COMMENTS

Reconsidering the Precolumbian Presence of Venetian Glass Beads in Alaska

Elliot H. Blair

In a recent article, Kunz and Mills (2021) report 10 drawn, a speo *finished, turquoise blue, IIa40 beads manufactured in Venice and recovered from three late precontact sites in the Alaskan Arctic. They argue that these beads date to the fifteenth century, predating Columbus's arrival in the Americas. This conclusion is certainly in error because beads of this type were not manufactured prior to approximately AD 1560. The historical and archaeological evidence for this dating is substantial. Additionally, the elemental and radiocarbon evidence presented by Kunz and Mills (2021) supports a late sixteenth- to early seventeenth-century date for these beads.*

Keywords: Alaska, Venice, glass beads, radiocarbon, chronology, instrumental neutron activation analysis

En un artículo reciente, Kunz y Mills (2021) reportan 10 cuentas trazadas azules turquesa, de acabado a speo y tipo IIa40, fabricadas en Venecia y recuperados en tres sitios del pre-contacto tardío en el Ártico de Alaska. Argumentan que estas cuentas datan del siglo XV, previo a la llegada de Colón a las Américas. Esta conclusión es ciertamente errónea ya que las cuentas de este tipo no se fabricaron antes de aproximadamente el año 1560 d.C. La evidencia histórica y arqueológica de esta datación es sustancial. Además, la evidencia elemental y de radiocarbono presentada por Kunz y Mills (2021) respalda una fecha de finales del siglo XVI a principios del XVII para estas cuentas.

Palabras clave: Alaska, Venecia, cuentas de vidrio, radiocarbono, cronología, análisis poractivación neutrónica

The recent article by Kunz and Mills (2021) is a welcome contribution to the limited literature on the early circulation of glass beads into Alaska. Unfortunately, the interpretations presented by the authors are not supported by either the historical and archaeological record or their own data. Kunz and Mills (2021) argue that 10 drawn, *a speo* finished, turquoise blue, IIa40 beads recovered from three sites in the Alaskan Arctic predate Columbus's arrival in the Americas. This is impossible because beads of this variety were not manufactured prior to the mid-sixteenth century, a date well supported by historical and archaeological evidence. The elemental and radiocarbon data presented by Kunz and Mills (2021) also clearly support a late sixteenth- or early seventeenth-century date for these beads.

Kunz and Mills (2021) suggest that the historical data for the beginning of the drawn bead manufacturing industry, particularly those rounded using the *a speo* method, are unclear, and because of this ambiguity, they suggest that it is possible that IIa40 beads could have been manufactured and distributed during the early and mid-fifteenth century. This does not accurately reflect historical knowledge of Venetian bead manufacture, and the evidence is not nearly as ambiguous as they suggest. Many scholars, often writing in Italian and relying on primary documents from the Venetian archive, have documented the invention of drawn, hollow, canes for bead manufacture around 1470 (e.g.,

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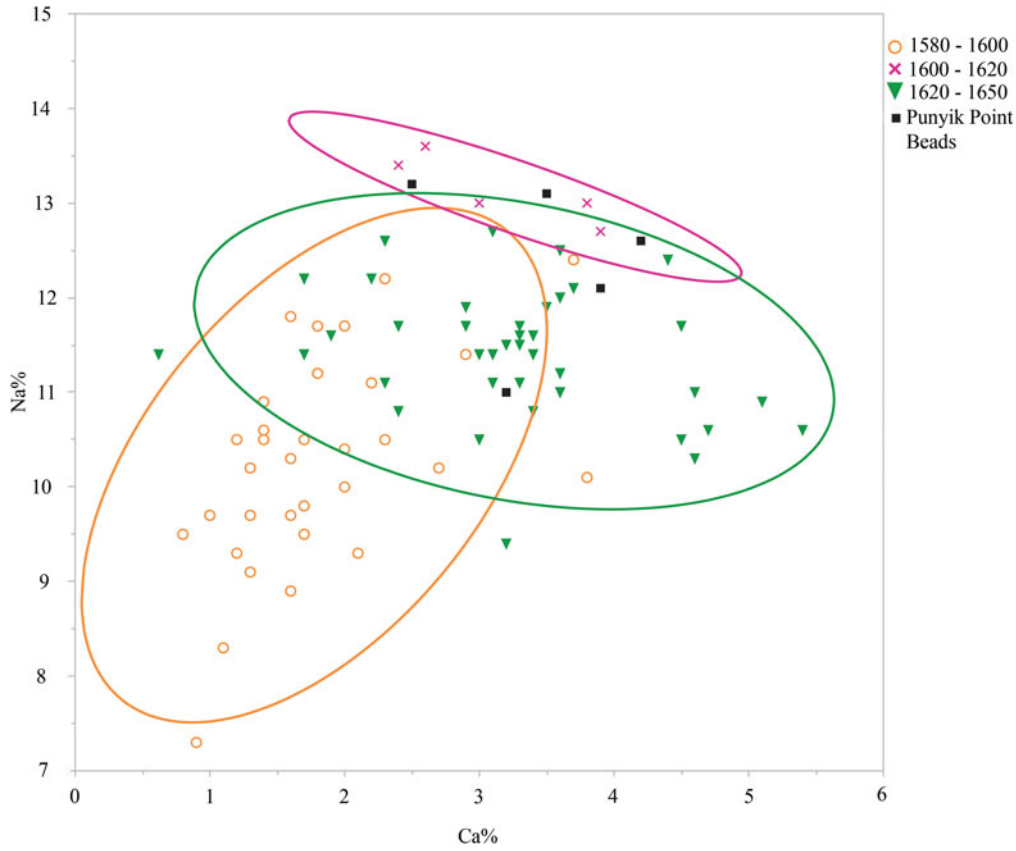

Figure 1. Biplot of Ca/Na for Alaskan IIa40 beads plotted against 95% confidence intervals for Hancock and colleagues' (1994) temporal groups. (Color online.)

Gasparetto 1958:178; Sarpellon 2010:293; Zecchin 2005:78).

This date roughly coincides with the establishment of the Paternostri guild. Although during the seventeenth century this guild manufactured drawn glass beads finished by the *a speo* method, during the late fifteenth century and much of the sixteenth century, the products of this guild were primarily finished by grinding. This is well supported archaeologically, with fifteenth- and sixteenth-century manufacturing debris from the Venetian lagoon and nearby locales (Bailo 1903; Moretti 2005) as well as by the types of beads circulating in the earliest colonial trade in the Americas (Smith 1983; Smith and Good 1982). In both contexts, pre-1560 beads were finished by grinding, and evidence for beads being finished using the *a speo* method is absent. It is only after approximately 1560 that we first see IIa40 beads, possibly finished with the *a speo* method, appearing in the archaeological record (Smith 1983). Indeed, the combined archaeological and historical evidence for the earliest date of manufacture for this bead type is quite strong, and considerable evidence would be needed to contest it.

The compositional and radiocarbon data presented by Kunz and Mills (2021) do not rise to this mark, and in fact, their reported elemental data are consistent with early seventeenth-century recipes, supporting a date of approximately 1600–1650 for the Alaskan beads. Compositional recipes for IIa40 beads in North America dating to roughly 1580–1650 (and later) have been extensively documented by Hancock and colleagues (1994; Kenyon et al. 1995). Figure 1 compares the sodium and calcium (temporally significant elements) concentrations of the Alaskan data

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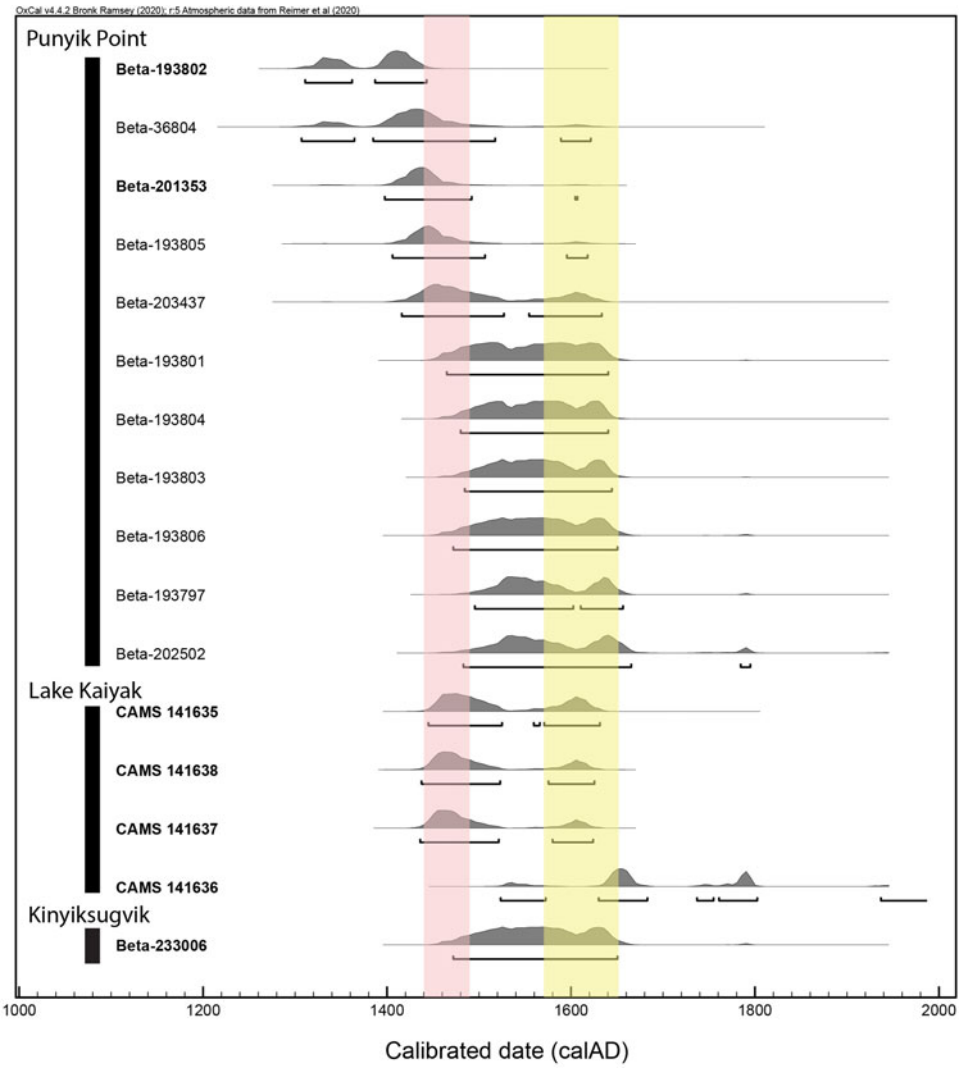

Figure 2. Calibrated (IntCal20) radiocarbon dates from the late precontact occupation of Punyik Point (Kunz 2005), Lake Kaiyak (Shirar 2011), and Kinyiksugvik (Kunz and Mills 2021). Dates in bold are those reported by Kunz and Mills (2021). The right (yellow) column reflects the likely production dates (ca. 1570–1650) for the Alaskan IIa40 beads based on combined historical, archaeological, elemental, and radiocarbon evidence. The left (pink) column indicates the dates proposed by Kunz and Mills (2021). (Color online.)

to the early compositional groups defined by Hancock and colleagues (1994). Three of the Alaskan beads fit comfortably within the 1600–1620 grouping, whereas the other two match the 1620–1650 cluster. Although it is unfortunate that the authors chose to use INAA for their analyses, due to the limited number of elements detected and the poor resolution of others, the suggestion of an elevated tin content for these beads—and the absence of antimony and arsenic—indicates that all of these beads were opacified with a lead-tin compound and that they date to the seventeenth century or earlier (Walder 2018). In addition, the generally low copper content and slightly elevated manganese content of the Alaskan beads is a good match for Hancock and colleagues' (1994) seventeenth-century sample, and it is completely inconsistent with earlier beads.

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Perhaps more problematically, the radiocarbon dates associated with the Alaskan IIa40 beads do not support a fifteenth-century date. All of the dates reported by Kunz and Mills (2021), except the earliest of the Punyik Point (49-XHP-00308) dates (Beta-193802), have multiple intercepts with the calibration curve, including early seventeenth-century intercepts that match the later archaeologically and historically documented production dates for these beads. Kunz and Mills (2021) place great weight on the two reported Punyik Point dates, but both are problematic. The earliest date (Beta-193802) is far too early to be acceptable for dating the beads, and it is almost certainly an example of the old-wood problem. Kunz and Mills (2021) acknowledge this, but they are too dismissive of this well-known issue in radiocarbon dating on Arctic sites (Anderson and Feathers 2019). The second Punyik Point date (Beta-201353)—although it also has an acceptable, but small, seventeenth-century intercept—is equally problematic. Much of their analysis hinges on the close association between this sample of "vegetal twine" and one of the IIa40 beads. This date, however, has previously been reported as a sinew sample (Kunz 2005:106, Table 1). If the earlier sinew identification were correct, then a marine mammal, perhaps seal, origin could be possible, and marine reservoir corrections would be needed (Ledger and Forbes 2020). With competing identifications of this material, more information is needed to assess the reliability of this date.

Both problematic dates, however, are also inconsistent with the larger assemblage of late precontact dates that have previously been reported from Punyik Point (Kunz 2005). Although the authors report only radiocarbon dates in close association with the glass beads, Kunz (2005) previously reported nine additional dates from the late precontact component at Punyik Point, all of which have calibration probabilities in the late sixteenth and early seventeenth centuries—consistent with the archaeological and historical evidence for the production and circulation of IIa40 glass beads (Figure 2). This later dating of Punyik Point is also consistent with previous interpretations of the site (Kunz 2005:107, 2009:325) and with the dating of the other two Alaskan sites with IIa40 beads (Gilbert-Young 2004; Shirar 2011).

In sum, the historical, elemental, and radiocarbon evidence all indicate that these beads most likely date to the early seventeenth century. It is unfortunate that Kunz and Mills (2021) rely on two problematic radiocarbon dates to postulate an untenably early date for these artifacts, when the accurate dating of these artifacts is still a fascinating story. As Kunz (2005:107) previously observed, the latest occupation of Punyik Point was likely around AD 1620—more than 100 years before contact between Alaska Natives and Europeans. The itineraries of these objects are still amazing, even without hypothesizing a precolumbian origin.

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