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AN EARLY MEDIEVAL BUILDING TRADITION? A PAGLIAIO AT COLLI A VOLTURNO (PROVINCIA DI ISERNIA, MOLISE)

INTRODUCTION

Vernacular architecture in Italy is usually associated with stone buildings. The tradition of building in timber, by contrast, has received scant attention. The principal reason for this is that Italy has had a long and outstanding tradition of stone-built domestic architecture. Protohistoric and classical rural dwellings invariably had stone foundations, though their upper parts, as often as not, were made of wattle and daub, clay or mud-brick. Moreover, since the eleventh century, the age of *incastellamento*, rural dwellings in most parts of Italy have been partly or wholly stone-built (cf. Francovich, Gelichi and Parente, 1980). Even periodically occupied buildings, such as cabins in fields far from villages or in transhumance pastures, often tended to be constructed of dry stone rather than timber (cf. Hodges and Mitchell, 1983: 378-80; though see Close-Brooks and Gibson, 1966, for a brief discussion of shepherds' huts made of timber in Latium). Not surprisingly, as a result, the timber partitions and roofs of high status buildings (castles and churches) manifest a rather poor competence in carpentry in comparison with carpentry traditions north of the Alps (cf. Andrews, 1981). It is assumed that the carpentry tradition employed in lower status rural buildings was of the same order of competence.

Yet there has always been a minor tradition of timber buildings in Italy. The origins of this tradition doubtless lie in prehistory. In classical times outhouses, and perhaps barns, were constructed in timber with thatched roofs, though illustrations of these are rare (note, however, that the second- to third-century mosaic from Oudna, Tunisia (Dunbabin 1978: 112; pl. XXXIX, 101) shows the kind of ancillary farm building which was thatched). Buildings of this sort invariably became the principal form of dwelling in the post-classical age. In the forum of the ancient port of Luni, for example, the remains of sixth- to seventh-century, earth-fast, timber dwellings were discovered (Ward-Perkins, 1981) (Fig. 1). Buildings of similar type have now been discovered in the post-classical phases at Cosa on the Tuscan coast (cf. Fentress *et al.* 1991). Inland, post-built dwellings were introduced to centres like Brescia in Lombard times (Brogiolo, 1992), while peasant dwellings occupying hillslopes after the sixth or seventh centuries seem to

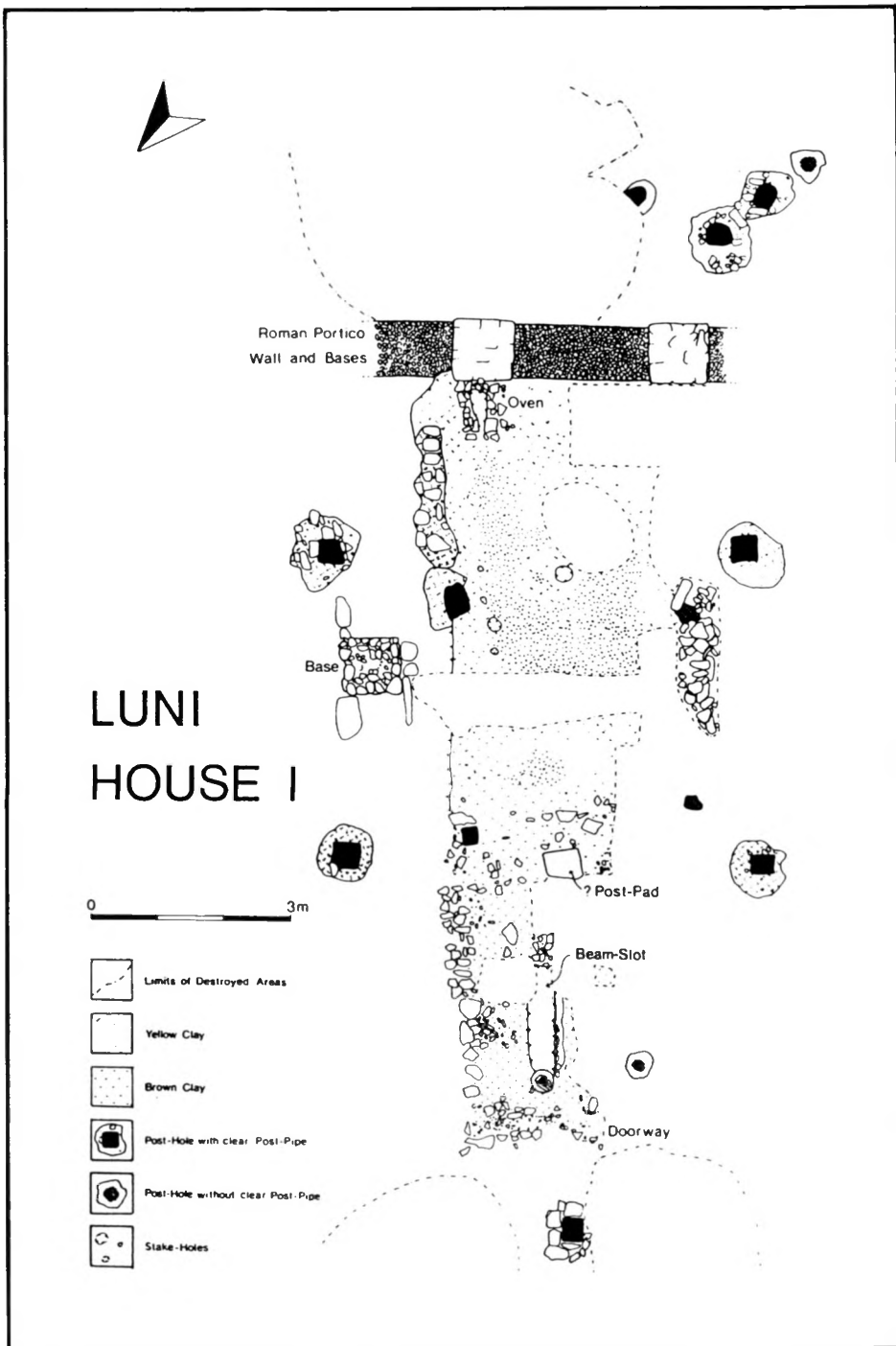


FIG. 1. A plan of an early Byzantine dwelling at Luni (after Ward-Perkins, 1981: fig. 1).



FIG. 2. A thatched encampment at Ostia *c.* 1900 photographed by Miss C. E. Bulwer (courtesy of the British School at Rome archive).

have adopted a similar, somewhat expedient architectural form. Rural examples have been discovered at Montarrenti area 2000 (Bartoloni in Francovich and Hodges, 1986), where a post-built structure was found cut into the contours of the hill, at Piadena in the Po plain (Brogiolo, 1989), and at Santa Maria in Civita, a Beneventan frontier settlement (Hodges, Barker and Wade, 1980). Thatched buildings were also present in higher status settlements in the Early Middle Ages. In the Benedictine monastery of San Vincenzo al Volturno most of the ninth-century buildings were stone-built with tile roofs, but the excavations indicate that the refectories for the monks and distinguished guests were thatched (Hodges, 1993: 210-15; 1995). In these cases the thatch was supported by a timber roof structure with trusses of some kind held together by 14 cm-long nails. The reason for the thatched roofs in this ninth-century monastery can only be speculative. The thatch would have retained warmth in winter, making the buildings more comfortable environments in which to dine. The notable width of these buildings may also have been a significant factor: thatch, being lighter than tiles, necessitated a less sophisticated roof construction.

With the widespread re-adoption of stone-built architecture at all levels of society during the eleventh and twelfth centuries, we come full circle. Thatched, timber structures, to judge from Renaissance paintings, only served as ancillary farm buildings (for example, Giovanni Bellini's Pesaro altarpiece includes a small study of a large thatched barn and associated thatched buildings (Valazzi, 1988: pl. VIII)). This tradition was maintained until recently. Shepherds in Latium (unlike those in Molise) tended to build timber dwellings in summer time with thatched roofs (Ashby 1986: n. 76, fig. 7; n. 179, fig. 1) (Fig. 2). A detailed record

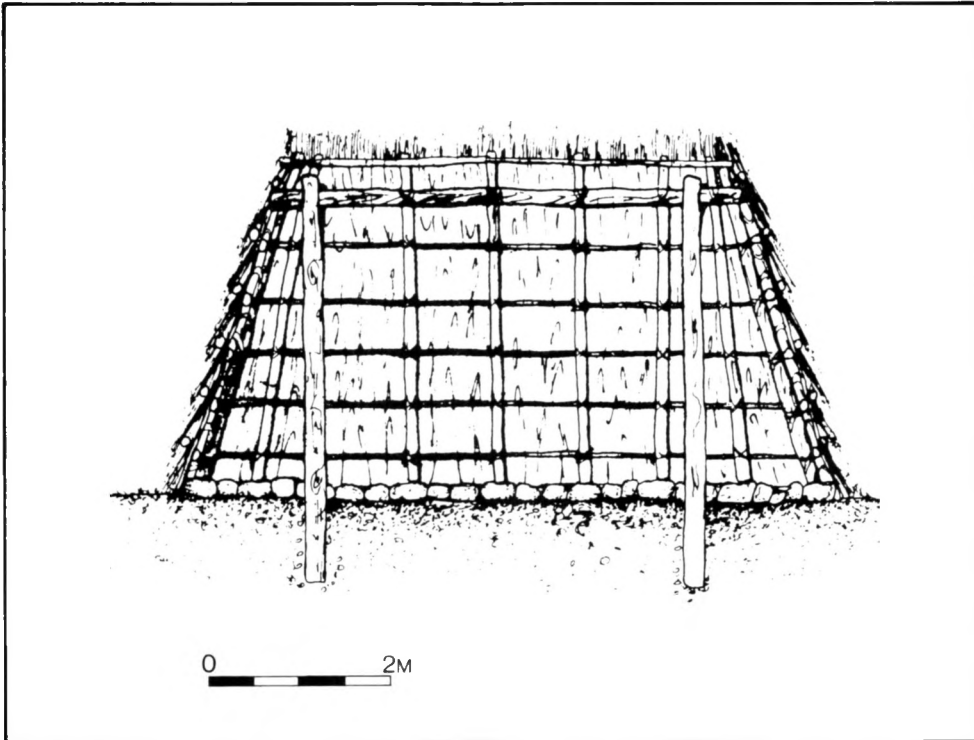


FIG. 3. A *pagliara* from Molise (after Sardella and Sardella, 1989: fig. 10).

of one of these was made by Close-Brooks and Gibson (1966) because it provided some insights into Etruscan structures excavated at Veii. In areas practising a polycultural agrarian regime in Molise, the thatched *pagliara* was a common ancillary farm-building. Such buildings tended to be small, normally measuring 5.5 m × 4 m, and might be constructed with readily available materials in a matter of hours (Fig. 3) (Sardella and Sardella, 1989). The experimental construction of a building of this type at Castropignano (CB) illustrated rather vividly the limited resources involved. However, at Colli a Volturno, near San Vincenzo al Volturno, a rare example of a larger *pagliaio* remains still in use. The construction and form of this barn bring to mind the kind of buildings associated with the excavated remains found at places as diverse as Brescia, Luni, Montarrenti, and Santa Maria in Civita. In August 1993 the Colli a Volturno barn was recorded by members of the San Vincenzo Project.

THE COLLI A VOLTURNO *PAGLIAIO* (Figs 4-6)

The barn (known as a *pagliaio* or *fienile*) is situated at Colli a Volturno at 462 m above sea level in the *frazione* of San Lorenzo. It was built in 1959 by Domenico Lombardo, a farmer who owns 30 hectares of land on the west-facing slopes

overlooking the upper Volturno valley. The building is constructed against a break-of-slope, an old, partially rock-cut terrace face. It is approximately 10 m long and 5 m high, with the downslope elevation having a pronounced hip-end (Fig. 4).



FIG. 4. A view of the *pagliaio* at Colli a Volturno (photo by Richard Hodges).

Il signore Lombardo explained the history of the building and the method of construction as follows. An earlier barn had existed on this hillside (adjacent to the barn under consideration) since the '30s. This building had stone walls and a thatched roof supported by two oak uprights (*forcine*). This housed animals (two oxen, pigs, goats, sheep and hens), as well as serving as a hay-barn. In the '50s Lombardo's grandfather dropped his pipe in the barn, setting it alight. Despite the efforts of the family and villagers, only the two oxen survived. The barn was destroyed. (Today this spot is marked by a solitary upright, situated in a dense bramble bush.) As a result Lombardo erected a new *pagliaio* immediately south of the destroyed barn. Initially, this was a simple, tent-like structure, similar to the experimental *paglia* at Castropignano, with its north end positioned on top of a terrace, and its south (downslope) end reaching down the face of the terrace (cf. Sardella and Sardella, 1989) (Fig. 3). In 1960, however, he concluded that it provided insufficient space for the hay and straw needed to feed his stock. Rain from time to time also penetrated the *paglia*. Therefore he enlarged the existing

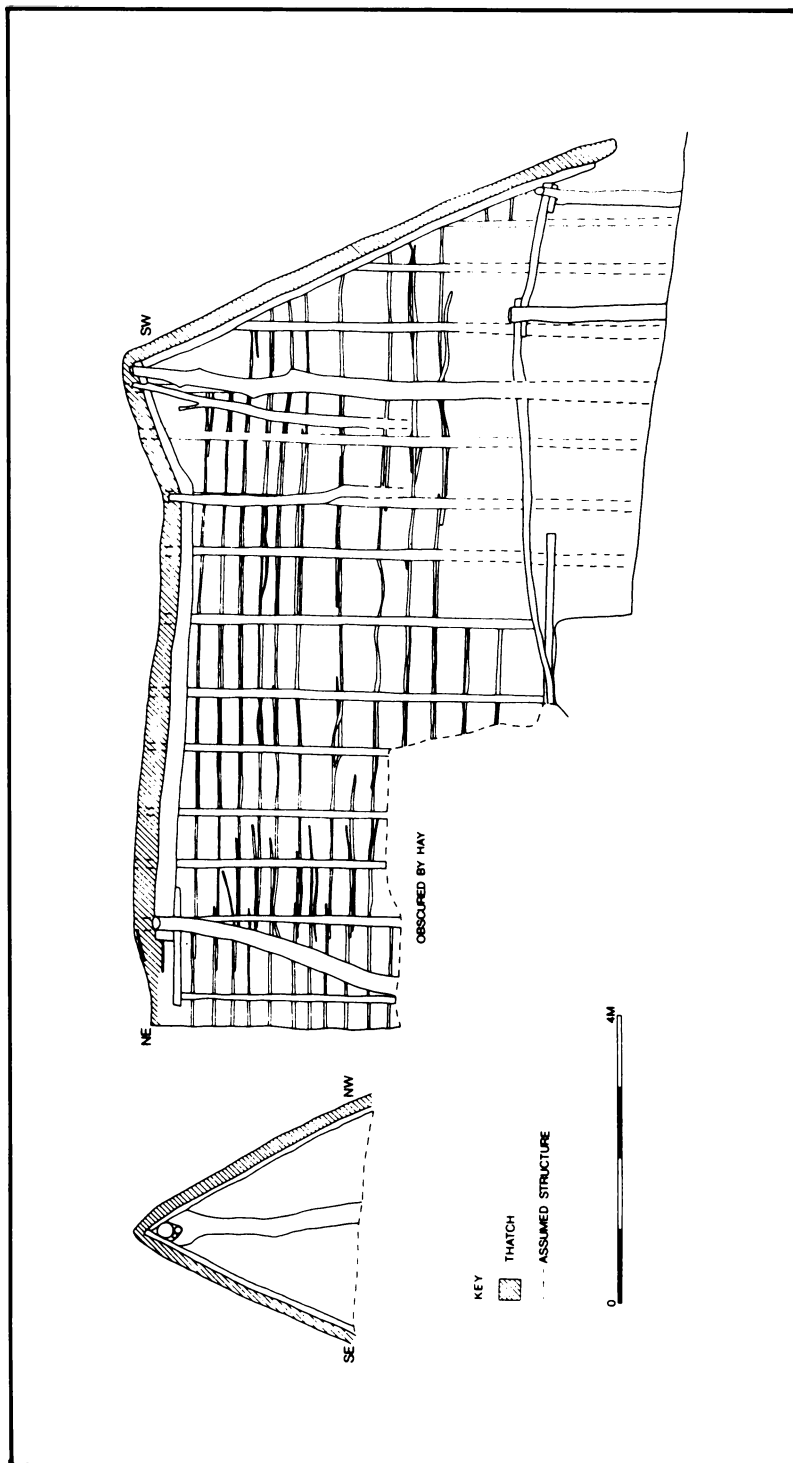


FIG. 5. Elevations of the *pagliato* (survey by Richard Buckley and Seema Mann).

building by adding what he envisaged as a 'room', creating the structure with the *aia* (threshing floor) on its north side that we have recorded (Figs 4-6).

The new barn took about a month to build. Lombardo undertook most of the work on his own. He described how he cleared the sloping ground, exposing the rock-cut face of the terrace. A rammed stone base seems to have been prepared at the south end of the barn. Next, he prepared the oak uprights (*forcine*). Oak was selected, he explained, because it is the hardest available wood, resistant to great variation in weather experienced at Colli (at the junction of the mediterranean and continental climates (see Hayes, 1993)). The bark was removed from each of the uprights (and all the oak used in the barn) to prevent pests inhabiting the posts, and, with time, destroying them. Calling upon assistance for this phase of the construction only, each of the two uprights was set in a hole more than a metre deep, then packed with alternate layers of earth and rammed stones, and compacted on the surface. Next, eight shorter, forked uprights made of oak were used to define the outline of the southern half of the building. Six posts supported the front, with one set back on each side. Each post, measuring about 25 cm in diameter, was bedded in a deep, well-packed post-hole. Following this, the ridge post (known as the *felegna*) was prepared from a length of poplar (*pioppo*). The poplar, according to Lombardo, occurs on the lowest parts of his land. It was cut when the moon was waning; apparently this prevented vermin inhabiting the timber. It was seasoned as the moon waxed. Once ready, the ridge pole was set between the two main oak uprights. Next, the oak wall-plates 12-14 cm in diameter were placed between a subsidiary ring of eight forked uprights, passing from the rock-cut hillslope to one fork, and then another running to the corner fork. Three horizontal wall-plates were positioned along the front, then two more spanned the distance between the corner and the rock outcrop of the far side. The wall-plate supported the two sides and south-facing front of the barn.

With this structure in place, work began on making the roof. The common rafters, mostly between 6.5 and 9 cm in diameter, were made either of poplar or ash (*orno*), held together by laths approximately 2 cm in diameter, also made of ash. The ash is water-resistant, not too heavy, and found on the higher parts of Lombardo's land.

Ties made of the pliable willow shoots (*salice*) were used to attach the laths to the common rafters. The thatch itself was built up in layers. *Segale*, known as *spelta* in local dialect, was used. (This is hand-harvested straw, plucked from the ground with its shallow roots intact. After harvesting, the material is left to dry, and then when conditions are humid, even wet—that is, when the straw is relatively malleable—it is deployed in handfuls on the roof, always with its roots downslope.) Three layers of straw cover the roof, each separated by a lath which gives the structure rigidity. In other words, a webbing of laths lies directly over the rafters, then further laths are woven in between the first and second layer of thatch. Laths are also woven between the second and third layers, and finally laths commonly overlie the upper layer of thatch.

The sides of the barn are not identical. The south-facing side reaches down to ground level, whereas the north side stops about a metre above the ground. When quizzed about this, Lombardo explained that there was no real motive for the

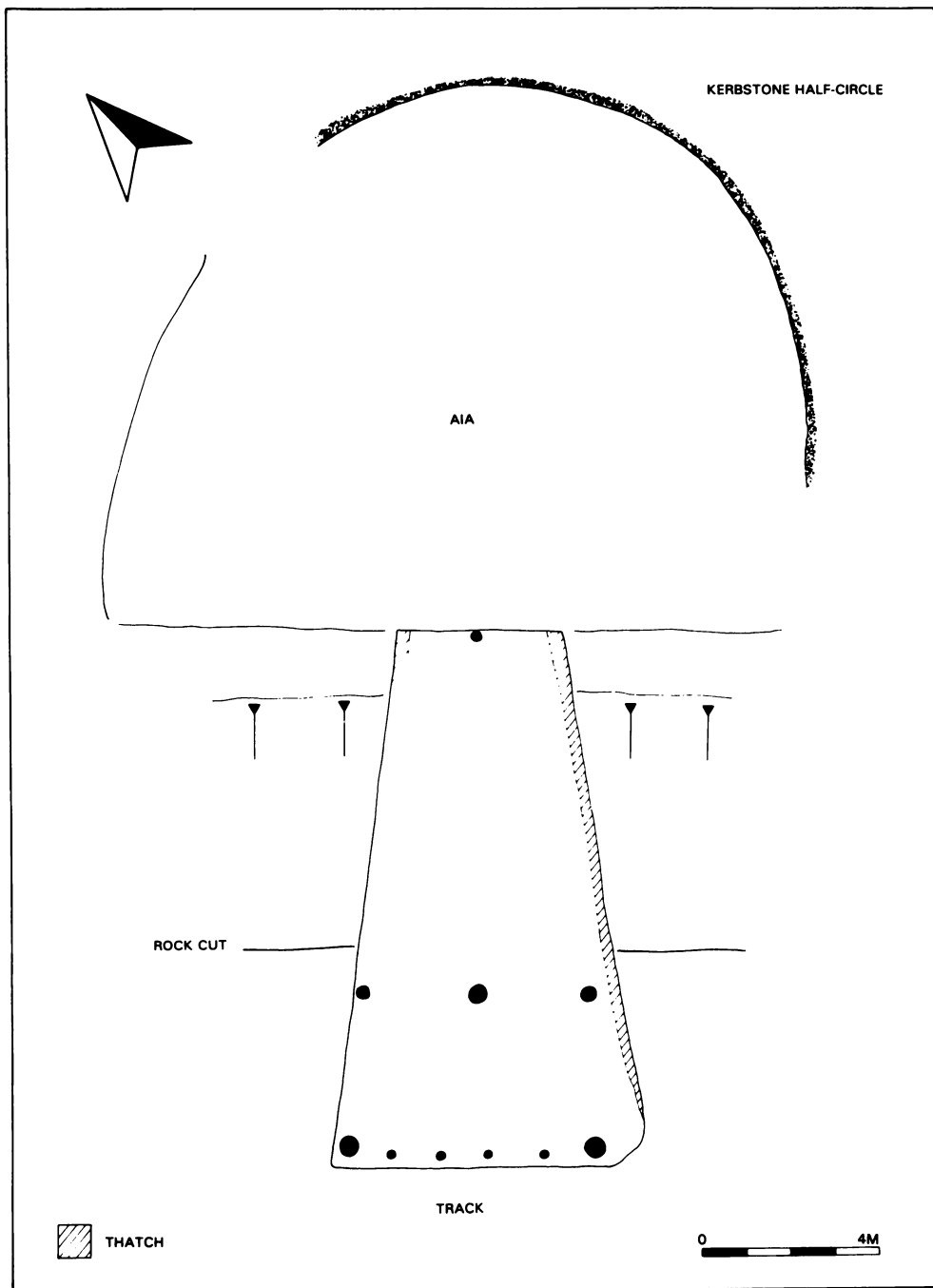


FIG. 6. Plan of the *pagliaio* (survey by Richard Buckley and Seema Mann).

difference. But the gap below the north-facing side permitted one to enter the barn from this side. No eaves drip or gutter was visible below the line of the thatch. In heavy rain the water seemed to run off with some velocity without leaving any imprint around the building.

Beyond the east, upslope entrance lies the threshing floor (*aia*). This is virtually a half-circle in shape, between 12.5 and 15.5 m across, the modern concrete surface being edged by dressed kerbstones on the east side. Signore Lombardo extended the original barn out from its original line, marked by the upright *forcina*, creating a porch with an entrance 3.3 m wide. The ends of the porch, resting upon the concrete base of the threshing floor, are supported by common rafters made of pine (*pino*). Apparently the porch protects the contents of the barn at its upslope end from blowing rain.

The barn requires regular maintenance. Every three years or so the building is re-thatched. This has tended to take Signore Lombardo about a month, and is usually undertaken in short stints. The ridge pole, however, broke and rather than replace it, an iron tube was inserted to reinforce the pole where it had snapped. This has given the building its hipped profile, almost as if there were a chimney at the apex of its south end. Some extra cladding with corrugated iron either side of the ridge was felt necessary because of the makeshift repair. Notwithstanding these modifications, Lombardo is proud of his building, contending that it is a unique structure in the valley. When pressed, however, he admitted that the vernacular tradition had been handed down to him, and that in the past there were many similar barns in the locality. Sadly, he has now retired and no longer has need of the barn. With time, like the more modest examples of this tradition elsewhere at Colli a Volturno, it will inevitably fall into disrepair.

CONCLUSION

The *pagliaio* at Colli a Volturno offers some illustrative data relevant to post-classical domestic architecture in Italy. Firstly, it was constructed by one person in a short period. Secondly, the building contains at least five different types of wood, all obtained within a catchment of 1 km radius without difficulty. As a result, it could easily be maintained. Thirdly, the building is water-proof and retains heat in winter. These essential, but largely expedient, characteristics may explain why dwellings of this kind were favoured between the end of antiquity and the eleventh to twelfth centuries. At the same time, unlike the majority of timber buildings north of the Alps, to judge from the irregular form of the excavated features, limited carpentry techniques were available. In other words, if the *pagliaio* is indeed an illustration of early medieval rural architecture in Italy, it reveals the apparent loss of constructional skills after antiquity. Finally, from an archaeological standpoint, this simple building would have left only vestigial traces of the rammed stone surface, the deep post-holes for the main uprights, and the ring of post-holes supporting the wall-plate. Without associated occupation debris, it would prove difficult to interpret.

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FURTHER COINS FROM SANTA CORNELIA (ROME)

THE SITE AND EXCAVATIONS

The early medieval and medieval religious site of Santa Cornelia, located in the comune of Formello north of Rome, was excavated by Charles Daniels on behalf of the British School at Rome between 1960 and 1964. Its excavation formed part of the broad archaeological survey of the region of South Etruria carried out by the School in the 1950s-1970s. The site was rapidly identified with a documented late eighth-century papal foundation (the *domusculta Capracorum*, founded c. 780 by Pope Hadrian), comprising church, baptistery, cemetery and estate buildings (administrative and storage). Occupation of the estate dwindled in the tenth century when perhaps only the church survived. Subsequently, in the course of the first half of the eleventh century, the small church was transformed into a compact Benedictine monastery. This monastery flourished into the thirteenth century but was apparently redundant by the mid-fourteenth century. Abandonment of the zone meant that the excavations were able to reveal almost the whole plan of both the early medieval and medieval complexes. However, despite the importance of the site in terms of actual finds and in terms of suggesting continued open settlement, thus contrasting with the assumed pattern of nucleation, seclusion and upland movement of sites attested elsewhere in south Etruria in the early Middle Ages, the publication of the excavation was unfortunately long delayed, appearing only in 1991 (for full discussion see Christie and Daniels (1991), summarized in Christie (1992)). Earlier interim statements included Kahane *et al.* (1968: 161-5); Potter (1979: 146-50); and Whitehouse (1980).

Although a large quantity of finds was recovered at Santa Cornelia, including substantial traces of the architectural and sculptural elements belonging to both the *domusculta* church and the monastic complex, stratigraphy was everywhere fairly restricted and many small finds such as pottery were deprived of closed contexts. The site produced only a small number of coins, few of which were stratified. In the full excavation report, only six coins were listed, relating chiefly to the late tenth and to the late twelfth century: an *as* of the emperor Titus, a denaro of Pavia of Otto I with Otto II, two provisini of Champagne, plus two unidentified denari (see Christie and Travaini (1988); Travaini, in Christie and Daniels (1991: 81)). However, since publication of the full report, further coins from the excavations have been found—a salutary warning regarding the failure to publish promptly—and these are presented here. As with the previously published issues, these 'new' coins relate chiefly to the full medieval period. No record exists of their exact stratigraphic contexts within the site, however, and