or were those crafts carried out by different households in this ward or neighborhood at the edge of the site? That question would take excavation to unravel.

## 2.2. The Importance of Domestic Units in Mesoamerica

The household was an important Mesoamerican institution that had long-term durability (Kowalewski and Heredia 2020). This durability of domestic units was documented decades ago in the Maya Lowlands by stratigraphic excavations of houses that exposed long sequences of rebuilding and other activities carried out over time on the same spot (e.g., Willey et al. 1965). The same pattern was observed in excavations of Formative period houses in the Valley of Oaxaca in the late 1960s–1970s (Drennan 1976; Flannery and Marcus 2005; Whalen 1981). Generally, throughout the prehispanic era (Early Formative through the Postclassic period), household units were small, consisting of a nuclear family, although larger households did develop in some times and places (Kowalewski and Heredia 2020). These households were the principal units of production and consumption in prehispanic Mesoamerica (Hirth 2009a, 1).

Prior to our excavations in Ejutla in the early 1990s, most houses excavated in the Valley of Oaxaca dated to the Formative period (Drennan 1976; Flannery 1976a; Flannery and Marcus 2005; Whalen 1981; Winter 1972). The early house was a small, rectangular, one-room structure with a hard-packed earthen floor and walls built with wattle and daub, typically 15–25 m² in size (Flannery 1976b; Winter 1976a). Outdoor workspace surrounding the house comprised a range of features, including storage pits, hearths, ovens, activity areas, household middens, and burials, all within an area of 300–400 m² (Flannery and Marcus 2005, 34; Winter 1976a). These residential spaces were generally separated from each other by 20–40 m of open space (Winter 1976a).

Three Classic period houses excavated in a residential area north of the Main Plaza at Monte Albán had a different plan (Winter 1974). The houses, located on separate terraces and spaced approximately 25 m apart, had stone foundations and walls of adobe, with small rooms enclosing three or four sides of a central, square patio with a plaster floor. The deceased were often interred inside the house, typically in small tombs under the floor of one of the rooms or under the patio. Are these the patterns we would find in a Classic period residence in Ejutla, far from the capital?

Inspired by the survey findings at Ejutla, we returned to the site to excavate houses and examine household activities, not just the crafting of shell ornaments. Over four field seasons (1990–93), we excavated a small Classic period residence of intermediate status and its immediate surroundings, where we documented multicrafting by one household, but we were blocked from uncovering the entire house by adjacent modern house lots that limited

the expansion of our excavations. And finding additional intact ancient houses in the heavily plowed fields (we did not find the house until the third year of the project) would be time-consuming.

During the regional surveys in both Oaxaca and Ejutla, we had mapped many hilltop sites where the ancient inhabitants had artificially flattened the slopes and constructed stone retaining walls to create flat spaces on which to build their houses. These sites are generally far from contemporary villages and have suffered less destruction from modern activities, such as heavy plowing. We often could see stone foundations and other remains of residential structures, and surface evidence of various craft activities was not uncommon. Terrace sites were a common form of settlement in Oaxaca, especially during the Classic period, when more than half of the population lived in one of these densely packed towns (Feinman and Nicholas 2013). The highest concentration of terrace sites was in the Tlacolula, or eastern, arm of the valley. A terrace site in Tlacolula seemed to be the ideal place to begin excavating more houses.

## 2.3. Excavations at Other Classic Period Sites in the Valley of Oaxaca

Our initial goal was to excavate a sample of houses at multiple locations to obtain household-level information on domestic activities that we could compare to Ejutla and begin to explore questions concerning the region's ancient economy (e.g., Feinman 1999; Feinman and Nicholas 2004a, 2007a, 2010, 2012). We ultimately excavated Classic period houses at three sites in the dry Tlacolula Valley, two hilltop terrace sites—El Palmillo and the Mitla Fortress-and a valley floor site-Lambityeco-in a setting more similar to the Ejutla site (see Figure 1.1). All four sites have extended occupational histories, although most of the excavated contexts pertain to the Classic period or the very beginning of the Early Postclassic period (ca. 900-1200 CE). Each site was at its apogee during the Classic period. At all four sites we excavated broad horizontal exposures to uncover complete houses and associated outdoor work and midden areas. To ensure comparability, we followed consistent field and laboratory methods and procedures (see chapter 3). At the three Tlacolula sites we recovered information that touches on many of the questions that we began investigating at Ejutla, and here we briefly describe the sites and the extent of our investigations.

El Palmillo is a large terrace site on the top and steep slopes of a rocky promontory that descends from the mountain ridge that defines the eastern edge of the Valley of Oaxaca. At its greatest expanse during the Classic period, the site's inhabitants had constructed more than 1400 terraces, most of which were residential (Feinman and Nicholas 2004b). Over a decade (1999–2008) we excavated eight houses on residential terraces spanning the bottom to the top of the hill (Feinman and Nicholas 2009, 2012; Feinman et al. 2002a). The three houses near the bottom of the hill were smaller

and had fewer rooms than other houses we excavated at El Palmillo. The three residences at the top, near the site's civic-ceremonial core, were larger and more elaborate structures. We also excavated a small ballcourt situated between two of the more palatial structures (Feinman and Nicholas 2011a). Two houses on mid-slope terraces were intermediate in size and elaboration. Location on the hill generally reflects a status gradient at El Palmillo, with houses near the top showing signs of higher status than those closer to the bottom. During the excavations we collected ample evidence of a range of economic activities, including stone working and the processing of xerophytic plants in most houses, and ceramic production in the lowest set of residences (Feinman and Nicholas 2009, 2007b; Feinman et al. 2002a, 2007; Haines et al. 2004).

The Mitla Fortress is located on a freestanding rocky butte in eastern Tlacolula, approximately 10 km north of El Palmillo. The site is known mostly for a series of tall stone defensive walls that ringed the top of the hill in the Postclassic period (900-1520 CE), but the site was more than a military redoubt. During the Classic period it was a population center, with more than 500 terraces and other residential structures (Feinman and Nicholas 2004b). Between 2009 and 2011 we excavated houses on three residential terraces, two just below the defensive walls and one farther down the slope (Feinman and Nicholas 2011b, 2012; Feinman et al. 2010). In addition to working local stone and processing fiber from xerophytic plants, the site's residents made obsidian blades from imported cores and raised turkeys (Feinman and Nicholas 2012, 241, 244; Lapham et al. 2013, 2016).

Lambityeco has long been in the regional archaeological literature following excavations at the site by John Paddock in the 1960s (Paddock et al. 1968). This large site on the valley floor in the middle of the Tlacolula arm consists of two major architectural sectors that are largely chronologically distinct, the earlier sector (Yegüih) to the east (Formative through Early Classic, 700 BCE–500 CE) and the later sector (Lambityeco) to the west (Late Classic, 500-900 CE), where Paddock excavated two palatial residences (Lind 2017; Lind and Urcid 2010). During the early work at the site salt production and ceramic production were documented as important economic activities (Lind and Urcid 2010; Payne 1970; Peterson 1976). We worked at Lambityeco in 2013–16, excavating a residence and associated ballcourt, plaza, and temple in the main civic-ceremonial core of the site (Feinman and Nicholas 2016b, 2019a; Feinman et al. 2016), just south of the two palaces excavated by Paddock. We recovered relatively few stone or ceramic artifacts or features associated with productive activities; an exception was a cluster of large jars in the earliest surface of the residence that were likely used in salt production (Feinman et al. 2016). Instead, most of the material remains were associated with ritual activities, including incredible quantities of figurines and whistles and large ollas and serving vessels. Based on the modest size and layout of the residence, we suspect that its occupants were functionaries associated with ritual activities, perhaps low-level priests (Feinman and Nicholas 2019a; Feinman et al. 2016).

As we expanded our corpus of information on the material record from Classic period houses in the Valley of Oaxaca, we gained additional insights that sharpened our interpretations of economic activities at Ejutla and, more broadly, the prehispanic economy. Throughout the remaining chapters, we bring in material findings from El Palmillo, the Mitla Fortress, and Lambityeco as they are relevant. For some comparisons, the findings at sites where we excavated more than one house are presented as averages.

The construction of a corpus of domestic units for Classic period Oaxaca provides an analytical lens into domestic variability and the implications that diversity has on political and economic relations at scales larger than the household.

## Research Program and Field Methodology

The questions we had about shell working at Ejutla were many, from more specific ones—what kinds of ornaments were made, how was the shell processed, what shell species were used, when did this activity take place—to broader ones about context and scale—were the production locale(s) residential, was there a division of labor between households, how was the shell procured, were ornaments made for local use or for broader networks of exchange? To answer these questions, we implemented a three-stage investigatory plan that was carried out over four field seasons (1990–93): surface collection, test pits, and large-scale horizontal excavations.

## 3.1. Exploratory Field Season

The first field season (July–August 1990) was largely exploratory (surface collection and test pits), to produce a detailed map of the shell-working area, to collect surface information on spatial variability in shell and other artifact distributions, to gather subsurface evidence of shell ornament production, to gain a preliminary chronological assessment of this activity, and to gauge the stratigraphic integrity of the area of surface shell and its suitability for large-scale excavations (Feinman et al. 1991). The latter was a primary concern, as the dense prehispanic debris concentrations that we noted in the area with surface

marine shell raised the worrisome prospect that much of this area was already impacted by contemporary farming.

We began this fieldwork by preparing the map, using Brunton pocket transits and 100 m tapes. We recorded all modern features (structures, fences, roads and footpaths, and watercourses) in the fields on the east side of town where we had found surface shell during the regional survey (Figure 3.1). The area with surface shell debris was approximately 4.9 ha, although the western boundary was difficult to define because of modern constructions that were encroaching onto the fields that were littered with surface shell.

Once we prepared the detailed map of the shell-working area, we laid out a grid of  $20 \times 20$  m blocks across the area. The grid was drawn to include not just contemporary agricultural fields but also some adjacent modern house lots where there was good surface visibility (Figure 3.2). The initial 45 blocks in the grid covered approximately 37% of the area with some visible surface shell and 90% of the 2 ha area with the densest surface concentrations of shell. Each  $20 \times 20$  m block was divided into  $100 \times 2 \times 2$  m units (the provenience designations for all surface and excavation units refer to the southwest corner of that unit). To assess variation in surface material and the



Figure 3.1. The area with surface shell, planted in corn, extends east to the line of trees in the background.