PROGRESS REPORT FOR AINGRA09029

PROJECT TITLE
Dating the Earliest Cypriot Copper Exports in the Eastern Mediterranean at Pella in Jordan

INVESTIGATOR(S)
Chief Investigator Dr Stephen Bourke
Institution and Department Archaeology, The University of Sydney
Other Investigators None beyond ANSTO colleagues.
Students Ms. Samantha Gibbins (PhD. student, USyd)
Mr. Lachlan Mairs (PhD. student, USyd)
Ms. Melissa Kennedy (PhD. student, USyd)
ANSTO Investigators Geraldine Jacobsen
Specialist Committee A

SCIENTIFIC OBJECTIVES
The scientific objective is to date securely the archaeological horizons in which an exceptionally well preserved Early Bronze Age (ca. 2800 BC) copper metal hoard was discovered at Pella in Jordan.

PROGRESS REPORT and RESEARCH OUTCOMES
The 6x C14 dates were drawn from a range of archaeological strata excavated in 2009, bracketing in time the copper hoard deposit excavated in 1995, which is the subject of the controversy. The six new dates confirm the original surmise of an early Third Millennium calBC date for the copper hoard. Indeed they strongly reinforce the original 2900/2800 calBC date, and make clear that the maximal spread cannot extend beyond 2700 calBC, which is still between 200 and 400 years earlier than the apparently earliest exported Cypriot copper previously known (see Table 1 below).

I gave a paper on this (and other) issues at the 7th International Conference on the Archaeology of the Ancient Near East (7ICAANE) at London in April 2010, and another version of the paper at the XIth Conference on the History and Archaeology of Jordan (XIth ICHAJ) at Paris in June 2010. Discussions at both conferences made it clear that the topic of early Third Millennium calBC Cypriot copper export is still controversial, but that recent evidence from Crete was suggestive of early Cypriot copper exports to that island at around 2900/2800 calBC, which is consistent with our original findings for Jordan, confirmed by the more recent 6x assays. I believe we have opened a new (and significantly earlier) window on Cypriot copper export to the outside world, which will call into question several key elements in current formulations on Cypriot socio-economic developmental scenarios. In the wider world, our findings will become a key datum in the ongoing reassessment of when and with what drivers the first 'Age of Internationalism' began.

Several conference papers are currently being drafted on the significance of the recent C14 data. We envisage first publication in Radiocarbon, following up earlier related work there (Bourke et al. Radiocarbon 2009), and several conference proceedings, which will emerge over the next couple of years.

DATA

Table 1: Six New C14 Dates from Early Bronze Age Pella in Jordan

<table>
<thead>
<tr>
<th>ANSTO</th>
<th>Sample</th>
<th>Submitter ID</th>
<th>13C</th>
<th>%Mod Carbon</th>
<th>Age BP</th>
<th>Age Cal BC</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>OZM235</td>
<td>Legumes</td>
<td>2009/1 Pella</td>
<td>XXXIVE 115.4</td>
<td>-23.5</td>
<td>57.74</td>
<td>4410 ± 50</td>
<td>3097-2927BC (99%)</td>
</tr>
<tr>
<td>OZM236</td>
<td>Cereals</td>
<td>2009/2 Pella</td>
<td>XXXIVE 115.2</td>
<td>-22.8</td>
<td>58.06</td>
<td>4370 ± 40</td>
<td>3018-2919BC (100%)</td>
</tr>
<tr>
<td>OZM237</td>
<td>Cereals</td>
<td>2009/3 Pella</td>
<td>XXXIVE 111.5</td>
<td>-25.1</td>
<td>59.22</td>
<td>4210 ± 45</td>
<td>2894-2700BC (100%)</td>
</tr>
</tbody>
</table>

Date electronic copy received at AINSE: 20 August 2010
OZM238  Cereals 2009/4  Pella XXXIVB 204.4  -23.0  57.14  4495 ± 50  3337-3101BC (100%)
OZM239  Cereals 2009/5  Pella XXXIVB 60.2  -22.3  52.33  5200 ± 45  4041-3969BC (100%)
OZM240  Cereals 2009/6  Pella XXXIVF 51.23  -22.6  53.94  4960 ± 40  3781-3695BC (100%)

Signature of Investigator preparing the report for
After signing this report please fax this page with your signature for our files

Proj: AINGRA09029
Date: 20/8/10

PUBLICATIONS / REPORTS arising as a result of your work.

No publications have as yet occurred in connection with AINGRA 09029. Several conference papers (London 7ICAANE, April 2010 and XIth ICHAJ, June 2010) have been delivered on the significance of the new dates. These and several other papers are currently being written up for conference proceedings and research journals.

PhD STUDENTS

