SMITHSONIAN INSTITUTION BUREAU OF AMERICAN ETHNOLOGY BULLETIN 199

THE ETHNOARCHEOLOGY OF CROW VILLAGE, ALASKA

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U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1967

bottles have necks made to receive cork stoppers, and in the case of two specimens, the corks were still in place at the time of discovery. This fact alone would tend to place the bottles chronologically where we would expect to find them—at the end of the 19th century.

One other feature of manufacture and style is likely to be of value when more research has been done on late 19th-century and early 20th-century glass bottles. This concerns the fact that molded marks frequently occur on the bottoms of bottles and may indicate the manufacturer, the contents, or both (Fontana and Greenleaf, 1962, p. 101). All four complete bottles from Crow Village and two bottom fragments have molded marks. In three cases at least, these marks indicate the name of the manufacturer but only one could be identified definitely. This is "A & DH CO." which stands for the Alexander and David H. Chambers Co. of Pittsburgh (Fontana and Greenleaf, 1962, p. 101). Fontana and Greenleaf point out that Arthur Woodward was able to delineate many of the marks found on bottles at Fort Union, N. Mex., but was able to identify with certainty only three, including the one given above. It is clear, as these authors take care to mention, that much more research needs to be done on the entire subject of late 19th- and 20th-century bottles (1962, p. 101).

MISCELLANEOUS GLASS

In addition to buttons, window glass, and bottles, there are three fragments of what appear to have been faceted *drinking glasses*. Also there are two rather thin curved pieces that may be fragments of *oil lamp chimneys*. If this identification is correct, it would be the only indication in the Crow Village collection of the use of any kind of lamp other than the traditional Eskimo clay variety.

BEADS

Various types of glass trade beads were found in all houses and in the two large midden sections. They form an important group of artifacts whose structure, color, form, and size lend themselves to typological analysis. Their value as dating aids, however, is limited, and it will be possible to make only the most general statements concerning the chronological position of the Crow Village beads.

In general, the bulk of the glass beads traded on the North American continent from the 16th until the first half of the 19th century were made in the glass factories of Venice in Italy. After that time many beads were manufactured in France and some in Czechoslovakia, known then as Bohemia. A number of other countries imported beads from Italy and repackaged them for shipment abroad (Woodward, 1959, n.p.; 1960, n.p.). The Crow Village beads, which are undoubtedly of European manufacture, probably were made by one of two related processes. The single color beads were made by breaking a glass tube, composed of a single type of glass, into segments which then were tumbled in a heated drum to wear off the sharp edges. The white-lined and dark-green-lined beads were manufactured by fashioning two layers of different colored glass into a tube, breaking the tube into bead lengths, and again tumbling them in a heated drum. The latter beads have a central core of one color of glass and an outer coating of another (Duffield and Jelks, 1961, pp. 40-41; Orchard, 1929, pp. 82-83; Woodward, 1959, n.p.; 1960, n.p.).

Four hundred and sixteen beads of the various types make up the collection. For study purposes these were first separated into groups based upon color alone. The colors are given as they appear to us and not through comparison with a standard color chart. Gradations in color are often imperceptible, and many of the beads described also appear to be discolored because of changes caused by chemical actions of the soil or by firing. It was found that there were 250 white, 117 blue, 8 white-lined red, 3 green, 7 dark-green-lined red, 2 vellow, 7 red, 2 blue-lined white with alternate painted stripes, and 20 black. Next the beads were separated according to shape within each color group, and it was found that eight different types are represented (fig. 6). Sizing came next, and out of the total there were 16 of the "seed" form, those that do not exceed 2 mm. in diameter. However, there were a large number of beads averaging 3 to 5 mm, in diameter. All of the seed beads belong to type A and are invariably very brightly colored. Blue, white, black, and vellow are the colors represented, and these beads are generally similar to those sold in tubes in stores today for sewing into beadwork designs.

a b c d e l g h

FIGURE 6.—Quarter sections of beads.

Of the 250 white beads, 163 belong to type B, 78 to type A, 8 to type E, and 1 to type D. The color varies from an extremely bright, hard whiteness that characterizes the five seed beads to a grayish white that is perhaps more typical of this category as a whole. The largest white beads belong to type E and average approximately 8 mm. in length. Of particular interest is the single milk-white bead belonging to type D. It was apparently cut from a hexagonal cane and is 1.5 cm. in length and 3 mm. in diameter.

The blue beads show the greatest variety of shapes and can be grouped into the following types: 55, type A; 29, type B; 18, type E; 8, type G; 6, type c; and 1, type F. There are nine seed beads, but a

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great many more are just a little larger than the seed bead as defined above. The color ranges from an extremely deep marine blue to the very light blue that characterizes the beads of the seed form. The largest blue beads, some measuring as much as 7 mm. in diameter, belong to type B with the exception of the single type F specimen. Of greatest interest, however, are the eight faceted beads, all a deep marine blue, and all averaging approximately 6 mm. in length with corresponding diameters. These beads were cut from a hexagonal cane, and the facets appear to have been made by rubbing each bead against some abrasive object to create a number of irregular facets over the entire surface (Woodward, 1959, n.p.; 1960, n.p.).

The eight white-lined red beads all belong to type A and uniformly have dark, translucent, orange-red exteriors and opaque white interiors. This is a variety of the famous "Cornaline d'Aleppo" bead, the significance of which will be discussed later.

Three green beads, all belonging to type A, are of a uniform dark green color. One is quite large, measuring 7 mm. in diameter, and is more round than the others.

Of the seven dark-green-lined red beads, three belong to type A and four to type B. All have an opaque, dull, reddish brown exterior and a translucent dark green interior which is so dark as to appear on casual inspection as black. This is another type of "Cornaline d'Aleppo" bead.

The two yellow beads are about as different as any two beads could be. One is a bright yellow seed bead of the usual type A shape, while the other is a unique, multifaceted translucent specimen belonging to type H. This bead, which is thick in the center and tapers abruptly toward each end, has 23 separate facets and is the most intricate specimen in the collection.

The red beads, of which there are seven belonging to type A, are really more of a wine color and are all translucent.

Two interesting and unusual beads are blue-lined white with alternate green and purple stripes painted on them. These stripes appear to have been applied with a fine tipped brush, a delicate task since both specimens are only slightly over 2 mm. in diameter.

Of the 20 black beads, 14 belong to type A and 6 to type B. There is one seed bead of the latter type, but the others are not distinguished by any unusual characteristics.

Glass beads were assigned definite trade values by the trader or fur company dealing with a particular group or tribe. The beads themselves were sent into the field packaged in different ways. Some were sold in bulk, by the pound, and were shipped in casks, barrels, or boxes, while others were strung. Stringing was particularly true of the smaller varieties. The larger varieties were used in necklaces Tf

and for other objects of personal adornment, or were sewn as fringes on garments. The small varieties, particularly the seed type, were intended for sewn beadwork designs. Today only seed beads are sold to the Indians and Eskimos of Alaska and, as previously mentioned, these come packaged in glass tubes.

From a diagnostic standpoint, the most important type of bead in the collection is a form known to the trade as "Cornaline d'Aleppo," so named because it was associated in the Italian export business with the city of Aleppo in Syria. This type of bead is found widely distributed throughout the North American continent and was particularly popular among Indians who traded at the Hudson's Bay Company posts. In fact, this type of bead became known as "Hudson's Bay beads" in regions covered by the Company, and it is probable that independent traders helped to popularize this form in areas peripheral to the Company's posts (Orchard, 1929, p. 87; Woodward, 1959; 1960).

The dark-green-lined red "Cornaline d'Aleppo" is apparently the earliest type and occurs extensively on sites of the 17th and 18th centuries in the Eastern United States and Canada. The white-lined red form is thought to be a more recent type, and at least one authority believes that beads of this kind were confined to the northwestern trade (Orchard, 1929, p. 87). Watkins examined white-lined red beads from the Taral site but was only able to say that the type occurs fairly early in the contact period in the northern Great Plains area (VanStone, 1955, p. 122). It seems likely that both forms of "Cornaline d'Aleppo" bead were introduced into Alaska after extensive use elsewhere in North America, but the exact time of their appearance cannot be determined without further detailed research.

Another type of bead from the Crow Village collection that deserves special attention is the faceted deep-marine-blue bead. The question that arises is whether these are examples of the so-called "Russian beads" which have been found on Russian sites in Alaska as well as along the coast of British Columbia and as far south as Washington and Oregon. Woodward (1959; 1960) has noted that these beads are called "Russian" in spite of the fact that original packages wrapped in gray paper and marked "Brussels" were found unopened in a warehouse of the Russian-American Company at Sitka in 1867. Blue faceted Russian beads are generally large and covered with many small facets, which would make them both larger and more ornate than the Crow Village specimens. This was certainly true of examples examined by VanStone in the collection of the Alaska Historical Library and Museum. On the other hand, Herrick (1957, pl. 5, 51) illustrates blue faceted beads that are identical to the Crow Village specimens, and these were purchased from Indians at Skagway.

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By way of summary, it can be said that although precise dating of the beads from the Crow Village site is not possible, they presumably represent a late 19th-century assemblage of European- and Syrian-made beads, most of which were used extensively in the North American trade before being introduced into Alaska. At the same time, it is at least possible that the blue faceted beads can be identified as a specific aspect of the Russian trade and would therefore belong to the period of early contact at Crow Village, a phase which terminated in 1867.

METAL

Objects of metal form a large and important category of imported manufactured goods from the Crow Village site. For guidance in describing and analyzing these materials, particularly the nails, tin cans, and metallic cartridge cases, we relied heavily on the chapter concerning metal artifacts in Fontana and Greenleaf (1962). The reader is referred to this pioneer study in 19th-century historical archeology for informative background material concerning the manufactures described below.

NAILS

Considering the abundance of metal objects in the collection, it comes as something of a surprise to find that only 18 nails were recovered. Twelve of these are modern wire nails, the common variety in use at the present time. About 1855, machines were invented in France to make complete wire nails automatically. A few of these were exported to the United States but soon were replaced by similar machines of American manufacture. By about 1890, machine-made wire nails were outselling cut nails, and by 1900 the latter type was made only for special purposes (Fontana and Greenleaf, 1962, p. 55). All of the wire nails from the site were found embedded in pieces of cut wood, probably parts of crates or boxes.

The remaining six nails from the site are of the square cut variety, and each one is a different size. Four are corroded heavily, and five show indications of having been clinched. The six sizes, expressed in pennyweights, are as follow: 2d (pl. 14, j); 3d (pl. 14, i); 5d (pl. 14, h); 7d; 10d; 30d. The square cut nail was invented by a New Englander in 1775, and until about 1810 these nails were headed by a single hand-driven hammer blow. Between 1810 and 1830 machines for making square cut nails were perfected until they could produce a nail that was uniformly cut and headed. A final innovation in the square cut nails were heated and then slowly cooled to soften and toughen them at the same time, thus enabling them to be clinched without rupturing. Fontana and Greenleaf believe that any cut