Excavation Methodology and Field Procedures

CHRISTINE A. HASTORF AND MATTHEW S. BANDY

In the 1996 field season, we exposed broad, previously unexcavated areas of the site in order to better understand the amorphous and complex soil deposits we had found in the 1992 field season. The areas we excavated were marked out with the units designated by their southwest corner, based on the same grid system used in the surface collection of the site. Each excavation unit begins with an arbitrary 2 by 2 m unit at 10 cm deep but switched to culturally defined areas as soon as soil matrix changes were visible. Some units have odd numbers due to a lack of theodolite access at certain times during the early excavations. All excavated soil was passed through a .635 (1/4” mesh) screen in measured buckets of 10 liters, except for the soil collected as a flotation or the archival soil (pollen-phytolith-archive) samples, both plotted on each locus excavation plan. In 1996, every tenth bucket of soil was passed through a .32 cm (1/8” mesh) screen to gain a subsample of the smaller animal bone and lithic debitage. All excavated soil is therefore measured volumetrically, allowing us to calculate the density of the artifacts within each excavated locus across the site. All artifacts were bagged and tagged (and washed) by artifact type. These artifacts are currently stored in the Tiwanaku regional museum under the auspices of the Dirección Nacional de Arqueología y Antropología (DINAAR), the official Bolivian archaeological commission. Each artifact type is processed differently post-excavation. The ceramics are soaked to extract the salts and then washed in the field. All of the lithics and the bone are also washed in Chiripa. Ceramics that had any evidence of organic encrustation are set aside and scraped to collect the organic remains before washing. All complete artifacts are photographed, all diagnostic ceramics drawn. Large and prehistorically sealed ground stone was washed using distilled water, with all of the sediment captured for pollen analysis.

We conducted water flotation soil processing to collect a systematic sub-sample of charred plants, micro-fauna, and other small artifact types. Our flotation methods included collecting at least one standard-sized soil sample from every excavated locus. Field excavators were instructed to
These matrices therefore define a visibly determinate sequence of past events. Appendices 1-3 display the three main area matrices from the 1996 excavations. On the form of each locus, we always described the soil of each excavation locus, often taking both color and black-and-white photographs. The locus is to be distinguished from the stratigraphic event, which is a unit of stratigraphy. The stratigraphic event is a natural property of the matrix, resulting from the processes by which the site was formed. Events were labeled by area of the site, such that all D-events are from the mound area, B-events are from Santiago, and A-events are from Llusco. The locus, by contrast, is an archaeological unit of provenience, formed by the manner and sequence in which the site is excavated. Ideally, each locus should belong to only one stratigraphic event, although stratigraphic events can contain many (or no) loci. An event is a unit of homogenous soil linked to an activity or process; for example, an ash lens, an intentional fill level, a floor, or the cut of a pit or of a foundation trench. Stratigraphic events occurred in the past in a particular and determinate sequence. One of the primary goals of our excavation was to reconstruct this sequence.

Reconstruction of a detailed stratigraphic sequence allows for fine chronological control, as well as a more detailed understanding of the processes, both natural and cultural, that are responsible for the formation of the site as it exists today. Features were also assigned when identified. We define a level by culturally visible changes in the deposits. We use the term architectural sub-division (ASD) for an architectural feature such as a structure. These identities are all recorded on every appropriate locus form and on our database. While analysis occurs at the locus level, interpretation is at the event level.

Micromorphology samples were collected occasionally in vertical columns as intact solid blocks of soil approximately 20 x 10 x 10 cm. Such soil thin section analysis can present an in situ and detailed view of the soil matrix found in archaeological sites with more specific views of what was laid down as well as the conditions of its deposit (see Goodman below, chapter 10). A series of micromorphological soil profiles were collected from the excavations at the Montículo, Santiago, and Llusco areas. Additional off-site "natural" samples were collected as controls.

**Stratigraphic Organization of the Excavations**

To build a sequence of past events, and therefore a Harris Matrix of every excavation area, we use the term locus to denote the smallest visibly defineable and excavated unit (Harris 1979). Each locus represents an action in the past. These matrices allow us to stratigraphically reconstruct the sequence of past events.