Pipes and Smoking in Pre-Contact Pacific Northwest North America

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Abstract

Smoking has been practiced by native peoples throughout the inland Pacific Northwest—and especially along the Columbia and Fraser River systems—for several millennia. This is evidenced by the presence of stone pipes and pipe fragments in sites across the region. This paper presents the spatial and chronological distribution of archaeological smoking pipes throughout the inland Pacific Northwest based on literature and database searches, with a particular focus on those collections held or formerly held by the Washington State University Museum of Anthropology. Additionally, the results of chemical residue analyses determining the material smoked in a number of pipes and pipe fragments from sites spanning the region will be reviewed, including the results of new testing by the authors. The research, developed in collaboration with indigenous communities in the USA and Canada, sheds light on the practice of smoking in the past and addresses questions relating to pipe form and distribution and the traditional use and management of smoke plants throughout the Pacific Northwest.

Ethnographic and Historical Background

- A variety of plants were smoked by groups throughout the Pacific Northwest of North America (Kroeber 1941; Figure 1).
- Some Inland Plateau groups had access to local tobacco, especially along the middle Columbia and the Fraser River (Kroeber 1941).
- Coastal peoples used plant materials to construct pipes, so evidence of pre-contact smoking in these places is elusive.
- Ethnographic evidence is supported by the accounts of Europeans in the early post-contact period such as botanist David Douglas, whose notes and samples allow us to confidently conclude that the preferred smoking plant of the Inland Northwest was Nicotiana quadrivalvis, known as Native or Indian Tobacco (Nisbet 2003).

Smoking Pipes in the Archaeological Record

- Stone pipes are an uncommon, if not exceedingly rare, artifact class in the Pacific Northwest.
- Pipestone varies from fine cutaneous slate to more robust ground sedimentary stones, especially those of finer grain size.
- To better understand the spatial and temporal distribution of pipes in this region, an extensive literature search (using Hayden and Schulting 1997 as a starting point) was also as a methodical search of the collections databases of the Washington State University Museum of Anthropology (WSU MoA) and the Reciprocal Research Network were undertaken.
- Stone pipes almost exclusively occur west of the Cascade Range and are concentrated along the major rivers of the region (Figure 2). This may be an artifact of sampling bias, as the Columbia River system was extensively surveyed during the construction of Washington’s dam network last century.
- The oldest archaeologically collected pipes in this region come from the Cox’s Pond (45SD172) site in central Washington, which is dated to 4418 – 4630 cal BP (example on right). Pipes seem to become more common in late pre-contact periods.
- Radiometric dates associated with the pipes we analyzed for residue indicate the long history of tobacco smoking in the region (Table 1).

Results and Conclusions

- One of the twelve tested specimens (see right) contained nicotine. This is a complete siltstone pipe from a site near Moses Lake in Grant County, Washington.
- A number of other nicotine-negative specimens contained other metabolites shared with nicotine species, suggesting that they also may have been used to smoke tobacco.
- The results of the residue study allow us to conclude with confidence that people in the middle Columbia region were smoking tobacco as early as c. 1420 cal BP.
- Further methodological refinements will hopefully allow for species level determinations about nicotine. This question is of interest in this case as the historically attested preferred tobacco variety, N. quadrivalvis, was managed to extend its range northward into this region from California. Identifying its use in the past would shed light on the time depth of plant management practices.

Table 1. Radiocarbon Dates Associated with Pipes Analyzed for Residue

<table>
<thead>
<tr>
<th>Site/Specimen Code</th>
<th>Reported Date</th>
<th>Calibrated Date (2σ)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>45SD172-Post1</td>
<td>4030 ± 40 BP</td>
<td>4418 – 4509 cal BP</td>
<td>Gaim and Kosen 2012</td>
</tr>
<tr>
<td>45SD172-Post10</td>
<td>4060 ± 40 BP</td>
<td>4432 – 4630 cal BP</td>
<td>Gaim and Kosen 2012</td>
</tr>
<tr>
<td>45GQ72-198</td>
<td>1520 ± 40 BP</td>
<td>1334 – 1524 cal BP</td>
<td>Pouley 2001</td>
</tr>
<tr>
<td>45GQ72-196</td>
<td>1390 ± 70 BP</td>
<td>1176 – 1416 cal BP</td>
<td>Pouley 2001</td>
</tr>
<tr>
<td>45GQ72-224</td>
<td>805 ± 60 BP</td>
<td>657 – 803 cal BP</td>
<td>Pouley 2001</td>
</tr>
<tr>
<td>45GQ60-1988</td>
<td>884 ± 66 BP</td>
<td>693 – 922 cal BP</td>
<td>Obtained for this study</td>
</tr>
<tr>
<td>45GQ60-1574</td>
<td>670 ± 52 BP</td>
<td>549 – 687 cal BP</td>
<td>Obtained for this study</td>
</tr>
</tbody>
</table>

Scores calibrated against the IntCal13 curve (Reimer et al 2013) using CALIB rev 5.0 (Stuiver et al. 2005).