In 2012 the Sangro Valley Project continued its excavations in San Giovanni with the intention to clarify the function and date of the two structures (A and B) discovered in the 2011 season. New excavations in 2012 focused on three areas adjacent to SG 1000: SG 2000, located south of Structure A and east of Structure B; SG 3000, located to the west along the slope of the plateau lying above SG 1000; and SG 4000 located north of SG 1000. (figs. 1 & 2)

**Trench SG 2000**

SG 2000 was opened in the area where, during back fill at the end of the 2011 season, the mechanical digger discovered four complete bipedales tiles. When the area was reopened in 2012, the mechanical digger almost immediately uncovered a broken corner of cocciopesto pavement just beneath the plow soil.

Excavations in SG 2000 revealed a single room structure (Structure C—ca. 5.96 x 3.37 m). (fig. 3) Structure C is situated in the southeast corner of the site on a sloping terrain between Structures A and B and oriented northwest to southeast on the same axis as those two structures. It is a few meters south of Structure A and not more than a meter east of Structure B. There appears to be a very narrow gap between SG 2000 and Structure B, but this area was not excavated this season. Structure C is on the same level Structure A but due to plow damage between the two structures it is not possible to determine if they were once attached.

The construction technique of Structure C’s rubble foundations is consistent with that seen in Structures A and B, namely stone and some terracotta set in a sandy, yellow mortar, although the stones are of generally smaller dimensions. The foundations range in width...
Figure 2 – Plan of site

Figure 3 – Trench SG 2000
from ca. 0.45-0.60 m (the widest foundation is located on the southern side of the structure) and in places rise ca 0.25 m. above a preserved cocciopesto pavement, but no traces of the structure's upper walls are preserved.

A cocciopesto pavement (4.84 x 2.4 m) fills the interior of Structure C, although its southeast and southwest corners are badly damaged from bioturbation (tree roots) and modern plowing. The basin appears to be lying on a foundation layer of tightly packed stones and tile, as can be seen in breaks at the southeast and northeast corners.

A moulded rim (quarter round in profile—ca. 3-4 cm high and 5 cm wide) surrounds the perimeter of the basin. This rim is broken off along most of the west wall and in a few other places; these breaks are fairly clean, suggesting that it might have been added separately after the laying of the pavement. The moulded rim must have acted as a transitional element between the pavement and the walls. However, it is unclear how far the cocciopesto once extended up the walls as the latter are no longer preserved. In the northeast corner, a slump of cocciopesto spills over the rim and surface; fragments of cocciopesto also were found in the contexts that filled the room but not enough to suggest how far the cocciopesto extended vertically in the room. (fig. 4)

In the northwestern corner of the room, there is a rectangular area (1.17 x 0.65 m) not covered by cocciopesto. It appears to have been deliberately left open as its perimeter is bordered by the same type of moulded rim that can be seen along the rest of the pavement. (fig. 5) This area may have served to support a small staircase leading into a basin or tub or else held a separate basin or tank in the room.

A drain runs from the southwestern corner of Structure C. (fig. 6) Only about 2 meters of the channel's length are preserved, although linear traces of discolored sediment—corresponding to the mortar used in the channel walls—are visible extending under the southern section wall of SG 2000. The channel was constructed with precision: the initial cut into the clay is just wide enough for the roof tiles that act as its floor; the tile-and-mortar walls are very neatly and evenly coursed, and were clearly cut to a fairly uniform width; the space left between the walls is just wide enough to accommodate the pipes that feed into it. (fig. 7)

Three round terracotta tubes (fig. 8), designed to nest one into the other, were set into mortar and formed the northern portion of the drain. The tubes were laid so that effluvia from Structure C would flow from the wide to the narrow end of each pipe, possibly causing leakage in this part of the drain. These tubes drained into a wider channel constructed of tegula flanges set in mortar, on a base of two inverted tegulae, and capped by a series of bipedales.
Figure 5 – Rectangular area not covered by cocciopesto

Figure 6 – Drain running from southwestern corner of Structure C.
Figure 7 – Detail of drain construction

Figure 8 – Detail of terracotta tubes in situ
bricks tented over the channel. The fill removed from the channel was floated and produced bits of ceramic, bone, a glass bead and more charcoal. A sample of this charcoal was radiocarbon dated to Cal AD 70 to 230 (Cal BP 1880 to 1720). The means by which the drain was incorporated into Structure C is unclear due to extensive damage by tree roots just at the juncture between the drain and the cocciopesto pavement.

The function of Structure C is currently unclear. The presence of the cocciopesto, a water-proof pavement, the drain and the thickened southern wall, which is on the downhill side of the structure, suggest that Structure C may have functioned as a basin or work surface that would require frequent washing out. Future excavations are planned for this area in 2013.

A variety of architectural materials were recovered in this area. These include a quantity of tegula and imbrex roofing tile, twenty-one wedge-shaped bricks of a type used to construct columns (one complete—SF 295) (figs. 9 and 10), a number of opus spicatum paving bricks (fig. 11), pieces of opus recticulatum, and 8 kg of tubuli parietalis (two almost complete tiles SF 302 and SF 307) that provide evidence of a hypocaust heating system that was used in one of the nearby structures. (fig. 12 & 13)
Large quantities of ceramic, as well as glass fragments, iron slag, bone, small fragments of painted plaster (some appear to be covered with mortar, a possible sign of the room’s secondary use?) (fig. 14), a loom weight and charcoal, were recovered from within the confines of Structure C. The high level of preservation of artifacts from this space suggest that the materials represent a primary deposit and were not brought from any great distance. The ceramic assemblage, including cooking ware, water jugs, common and fine ware vases for food consumption (fig. 15), oil lamps (figs 16 and 17), a piriform unguentarium (fig. 18), and the preserved animal bones (pigeon, goat) are consistent with a domestic context and can be dated to the Early Imperial Period. The C-14 analysis of a carbon sample taken from just above the cocciopesto pavement provides a date of Cal AD 20 to 130 (Cal BP 1930 to 1820).

There was also a notable amount of iron slag from the southwest side of the basin and what might be a burnt crucible close by, to suggest that metal smithing activity. There were two types of slag: one of grey, lighter composition, which suggests a slower cooling; and a denser, darker slag, with iron inclusions, which suggests a rapid cooling, possibly aided by water. Both types of slag could be the result of smithing or iron recycling activities. The presence of a reddish stain, spilling away from the east wall of the basin, may have been the result of the cleaning of an oven, another sign of industrial activity and a possible secondary use of the structure.

The dates provided by the C-14 analyses and diagnostic ceramics suggest that Structure C ceased to function in its original capacity at the end of the 1st century C.E. or the beginning of the 2nd century C.E. Its proximity to Structures A and B, as well as the use of similar construc-
tion techniques, suggest that all three structures should be viewed as part of a single complex. It appears to have been an early Imperial domestic or bathing complex that may have been reused in a later period. All structures appear to have been systematically dismantled and their elements recycled. This recycling, along with the use of the field for modern agricultural purposes, makes it difficult to reconstruct a detailed history of the area.

**Trench SG 3000**

The location of SG 3000 was selected to explore the area near the Late Roman/Early Medieval dump found in 2011 (C-14 analyses of two carbon samples taken from this deposit provide a date of Cal AD 260 to 300 (Cal BP 1690 to 1650) and Cal AD 340 to 430 (Cal BP 1610 to 1520)). Excavations in this area revealed Structure D, a complex series of foundations in dry stone masonry set into a yellow, sandy mortar. (fig. 19) As seen elsewhere on the site, there were no traces of flooring or ancient ground levels, only foundations which are consistent in appearance and construction technique to those seen in Structures A, B, and C. A thin layer of plough soil overlaid these foundations. The extent of damage in this area by ancient dismantling and modern ploughing makes it very difficult to determine the date or function of Structure D.

Structure D, as currently understood, consists of a block of at least three, and perhaps as many as six, enclosed rooms aligned northwest to southeast, similar in orientation to the other structures on site. The western wall of this block measures 14.8 m in length; its southern extent appears to run right up to the edge of the terrace that marks the field boundary, while its northern extent remains to be excavated under the north baulk of the trench. A parallel wall is set ca. 4 m to the east, but extends only 8.3 m from the northern trench baulk. The width of the foundations in Structure D ranges from ca. 0.5-0.75 m. Three rooms in this block are clearly defined by foundations and from north to south measure: Room 1) ca. 1.1-1.3 x 2.9 m; Room 2) ca. 1.2-1.3 x 2.6 m; and Room 3) ca. 3.65-3.5 x 3.0-3.3 m.

A deposit of well-preserved tegulae was located just north of Room 1, including several tiles with a full length or width. Two bricks of a type smaller (ca. 14 x 14 cm) than those recovered in SG 1000 and SG 2000 (ca. 27 x 27 cm) were recovered within Room 1, one overlapping the southern wall of the room.

Three sondages were made adjacent to the foundations, but produced no dateable material. The ceramic material indicates activity in the area of this building during the Late Republic (3rd–1st centuries B.C.E.) and then again in the Late Roman Empire (3rd–5th centuries C.E.).

The construction of Structure D’s foundations may
have been from materials reused from dismantling Structures A, B, and C. This is supported by the proximity of the Late Imperial Period midden in SG 1000, located just to the northeast of Structure D, which contained a number of near complete pots, indicating primary deposition. Material recovered from SG 3000, in addition to ceramics and architectural terracottas, included a number of dolium fragments, several iron nails, bone, and a loom weight. Thus, Structure D may represent a second major phase of activity on site.

**Trench SG 4000**

SG 4000 was comprised of three trial trenches located on either side of a hedgerow marking the property boundary of the house located north of SG 1000. The terrain in this area of the site slopes gently down toward the north. These trenches further demonstrated the extent of modern agricultural activity on site; the stratigraphy in these trenches consisting almost entirely of plough soil overlying a sterile white clay. Limited quantities of highly fragmented and worn pieces of ceramic and terracotta were recovered from the plough soil. Excavation in SG 4000a and SG 4000c revealed deposits of material below the plough zone, which were not completely excavated due to time constraints. The majority of the ceramics from these deposits can be dated to the period from the 1st century B.C.E. to the 2nd century C.E., with some later Roman and Medieval ceramics coming from the upper surfaces of the deposits.

SG 4000a was a long trench (ca. 15.45 x 0.75 m) running approximately north-south along the western side of the hedge. A deposit of highly fragmented ceramic and architectural terracottas, with charcoal, small stones and some bone, was partially excavated in the northern ca. two meters of the trench. Finds from this deposit include fragments of amphorae of early 1st century B.C.E. date from Brindisi. The deposit also included complete and fragmented opus spicatum pavement bricks (fig. 11) of a smaller and more refined type than those recovered in SG 1000 and SG 2000.

SG 4000b and SG 4000c were located in the modern household garden just within the hedgerow. SG 4000b (2 x 1.5 m) was laid out at the southern, higher end of the garden. This trench produced very little material, consisting of small and heavily worn fragments of ancient and modern ceramic and terracotta, from a layer of tilled, garden soil overlying sterile, white clay. SG 4000c was situated farther to the north in order to determine if the deposit in SG 4000a continued to the east. A similar deposit material was, in fact, encountered at the southern end of SG 4000c, including a loom weight, dolium rim and a stamped amphora handle from Brindisi with the same name—ARCHELAUS—as one found in 2011 (Sangro Valley Project: report on 2011 excavation and survey work, p. 4 and fig. 11). (fig. 20)

The 2011 and 2012 excavations at San Giovanni indicate that there was activity on site from the Late Republican Period to the Early Medieval Period. Two major phases of construction and habitation are defined by evidence provided by radiocarbon analyses and ceramic typologies. Phase One belongs to the Early Imperial period, especially the 1st century C.E., and featured a domestic and bathing complex: Structures A, B and C. Phase Two can be dated to the Late Roman period, between the 3rd–5th centuries C.E., during which time Structure D was built, or remodeled, while Structure C had certainly ceased to function in its original capacity, and the site continued to have a domestic function.

**Other 2012 activities**

A series of nine sondages (ca. 0.50 x 1.0-3.0 m) were made with a backhoe across the surface of the raised plateau located southwest of SG 1000. These revealed a limited stratigraphy of a shallow and rocky plough zone lying directly above a white, clay substrate, identifiable as sterile soil elsewhere on site. Almost no archaeological material was evident in these sondages and what was present consisted of very small and heavily worn fragments of terracotta roofing tile.

Geophysical exploration was conducted using ground-penetrating radar (GPR) in the field north of the raised plateau and in the strip of land just below the break of slope south of SG 1000. Anthropogenic anomalies were identified in both areas that will be explored in the 2013 season. (fig. 21)

A.C., S.K., B.M.
Pottery Assemblage-San Giovanni 2012

Trench SG 2000

The ceramics found in Trench SG 2000 mainly belong to the 1st century C.E., in particular to the second half of that century, with some material possibly dating a bit later into the early 2nd century C.E. Cooking and common wares as well as regional amphorae comprise the majority of the assemblage, all consistent with domestic habitation. Context 2003 and 2019, both located above the cocciopesto basin, provide the most secure dates for the site. Several lamps were found in these contexts, including a cross-context join of a fragmentary lamp nozzle (SF 319), which suggests that the two contexts were originally one deposit. The lamps include a disc fragment of a northern Italian style volute Bildlampe (SF 319) dated to the 1st century C.E., a reconstructed Firmalampe spout possibly dating to the 1st through 2nd centuries C.E. (SF 282) (fig. 16) and a northern Italian volute Bildlampe (SF 258) datable to the Augustan or later periods (fig. 17) with an eagle clutching an olive branch on its discus, a motif that can be paralleled on other Italian lamps of the first century C.E. A number of nearly complete vessels may be reconstructed from sherds of large size (10 x 20 cm) found in these two contexts (2003, 2019) are another indication
that vessels were dumped as a primary deposit over the cocciopesto basin after being removed from service. (fig. 22) Ceramics recovered included regional terra-sigillata of the Conspectus 34 type (without molded or applied decoration), such as a nearly complete Conspectus 34 terra-sigillata cup (SF 285) (fig. 15) dating from the late Tiberian to the Flavian periods and a stamped terra-sigillata base. The stamp on this base is a centrally placed [VIB —possibly VIBIUS or VIBIENUS] and can be identified as OCK 2379, [VIBI (VS?)], perhaps of central Italy, c. 15 B.C.E. to 15+ C.E. A piriform unguentarium (SF 250) (fig. 18) with a pointed base was also recovered, similar to one found in previous excavations nearby at Acquachiara. Cooking ware ranged from small bowls to large cauldron-like vessels with thick, everted rims. Fragments of color-coated ware and thin-walled color-coated ware were also recovered. Finally, an example of a regional black-gloss rim and a base were recovered from Context 2019, but these sherds were covered in mortar and may be proof of the area’s reuse.

Trench SG 3000

Trench SG 3000 has evidence for multiple activity phases ranging from the Roman Republican Period (with a cluster of activity between the 3rd and 1st centuries B.C.E.) to the Late Roman/Antique Period (with a cluster of activity between the 3rd and 5th centuries C.E.). The lack of material datable to the Roman Imperial Period may indicate that this area was not in use during the Imperial period, or that the activities that took place here were not related to consumption. Cookware is present as well as both coarse and fine grain common wares; most sherds are small in size and worn. The area has been disturbed by both ancient reuse and modern agriculture. The plowsoil (Context 3001) contained material from the 2nd century B.C.E.—16th century C.E. (the latter indicated by the presence of a molded kaolin tobacco pipe); Campana C black-gloss sherds, African Red Slip sherds of Production C3 in the same stratigraphic context as a glazed Medieval/Modern sherd. Two contexts which may have more secure dates are contexts 4008 and 4012. Context 4008 was datable to the 1st century B.C.E. based on the recovery of amphorae sherds from Brindisi, though no stamp was associated with them and they could not be joined to the handle from Context 4009. Context 4012 produced a Dressel 6 amphora rim in addition to the previously mentioned regional black-gloss and therefore, dating this context to the late 1st to mid-second century C.E. The clustering of dates from Contexts 4008 and 4012 to the 1st century B.C.E.—2nd century C.E. is consistent with the main cluster of activity for Trench SG 2000, indicating that area of Trench SG 3000 may have been in contemporaneous use with Trench SG 2000.

Finds

Trench SG 2000

One hundred and nine small finds from San Giovanni were catalogued in the 2012 season, including ceramic building material, metal, glass, bone, terracottas and slag. The majority of the small finds were recovered from Trench SG 2000, from both the disturbed topsoil (Context 2001) and lower in-situ contexts. Architectural pieces were retrieved from across the contexts in Trench 2000, including two segments of column brick, one possible architectural terracotta feature (SF249), an incomplete ceramic tile and an incomplete ceramic brick with a hobnail shoe impression on the surface and a possible maker’s mark on
the reverse (SF283). Three box tiles were recovered one of which, SF 302, was very nearly complete. (figs. 12 & 13) The remaining two were complete in part, SF307 having a complete circumference and SF272 a complete profile. All three of the box tiles had triangular holes on the sides presumably to allow air to flow transversely. The tiles indicate the use of a bath in the building or a hypocaust heating system. As well as the ceramic building material, fragments of predominantly red, but also black and orange, painted wall plaster were recovered from context 2003 (SF304, SF 325, SF326) and Context 2019 (SF304) indicating that the building had areas of interior decoration. (fig. 14) Some of these fragments display evidence of mortar present on top of the painted intonaco indicating the wall surface may have been re-used.

Glass finds from Trench SG 2000 were numerous, while other materials such as iron were less represented and bronze, flint and bone artefacts were minimal. A total of 86 glass shards, including four rims, two bases and one neck shard were retrieved and two glass beads were also recovered from the heavy fraction. The vast majority of the shards appear to be good quality, probably dating to the mid-1st–2nd Century AD. Eleven iron nails were recovered, the majority of which had circular heads and square tapered shanks, and one highly corroded key (SF288) was also retrieved. In addition to the iron objects 2,136.5g of iron slag was excavated indicating that some form of iron-working occurred on site. One very worn bronze coin (SF235) was recovered from the topsoil (context 2001), possibly late Roman in date. One loom weight was found. Other objects retrieved from Trench 2000 included a bone pin, masonry and cocciopesto samples.

Trench SG 3000

Fourteen small finds were recovered from Trench SG 3000, most of which were recovered from the disturbed top soil. The finds included ceramic bricks, four nails, 9g iron slag and one piece of lead slag. The presence of lead slag and iron slag is an indication that metal smithing took place on-site. In addition, one piece of glass was recovered and one piece of worked flint. One ceramic (SF259) and one stone (SF322) loom weight were also recovered.

Trench SG 4000

Ceramic building materials were the most common find from Trench SG 4000 with five of the nine small finds consisting of incomplete terracotta opus spicatum bricks and one fragmented piece of concrete. An iron nail shank was also excavated, in addition to a piece of worked flint and a terracotta loom weight.

Faunal Report

In total, 1093 pieces of animal bones, teeth and shells, from available deposits at San Giovanni, were examined: 289 (26.4%) comprise the NISP (= Number of Identified Specimens) component, and the remaining 804 (73.6%), here referred to as the UNID (i.e., less intently identified) component, classified within broader skeletal-part and animal-size categories only. The relatively low ratio of NISP bones to UNID counts for San Giovanni accords with most other sites in Roman Italy. Analyses of these finds, especially faunal remains from Context 1003, the largest single source of zooarchaeological material from San Giovanni thus far, suggest mixed husbandry schemes that may have incorporated localized herding of stock coincident with larger ventures of transhumance. Hunting and fishing were of minor importance to the diet and economy. Pigs and oviscaprids factor regularly at the site, with younger individuals predominating, suggestive of some dietary wealth. Cattle and equids register in fairly higher numbers compared to other Roman/Late Antique sites in central Italy, perhaps an indication of their augmented importance as work and transport animals at the site, but also suggestive of a larger proportion of beef in the diet of these occupants than among other sites.

M.M.

Technology and Paperless Recording

The 2012 season was the SVP’s second season using both paperless recording and a fully integrated project database. The database was created in 2011 with FileMaker Pro and was hosted on an Apple Mac Mini server in the Project’s computer lab. Data recording during excavation and survey was performed using seven Apple iPads with the FileMaker Go app. Special digital camera memory cards from Eye-Fi allowed the wireless transfer of images to the iPads, which enabled excavators to immediately add captions to their photos using the Photosmith app while in the field.

Since the 2011 season the SVP has continued to push the field of paperless archaeological data recording and management. All of the SVP’s data recording and management systems were updated and revised in accordance with the knowledge gained during the 2011 season. Particular attention was given to streamlining synchronization procedures, improving the file structure of the Phase 3 data archive, improving image handling, and making the paperless recording system more intuitive, flexible, and robust.

The SVP also expanded its experiments with digital drawing this season. One 15-meter long section was drawn simultaneously by two field school students who had no prior experience, one using paper and the other using the vector drawing app TouchDraw on an iPad. Both students produced accurate drawings, but the iPad version was al-
ready publication quality while the paper drawing still needed to be scanned and cleaned. iPads were also used to outline and label contexts in photographs and to keep up-to-date schematic plans. Both of these activities improved excavators’ situational awareness, reduced confusion and improved communication, and made the management of a stratigraphically complex trench much easier.

Online community involvement with the SVP grew exponentially this year, due to a deliberate push for greater visibility and improved interaction with the greater SVP community. During the period from July 5 to August 4, the SVP’s official Facebook page received 1,177 views, while nearly 7,000 people saw content related to the page including status updates, photos, and comments. On average, 75 unique visitors came to the page each week. Notably, 30% of the SVP’s Facebook followers reside in Italy, which signals a high degree of interest in the Project among younger generations in the local community. Numerous positive comments were received regarding the quantity, quality, and educational value of the content, goals which the project was able to achieve while still protecting archaeologically significant data.

After two seasons of use the database contains over 1,950 primary archaeological records spread among 18 record types, covering everything from Sites to Micro-morphology Samples. The database also contains over 1,400 labelled images, each linked to its subject; 307 unique stratigraphic relationships; and permanent records of 14,733 individual edits, allowing researchers to examine the evolution of each record through time. All of this data is searchable, and all of it is linked together in a logical and user-friendly manner. The database is accessible to SVP staff members around the world over the internet.

The paperless system continues to have many advantages over traditional paper recording methods, namely: much quicker exchange of information between the field and specialists; the ability to back up field data twice daily; the ability to immediately label and caption photos taken in the field; a significant decrease in human error through automation; an increase in the consistency of terminology; an elimination of the time and manpower required to digitize each paper record; and an increase in the amount of information available to each individual user, accessible much more quickly and easily.

Paperless recording continues to gain acceptance in the archaeological community, and the SVP continues to be one of the key pioneers. Future work will be focused on refining existing systems and procedures—notably simplifying behind-the-scenes management and streamlining synchronization—as well as incorporating any useful technological advancements.

C.M.

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