In this process, a constant stream of molten glass flowed over a rotating, hollow blowpipe which introduced air into the gather to form the hole (Francis 1996:5). Depending on the cross-section of the pipe, the resultant beads could have perforations that were triangular, square, or some other shape (Francis 1996:5). The Danner and subsequent processes, however, could only produce monochrome beads. Tubes for striped and multi-layered beads continued to be drawn by hand and still are. Beads representative of both techniques are present in the York Factory collections but there is no way to segregate them visually, except for those with shaped perforations (these are marked SP in the inventory that follows).

When the tube had cooled, it was broken into bead lengths. These could be used as is or their rough ends were rounded by subsequent heating and agitation. Initially this was done by hand. Smaller beads were heated in a pan mixed with sand and wood ash. The mixture was stirred and the bead segments gradually became viscid and their angular edges were rounded. Larger beads were placed on a spit (*a speo*) which was rotated in a furnace until the desired roundness had been achieved. Because of the way they were produced, *a speo* beads often exhibit certain characteristics that help to identify this method (Karklins 1993). A mechanical means (heat tumbling) to round beads

was devised in 1817 and greatly helped to speed the process (Karklins and Adams 1990). There is no way to distinguish pan-rounded from heat-tumbled beads.

The drawn-bead assemblage is quite varied with 18 Kidd/Karklins types being represented by 188 varieties (Plates XI-XVII). Small seed beads (type IIa) predominate.

Ia – Tubular, Monochrome, Undecorated

Ia2 (YF-v). Tubular; op. black (N 1/0); glass appears tsl. rose wine (10RP 4/6) on thin edges when held up to a strong light; ends range from unaltered breaks to well rounded; some specimens fall into the category of imitation wampum; late 18th/19th centuries; no. = 6.

Diameter: 3.0-4.6 Length: 6.2-21.5

Ia3 (YF-jj). Tubular; tsp. light gray (N 7/0); iridescent patina; very fragmentary specimen; late 18th/19th centuries; no. = 1.

Diameter: 4.7 Length: 4.0+

Ia4 (YF-1). Tubular; tsl. oyster white (N 8/0) flashed in clear glass; ends range from unaltered breaks to rounded; some specimens fall into the category of imitation wampum; late 18th/19th centuries; no. = 184.

Diameter: 1.6-6.1 Length: 0.7-32.0

Ia5 (YF-y). Tubular; op. white (N 9/0) flashed in clear glass; the white glass has a granular, porcelain-like appearance; broken ends; fragmentary specimen; late 18th/19th centuries; no. = 1.

Diameter: 3.5 Length: 6.8+

Ia*(a) (YF-s). Tubular; tsl. white (N 9/0) satin sheen; ends consist of unaltered breaks; 19th century; no. = 4.

Diameter: 2.0-2.7 Length: 2.1-3.2

Ia*(b) (YF-49c). Tubular; tsp. ruby (2.5R 3/10); pinkish-white patina; the glass tends to be cracked and crumbly; late 18th/19th centuries; no. = 10.

Diameter: 2.8-3.3 Length: 3.0-5.1

Ia*(c) (YF-3). Tubular; op. amber (10YR 7/8); earthy patina; ends range from unaltered breaks to slightly rounded; late 18th/19th centuries; no. = 10.

Diameter: 2.6-3.3 Length: 3.4-5.4

Ia*(d) (YF-2). Tubular; tsl./op. sunlight yellow (5Y 8/8); thick earthy patina; ends consist of unaltered breaks; late 18th/19th centuries; no. = 4.

Diameter: 5.0-6.3 Length: 12.0-23.8

Ia*(e) (YF-4). Tubular; tsl./op. dark palm green (10GY 4/4-6); thick earthy patina; ends range from unaltered breaks to rounded; late 18th/19th centuries; no. = 11.

Diameter: 2.3-3.8 Length: 2.2-6.0

Ia15 (YF-56a). Tubular; tsp./tsl. bright blue (5B 5/7); numerous linear bubbles in glass; ends consist of unaltered breaks; late 18th/19th centuries; no. = 2.

Diameter: 3.3 Length: 3.7-3.9

Ia*(f) (YF-o). Tubular; op. dusty blue (2.5PB 5/2); ends range from unaltered breaks to slightly rounded; late 18th/19th centuries; no. = 345.

Diameter: 3.0-4.6 Length: 2.3-6.2

Ia*(g) (YF-6). Tubular; op. medium blue (5PB 3/6); ends range from practically unaltered breaks to slightly rounded; late 18th/19th centuries; no. = 55.

Diameter: 3.2-5.7 Length: 3.3-7.7

Ia*(h) (YF-cc). Tubular; op. powder blue (5PB 6/3); ends range from unaltered breaks to rounded; late 18th/19th centuries; no. = 8.

Diameter: 2.6-2.8 Length: 2.2-4.4

Ia19 (YF-5). Tubular; tsp. bright navy (7.5PB 2/7); ends range from unaltered breaks to well rounded; late 18th/19th centuries; no. = 147.

Diameter: 1.4-5.1 Length: 2.0-16.2

Ib – Tubular, Monochrome Body, Decorated with Straight Simple Stripes

Ib*(a) (YF-7). Tubular; tsp./tsl. bright navy (7.5PB 2/7) with 12 thin op. white (N 9/0) stripes; ends consist of unaltered breaks; late 18th/19th centuries; no. = 2.

Diameter: 4.3-4.5 Length: 12.8-15.5

Ibb' – Tubular, Monochrome Body, Decorated with Spiral Compound Stripes

Ibb*(a) (YF-yy).** Tubular; tsp./tsl. deep brown (10YR 3/4) body exhibiting 2 sets of closely spaced simple and compound spiral stripes, one on either side of the bead: 1) op. aqua blue (2.5B 6/4), 2) op. white (N 9/0)/op. brick red (7.5R 3/8)/op. white/op. brick red, 3) op. light gold (2.5Y 7/8), 4) op. white, 5) 3 very narrow tsp. aqua green (7.5BG 6/6), and 6) op. white; relatively flat but diagonal ends; late 18th/19th centuries; no. = 1.

Diameter: 6.1 Length: 16.6

Ic – Tubular, Straight, Monochrome, Polyhedral Body

Ic*(a) (YF-9). Tubular, hexagonal; iridescent op. black (N 1/0); ends consist of unaltered breaks; late 19th/early 20th century; no. = 2.

Diameter: 1.6 Length: 6.5

Ic*(b) (YF-8). Tubular, hexagonal; tsp. light gray (N 7/0) (colorless); uneven, slightly rounded ends; 20th century; no. = 16.

Diameter: 1.8-1.9 Length: 1.4-1.8

Ic*(c) (YF-15a). Tubular, hexagonal; tsp. ruby (2.5R 3/10); slightly rounded ends; 20th century; no. = 1.

Diameter: 2.0 Length: 1.5

Ic*(d) (YF-15). Tubular, hexagonal; op. ruby (2.5R 3/10); slightly rounded ends; 20th century; no. = 9.

Diameter: 1.9-2.0 Length: 1.5-2.2

Ic*(e) (YF-14). Tubular, hexagonal; op. scarlet (8.75R 4/14); slightly rounded ends; 20th century; no. = 64.

Diameter: 1.7-2.2 Length: 1.4-2.1

Ic*(f) (YF-13). Tubular, hexagonal; op. poppy red (8.75R 4/14); slightly rounded ends; 20th century; no. = 24.

Diameter: 1.8-2.3 Length: 1.5-2.2

Ic*(g) (YF-12). Tubular, hexagonal; tsp. bright coral red (10R 5/14); slightly rounded ends; 20th century; no. = 1.

Diameter: 1.7 Length: 1.8

Ic*(h) (YF-11). Tubular, hexagonal; op. bright orange (1.25YR 5/12); slightly rounded ends; 20th century; no. = 7.

Diameter: 1.7-2.1 Length: 1.5-1.8

Ic*(i) (YF-10). Tubular, hexagonal; tsp. orange (2.5YR 6/14); slightly rounded ends; 20th century; no. = 2.

Diameter: 1.5-2.0 Length: 1.5

Ic*(j) (YF-17). Tubular, hexagonal; tsp. grass green (10GY 5/10); slightly rounded ends; 20th century; no. = 2.

Diameter: 1.8 Length: 1.6-2.0

Ic*(k) (YF-16). Tubular, hexagonal; tsp. bright green (2.5G 5/10); slightly rounded ends; 20th century; no. = 1.

Diameter: 1.9 Length: 1.9

Ic*(l) (YF-18). Tubular, hexagonal; tsp. bright blue (5B 5/7); slightly rounded ends; 20th century; no. = 2.

Diameter: 1.8 Length: 1.7

Ic*(m) (YF-19). Tubular, hexagonal; tsp. cerulean blue (7.5B 4/8); slightly rounded ends; 20th century; no. = 1.

Diameter: 2.0 Length: 1.5

Ic13 (YF-20). Tubular, hexagonal; tsp. bright navy (7.5PB 2/7); rounded ends; 20th century; no. = 3.

Diameter: 2.1 Length: 1.8

Ic (lined) – Tubular, Monochrome Polyhedral Body Having Silvering or Colored Enamel on the Perforation Surface

Ic (lined)*(a) (YF-21a). Tubular, hexagonal; tsp. light gray (N 7/0) with a silvered layer on the surface of the perforation; slightly rounded ends; 20th century; no. = 3.

Diameter: 1.9-2.1 Length: 1.2-1.5

Ic (lined)*(b) (YF-21). Tubular, hexagonal; tsp. light gray (N 7/0) with op. pink (ca. 5RP 6/8) enamel on the perforation surface; slightly rounded ends; 20th century; no. = 16.

Diameter: 1.7-2.3 Length: 1.3-1.9

Ic (lined)*(c) (YF-22). Tubular, hexagonal; tsp. light gray (N 7/0) with op. purplish enamel (ca. 5P 5/4) on the perforation surface; slightly rounded ends; 20th century; no. = 4.

Diameter: 1.7-1.9 Length: 1.6-1.8

If – Tubular, Monochrome Beads with Surfaces Modified by Grinding

If*(a) (YF-MPu). Tubular, multifaceted; op. black (N 1/0); 20 irregular cut facets ranging from triangular to hexagonal cover the surface; relatively flat ends; very narrow cylindrical perforation; late 18th/19th centuries; no. = 1.

Diameter: 4.9 Length: 3.9

If*(b) (YF-z). Tubular, multifaceted; tsp. light gray (N 7/0); 24 irregular cut facets cover the surface; uneven ends; probably 19th century; no. = 2.

Diameter: 6.2 Length: 4.5-4.8

If*(c) (YF-vv). Tubular, multifaceted; tsp. light gray (N 7/0); 24 irregular diamond-shaped cut facets about the middle, and 8 triangular to pentagonal cut facets around either end; surface is extensively faceted but tiny sections of the original tube surface are visible; slightly rounded ends; probably 19th century; no. = 1.

Diameter: 7.2 Length: 9.0

If*(d) (YF-ww). Tubular, multifaceted; tsl. ruby (2.5R 3/10); 24 irregular diamond-shaped cut facets about the

middle, and 8 triangular to pentagonal cut facets around either end; battered ends; late 18th/19th centuries; no. = 1.

Diameter: 8.0 Length: 12.2

If*(e) (YF-aa). Tubular, multifaceted; tsp. turquoise green (5BG 4/8); 18 diamond-shaped cut facets about the middle, and 6 pentagonal cut facets around either end; flat ends; late 18th/19th centuries; no. = 2.

Diameter: 6.2-7.7 Length: 9.1-11.6

If*(f) (YF-ee). Tubular, multifaceted; tsp. turquoise (10BG 4/8); 18 diamond-shaped cut facets about the middle, and 6 triangular to pentagonal cut facets around either end; ground flat ends; late 18th/19th centuries; no. = 1.

Diameter: 7.0 Length: 12.0

If*(g) (YF-27). Tubular, cornerless hexagonal; op. iridescent black (N 1/0); slightly rounded ends; 20th century; no. = 8.

Diameter: 2.0-2.1 Length: 1.6-2.2

If2 (YF-23). Tubular, cornerless hexagonal; tsp. light gray (N 7/0); ends consist of unaltered breaks; 19th century; no. = 10.

Diameter: 7.3 Length: 6.7

If2 var. (YF-26). Tubular, cornerless hexagonal; tsp. light gray (N 7/0); slightly rounded ends; 20th century; no. = 22.

Diameter: 1.9-2.0 Length: 1.2-1.9

If*(h) (YF-24). Tubular, cornerless hexagonal; tsp. light gold (2.5Y 7/8); slightly fire-polished ends; 19th century; no. = 1.

Diameter: 8.5 Length: 8.0

If*(i) (YF-25). Tubular, cornerless hexagonal; tsp. russet orange (5YR 6/12); the surface has been extensively faceted and no original body facets remain; ends consist of unaltered breaks; 19th century; no. = 2.

Diameter: 3.7-8.3 Length: 7.4-7.6

If*(j) (YF-30). Tubular, cornerless hexagonal; op. ruby (2.5R 3/10); slightly rounded ends; 20th century; no. = 27.

Diameter: 1.9-2.2 Length: 1.3-2.8

If*(k) (YF-31). Tubular, cornerless hexagonal; tsp. deep red (7.5R 3/10); slightly rounded ends; 20th century; no. = 147.

Diameter: 1.8-3.4 Length: 1.5-3.4

If*(l) (YF-29). Tubular, cornerless hexagonal; op. scarlet (8.75R 4/14); slightly rounded ends; 20th century; no. = 27.

Diameter: 1.8-2.1 Length: 1.3-1.8

If*(m) (YF-28). Tubular, cornerless hexagonal; tsp. burnt orange (10R 5/10); very slightly rounded ends; 20th century; no. = 3.

Diameter: 1.8 Length: 2.2

If*(n) (YF-a). Tubular, cornerless hexagonal; op. bright coral red (10R 5/14); slightly rounded ends; 20th century; no. = 11.

Diameter: 1.7-2.1 Length: 1.2-2.3

If*(o) (YF-33). Tubular, cornerless hexagonal; tsp. grass green (10GY 5/10); very slightly rounded ends; 20th century; no. = 1.

Diameter: 1.8 Length: 1.9

If*(p) (YF-32). Tubular, cornerless hexagonal; tsp. bright green (2.5G 5/10); slightly rounded ends; 20th century; no. = 2.

Diameter: 2.0 Length: 1.4

If*(q) (YF-34). Tubular, cornerless hexagonal; tsp. bright blue (5B 5/7); some specimens exhibit intentionally iridized surfaces; very slightly rounded ends; 20th century; no. = 8.

Diameter: 2.0-2.4 Length: 1.3-2.0

If*(r) (YF-35). Tubular, cornerless hexagonal; tsp. cerulean blue (5B 5/7); slightly rounded ends; 20th century; no. = 1.

Diameter: 1.9 Length: 1.6

If*(s) (YF-36). Tubular, cornerless hexagonal; tsp. ultramarine (6.25PB 3/12); slightly rounded ends; 20th century; no. = 2.

Diameter: 1.7 Length: 2.6

If*(t) (YF-37). Tubular, cornerless hexagonal; tsp. bright navy (7.5PB 2/7); slightly rounded ends; 20th century; no. = 44.

Diameter: 2.0-2.1 Length: 1.4-2.0

If (lined) – Tubular, Monochrome Polyhedral Beads with Surfaces Modified by Grinding and Silvering or Colored Enamel on the Perforation Surface

If (lined)*(a) (YF-38). Tubular, cornerless hexagonal; tsp. light gray (N 7/0) with a silvered layer on the surface of the perforation; some specimens exhibit intentionally iridized surfaces; slightly rounded ends; 20th century; no. = 23.

Diameter: 1.8-2.2 Length: 1.0-2.2

If (lined)*(b) (YF-39). Tubular, cornerless hexagonal; tsp. light gray (N 7/0) with light red (ca. 5R 5/12) enamel on

the perforation surface; slightly rounded ends; 20th century; no. = 12.

Diameter: 1.8-2.1 Length: 1.3-2.0

If (lined)*(c) (YF-40). Tubular, cornerless hexagonal; tsp. light gray (N 7/0) with op. purplish (ca. 5P 5/4) enamel on the perforation surface; slightly rounded ends; 20th century; no. = 6.

Diameter: 1.8-2.0 Length: 1.6-1.9

IIa – Non-tubular, Monochrome Body, Undecorated

IIa2 (YF-w). Circular; op. brick red (7.5R 3/8); late 18th/19th centuries; no. = 30.

Diameter: 1.4-3.7 Length: 1.2-2.6

IIa2 var. (YF-62). Circular; op. brick red (7.5R 3/8); 20th century; no. = 67.

Diameter: 1.4-2.0 Length: 0.9-1.7

IIa7 (YF-41). Circular; op. black (N 1/0); glass appears tsl. rose wine (10RP 4/6) on thin edges when held up to a strong light; late 18th/19th centuries; no. = 331.

Diameter: 1.4-4.8 Length: 0.9-3.4

IIa*(a) (YF-42). Circular; tsp. light gray (N 7/0); late 18th/19th centuries; no. = 96.

Diameter: 1.5-5.6 Length: 1.4-4.1

IIa*(a) var. (YF-63). Circular; tsp. light gray (N 7/0); 20th century; no. = 251.

Diameter: 2.1-2.3 Length: 1.4-2.0

IIa*(b) (YF-64). Circular; tsl. light gray (N 7/0); 20th century; no. = 31.

Diameter: 2.1-5.6 Length: 1.3-3.9

IIa11/IIa12 (YF-43/44). Circular/round; tsl. oyster white (N 8/0); most specimens are flashed in clear glass; shape ranges from distinctly barrel shaped to short tube sections with rounded ends; late 18th/19th centuries; no. = 5,323.

Diameter: 1.3-5.5 Length: 0.7-5.4

IIa14 (YF-46). Circular; op. white (N 9/0); shape ranges from distinctly barrel shaped to short tube sections with rounded ends; late 18th/19th centuries; no. = 5,703.

Diameter: 1.4-5.7 Length: 1.0-4.3

IIa14 var. a (YF-66). Circular; op. white (N 9/0); 20th century; no. = 402.

Diameter: 1.4-2.5 Length: 0.9-2.1

IIa14 var. b (SP) (YF-119). Circular; op. white (N 9/0); square perforation; 20th century; no. = 26.

Diameter: 1.5-2.0 Length: 1.0-1.9

IIa*(c) (YF-45). Circular; tsp. pale blue (7.5B 8/2) (milk white); glass has a golden cast; late 18th/19th centuries; no. = 27.

Diameter: 2.0-3.2 Length: 1.2-2.4

IIa*(c) var. (YF-67b). Circular; tsp. pale blue (7.5B 8/2) (milk white); glass has a distinct golden cast; 20th century; no. = 47.

Diameter: 2.0-3.4 Length: 1.3-3.0

IIa*(d) (YF-67a). Circular; tsl. pale blue (7.5B 8/2) (milk white); glass has a deep golden cast; 20th century; no. = 100.

Diameter: 1.8-2.2 Length: 1.0-1.6

IIa*(e) (YF-49a-b/83). Circular; tsp. ruby (2.5R 3/10); shape ranges from distinctly barrel shaped to short tube sections with rounded ends; some specimens exhibit a pinkish-white patina and the glass tends to be cracked and crumbly; late 18th/19th centuries; no. = 615.

Diameter: 1.7-3.9 Length: 1.3-4.9

IIa*(e) var. (YF-84). Circular; tsp. ruby (2.5R 3/10); 20th century; no. = 29.

Diameter: 1.5-2.3 Length: 0.9-1.6

IIa*(f) (YF-82). Circular; op. ruby (2.5R 3/10); 20th century; no. = 121.

Diameter: 1.6-2.4 Length: 1.2-1.7

IIa*(g) (YF-116). Circular; tsp. pink (2.5R 7/6) with golden cast; 20th century; no. = 18.

Diameter: 1.7-2.0 Length: 1.0-1.7

IIa*(h) (SP) (YF-116a). Circular; tsp. pink (2.5R 7/6); square perforation; 20th century; no. = 1.

Diameter: 1.8 Length: 1.6

IIa*(i) (YF-115). Circular; op. wine (7.5R 2/6); 20th century; no. = 2.

Diameter: 2.3-2.5 Length: 1.3

IIa*(j) (YF-81). Circular; op. scarlet (8.75R 4/14); 20th century; no. = 209.

Diameter: 1.9-2.4 Length: 1.1-1.8

IIa*(k) (YF-nn). Circular; tsl. light tomato red (7.5R 5/13); 20th century; no. = 3.

Diameter: 1.7 Length: 0.9

IIa*(l) (YF-n). Circular; op. light tomato red (7.5R 5/13); 20th century; no. = 48.

Diameter: 2.0-2.2 Length: 1.0-1.8

IIa*(m) (YF-79). Circular; tsp. bright coral red (10R 5/14); 20th century; no. = 8.

Diameter: 1.6-2.2 Length: 1.1-2.2

IIa*(n) (YF-80). Circular; tsp. bright coral red (10R 5/14); 20th century; no. = 5.

Diameter: 1.6-3.8 Length: 0.9-2.3

IIa*(o) (YF-78). Circular; op. bright coral red (10R 5/14); 20th century; no. = 89.

Diameter: 1.7-2.4 Length: 0.9-2.0

IIa*(p) (YF-77). Circular; op. bright orange (1.25YR 5/12); 20th century; no. = 25.

Diameter: 1.9-2.3 Length: 1.2-2.0

IIa*(q) (YF-76). Circular; op. orange (2.5YR 6/14); 20th century; no. = 21.

Diameter: 2.0-2.6 Length: 1.5-1.8

IIa*(r) (YF-75). Circular; op. russet orange (5YR 6/12); 20th century; no. = 4.

Diameter: 1.4-2.3 Length: 1.1-1.5

IIa*(s) (YF-74). Circular; tsp. cinnamon (10YR 5/6); 20th century; no. = 1.

Diameter: 1.5 Length: 1.0

IIa19 (YF-47). Circular; op. amber (10YR 7/8); earthy patina; the glass is often decomposed; late 18th/19th centuries; no. = 282.

Diameter: 1.2-4.0 Length: 0.9-2.7

IIa19 var. (YF-73). Circular; op. amber (10YR 7/8); 20th century; no. = 20.

Diameter: 2.2 Length: 1.3

IIa*(t) (YF-72). Circular; op. bright yellow (10YR 7/14); 20th century; no. = 48.

Diameter: 1.8-2.6 Length: 0.9-2.3

IIa*(u) (YF-48). Circular; tsp. light gold (2.5Y 7/8); the beads often consist of short tube sections with rounded ends; earthy patina; late 18th/19th centuries; no. = 133.

Diameter: 1.2-3.6 Length: 0.7-4.0

IIa*(v) (YF-71). Circular; tsp. sunlight yellow (5Y 8/8); 20th century; no. = 6.

Diameter: 1.5-2.3 Length: 1.0-1.7

IIa*(w) (YF-70). Circular; tsl./op. sunlight yellow (5Y 8/8); 20th century; no. = 97.

Diameter: 1.8-2.2 Length: 0.9-1.4

IIa*(x) (YF-69). Circular; op. buttercup (5Y 8/12); 20th century; no. = 97.

Diameter: 1.7-2.7 Length: 1.1-1.8

IIa*(y) (YF-68). Circular; tsl. lemon yellow (10Y 8/10); 20th century; no. = 10.

Diameter: 2.0-2.1 Length: 1.2-1.5

IIa*(z) (YF-98). Circular; op. bright chartreuse (2.5GY 7/10); 20th century; no. = 19.

Diameter: 1.5-2.6 Length: 1.0-1.6

IIa*(aa) (YF-97). Circular; tsp. leaf green (7.5GY 6/6); 20th century; no. = 21.

Diameter: 1.8 Length: 1.6

IIa*(bb) (YF-11). Circular; op. leaf green (7.5GY 6/6); 20th century; no. = 35.

Diameter: 1.7-2.4 Length: 1.2-1.6

IIa*(cc) (YF-52). Circular; tsl./op. dark palm green (10GY 4/4-6); the color varies; thick earthy patina; late 18th/19th centuries; no. = 258.

Diameter: 1.3-3.7 Length: 1.3-4.6

IIa*(dd) (YF-ii). Circular; op. deep grass green (10GY 4/8); 20th century; no. = 47.

Diameter: 1.8-2.0 Length: 1.1-1.3

IIa*(ee) (YF-96). Circular; tsp. grass green (10GY 5/10); 20th century; no. = 10.

Diameter: 2.1-2.3 Length: 1.1-1.8

IIa*(ff) (YF-95). Circular; tsl. apple green (10GY 6/6); 20th century; no. = 35.

Diameter: 2.0 Length: 1.2

IIa*(gg) (YF-94). Circular; op. apple green (10GY 6/6); 20th century; no. = 134.

Diameter: 1.8-2.5 Length: 1.1-2.0

IIa*(hh) (YF-92). Circular; op. dark green (2.5G 3/6); 20th century; no. = 7.

Diameter: 2.1 Length: 1.3

IIa*(ii) (YF-51). Circular; tsl. bright green (2.5G 5/10); shape ranges from distinctly barrel shaped to short tube sections with rounded ends; earthy patina; late 18th/19th centuries; no. = 146.

Diameter: 1.3-3.9 Length: 1.1-4.0

IIa*(jj) (YF-qq). Circular; tsp./tsl. bright green (2.5G 5/10); 20th century; no. = 94.

Diameter: 2.2-2.6 Length: 1.2-2.2

IIa*(kk) (YF-91). Circular; op. bright green (2.5G 5/10); 20th century; no. = 40.

Diameter: 1.7-2.5 Length: 1.0-1.7

IIa*(ll) (YF-93). Circular; tsl. light almond green (2.5G 6/4); 20th century; no. = 4.

Diameter: 1.8-2.2 Length: 1.0-1.5

IIa*(mm) (YF-c). Circular; tsl. bright mint green (2.5G 7/8); 20th century; no. = 20.

Diameter: 1.7-1.8 Length: 1.2-1.4

IIa*(nn) (YF-90). Circular; tsp. mint green (5G 6/6); 20th century; no. = 5.

Diameter: 1.9 Length: 1.1

IIa*(oo) (YF-87). Circular; tsl. dark jade green (10G 4/5); 20th century; no. = 57.

Diameter: 1.8-1.9 Length: 1.1-1.2

IIa*(pp) (YF-88). Circular; tsp. emerald green (10G 5/10); 20th century; no. = 15.

Diameter: 1.5-2.7 Length: 0.9-2.5

IIa*(qq) (YF-89). Circular; op. light jade green (10G 6/6); 20th century; no. = 7.

Diameter: 2.0 Length: 1.0

IIa*(rr) (YF-86). Circular; tsp. turquoise green (5BG 4/8); 20th century; no. = 15.

Diameter: 2.0-2.3 Length: 1.2-1.9

IIa*(ss) (YF-85). Circular; op. aqua green (7.5BG 6/6); 20th century; no. = 10.

Diameter: 2.0-2.2 Length: 1.4-1.9

IIa*(tt) (YF-113). Circular; tsl. robin's egg blue (5B 6/6); 20th century; no. = 48.

Diameter: 1.9-2.1 Length: 1.0-1.4

IIa*(uu) (YF-112). Circular; tsl. robin's egg blue (5B 6/6)

with golden cast; color varies; 20th century; no. = 308.

Diameter: 1.7-2.7 Length: 0.9-1.7

IIa41 (YF-111). Circular; op. robin's egg blue (5B 6/6); 20th century; no. = 353.

Diameter: 1.4-2.8 Length: 0.8-1.6

IIa43/IIa*(vv) (YF-55/56). Circular/round; tsp./tsl. bright blue (5B 5/7); color varies considerably; numerous linear bubbles in glass; late 18th/19th centuries; no. = 3,892.

Diameter: 1.3-7.1 Length: 1.1-6.0

IIa*(vv) var. (YF-114a). Circular; tsp./tsl. bright blue (5B 5/7); 20th century; no. = 2.

Diameter: 2.0 Length: 1.2

IIa*(ww) (YF-eeee). Circular; tsl. light aqua blue (5B 8/4); 20th century; no. = 17.

Diameter: 1.9 Length: 1.3

IIa*(xx) (YF-eee). Circular; op. light aqua blue (5B 8/4); 20th century; no. = 28.

Diameter: 1.7-2.7 Length: 1.0-1.7

IIa*(yy) (YF-109). Circular; tsp. cerulean blue (7.5B 4/8); 20th century; no. = 95.

Diameter: 1.5-2.2 Length: 0.9-1.9

IIa*(zz) (YF-57). Circular; tsl./op. cerulean blue (7.5B 4/8); late 18th/19th centuries; no. = 83.

Diameter: 1.5-4.3 Length: 1.0-3.1

IIa*(aaa) var. (YF-110). Circular; tsl. cerulean blue (7.5B 4/8); 20th century; no. = 125.

Diameter: 1.8-2.4 Length: 1.0-1.8

IIa*(bbb) (YF-108). Circular; op. cerulean blue (7.5B 4/8); 20th century; no. = 42.

Diameter: 1.8-2.4 Length: 1.2-1.6

IIa*(ccc) (YF-m). Circular; tsl. sky blue (7.5B 6/6); 20th century; no. = 30.

Diameter: 1.9-2.2 Length: 1.2-1.6

IIa*(ddd) (YF-107). Circular; tsl. sky blue (7.5B 6/6) with golden cast; 20th century; no. = 86.

Diameter: 1.8-2.6 Length: 0.9-1.6

IIa*(eee) (YF-114). Circular; op. sky blue (7.5B 6/6); 20th century; no. = 10.

Diameter: 1.8-2.4 Length: 1.0-1.6

IIa*(fff) (YF-107a). Circular; tsl. mist blue (10B 6/3); probably 20th century; no. = 2.

Diameter: 1.7 Length: 1.1

IIa*(ggg) (YF-107aa). Circular; op. mist blue (10B 6/3); probably 20th century; no. = 1.

Diameter: 2.1 Length: 1.3

IIa*(hhh) (YF-54). Circular; op. dusty blue (2.5PB 5/2); shape ranges from distinctly barrel shaped to short tube sections with rounded ends; late 18th/19th centuries; no. = 487.

Diameter: 1.3-4.4 Length: 0.9-5.2

IIa*(iii) (YF-106). Circular; tsp. bright copen blue (2.5PB 6/9) with golden cast; 20th century; no. = 8.

Diameter: 1.5-1.7 Length: 0.9-1.2

IIa*(jjj) (YF-105). Circular; op. bright copen blue (2.5PB 6/9); 20th century; no. = 25.

Diameter: 1.5-2.8 Length: 1.2-1.6

IIa*(kkk) (YF-58). Circular; op. medium blue (5PB 3/6); shape ranges from distinctly barrel shaped to short tube sections with rounded ends; late 18th/19th centuries; no. = 404.

Diameter: 2.0-5.3 Length: 1.4-6.0

IIa*(lll) (YF-104). Circular; tsl./op. dark blue (5PB 4/10); 20th century; no. = 219.

Diameter: 1.8-2.3 Length: 0.9-1.7

IIa*(mmm) (YF-103). Circular; op. copen blue (5PB 5/7); 20th century; no. = 104.

Diameter: 1.9-2.7 Length: 1.2-1.7

IIa*(nnn) (YF-53). Circular; op. powder blue (5PB 6/3); shape ranges from distinctly barrel shaped to short tube sections with rounded ends; late 18th/19th centuries; no. = 456.

Diameter: 1.5-4.0 Length: 1.1-4.3

IIa53 (YF-102). Circular; tsp. ultramarine (6.25PB 3/12); 20th century; no. = 37.

Diameter: 1.8-3.1 Length: 1.1-2.0

IIa*(ooo) (YF-101). Circular; tsl./op. ultramarine (6.25PB 3/12); 20th century; no. = 160.

Diameter: 1.7-2.2 Length: 0.9-1.6

IIa56 (YF-59). Circular; tsp. bright navy (7.5PB 2/7);

the intensity of the color varies greatly as some specimens are quite pale; shape ranges from distinctly barrel shaped to short tube sections with rounded ends; late 18th/19th centuries; no. = 219.

Diameter: 1.2-4.1 Length: 1.0-4.4

IIa57 (YF-60). Oval; tsp./tsl. bright navy (7.5PB 2/7); distinct broken projection at one end indicating it was rounded using the *a speo* technique (Karklins 1993); late 18th/early 19th centuries; no. = 1.

Diameter: 10.0 Length: 15.4

IIa*(ppp) (YF-100). Circular; tsl./op. bright navy (7.5PB 2/7); 20th century; no. = 111.

Diameter: 1.8-2.5 Length: 1.0-1.8

IIa*(qqq) (YF-99). Circular; op. bright Dutch blue (7.5PB 4/11); 20th century; no. = 215.

Diameter: 1.8-2.3 Length: 0.8-1.5

IIa59 (YF-50). Circular; tsp. rose wine (10RP 4/6); late 18th/19th centuries; no. = 46.

Diameter: 1.4-4.1 Length: 1.4-3.8

IIa59 var. (YF-118). Circular; tsp. rose wine (10RP 4/6); 20th century; no. = 5.

Diameter: 1.9-2.3 Length: 1.2-1.4

IIa*(rrr) (YF-117). Circular; op. rose pink (10RP 7/6); color ranges to baby pink (5R 8/4); 20th century; no. = 395.

Diameter: 1.4-2.3 Length: 0.8-1.5

IIa (lined) – Non-Tubular, Undecorated Monochrome Body with Silvering or Colored Enamel on the Perforation Surface

IIa (lined)*(a) (YF-122a). Circular; tsp. light gray (N 7/0) with silvering on the surface of the perforation; 20th century; no. = 4.

Diameter: 2.0 Length: 1.9

IIa (lined)*(b) (YF-122). Circular; tsp. light gray (N 7/0) with light red (ca. 5R 5/12) enamel on the surface of the perforation; 20th century; no. = 6.

Diameter: 1.8-2.5 Length: 1.3-2.0

IIa (lined)*(c) (SP) (YF-120). Circular; tsp. light gray (N 7/0) with ca. light red (ca. 5R 5/12) enamel on the surface of the square perforation; 20th century; no. = 5.

Diameter: 1.8-2.0 Length: 1.1-1.4

IIa (lined)*(d) (SP) (YF-121). Circular; tsp. bright chartreuse (2.5GY 7/10) with silvering on the surface of the square perforation; 20th century; no. = 1.

Diameter: 2.4 Length: 1.3

IIb – Non-Tubular, Monochrome Body Decorated with Straight Simple Stripes

IIb12 (YF-123). Circular/round; op. black (N 1/0) with 4 op. white (N 9/0) stripes; glass appears tsl. rose wine (10RP 4/6) when held up to a strong light; one specimen consists of two beads fused together end to end, possibly indicative of *a speo* manufacture (Karklins 1993); late 18th/19th centuries; no. = 19.

Diameter: 2.5-4.0 Length: 2.2-3.6

IIb*(a) (YF-124). Circular; op. black (N 1/0) with 6 op. white (N 9/0) stripes; late 18th/19th centuries; no. = 1.

Diameter: 4.1 Length: 2.7

IIb*(b) (YF-125). Circular; op. black (N 1/0) with 2 op. brick red (7.5R 3/8) and 2 op. white (N 9/0) stripes; late 18th/19th centuries; no. = 1.

Diameter: 3.7 Length: 2.2

IIb31 (YF-130). Circular/round; op. white (N 9/0) (bluish tint) with 2 op. brick red (7.5R 3/8) and 2 tsp. bright navy (7.5PB 2/7) stripes; flashed in clear glass; late 18th/19th centuries; no. = 1.

Diameter: 4.3 Length: 4.2

IIb31 var. (YF-130a). Circular; op. white (N 9/0) with 2 op. brick red (7.5R 3/8) and 2 tsp. bright navy (7.5PB 2/7) stripes; 20th century; no. = 2.

Diameter: 2.0 Length: 1.3

IIb*(c) (YF-128). Circular; op. white (N 9/0) with 4 tsp. bright turquoise (7.5BG 6/8) stripes; 20th century; no. = 7.

Diameter: 2.2-2.6 Length: 1.1-1.4

IIb*(d) (YF-128a). Circular; op. white (N 9/0) (bluish tint) with 6 tsp. bright turquoise (7.5BG 6/8) stripes; 20th century; no. = 2.

Diameter: 2.0 Length: 1.3

IIb*(e) (YF-ss). Circular; op. white (N 9/0) with 4 tsp. bright navy (7.5PB 2/7) stripes; 20th century; no. = 5.

Diameter: 1.6 Length: 0.8

III f – Non-Tubular, Monochrome with Surfaces Modified by Grinding

III f*(a) (YF-135). Faceted circular; tsp. rose wine (10RP 4/6); surface exhibits random cut facets; late 18th/19th centuries; no. = 5.

Diameter: 1.3-4.0 Length: 1.9-3.1

III a – Tubular, Multi-Layered, Undecorated

III a3 (YF-136). Tubular; op. brick red (7.5R 3/8) exterior; tsp. apple green (10GY 6/6) core; ends range from unaltered breaks to well rounded; late 18th/19th centuries; no. = 25.

Diameter: 1.7-4.3 Length: 2.1-17.0

III f – Tubular, Multi-Layered, Polyhedral Beads with Surfaces Modified by Grinding

III f1 (YF-137). Tubular, cornerless hexagonal; tsp. light gray (N 7/0) exterior; tsl. pale blue (7.5B 8/2) core with slight golden cast; the bead consists of a six-sided tube segment with a pentagonal facet ground on each corner; broken but relatively flat ends; 19th century; no. = 2.

Diameter: 5.0-8.1 Length: 4.5-7.6

III f*(a) (YF-140). Tubular, cornerless hexagonal; tsp. bright orange (1.25YR 5/12) exterior; tsp. light gray (N 7/0) core; slightly rounded ends; the bead consists of a six-sided tube segment with an irregular facet ground on each corner; 20th century; no. = 54.

Diameter: 1.8-1.9 Length: 1.5

III f*(b) (YF-138). Tubular, cornerless heptagonal; tsp. bright navy (7.5PB 2/7) exterior; op. aqua blue (2.5B 6/4) core; the bead consists of a seven-sided tube segment with a pentagonal facet ground on each corner; broken but relatively flat ends; 19th century; no. = 1.

Diameter: 9.0 Length: 8.0

III f*(c) (YF-139). Tubular, cornerless hexagonal; tsp. bright navy (7.5PB 2/7) exterior; op. aqua blue (2.5B 6/4) middle layer; tsp. bright navy core; the bead consists of a six-sided tube segment with a triangular facet ground on each corner; slightly rounded ends; 19th century; no. = 1.

Diameter: 7.0 Length: 6.4

III k – Tubular, Undecorated, Multi-Layered Chevron Beads

III k*(a) (YF-141). Tubular chevron bead with faceted

ends; 4 starry layers (the rays are slightly bent): 1) op. brick red (7.5R 3/8) exterior; 2) op. white (N 9/0) ; 3) op. brick red; 4) op. white core; uneven ends; late 18th/19th centuries; no. = 3.

Diameter: 10.3-11.3 Length: 19.0-20.0

III k*(b) (YF-142). Tubular chevron bead with faceted ends; 4 starry layers (all the rays are bent): 1) op. black (N 1/0) exterior; 2) op. white (N 9/0); 3) op. redwood (10R 4/8); 4) op. white core; uneven ends; late 18th/19th centuries; incomplete; no. = 3.

Diameter: 9.3-10.5 Length: 20.9-24.1

III k*(c) (YF-143). Tubular chevron bead with faceted ends; 4 starry layers (the rays are bent): 1) tsp. dark green (2.5G 3/6) exterior (rays of second layer show through as whitish stripes); 2) op. white (N 9/0); 3) op. redwood (6 ne); 4) op. white core (bent or spiral rays); uneven ends; eroded surface; late 18th/19th centuries; incomplete; no. = 2.

Diameter: 8.3-12.0 Length: 15.3+-22.1

III k*(d) (YF-144). Tubular chevron bead with faceted ends; 4 starry layers: 1) tsp. bright navy (7.5PB 2/7) exterior; 2) op. white (N 9/0); 3) op. redwood (10R 4/8); 4) op. white core; uneven ends; light patina; late 18th/19th centuries; incomplete specimens; no. = 4.

Diameter: 9.0-9.5+ Length: 19.8+-31.6+

III l' – Tubular, Multi-Layered Chevron Beads with Undecorated, Twisted, Polyhedral Bodies

III l'*(a) (YF-gg). Tubular, twisted hexagonal chevron with faceted ends; 3 starry layers: 1) op. black (N 1/0) exterior; 2) op. brick red (7.5R 3/8) ; 3) op. white (N 9/0) core; the 12 rays are diagonal, especially in layer #4; uneven ends; shiny iridescent patina; late 18th/19th centuries; no. = 1.

Diameter: 7.2 Length: 22.1

III nn-a – Tubular, Multi-Layered Chevron Beads Decorated with Compound Stripes

III nn-a*(a) (YF-kk). Tubular chevron with faceted ends; 4 starry layers: 1) tsl./op. bright navy (7.5PB 2/7) exterior with 6(?) op. brick red (7.5R 3/8) on op. light gold (2.5Y 7/8) stripes; 2) op. white (N 9/0) ; 3) op. brick red; 4) op. white core; uneven ends; light earthy patina; fragmentary specimens; late 18th/19th centuries; no. = 2.

Diameter: 9.0 Length: 12.2+

IVa – Non-Tubular, Multi-Layered, Undecorated

IVa3 (YF-145). Circular; op. brick red (7.5R 3/8) exterior; tsp. light gray (N 7/0) core; late 18th/19th centuries; no. = 945.

Diameter: 1.5-4.2 Length: 1.0-4.3

IVa6 (YF-146). Circular; op. brick red (7.5R 3/8) exterior; tsp. apple green (10GY 6/6) core; late 18th/19th centuries; no. = 2,108.

Diameter: 1.4-5.0 Length: 1.1-4.7

IVa*(a) (YF-r). Circular; op. brick red (7.5R 3/8) exterior; tsp. ruby (2.5R 3/10) core (consists of filaments of red glass in light gray or pale apple green glass which give it a pale to deep ruby color); late 18th/19th centuries; no. = 19.

Diameter: 2.4-4.0 Length: 1.9-3.4

IVa*(b) (YF-150). Circular; tsp. ruby (2.5R 3/10) exterior; op. white (N 9/0) core; 20th century; no. = 59.

Diameter: 1.8-3.1 Length: 1.0-2.0

IVa*(c) (YF-149). Circular; tsp. scarlet (8.75R 4/14) exterior; op. white (N 9/0) core; 20th century; no. = 120.

Diameter: 1.9-3.1 Length: 0.8-2.1

IVa*(d) (YF-149a). Circular; tsp. scarlet (8.75R 4/14) exterior; op. light gold (2.5Y 7/8) core; 20th century; no. = 4.

Diameter: 2.5 Length: 1.6

IVa*(e) (YF-148). Circular; tsp./tsl. bright coral red (10R 5/14) exterior; op. white (N 9/0) core; 20th century; no. = 84.

Diameter: 1.7-3.2 Length: 0.9-2.5

IVa*(f) (YF-147). Circular; tsp. bright orange (1.25YR 5/12) exterior; op. white (N 9/0) core; 20th century; no. = 2.

Diameter: 2.3-2.4 Length: 1.3-2.0

IVb – Non-Tubular, Multi-Layered, Decorated with Straight Simple Stripes

IVb*(a) (YF-fff). Circular; op. brick red (7.5R 3/8) exterior with 4 op. white (N 9/0) stripes; tsp. apple green (10GY 6/6) core; late 18th/19th centuries; no. = 1.

Diameter: 3.1 Length: 3.3

IVb*(b) (YF-126). Circular; op. white (N 9/0) exterior with 4 tsp. scarlet (8.75R 4/14) stripes; tsl. pale blue (7.5B 8/2) core with a slight golden cast; late 18th/19th centuries; no. = 15.

Diameter: 2.4-3.9 Length: 1.8-3.2

IVb*(c) (YF-127). Circular; op. white (N 9/0) exterior with 4 tsp. emerald green (10G 5/10) stripes; tsl. pale blue (7.5B 8/2) core with a slight golden cast; late 18th/19th centuries; no. = 17.

Diameter: 2.1-2.9 Length: 1.7-2.5

IVb*(d) (YF-129). Circular; op. white (N 9/0) with 4 tsl. bright navy (7.5PB 2/7) stripes; tsl. pale blue (7.5B 8/2) core with a slight golden cast; late 18th/19th centuries; no. = 6.

Diameter: 2.5-3.1 Length: 2.4-3.0

IVb*(e) (YF-151). Circular; op. white (N 9/0) exterior with 4 tsp. bright navy (7.5PB 2/7) stripes; tsl. dark blue (5PB 4/10) core; 20th century; no. = 1.

Diameter: 1.8 Length: 0.9

IVb*(f) (YF-131). Circular; op. white (N 9/0) with 2 tsp. scarlet (8.75R 4/14) and 2 op. light gold (2.5Y 7/8) stripes; tsl. pale blue (7.5B 8/2) core with a slight golden cast; late 18th/19th centuries; no. = 1.

Diameter: 2.7 Length: 4.0

IVb*(g) (YF-132). Circular; op. white (N 9/0) exterior with 2 tsp. scarlet (8.75R 4/14) and 2 tsp. emerald green (10G 5/10) stripes; tsl. pale blue (7.5B 8/2) core with a slight golden cast; late 18th/19th centuries; no. = 23.

Diameter: 2.3-3.0 Length: 1.6-2.8

IVb*(h) (YF-133). Circular; op. white (N 9/0) exterior with 2 tsp. scarlet (8.75R 4/14) and 2 tsp. bright navy (7.5PB 2/7) stripes; tsl. pale blue (7.5B 8/2) core with a slight golden cast; late 18th/19th centuries; no. = 79.

Diameter: 1.9-3.2 Length: 1.5-3.0

IVb*(i) (YF-134). Circular; op. white (N 9/0) exterior with 2 tsp. emerald green (10G 5/10) and 2 op. light gold (2.5Y 7/8) stripes; tsl. pale blue (7.5B 8/2) core with a slight golden cast; late 18th/19th centuries; no. = 58.

Diameter: 2.1-3.4 Length: 1.9-3.7

Wound Glass Beads

Beads of wound manufacture were formed by winding a gather of molten glass around a metal mandrel until the desired size and shape were achieved. Decoration could be applied to the surface or marvered into it while the glass was still viscid. There are 12 Kidd/Karklins types represented by 71 varieties (Plates XVII-XXA).

Wib – Monochrome Round Beads

Wib*(a) (YF-p). Round (irregular); op. black (N 1/0); glass appears tsp. dark green (2.5G 3/6) on thin edges when held up to a strong light; thick brown patina; late 18th/19th centuries; no. = 1.

Diameter: 4.0 Length: 3.5

Wib*(b) (YF-W5). Round (shape ranges from near globular to slightly ovoid); op. black (N 1/0); glass appears tsp. rose wine (10RP 4/6) on thin edges when held up to a strong light; late 18th/19th centuries; no. = 5.

Diameter: 4.3-5.5 Length: 4.3-5.8

Wib1 (YF-W1). Round; tsp. light gray (N 7/0); numerous tiny bubbles in glass; wind marks evident; light patina; probably late 18th/19th centuries; no. = 1.

Diameter: 10.5 Length: 9.5

Wib*(c) (YF-W2). Round; tsl. light gray (N 7/0); late 18th/19th centuries; no. = 27.

Diameter: 4.5-6.0 Length: 4.2-5.3

Wib*(c) var. (YF-W2a). Round; tsl. light gray (N 7/0); shiny surface; 19th (?) century; no. = 1.

Diameter: 6.3 Length: 5.5

Wib2 (YF-W3). Round to slightly ovoid; op. white (N 9/0); porcelain-like appearance; semi-glossy surface; wind marks evident; light brownish patina; late 18th/19th centuries; no. = 38.

Diameter: 3.4-6.0 Length: 3.5-9.3

Wib2 var. (YF-W4). Round; op. white (N 9/0); small perforation; matte surface; 19th (?) century no. = 4.

Diameter: 4.3 - 5.8 Length: 4.2 - 5.4

Wib5 (YF-W7). Round; tsl. pale blue (7.5B 8/2); milk white with slight alabaster cast; 19th (?) century; no. = 2.

Diameter: 6.3 Length: 5.6-5.7

Wib*(d) (YF-W8). Round; tsl. bright yellow (2.5Y 8/12); slightly patinated; 19th or 20th century; no. = 1.

Diameter: 5.8 Length: 4.8

Wib*(e) (YF-W6). Round; tsp. ruby (2.5R 3/10); brown earthy patina; late 18th/19th centuries; no. = 9.

Diameter: 3.4-6.9 Length: 3.3-7.2

Wib*(f) (YF-W10). Round (slightly ovoid); op. leaf green (7.5GY 6/6); wind marks evident; late 18th/19th centuries; no = 1.

Diameter: 6.5 Length: 7.9

Wib*(g) (YF-Wx). Round (irregular); op. dark palm green (10GY 4/4); shiny surface; late 18th/19th centuries; no. = 8.

Diameter: 3.6-4.6 Length: 3.4-4.1

Wib*(h) (YF-W9). Round (slightly barrel shaped); op. aqua green (7.5BG 6/6); wind marks evident; lightly pitted surface; late 18th/19th centuries; no. = 1.

Diameter: 4.7 Length: 5.5

Wib*(i) (YF-W14). Round; op. medium turquoise blue (2.5B 5/5); late 18th/19th centuries; no. = 26.

Diameter: 3.5-5.8 Length: 3.9-5.4

Wib11 (YF-Waaa). Round; op. robin's egg blue (5B 6/6); late 18th/19th centuries; fragmentary specimen; no. = 1.

Diameter: 6.0+ Length: 6.0+

Wib16 (YF-W15). Round; tsl./op. bright navy (7.5PB 2/7); wind marks evident; whitish patina; late 18th/19th centuries; no. = 2.

Diameter: 4.5-9.3+ Length: 3.4-7.5+

Wib*(j) (YF-Wtt). Round (?); op. bright navy (7.5PB 2/7); small perforation; shiny surface; 20th century; fragmentary; no. = 1.

Diameter: 5.0+ Length: ?

Wib*(k) (YF-W13). Round; op. cerulean blue (7.5B 4/8); wind marks evident; broken elongated bubbles at the matte surface; late 18th/19th centuries; no. = 1.

Diameter: 6.8 Length: 7.2

Wib*(l) (YF-W11). Round; tsp. light gray blue (7.5B 6/2); numerous tiny bubbles in glass; small perforation; crizzled surface; small areas of brown patina; late 19th or early 20th century; no. = 1.

Diameter: 6.4 Length: 5.9

Wib*(m) (YF-W12). Round; tsl. copen blue (5PB 5/7); numerous bubbles in glass; shiny surface; 19th (?) century; no. = 1.

Diameter: 5.1 Length: 4.3

Wic – Monochrome Oval Beads

Wic*(a) (YF-W26). Oval; op. black (N 1/0); glass appears tsp. dark green (2.5G 3/6) on thin edges when held up to a strong light; earthy to iridescent patina; late 18th/19th centuries; no. = 10.

Diameter: 2.9-5.0 Length: 5.3-10.2

Wic*(b) (YF-W16). Oval; tsl. light gray (N 7/0); late 18th/19th centuries; no. = 1.

Diameter: 5.8 Length: 9.2

Wic1 (YF-W17). Oval; op. white (N 9/0); irregular surface, smooth to lightly pitted; wind marks evident; late 18th/19th centuries; no. = 2.

Diameter: 6.5-6.6 Length: 10.5-11.1

Wic1 var. (YF-W18). Oval; op. white (N 9/0); smaller version of Wic1; wind marks evident; late 18th/19th centuries; no. = 22.

Diameter: 2.9-4.1 Length: 4.7-7.4

Wic*(c) (YF-Wmm). Oval; tsp. ruby (2.5R 3/10); earthy to iridescent patina; late 18th/19th centuries; no. = 1.

Diameter: 5.2 Length: 8.5

Wic*(d) (YF-W20). Oval; tsp. light red (5R 5/12); thin ends; silvery patina; late 18th/19th centuries; no. = 8.

Diameter: 2.5-3.4 Length: 3.7-5.4

Wic*(e) (YF-W19). Oval (slightly teardrop shaped); op. amber (10YR 7/8); eroded surface; earthy patina; late 18th/19th centuries; no. = 6.

Diameter: 3.1-3.4 Length: 2.7-7.8

Wic*(f) (YF-Wq). Oval; op. dark palm green (10GY 4/4); brown patina; late 18th/19th centuries; no. = 8.

Diameter: 3.1-3.6 Length: 5.3-7.5

Wic*(g) (YF-W22). Oval; tsp. teal green (5BG 3/6); shiny surface; late 18th/19th centuries; no. = 2.

Diameter: 5.4-6.4 Length: 8.9-9.1

Wic*(h) (YF-W21). Oval; op. aqua green (7.5BG 6/6); late 18th/19th centuries; no. = 2.

Diameter: 3.7-3.9 Length: 6.5-7.3

Wic*(i) (YF-Wrr). Oval (irregular); op. medium turquoise blue (2.5B 5/5); light earthy patina; late 18th/19th centuries; fragmentary specimen; no. = 1.

Diameter: 5.6 Length: 6.0+

Wic*(j) (YF-W24). Oval; op. copen blue (5PB 5/7); late 18th/19th centuries; no. = 7.

Diameter: 2.6-2.9 Length: 3.7-5.3

Wic*(k) (YF-W23). Oval; tsp. bright navy (7.5PB 2/7); thin whitish to iridescent patina; late 18th/19th centuries; no. = 20.

Diameter: 3.4-4.2 Length: 6.2-10.4

Wic*(l) (YF-Wb). Oval “pigeon egg” bead; tsl. bright navy (7.5PB 2/7); burned and heat distorted; late 18th/19th centuries; no. = 1.

Diameter: 20.4 Length: 27.4

Wli – Monochrome Truncated Teardrop Beads

Wli*(a) (YF-W25). Truncated teardrop; tsl. light gray (N 7/0); dull surface; late 18th/19th centuries; no. = 1.

Diameter: 5.9 Length: 7.8

Wli*(b) (YF-W25a). Truncated teardrop; op. white (N 9/0); late 18th/19th centuries; no. = 1.

Diameter: 3.7 Length: 6.0

Wli*(c) (YF-Whh). Truncated teardrop; op. medium turquoise blue (2.5B 5/5); late 18th/19th centuries; no. = 1.

Diameter: 5.7 Length: 6.6

Wlio – Monochrome Square Barrel Beads

Wlio*(a) (YF-W30). Long square barrel (Beck IX.D.1.b.); op. medium turquoise blue (2.5B 5/5); slight earthy patina; late 18th/19th centuries; no. = 3.

Diameter: 2.9-3.9 Length: 4.2-4.9

Wlii – Monochrome, Truncated Square Convex Bicone Beads (these exhibit pressed facets that taper slightly towards either end from a medial ridge)

Wlii*(a) (YF-W29). Standard truncated square convex bicone (Beck IX.C.1.f.); tsp. light gray (N 7/0); light whitish patina; late 18th/19th centuries; no. = 1.

Diameter: 4.2 Length: 5.3

Wlii*(b) (YF-W31). Short truncated square convex bicone; tsp. ruby (2.5R 3/10); one longitudinal pair of facets is sometimes poorly formed so the bead appears to have a triangular cross section; slight patina; late 18th/19th centuries; no. = 19.

Diameter: 3.1-3.8 Length: 2.6-3.8

Wlii*(c) (YF-W27). Short truncated square convex bicone; op. aqua green (7.5BG 6/6); light brownish patina; late 18th/19th centuries; no. = 2.

Diameter: 3.6 Length: 3.0

Wlii*(d) (YF-W28). Long truncated square convex bicone; op. mist blue (10B 6/3); the sides of the bead are

convex longitudinally; light brownish patina; late 18th/19th centuries; no. = 15.

Diameter: 3.4-4.7 Length: 4.5-5.4

WIIs – Monochrome, Truncated Pentagonal Convex Bicone Beads

WIIs*(a) (YF-W33). Standard truncated pentagonal convex bicone (Beck XII.C.1.f.); op. mist blue (10B 6/3); the sides of the bead are convex longitudinally; light whitish patina; late 18th/19th centuries; no. = 4.

Diameter: 4.5 Length: 4.5

WIIIt – Monochrome, Truncated Hexagonal Convex Bicone Beads

WIIIt*(a) (YF-W33a). Standard truncated hexagonal convex bicone (Beck XIII.C.1.f.); op. mist blue (10B 6/3); the sides of the bead are convex longitudinally; light whitish patina; late 18th/19th centuries; no. = 1.

Diameter: 4.5 Length: 4.2

WIIU – Monochrome, Truncated Hexagonal Bicone Beads

WIIU*(a) (YF-W32). Long hexagonal truncated bicone (Beck XIII.D.2.f.); tsp. ruby (2.5R 3/10); thick earthy patina; late 18th/19th centuries; fragmentary specimens; no. = 2.

Diameter: 7.0+-8.1+ Length: 11.0+-14.0+

WIIId – Monochrome, Flattened Oblate Beads

WIIId*(a) (YF-W30a). Flattened oblate (bead has been pressed flat parallel to the perforation); tsl./op. robin's egg blue (5B 6/6); crackled surface; late 18th/19th centuries; no. = 1.

Width: 6.9 Length: 4.5 Thickness: 4.1

WIIIA – Multi-Layered Beads with Simple Shapes; Undecorated

WIIIA*(a) (YF-W34). Round; tsp. ruby (2.5R 3/10) exterior; op. white (N 9/0) core; fine iridescent patina; 19th century; no. = 1.

Diameter: 9.5 Length: 8.8

WIIIB – Monochrome Beads with Simple Shapes; Inlaid Decoration (flush with surface)

WIIIB*(a) (YF-W36). Round eye bead; op. black (N 1/0) with 5 op. aqua green (7.5BG 6/6) on op. white (N 9/0) eyes around either end and 5 tsp. ruby (2.5R 3/10) on op. white eyes around the middle; patinated; late 18th/19th centuries; no. = 2.

Diameter: 7.8-10.0 Length: 6.8-8.2

WIIIB*(b) (YF-W37). Round eye bead; op. black (N 1/0) body divided into 8 squares by an op. light gold (2.5Y 7/8) grid; each square contains a tsp. ruby (2.5R 3/10) on op. white (N 9/0) eye; shiny surface; late 18th/19th centuries; no. = 2.

Diameter: 8.8-9.4 Length: 9.3-10.2

WIIIB*(c) (YF-Wccc). Round (?); op. black (N 1/0) body decorated with flowers having op. white (N 9/0) and tsp. scarlet (8.75R 4/14) blossoms, and op. robin's egg blue (5B 6/6) leaves; the flowers appear to have been separated from each other by longitudinal aventurine bands; eroded surface; late 18th/19th centuries; very fragmentary specimen; no. = 1.

Diameter: ? Length: 13.3+

WIIIB*(d) (YF-Wff). Round eye bead; tsl. light gray (N 7/0) with 5 tsl. bright navy (7.5PB 2/7) on op. white (N 9/0) eyes around either end and 5 tsp. scarlet (8.75R 4/14) on op. white eyes around the middle; dull to shiny brown patina; late 18th/19th centuries; no. = 3.

Diameter: 8.2-9.2 Length: 7.6-9.2

WIIIB*(e) (YF-W42). Oval; op. white (N 9/0) with 4 tsp. bright navy (7.5PB 2/7) wreaths set parallel to the perforation; semi-glossy surface; late 18th/19th centuries; no. = 7.

Diameter: 7.0-8.9 Length: 11.3-15.5

WIIIB*(f) (YF-W35). Round; op. white (N 9/0) with 2 tsp. ruby (2.5R 3/10) and 2 op. dark palm green (10GY 4/4) wreaths set parallel to the perforation; late 18th/19th centuries; no. = 11.

Diameter: 8.9-10.1 Length: 9.4-10.6

WIIIB*(g) (YF-Wuu). Round; op. white (N 9/0) with 2 tsp. ruby (2.5R 3/10) and 2 op. teal green (5BG 3/6) wreaths set parallel to the perforation; the ruby glass has deteriorated; late 18th/19th centuries; no. = 3.

Diameter: 9.1-10.0 Length: 9.8-9.9

WIIIB*(h) (YF-43). Oval; op. white (N 9/0) with a tsp. ruby

(2.5R 3/10) wavy line around the middle; shiny surface; late 18th/19th centuries; no. = 1.

Diameter: 5.2 Length: 9.6

WIIb*(i) (YF-W45). Oval; op. white (N 9/0) with a tsp. ruby (2.5R 3/10) wavy line around either end and an op. dark palm green (10GY 4/4) wavy line around the middle; late 18th/19th centuries; no. = 14.

Diameter: 7.2-8.4 Length: 11.9-14.6

WIIb*(j) (YF-W46). Oval; op. white (N 9/0) with an op. dark palm green (10GY 4/4) wavy line around either end and a tsp. ruby (2.5R 3/10) wavy line around the middle; the ruby glass has deteriorated; late 18th/19th centuries; no. = 4.

Diameter: 6.9-7.8 Length: 12.1-13.0

WIIb*(k) (YF-Wt). Oval; op. white (N 9/0) with an op. dark palm green (10GY 4/4) wavy line around either end and a tsp. ruby (2.5R 3/10) wreath around the middle; light patina; late 18th/19th centuries; no. = 13.

Diameter: 7.5-8.3 Length: 13.4-15.2

WIIb*(l) (YF-W44). Oval; op. white (N 9/0) with a tsp. ruby (2.5R 3/10) wreath around the middle; shiny surface; late 18th/19th centuries; no. = 1.

Diameter: 6.1 Length: 10.5

WIIb*(m) (YF-Wddd). Oval; op. white (N 9/0) with swirls of op. light gold (2.5Y 7/8), tsp. scarlet (8.75R 4/14), op. aqua green (7.5BG 6/6), and aventurine; the red and green glass is much eroded; late 18th/19th centuries; no. = 1.

Diameter: 8.6 Length: 15.7

WIIb*(n) (YF-Wdd). Round; tsp. ruby (2.5R 3/10) with an op. white (N 9/0) wreath around the middle; iridescent patina; late 18th/19th centuries; no. = 7.

Diameter: 7.5-9.0 Length: 7.6-9.1

WIIb*(o) (YF-W39). Round; tsp. ruby (2.5R 3/10) with an op. light gold (2.5Y 7/8) wreath around the middle; light iridescent patina; late 18th/19th centuries; no. = 1.

Diameter: 8.9 Length: 8.3

WIIb*(p) (YF-W38). Round; op. sunlight yellow (5Y 8/8) with a tsp. ruby (2.5R 3/10) wreath-like applique around the middle; shiny surface; late 18th/19th centuries; no. = 1.

Diameter: 9.0 Length: 7.8

WIIb*(q) (YF-W41). Round to oblate eye bead; op. aqua green (7.5BG 6/6) with 5 tsp. bright navy (7.5PB 2/7) on op. white (N 9/0) eyes around either end and 5 tsp. ruby (2.5R

3/10) on op. white eyes around the middle; late 18th/19th centuries; fragmentary; no. = 3.

Diameter: 8.2-10.1 Length: 7.2-9.5

WIIb*(r) (YF-W47). Oval; op. aqua green (7.5BG 6/6) with a spiral band of tsp. scarlet (8.75R 4/14) and op. white (N 9/0) diagonals, and a spiral band of aventurine; late 18th/19th centuries; no. = 11.

Diameter: 7.3-8.6 Length: 12.7-14.4

WIIb*(s) (YF-W48). Round; tsp. turquoise (10BG 4/8) with ca. 6 ovate blossom-like inlays of tsp. ruby (2.5R 3/10) on op. white (N 9/0) and what appear to be op. light gold (2.5Y 7/8) leaf-like swirls at either end of these; eroded and patinated surface; late 18th/19th centuries; fragmentary specimen; no. = 1.

Diameter: 16.9+ Length: 16.1

WIIb*(t) (YF-Woo). Round; tsp. cerulean blue (7.5B 4/8) with an op. white (N 9/0) wreath around the middle; brown patina; late 18th/19th centuries; incomplete specimen; no. = 1.

Diameter: 12.5 Length: 11.1

WIIb*(u) (YF-W40). Round eye bead; op. copen blue (5PB 5/7) with 5 tsp. bright navy (7.5PB 2/7) on op. white (N 9/0) eyes around either end and 5 tsp. ruby (2.5R 3/10) on op. white (N 9/0) eyes around the middle; brownish patina; late 18th/19th centuries; no. = 5.

Diameter: 9.5-9.8 Length: 9.0-9.5

WIIb*(v) (YF-Wbbb). Round; tsl. bright navy (7.5PB 2/7) with an op. white (N 9/0) wreath around the middle; light earthy patina; late 18th/19th centuries; no. = 1.

Diameter: 9.9 Length: 8.2

WIIId – Monochrome Beads with Simple Shapes; Overlaid Decoration (rests on or protrudes from the surface)

WIIId*(a) (YF-W50). Cylindrical; op. black (N 1/0) with a wavy op. light gold (2.5Y 7/8) thread around either end; the decoration rests on the glass and is not pressed into it; late 18th/19th centuries; no. = 2.

Diameter: 6.0 Length: 11.1

WIIId*(b) (YF-W49). Ovoid (ellipsoid); swirled op. bright Dutch blue (7.5PB 4/11) and op. bright navy (7.5PB 2/7) with raised diagonal squiggles of aventurine; late 18th/19th centuries; mostly fragmentary specimens; no. = 10.

Diameter: 11.5-14.5 Length: 14.8-19.4

Mold-Pressed Glass Beads

Eleven mold-pressed beads representing 10 varieties (Plate XXA) were recovered. These were generally produced by placing a molten glob of glass in a two-piece mold and letting it harden. A wire pushed through the glass while it was still soft imparted the perforation. In a variation of this, two viscid pieces of glass were pressed together in a mold to fuse them. This was frequently done where the glass contained a pattern that would have been distorted if the former method were used. In the case of “mandrel-pressed” beads, a tapered pin attached to one half of the mold formed the perforation. As the pin did not reach all the way to the other side of the mold when it was closed, the narrow end of the perforation was sealed and had to be broken through or ground down once the glass had hardened.

MPIa – Plain Monochrome Round Beads

MPIa*(a) (YF-MPzz). Round; tsl. amber (10YR 7/8); relatively small, parallel-sided perforation; shiny surface; 19th (?) century; no. = 1.

Diameter: 9.2 Length: 8.9

MPIa*(b) (YF-MP1). Round; op. scarlet (8.75R 4/14) with a slightly raised mold mark around the middle; small parallel-sided perforation; probably early 20th century; no. = 2.

Diameter: 5.0-5.1 Length: 4.7

MPIb – Plain Polychrome Oval Beads

MPIb*(a) (YF-MP9). Oval; tsl. amethyst (7.5P 4/8) containing numerous op. white streaks; composed of two longitudinal halves fused together; a slightly raised mold mark encircles the bead parallel to the cylindrical perforation; lightly abraded surface; 20th century; no. = 1.

Diameter: 8.0 Length: 14.0

MPIIa – Monochrome Round Beads with Faceting

MPIIa*(a) (YF-MP2). Multifaceted; “mandrel-pressed” type; tsp. ruby (2.5R 3/10) body covered with irregular cut facets; the perforation tapers noticeably; the end of the bead containing the narrow part of the perforation has been punched through and ground flat; 19th century; no. = 1.

Diameter: 9.6 Length: 9.2

MPIIa*(b) (YF-MP3). Multifaceted; “mandrel-pressed” type; tsp. bright rose (10RP 5/10) body covered with irregular cut facets; the perforation tapers noticeably and

the narrow end has been punched through; 19th century; no. = 1.

Diameter: 5.3 Length: 5.5

MPIIa*(c) (YF-MP4). Multifaceted; “mandrel-pressed” type; tsp. bright mint green (2.5G 7/8) body covered with irregular cut facets; sections of the original molded surface are visible; remnants of a mold mark encircles the middle; the perforation tapers noticeably and the narrow end has been punched through and is concave; 19th century; no. = 1.

Diameter: 8.2 Length: 6.5

MPIIa*(d) (YF-MP5). Multifaceted, pentagonal cross section; tsp. dark blue (5PB 4/10) body covered with irregular cut facets: 5 pentagonal facets around either end and 10 paired broad pentagonal facets around the middle; small cylindrical perforation; shiny surface; probably 20th century; no. = 1.

Diameter: 6.3 Length: 5.6

MPIIg – Monochrome Round Beads with Molded Designs

MPIIg*(a) (YF-MP6). Ribbed round (7 contiguous ribs encircle the bead perpendicular to the cylindrical perforation); op. medium turquoise blue (2.5B 5/5); dull surface; late 18th/19th centuries; fragmentary specimen; no. = 1.

Diameter: 6.0 Length: 5.8

MPIIg*(b) (YF-MP7). Ribbed round (9 contiguous ribs encircle the bead perpendicular to the cylindrical perforation); tsl. bright navy (7.5PB 2/7); late 18th/19th centuries; no. = 1.

Diameter: 7.6 Length: 8.1

MPIIh – Monochrome Oval Beads with Molded Designs

MPIIh*(a) (YF-MP8). Ribbed oval (7 contiguous ribs encircle the bead perpendicular to the perforation); op. scarlet (8.75R 4/14); a distinct raised mold mark encircles the bead parallel to the cylindrical perforation; small perforation; probably 20th century; no. = 1.

Diameter: 8.0 Length: 10.9

Blown Glass Beads

Represented by three specimens of a single variety (Plate XXA), blown beads were produced by blowing a bubble in a heated glass tube or a small gather of molten glass. As a result, they are all hollow. The bubbles could

be free-blown or blown in small molds. The interiors were frequently silvered or covered with colored enamel.

BIIC – Monochrome, Faceted Round Beads

BIIC*(a) (YF-B1). Round faceted (probably mold blown); tsp. light gray (N 7/0) with remnants of op. red enamel (ca. 10R 5/8) on the interior surface; 24 irregular cut facets encircle the middle; the area around either hole protrudes outward slightly and has been fire polished; late 18th/19th centuries; no. = 3.

Diameter: 8.2-10.0 Length: 8.5-9.5

Unidentifiable Glass Beads

Nine specimens were either too fragmentary or burned to be properly classified.

Prosser-Molded Beads

In the manufacture of Prosser-molded beads, three of which were encountered (Plate XXA), a powdered mixture of sand, feldspar, and calcium fluoride made plastic with milk was pressed into shape in gang molds. The beads were then deposited on a metal sheet and fired in an oven. Depending on the relative frequency of the constituents, the beads may range from translucent and glass-like to opaque and having the appearance of porcelain. First applied to the manufacture of buttons, the process was patented by Richard Prosser in 1840.

PMIa – Monochrome Round Beads, Undecorated

PMIa*(a) (YF-PM3). Round; op. ultramarine (6.25PB 3/12); distinct equatorial belt (mold seam); granular texture; the perforation tapers slightly; both ends are rough; shiny surface; 20th century; no. = 1.

Diameter: 5.9 Length: 5.4

PMIa*(b) (YF-PM2). Round; op. coral (10R 5/8); distinct equatorial belt (mold seam); one end is smooth, the other is pebbled; one end of the parallel-sided perforation was obstructed during manufacture (unusable); shiny surface; 20th century; no. = 1.

Diameter: 4.1 Length: 3.8

PMIa*(c) (YF-PM1). Round; tsl. orchid mist (2.5RP 7/4); one end is smooth, the other is pebbled; one end of the parallel-sided perforation was partially obstructed during

manufacture; shiny surface; 20th century; no. = 1.

Diameter: 4.8 Length: 4.5

Metal Beads

Two faceted brass beads consist of short sections of hexagonal tubing with a facet stamped on each corner.

Metal 1. Faceted, cornerless hexagonal; 20th century; no. = 2.

Diameter: 1.6 Length: 1.2

Bone Beads

A single bird-bone bead of probable Native manufacture is in the collection (Plate XXA).

Bone 1. Tubular, slightly curved; soil-stained dark brown; probably late 18th/19th centuries; no. = 1.

Diameter: 10.1 Length: 30.5

Plastic Beads

The two plastic beads were not examined directly. The descriptions are based on photographs and measurements provided by Parks staff (Plate XXA).

Plastic 1. Circular; op. light red (5R 5/12); 20th century; no. = 1.

Diameter: 2.2 Length: 1.8

Plastic 2. Round; op. bright coral red (10R 5/14); 20th century; no. = 1.

Diameter: 5.0 Length: 4.0

DISCUSSION

As would be expected of a major fur trade depot, beads were found over much of the site. There were several concentrations, however, and these provide much useful chronological information.

Over 8,500 glass beads were found during the extensive excavations conducted under and around the Depot which centered on the remains of the Old Octagon. A major concentration of approximately 5,000 glass beads encountered in a refuse deposit located outside the southwest curtain shed of the Octagon is especially significant as it can

be attributed to a very short period in the fort's early history. As an 1815 plan of the fort shows this area to be occupied by a cook room, the deposit has to date between 1795, the year the Octagon was completed, and some time before the plan was drawn. This gives us insight into what the fort's bead inventory consisted of at this time. Fifty-eight more or less distinct varieties are represented (Table 1) with white (IIa11/IIa12 and IIa14), bright blue (IIa43/IIa*[vv]), and red (IVa6) specimens predominating. Another refuse deposit adjacent to the southeast corner of the Octagon produced about 1,500 glass beads that generally replicate those from the sealed deposit. They are doubtless associated with the Octagon occupation.

Another major source of beads was the site of the Inland Cargo House situated to the north of the Depot. Attributed to the period from 1824 to 1939, this feature produced 7,869 beads. An examination of them reveals that many duplicate those from the sealed Octagon deposit. In fact, the four most common varieties – comprising 80% of the Cargo House total – are identical to those from the Octagon deposit. This suggests that most of the beads from the Cargo House excavations are coeval with the later occupation of the Octagon and the early occupation of the Depot.

A smaller concentration of beads (3,389 specimens) of like age were recovered from the North Garden and Drainage Ditch to the east of the depot. The finds are generally attributed to the period from 1831 to 1930. Once again the three most common varieties (IIa14, IIa11/IIa12, and IIa43/IIa*[vv]) replicate those from the sealed Octagon refuse deposit and the bulk of the remaining varieties have counterparts in that deposit as well. Clearly the beads from this area and the Inland Cargo House are of the same approximate date.

A final concentration of 1,783 beads was recovered from Cabin 2 in the North Village which extended along the river bank to the north of Dry Dock Creek. These dwellings were occupied by temporary employees, mostly Cree Indians and Métis. Consequently, the recovered beads represent material utilized locally by the occupants. The cabin may have been inhabited as early as the late 19th century but the recovered varieties indicate an occupation sometime during the first half of the 20th century. The beads were recovered from one of the bedrooms, suggesting that this was a principal beading and sewing area. It is, however, possible that the beads represent a discarded beaded garment that has since disintegrated.

The beads characteristic of the early occupation of York Factory III (1795-1815) as revealed by the specimens found in sealed deposits beneath and adjacent to the Depot (Table 1) may be summarized as follows. Undecorated seed

beads clearly prevail with just six varieties – dominated by tsl. oyster white (IIa11/IIa12), tsp./tsl. bright blue (IIa43/IIa*[vv]), and op. redwood on tsp. gray or green (IVa3/IVa6) beads – making up 79% of the collection. Unfortunately, there are no tightly dated contexts that can definitely be attributed to the second half of the 19th century.

The 20th century is represented primarily by monochrome seed beads, comprising 85% of the 20th-century bead assemblage. The five most common varieties are, in sequence: op. white (IIa14), op. pink (IIa*[rrr]), op. robin's egg blue (IIa41), tsl. robin's egg blue (IIa*[uu]), and tsp. light gray (IIa*[a] var.). They make up 30% of the seed beads. Tubular hexagonal beads were a distant second in popularity (10%). As for color frequency, blue beads predominate (40%), followed by red (22%), green (10%), white (8%), purple (8%), colorless (6%), yellow (5%), and black (1%).

The beads shipped to York Factory and other HBC trading establishments during the 19th century were supplied by a number of British merchants, ten of whom have been identified (Table 2). The majority were located in London. The exception is J.P. Sturgis and Co., fur merchant for the HBC in Canton, China. He is known to have supplied small blue glass beads in 1827-1828 (Lafèche 1979:58; Ross 1979:172). Whether these were actually produced in China or were just being exported from there is uncertain. Unfortunately, it is not known where most of the others obtained their beads but some clues are provided by information gleaned from various London business directories concerning the business owned by Moses Lewin Levin. Already an importer of beads in 1830, Levin built up his business over the years to such an extent that “between sixty and seventy tons of beads” were destroyed by fire on his premises around 1895 (Hartshorne 1897:106 n.). About this same time he is listed as importing “coral, amber, and glass beads” from Venice, Bohemia, and Germany (Karklins 2004:40). It is probable that the other suppliers were obtaining their beads from the same countries.

Some idea of the quantity of beads that was sent to York Factory III in its early days is provided by several invoices. In 1802, the post received 350 lbs. of “common beads” and 13 “bead necklaces.” The following year the shipment included 145 yards of “common beads.” In 1805 and 1806, the incoming trade goods included 50 lbs. and 221 lbs. of “common beads,” respectively (HBC Archives 1802-1806). While some of these beads were kept for local trade, the majority were shipped to inland posts in much smaller quantities. For instance, in 1803, at Nottingham House at the east end of Lake Athabasca, the inventory of trade goods included 4-3/4 lbs. of “blue common” beads and 3 lbs. of “fine white” beads (Karklins 1983:329).

**Table 1. Early Octagon Bead Varieties, 1795-1815
(by Manufacturing Technique and Frequency) (no. = 4,440).**

Kidd Variety	YF No.	Description	Quantity	%
Drawn Beads				
IIa11/IIa12	YF-43/44	Circular/round; tsl. oyster white	1,069	24.1
IIa43/IIa*(vv)	YF-55/56	Circular/round; tsp./tsl. bright blue	1,049	23.6
IIa14	YF-46	Circular; op. white	732	16.5
IVa6	YF-146	Circular; op. brick red exterior; tsp. apple green core	663	14.9
IIa7	YF-41	Circular; op. black	212	4.8
IIa*(e)	YF-49a-b/83	Circular; tsp. ruby	175	3.9
Ia19	YF-5	Tubular; tsp. bright navy	88	2.0
IIa*(kkk)	YF-58	Circular; op. medium blue	87	2.0
IIa19	YF-47	Circular; op. amber	66	1.5
IIa56	YF-59	Circular; tsp. bright navy	24	0.5
IIa*(ii)	YF-51	Circular; tsl. bright green	20	0.5
Ia4	YF-1	Tubular; tsl. oyster white flashed in clear glass	19	0.5
IIa*(cc)	YF-52	Circular; tsl./op. dark palm green	19	0.5
IIa2	YF-w	Circular; op. brick red	18	0.4
IVa*(a)	YF-r	Circular; op. brick red exterior; tsp. ruby core	16	0.4
IIa*(nnn)	YF-53	Circular; op. powder blue	15	0.3
IIa*(hhh)	YF-54	Circular; op. dusty blue	15	0.3
Ia*(g)	YF-6	Tubular; op. medium blue	10	0.2
IIIa3	YF-136	Tubular; op. brick red exterior; tsp. apple green core	10	0.2
IIa59	YF-50	Circular; tsp. rose wine	9	0.2
IIa*(a)	YF-42	Circular; tsp. light gray	8	0.2
Ia2	YF-v	Tubular; op. black	5	0.1
IIa*(u)	YF-48	Circular; tsp. light gold	4	>0.1
IIb12	YF-123	Circular/Round; op. black with 4 op. white stripes	4	>0.1
IIf*(a)	YF-135	Faceted circular; tsp. rose wine	3	>0.1
Ia*(c)	YF-3	Tubular; op. amber	2	>0.1
Ia*(h)	YF-cc	Tubular; op. powder blue	2	>0.1
If*(b)	YF-z	Tubular, multifaceted; tsp. light gray	2	>0.1
Ia5	YF-y	Tubular; op. white flashed in clear glass	1	>0.1
Ia*(a)	YF-s	Tubular; tsl. white satin sheen	1	>0.1
If*(a)	YF-MPu	Tubular, multifaceted; op. black; 20 irregular cut facets	1	>0.1
If*(e)	YF-aa	Tubular, multifaceted; tsp. turquoise green; 24 cut facets	1	>0.1

Table 1. Continued

Kidd Variety	YF No.	Description	Quantity	%
If*(f)	YF-ee	Tubular, multifaceted; tsp. turquoise	1	>0.1
IIIk*(b)	YF-142	Tubular chevron with faceted ends; 4 starry layers: 1) op. black exterior; 2) op. white; 3) op. redwood; 4) op. white core	1	>0.1
IIII'*(a)	YF-gg	Tubular, twisted hexagonal chevron with faceted ends; 3 starry layers: 1) op. black exterior; 2) op. brick red; 3) op. white core	1	>0.1
Wound Beads				
WIb*(i)	YF-W14	Round; op. medium turquoise blue	17	0.4
WIc*(k)	YF-W23	Oval; tsp. bright navy	11	0.2
WIb2	YF-W3	Round to slightly ovoid; op. white	7	0.2
WIc*(f)	YF-Wq	Oval; op. dark palm green	7	0.2
WIIIb*(k)	YF-Wt	Oval; op. white with an op. dark palm green wavy line around either end and a tsp. ruby wreath around the middle	7	0.2
WIIIb*(i)	YF-W45	Oval; op. white with a tsp. ruby wavy line around either end and an op. dark palm green wavy line around the middle	5	0.1
WIc1 var.	YF-W18	Oval; op. white	4	>0.1
WIb*(g)	YF-Wx	Round (irregular); op. dark palm green	4	>0.1
WIb*(c)	YF-W2	Round; tsl. light gray	3	>0.1
WIb*(e)	YF-W6	Round; tsp. ruby	3	>0.1
WIc*(e)	YF-W19	Oval (slightly teardrop shaped); op. amber	3	>0.1
WIIIb*(n)	YF-Wdd	Round; tsp. ruby with an op. white wreath around the middle	3	>0.1
WIc*(j)	YF-W24	Oval; op. copen blue	2	>0.1
WIIIb*(g)	YF-Wuu	Round; op. white with 2 tsp. ruby and 2 op. teal green wreaths set parallel to the perforation	2	>0.1
WIIIb*(r)	YF-W47	Oval; op. aqua green with a spiral band of tsp. scarlet and op. white diagonals, and a spiral band of aventurine	2	>0.1
WIb*(a)	YF-p	Round (irregular); op. black	1	>0.1
WIc*(a)	YF-W26	Oval; op. black	1	>0.1
WLi*(c)	YF-Whh	Truncated teardrop; op. medium turquoise blue	1	>0.1
WIIIb*(d)	YF-Wff	Round; tsl. light gray with 5 tsl. bright navy on op. white eyes around either end and 5 tsp. scarlet on op. white eyes around the middle	1	>0.1
WIIIb*(f)	YF-W35	Round; op. white with 2 tsp. ruby and 2 op. dark palm green wreaths set parallel to the perforation	1	>0.1
WIIId*(b)	YF-W49	Ovoid (ellipsoid); swirled op. bright Dutch blue and op. bright navy with raised diagonal squiggles of aventurine	1	>0.1
Blown Beads				
BIIc*(a)	YF-B1	Round faceted; tsp. light gray with remnants of op. red enamel	1	>0.1

Table 2. British Suppliers of Beads to the Hudson's Bay Company, 1820-1875.

Name	Description	Dates	Location	Goods	References
John T. Burgon and Son	Hardwareman and flint dealer	1820-1842	London	Beads, gun flints, finger rings, tobacco, and snuff boxes, etc.	Lafèche 1979:16; Ross 1979:48-49
Heinzmann and Rochusson		1862-1864	London?	Beads and Northwest guns	Lafèche 1979:34
Ephraim Levin		1862-1864	London	Beads and meerschaum pipes	Lafèche 1979:39
Moses Lewin Levin	Manufacturer and importer	1864-1875	London	Beads, coral, cutlery, etc., for the African, American, and Indian markets	Karklins 2004:39; Lafèche 1979:39
Albert Pelly and Co.	Merchant	1846-1854	London	Beads, oatmeal, and flour	Ross 1979:146; Sussman 1979:124-125
Jonas Phillips and Sons	Bead merchants	1820 to 1850	London	Beads	Lafèche 1979:48; Ross 1979:149; Sussman 1979:127
Lawrence Phillips and Sons	Merchants and importers of beads and East India agents	1839-1850	London	Beads	Ross 1979:150; Sussman 1979:127
Octavius Phillips and Co.		1843-1850	London	Beads	Ross 1979:150; Sussman 1979:128
J.P. Sturgis and Co.	Fur merchant for the HBC	1827-1828	Canton, China	Small blue glass beads	Lafèche 1979:58; Ross 1979:172
G. Trinsby and Co.		1873	London?	Beads, etc.	Lafèche 1979:60

The relative value of glass beads shortly before York Factory moved to its present location is provided in the Standard of Trade at York Factory in 1776 which lists the number of prime beaver pelts required to purchase specific quantities of trade goods (Rich 1951:358-359). Information specific to beads is presented in Table 3. A sampling of other goods is also listed for comparative purposes. The list reveals that a pound of fancy "flowered" beads was almost equivalent to the value of a pistol or a blanket, and that a pound of small long white or red beads was equivalent to a trunk, a laced hat, or a gallon of English brandy. Even the large, middling, and small round white and blue beads at two pelts per pound had the same value as a shirt or a pair of shoes, eight jackknives, or eight dozen coat buttons. In other words, beads were not an inexpensive commodity.

While it is not known exactly which bead varieties were produced in which country, it is possible to suggest likely origins for many of them. The glass beads recovered from the early deposits almost certainly came from Venice/Murano, the principal supplier at the time. Those from later contexts could either be of Venetian or Bohemian origin. The cornerless hexagonal beads (If and IIIf) are generally regarded as being Bohemian, as are the mold-pressed and blown specimens. The Prosser beads likely came from France though Bohemia is also a possible source. What Germany may have contributed is unknown but its products included wound, blown, and molded beads.

Although the bulk of the beads from the Octagon represent material destined for inland trading posts, some

Table 3. York Factory Standard of Trade, 1776.

Beads	Beaver Pelts/Pound
Large long white	5
Small do.	4
Large, middling & small rod. [round] white	2
Large, middling & small rod. blue	2
Small long red	4
Large round red	2
Small rod. red, yellow, green & dove colour'd	2
Large & middling rod. black & white	6
Round white flowd. [flowered] red & green	6
Barley-corn white flowd. red & green	6
Barley-corn white, black, red, green & yellow	6
Other Goods	Beaver Pelts
Pistol	7
Blanket	7
Trunk	4
Laced hat	4
English brandy, gallon	4
Shirt or Shoes	2
Coat buttons, 4 doz.	1
Jackknives (4)	1

of them were definitely also utilized by the inhabitants as revealed by the presence of several beadwork remnants, probably Cree, including a moccasin vamp (Plate XXB), in the Octagon deposit. The Cree were the home guard Indians at York Factory and it is likely that the beadwork was produced by them. Similarly, it is likely that the single bone bead is also of local manufacture.

Some insight into how the local Cree utilized beads to adorn themselves and their garments is provided by Robert M. Ballantyne (1848) who visited York Factory in 1841-1842:

The summer dress of the [male] Indian is almost entirely provided for him by the Hudson's Bay Company; it consists chiefly of a blue or gray cloth, or else a blanket capote reaching below the knee, made much too loose for the figure, and strapped round the waist with a scarlet or crimson worsted belt. A very coarse blue striped cotton shirt is all the underclothing they wear, holding trousers to be quite superfluous; in lieu of which they make leggins of various kinds of cloth, which reach from a few inches above the knee down to the ankle. These leggins are sometimes very tastefully decorated with bead-work, particularly those of the women, and are provided with flaps or wings on either side [Figure 4], which have a pretty and novel appearance (Ballantyne 1848:43-44).

Their jet black hair generally hangs in straight matted locks over their shoulders, sometimes ornamented with beads and pieces of metal, and occasionally with a few partridge feathers (Ballantyne 1848:42).

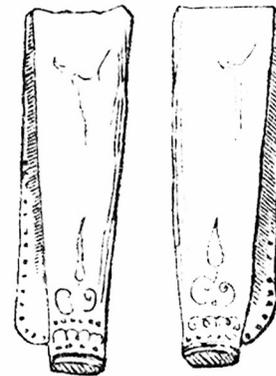


Figure 4. Leggings and moccasins worn by the Swampy Cree around York Factory in the 1840s (after Ballantyne 1848:43-44).

As for the Cree women:

Their dress is a gown, made without sleeves, and very scanty in the skirt of coarse blue or green cloth; it reaches down to a little under the knee, below which their limbs are cased in leggins beautifully ornamented. Their whole costume, however, like that of the men, is almost always hid from sight by a thick blanket without which the Indian seldom ventures abroad. The women usually make the top of the blanket answer the purpose of a head-dress; but when they wish to appear very much to advantage, they put on the cap represented in the illustration [Figure 5]. It is a square piece of blue cloth, profusely decorated with different coloured beads, and merely sewed up at the top (Ballantyne 1848:45).



Figure 5. Swampy Cree woman's beaded cap (after Ballantyne 1848:46).

Visiting York in 1840, Letitia Hargrave adds a bit more information: "One woman had large gold earrings wch were put half way up her ears & stuck out a good deal, & a beautiful turquoise ring. She wore a green tartan gown mocassins & blanket. The other women had all 3 or 4 large glass bead necklaces – different colours" (MacLeod 1947:76).

Beads were put to many other uses by the Cree and their neighbors (Karklins 1992). In the hands of company traders and Indian middle men, they were distributed far beyond the borders of the Hudson's Bay Company's territory and applied to sundry articles "in a very tasty and beautiful manner" (M'Keevor 1819:56).

CONCLUSION

While it is probable that not every bead variety that made its way to York Factory is represented in the archaeological collection, the recovered specimens do provide excellent insight into what the Hudson's Bay Company was importing into Rupert's Land from the late 18th to the early 20th century. While trade beads may not have been as sought after as guns, gun powder, knives, kettles, and cloth, their presence at most contemporary archaeological sites in the region and on many ethnographic objects made by the indigenous population reveals that they were nonetheless in great demand. It is hoped that this report will help fur trade researchers as well as others to better classify, date, and interpret their trade beads.

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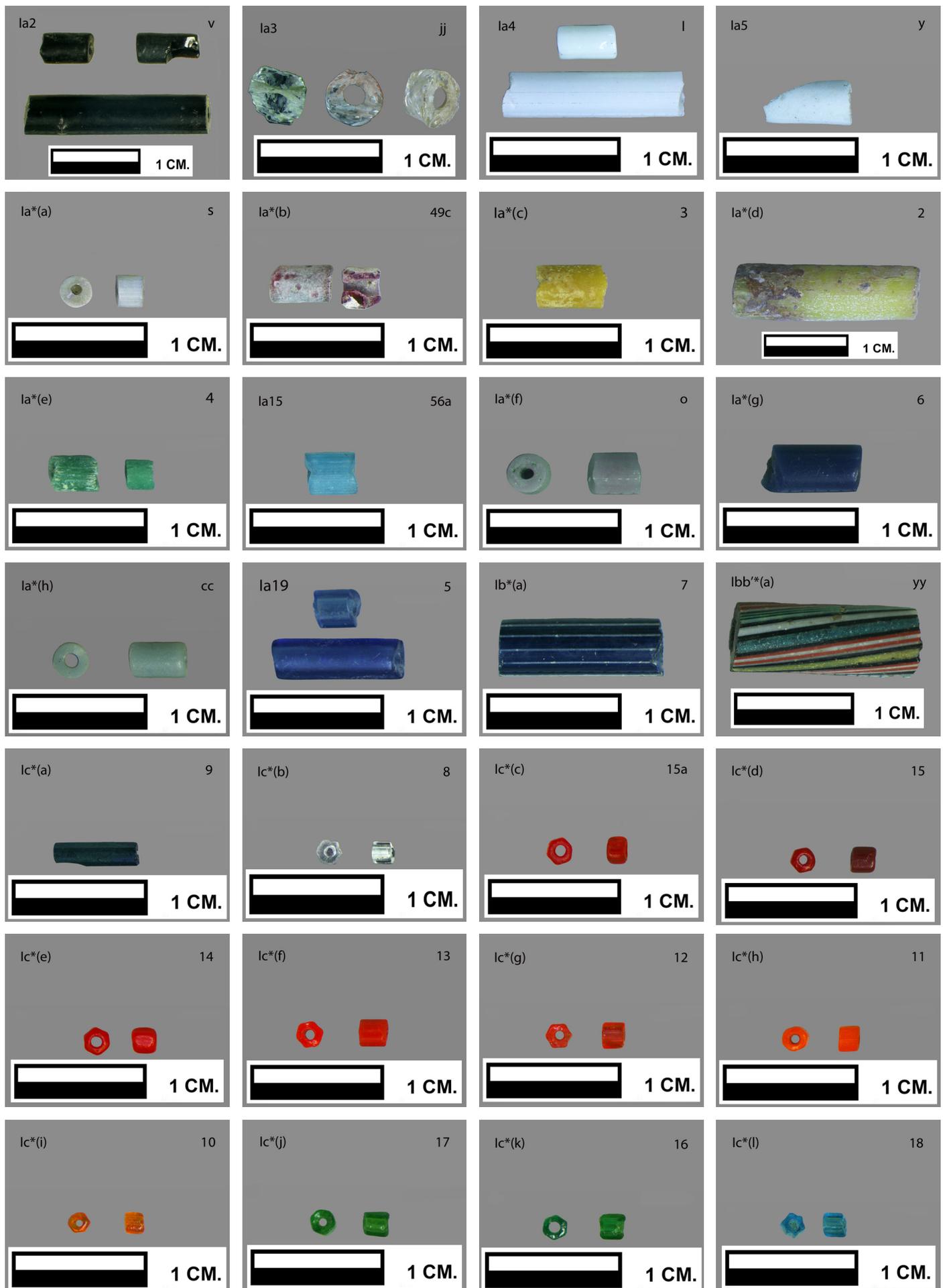


Plate XI. York Factory: Glass bead varieties (photos: Louis Laflièche, Parks Canada).

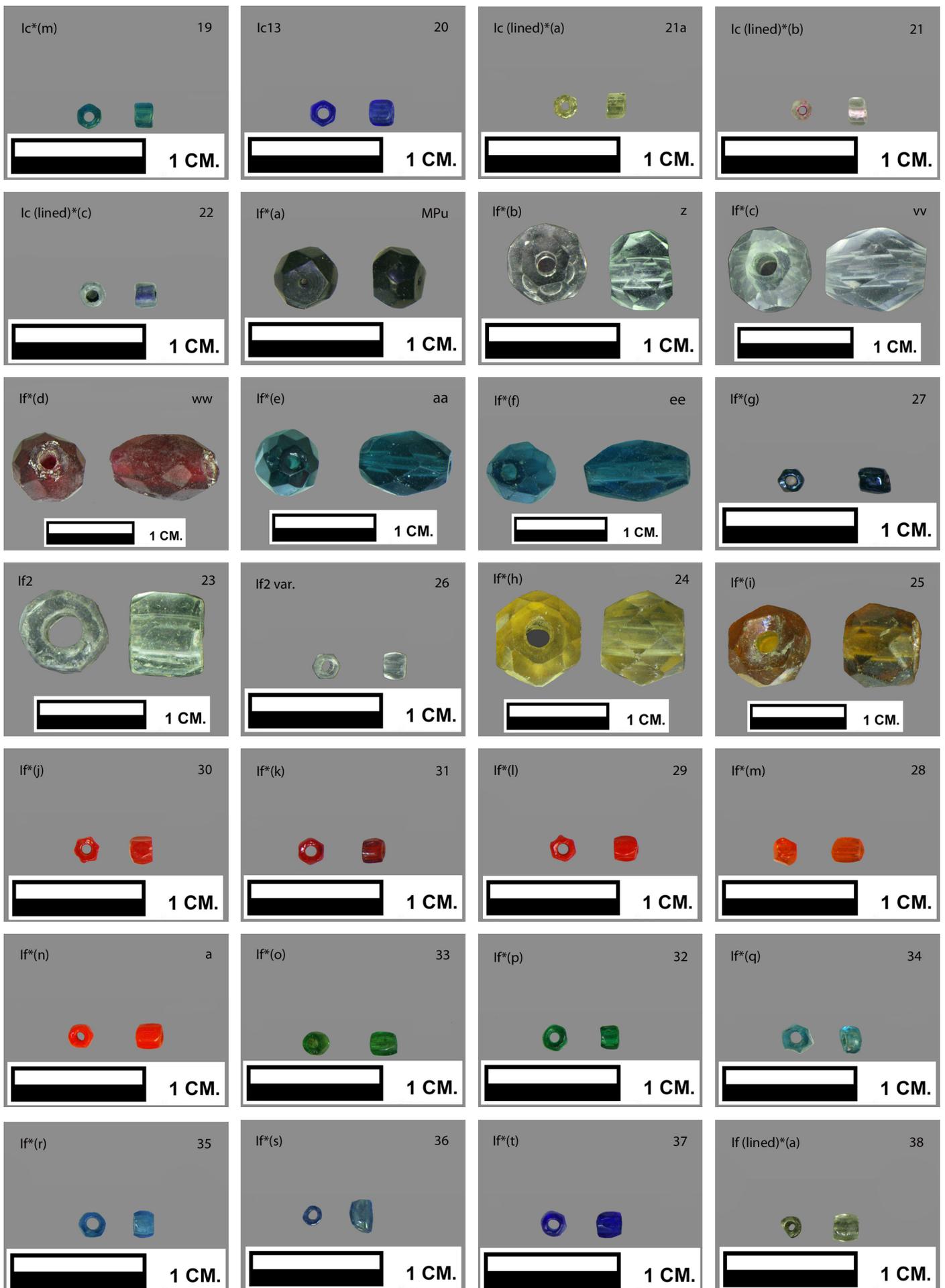


Plate XII. York Factory: Glass bead varieties.

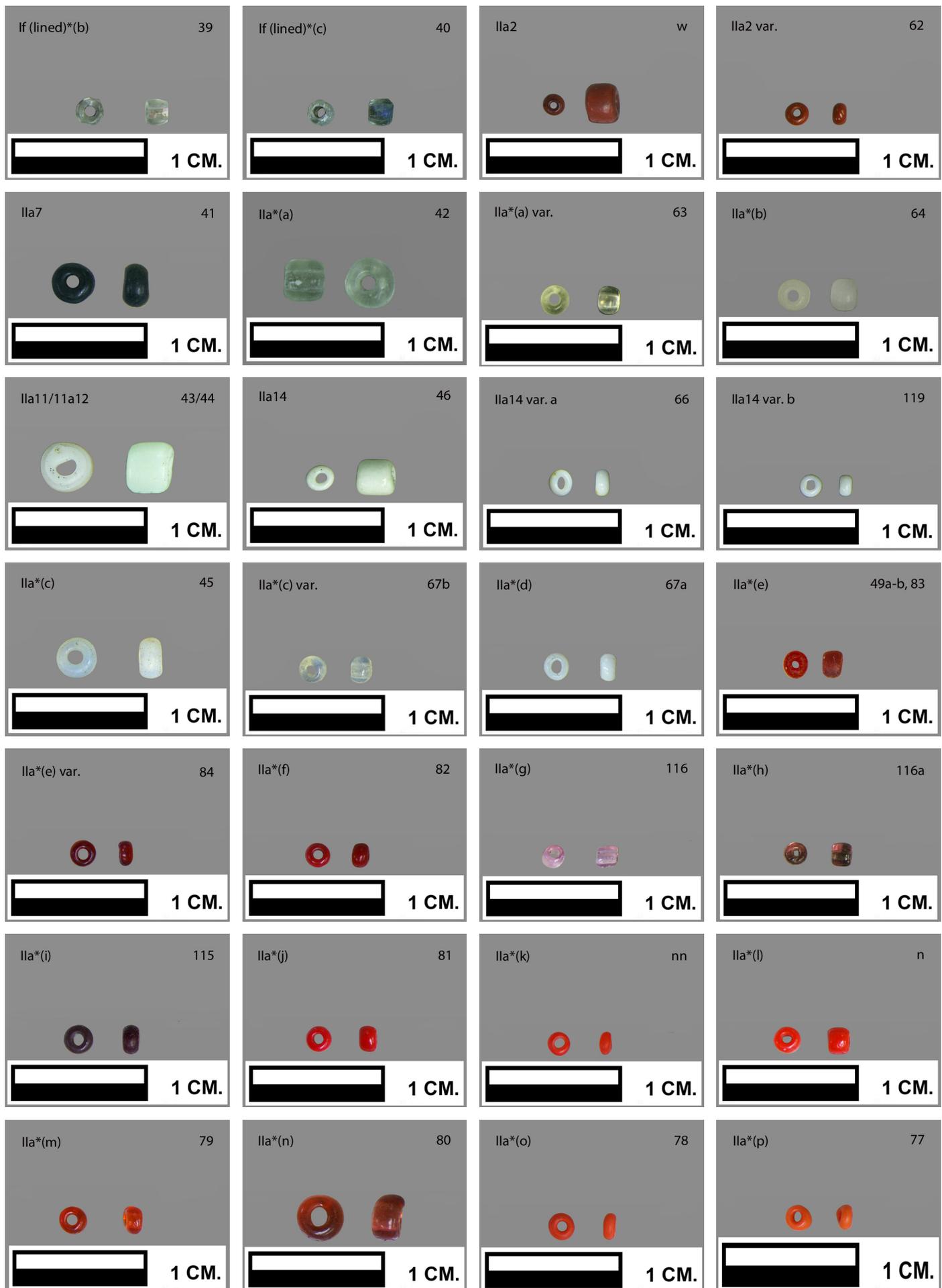


Plate XIII. York Factory: Glass bead varieties.

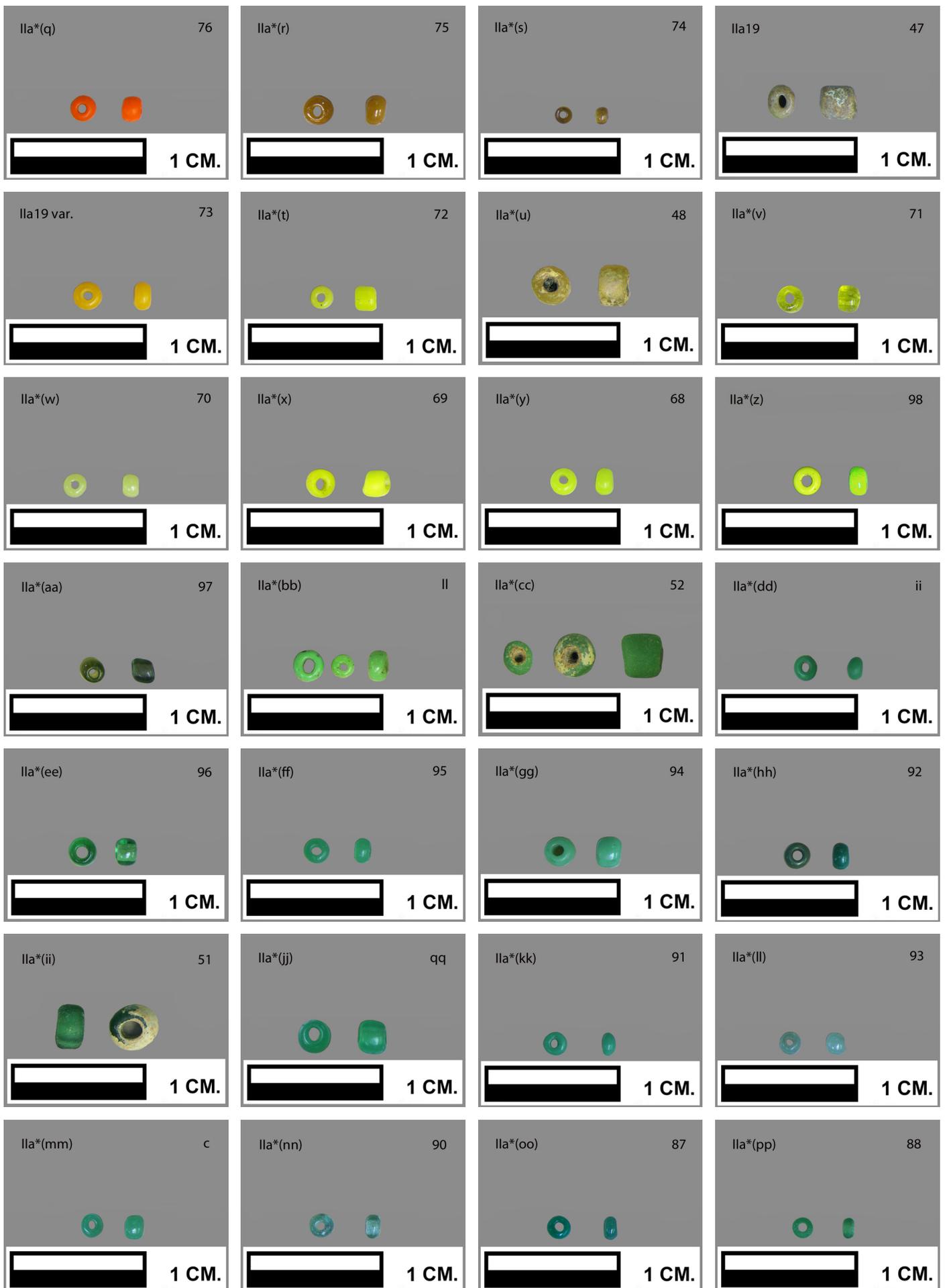


Plate XIV. York Factory: Glass bead varieties.

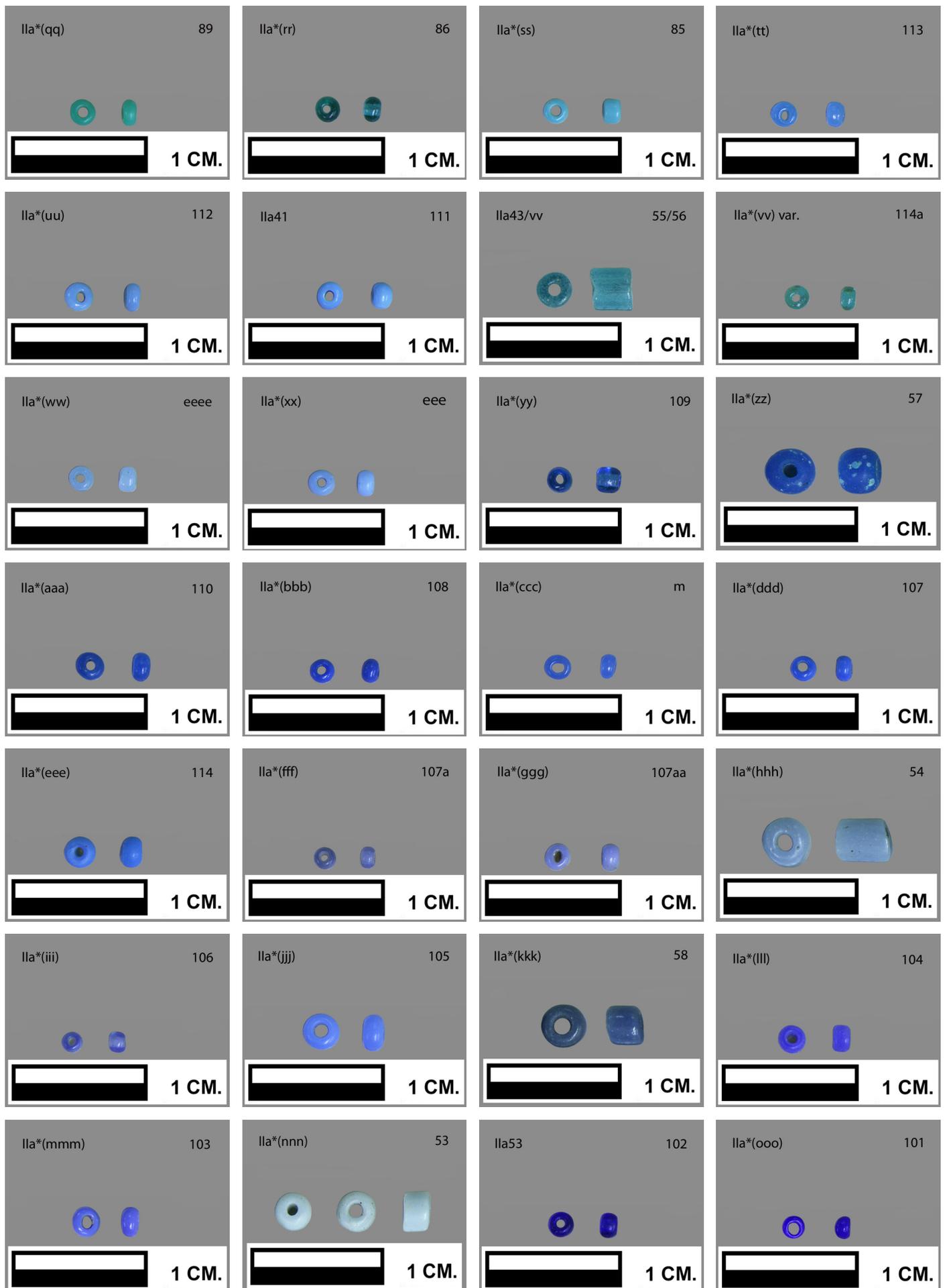


Plate XV. York Factory: Glass bead varieties.

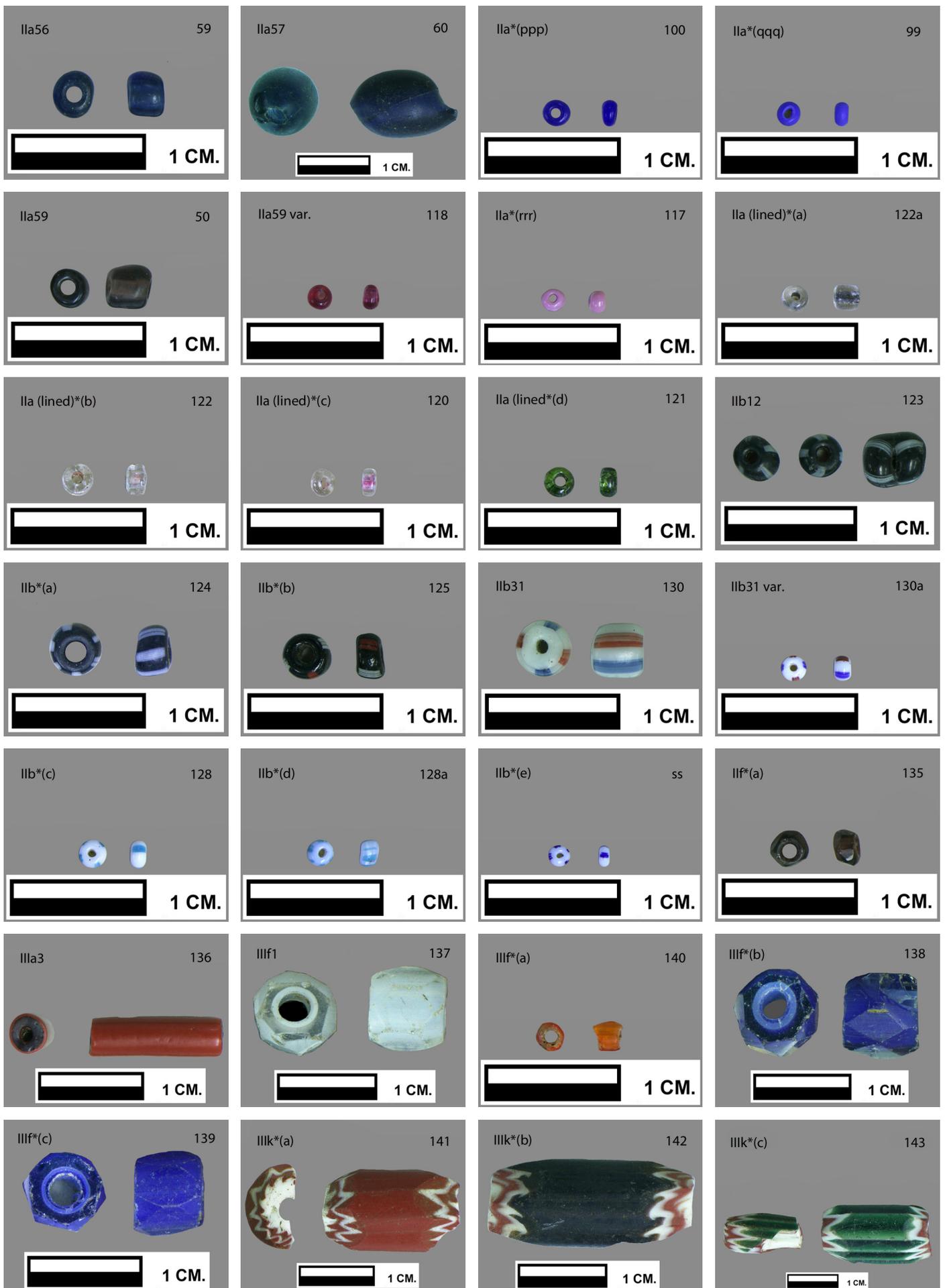


Plate XVI. York Factory: Glass bead varieties.

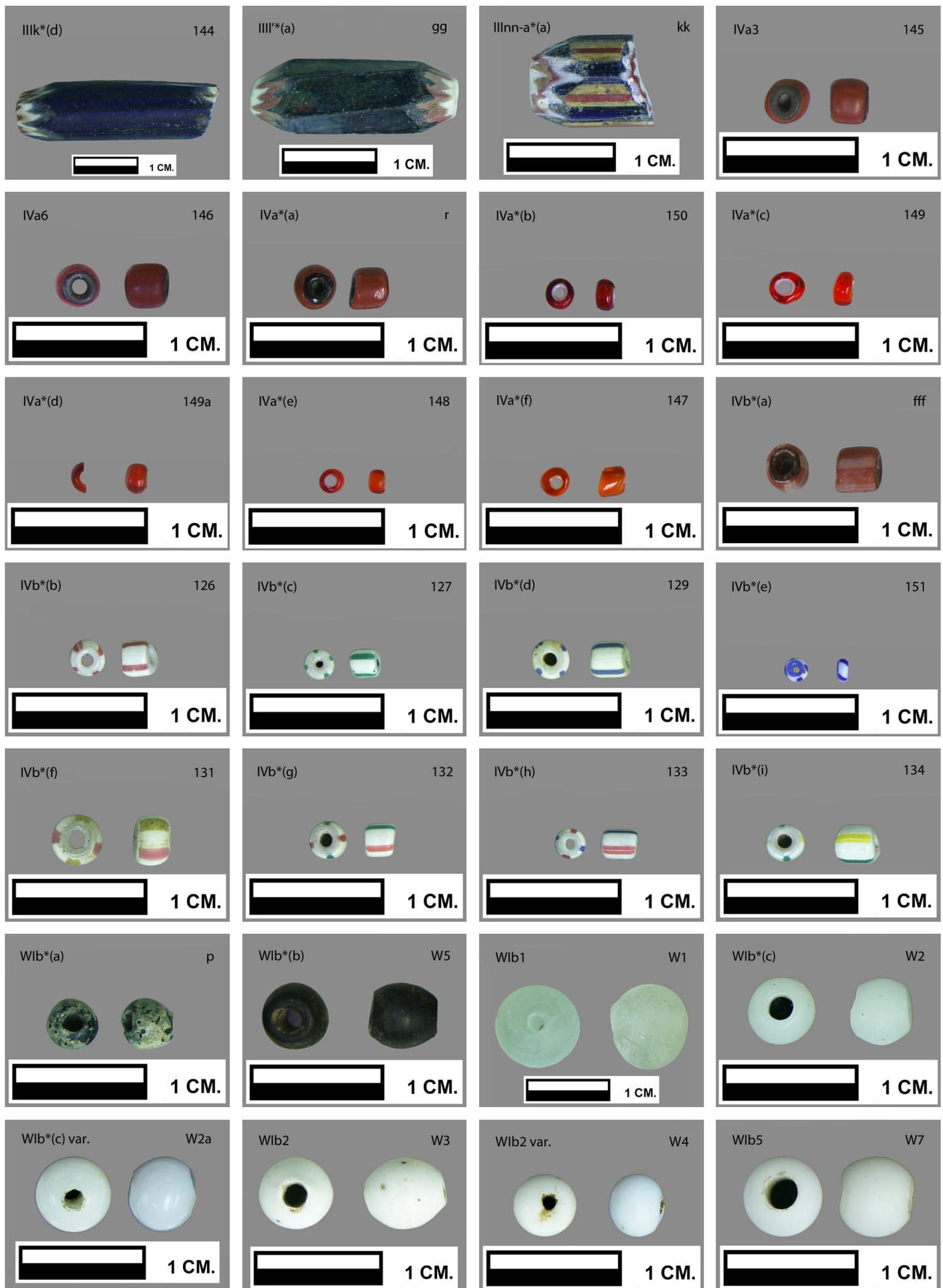


Plate XVII. York Factory: Glass bead varieties.

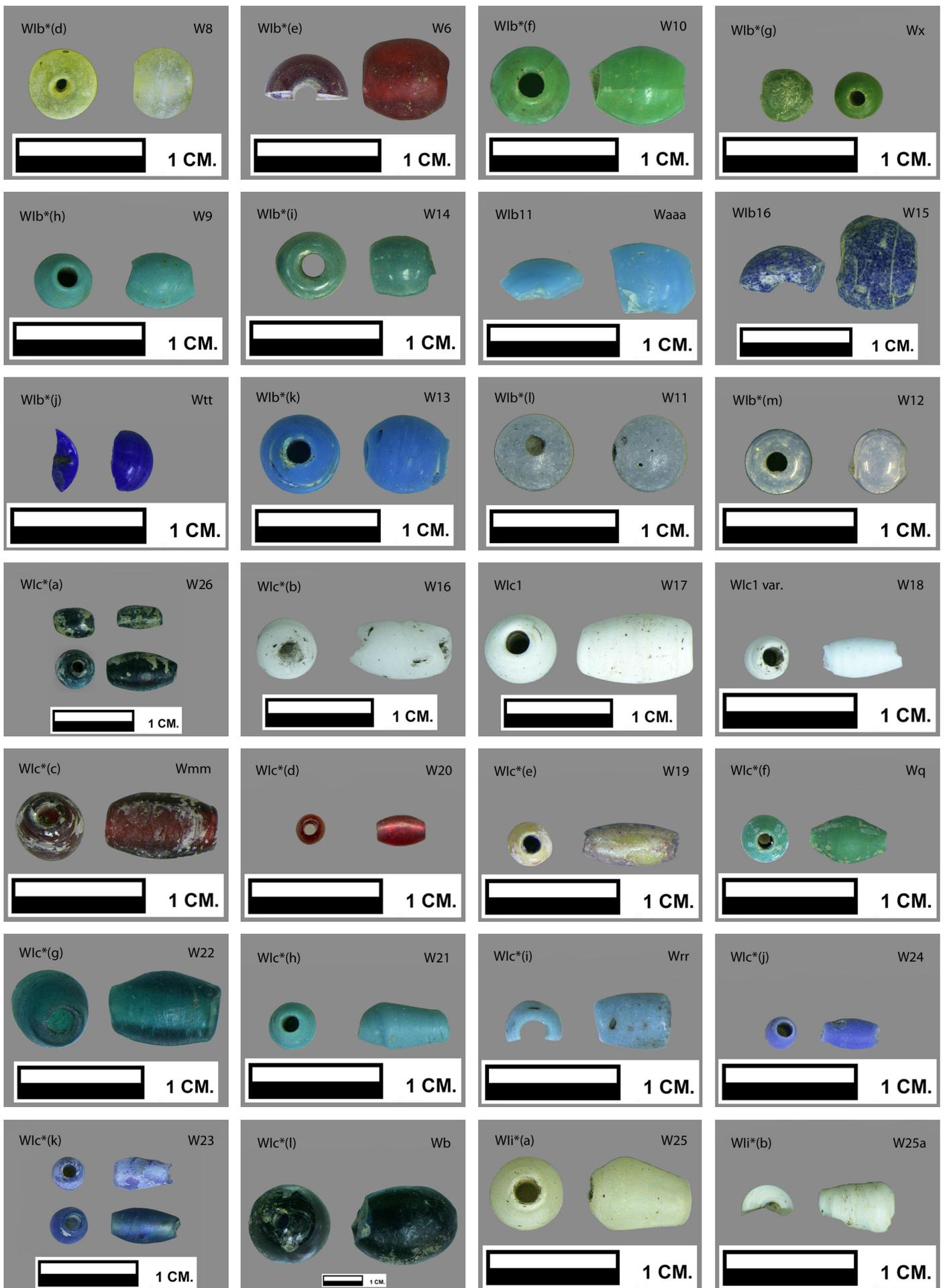


Plate XVIII. York Factory: Glass bead varieties.

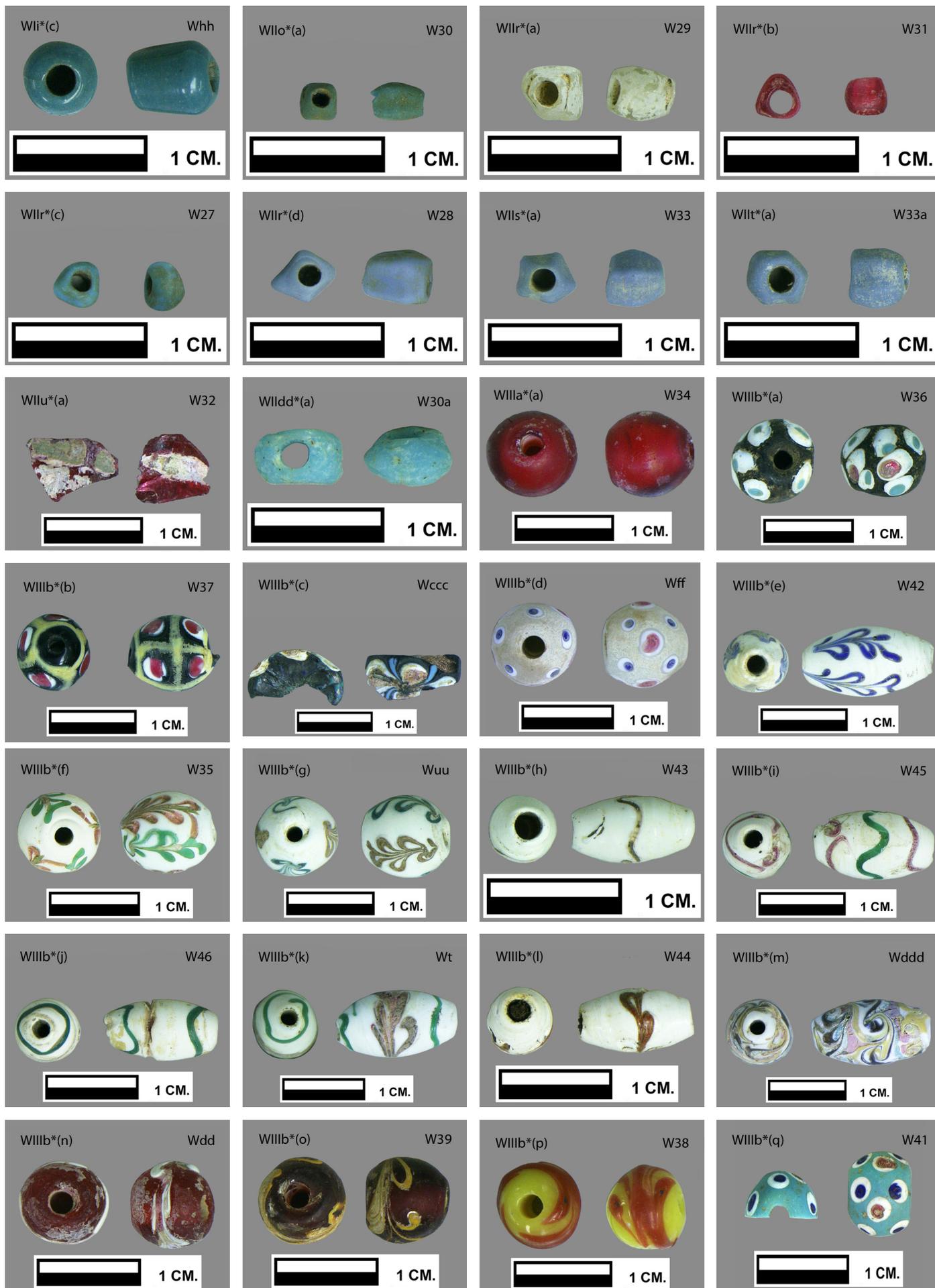


Plate XIX. York Factory: Glass bead varieties.

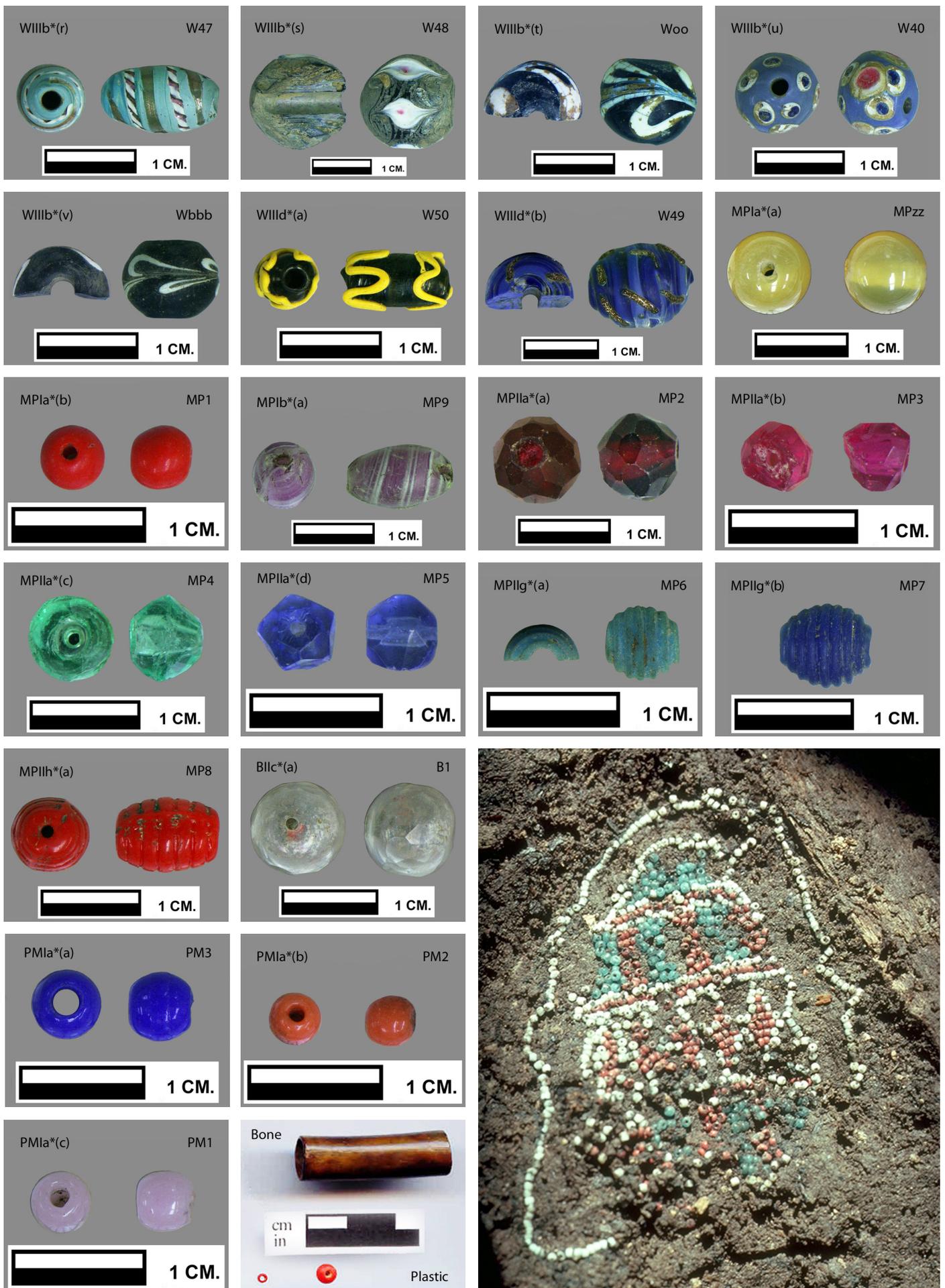


Plate XXA. York Factory: Glass, ceramic, plastic, and bone bead varieties.

Plate XXB. York Factory: Beaded moccasin vamp remnant from the Octagon deposit (Parks Canada/9K-1936T).