Handling Uncertainties in Legacy Site Data

The strange case of the Hidden Landscapes database

Martijn van leusen
Groningen Institute of Archaeology

CAA-NL/DE 2012 chapter meeting
Hidden Landscapes: assessing the archaeological record of the Monti Lepini

Extensive studies of the archaeological record of the Pontine Plain and the Alban Hills had been conducted, but little systematic study of the mountainous hinterland. The Hidden Landscapes Project (2005-2010) set out to remedy this.

On the basis of a preliminary study of landscape types, three study areas (A-C) were selected for detailed mapping of Land Classes / Erosion Response Units, and surface archaeology.

As part of this work, a desktop study of legacy site data was conducted for the whole mountain area.
Uncertainties in site location, date and type

PRP 11793

Toronym: Lubro (near Roccamassima)
Coordinates: X 328102, Y 4615884
Location: R, gentle slope
Research history: Brandizzi Vittucci (1968, site 193) describes a large area with a lot of tile fragments and many, mainly depurated, pottery fragments. GIA visits in October 2007 (u1274 and u1280-1288) extended the site as mapped by her southward, extending the date range for the site both to the archaic period and the post-Roman period. However, the site may have been incorrectly mapped by Vittucci, in which case it may be almost identical to the one identified by GIA in 2007.

Finds assemblage: tile (incl. archaic fabric); archaic impasto; dolium (incl. archaic fabric); amphora; ICS; coarse and depurated wares (incl. archaic fabric); TS.

Remarks: Vittucci’s tentative identification with ‘Ulubrae’ (based on the toponymic ‘Lubro’) seems unlikely as the archaic site appears to be too small. Giannini (2006, site 144) reports an adjacent relatively flat area of numerous finds (tile, CW, some BG and depurated pottery) c. 200 m to the north-west which he identifies with the Vittucci site, and suggests the area was used for habitation and farming in the Mid- and Late Republican period; it then continues in more modest form during the early Imperial period. The site has been registered in the Latina inventory under 59021_2.

Interpretation: habitation starts in the archaic period (impasto and dolium), grows into a village in the Republican period, and continues in a more modest form into the early Medieval period (6th century).
Aims and scope

• **Aims**
  – To record modern and legacy site data together in a single database,
  – With explicit quality attributes for location, type and date
  – And with explicit interpretations,
    • For example: [MvL, on 13 November 2011, believes that site 11763 is probably of type ‘fattoria’ in the Late Republican period]
  – Usable for analysis of regional settlement history

• **Scope**
  – Sites of the Monti Lepini region (south Lazio, Italy) as recorded by the Hidden Landscapes Project
Second-guessing attribute quality

Source
(x, y, …)

Site
(1, 2, …)

Assessor
(A, B, …)

timestamp

spatial precision
period precision
type precision

location
period
type

precision
precision
precision

Spatial R
Chrono R
Typo R
Assessing general reliability parameters

The reliability of the site descriptors is recorded in the data structure by means of the three parameters R\_spatial (location, in meters), R\_typo (type/function), and R\_chrono (period).

- R\_spatial is based on information about the field mapping method used, and the scale and mode of publication. For example, in the Italian ‘topographic’ tradition site locations are typically recorded on 1:25,000 scaled maps, with an associated error of about 50m. If the 1:10,000 scale *Carta tecnica* was used, the error is reduced to 25m; if a single receiver GPS unit was used before 2004 the error is typically less than 10m, and after the addition of WAAS it is less than 5m. In the worst cases, where sites are only located by map toponym, the error can be as large as 250m.

- Most older, and many recent, publications of site catalogs do not provide good definitions of their site types. Different sources may apply different definitions to the same site type, or no definitions at all; some consciously refrain from assigning site types. Older sources typically only recognise sites that have obtrusive remains (standing architecture, dense surface scatters). Amateurs tend to assign ‘romantic’ site types. For this reason we have chosen to re-assess all legacy typological assessments.

- R\_chrono: dating quality depends on how much formal training the source has received, when the dating was done (e.g., before or after the publication of ARSW by Hayes ca 1970), and on the quality of the field research. Amateurs tend to assign dates unsupported by evidence. Non-intensive field research and limited knowledge of the materials leads to non-recognition of pre- and late Roman remains especially (proto, Arch, pArch, m/l-Imp en post-Rom). Sources with a specific expertise tend to ignore or under-use evidence for other periods.
## Source Reliability

<table>
<thead>
<tr>
<th>source_code</th>
<th>source_full</th>
<th>chrono_R</th>
<th>spatial_R</th>
<th>typo_R</th>
</tr>
</thead>
<tbody>
<tr>
<td>HL'06-'09</td>
<td>Van Leusen 2010. Hidden Landscapes field locations (GPS); dates by CA and GT</td>
<td>high</td>
<td>10</td>
<td>high</td>
</tr>
<tr>
<td>MC</td>
<td>M Campagna 1983</td>
<td>low</td>
<td>250</td>
<td>medium</td>
</tr>
<tr>
<td>MvL</td>
<td>date or type assigned on the basis of evidence presented by the primary source</td>
<td>high</td>
<td></td>
<td>high</td>
</tr>
<tr>
<td>SDF</td>
<td>Del Fabro n.d.</td>
<td>high</td>
<td>100</td>
<td>high</td>
</tr>
</tbody>
</table>
Site table with ‘phasetypes’

<table>
<thead>
<tr>
<th>PRP_ID</th>
<th>Toponym</th>
<th>spatial R</th>
<th>Phase_certainty</th>
<th>Phase_code</th>
<th>Phase_source</th>
<th>Type_certainty</th>
<th>Type_code</th>
<th>Type_source</th>
</tr>
</thead>
<tbody>
<tr>
<td>11652</td>
<td>S. Angelo BV68-52</td>
<td>0</td>
<td>possible</td>
<td>6000</td>
<td>possible</td>
<td>320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11653</td>
<td>S. Angelo BV68-53</td>
<td>0</td>
<td>possible</td>
<td>6000</td>
<td>possible</td>
<td>320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11730</td>
<td>Colle Iucci BV68-130</td>
<td>0</td>
<td>possible</td>
<td>6000</td>
<td>possible</td>
<td>320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11731</td>
<td>Colle Iucci BV68-131</td>
<td>0</td>
<td>possible</td>
<td>6000</td>
<td>certain</td>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11736</td>
<td>Costa di S. Nicola BV68-136</td>
<td>0</td>
<td>possible</td>
<td>7200</td>
<td>probable</td>
<td>900</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>possible</td>
<td>6200</td>
<td>probable</td>
<td>900</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>probable</td>
<td>6000</td>
<td>certain</td>
<td>410</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>certain</td>
<td>6000</td>
<td>probable</td>
<td>135</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11737</td>
<td>Casale Buzzia BV68-137</td>
<td>0</td>
<td>probable</td>
<td>6000</td>
<td>certain</td>
<td>440</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11771</td>
<td>Colle Medico BV68-171</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11774</td>
<td>BV68-174</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11775</td>
<td>Colle Perunio BV68-175</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Querying the site database