CHAPTER XXXI

STREETS, WATER SYSTEM, AND WAYSIDE SHRINES

The streets of Pompeii vary greatly in width. The widest is Mercury Street, the continuation of which near the Forum has a breadth of nearly 32 feet. Next come Abbondanza and Nola streets, the greatest width of which is about 28 feet; the other streets and thoroughfares vary from 10 to 20 feet. With unimportant exceptions, broad and narrow streets alike are paved with polygonal blocks of basalt, which in laying were fitted to one another with great care; on both sides are
raised sidewalks, with basalt or tufa curbing. The sidewalks in some places are paved with small stones, elsewhere are laid with concrete, or left with a surface of beaten earth. As there is no uniformity, the sidewalk varying in front of adjoining houses, it is clear that the choice of materials was left to individual owners of abutting property. The limits of ownership are often designated by boundary stones, laid in the surface of the walk.

Broad ruts, worn by wheels, are seen in the pavement, shallower in places where the basalt flags, cut from the lowest stratum of the stream of lava, are particularly hard; deeper wherever there are blocks quarried nearer the surface. Only the principal streets were wide enough to allow wagons to meet and pass; elsewhere drivers must have waited at a corner for a coming team to go by. It seems likely that driving on the streets of the city was forbidden, wheeled vehicles being used only for traffic; people who wished to ride availed themselves of litter cars.

At various places along the thoroughfares, but particularly at the corners, large oblong stepping stones with rounded corners were set in the pavement at convenient distances for those wishing to cross, the surface being on a level with the sidewalk. The number varied according to the width of the pavement; in the broadest streets as many as five were used. They were arranged always in such a way as to leave places for the wagon wheels. It is not difficult to understand how Pompeian drivers guided their teams past them; draft animals were attached to the wagon by means of a yoke fastened to the end of the pole, and, as there were no tugs or whippletrees, they had a greater freedom of movement than is allowed to modern teams.

It is not to be supposed that so complete a system of paving existed from the beginning of the city. Some light is thrown on the period of its laying by two inscriptions, — one, ex · K · qui, cut in the edge of the sidewalk west of Insula IX. iv.; the other, K · Q., in the pavement between the second and fourth Insulae of Region VII. Both are evidently dates, and in full would read ex Kalendis Quinctilibus, 'from the first day of July,' and Kalendis Quinctilibus, 'July 1.' Apparently they relate to the laying of the pavement; this was in place, even in the unimportant side street of Region VII, when the inscriptions were cut, and so must go back to the time before the name of the month Quintilis was changed to Julius, our July. Pompeii was paved, therefore, before 44 B.C.

The stepping stones were particularly useful when there was a heavy rain; for the water then flowed in torrents down the streets, as it does to-day in Catania, where the inhabitants have light bridges which they throw over the crossings after a storm. There were covered conduits to carry off the surface drainage of the Forum, one of which runs under the Strada delle Scuole to the south, the other under the Via Marina to the west. Elsewhere the water rushed down the streets till it came near the city walls, where it was collected and carried off by large storm sewers. These are still in successful operation, as are also the conduits at the Forum. One is at the west end of the Vico dei Sopraesenti, another at the west end of Nola Street; and a third leads from Abbondanza Street, where it is crossed by Stabian Street, toward the south.

There were other sewers in the city, but they were of small dimensions and have not been fully investigated. They seem generally to have been under sidewalks. They were not designed to receive surface water, but the drainage of houses. They cannot have served this purpose fully, however, for most of the closets were connected, not with the sewers, but with cesspools.

After the lapse of more than eighteen centuries, the visitor at Pompeii will distinguish at a glance the business streets from those less frequented. The sides of the former are lined with shops; along the latter are blank walls, broken only by house doors, with now and then a small window high above the pavement. The greatest volume of business was transacted on the two main thoroughfares, Stabian and Nola streets; next in importance were Abbondanza Street, leading from the Forum toward the Sarno Gate, and the continuation of Augustales Street from the north end of the Forum toward the east. First in the list of quiet thoroughfares is the broad Mercury Street, along which were many homes of wealth; the north end of it is closed by the city wall.
There were many fountains along the streets of Pompeii, most of them at the corners. They were fed by pipes connecting with the water system of the city. The construction is simple. A deep basin was made by placing on their edges four large slabs of basalt, held together at the corners by iron clamps. Above one of the longer sides, usually near the middle, is a short, thick standard, of the same stone, pierced for the lead feed pipe, which threw a jet of water forward into the basin below; on the opposite side is a depression through which the superfluous water ran off into the street. Most of these standards are ornamented with reliefs, roughly carved but effective,—an eagle with a hare in its beak, a calf’s head, a bust of Mercury, a head of Medusa, a drunken Silenus (Fig. 103), or some other suitable design, arranged so that the water would spurt from the mouth of the figure or from an amphora.

Occasionally we find a fountain of finer material. That of Concordia Augusta, of limestone, has already been mentioned (p. 117). In the neighborhood of the Porta Marina there is a fountain of white marble with a relief showing a cock that has tipped over a jar, from the mouth of which the water flowed. Both these more costly fountains were probably the gift of private individuals, one presented to the city by Eumachia, the other by the owner of the nearest house, at VII. xv. 1–2. All the fountains bear witness to long use by the depresions worn in the stone by the hands of those leaning forward to drink.

Water towers stand at the sides of the streets, small pillars of masonry preserved ordinarily to the height of 20 feet. Usually on one side there is a deep perpendicular groove (shown in Fig. 103) in which ran the pipe that carried the water to the top of the tower, where it was received by a small open reservoir, presumably of metal, and distributed through numerous small pipes leading to the fountains and to private houses. The sides of the towers are often covered with incrustations of lime deposited from the water, in which the impressions of the lead pipes are still to be seen; in the case of one tower, at the northeast corner of Insula VI. xiii, a number of the pipes have been preserved. A reservoir was placed also on the top of the commemorative arch at the lower end of Mercury Street, on which stood the bronze statue of Nero or Caligula (p. 48); the traces of the pipes leading from it are clearly seen on the surface of the arch. Similar water towers are in use now in Constantinople and Palermo, having been introduced into the latter city, it would seem, by the Saracens, who very likely took their water system from that of the Turkish capital.

In consequence of these arrangements, Pompeii was well supplied with water. There were flowing jets in all houses except the poorest, and in some the amount used must have been large. In the house of the Vettii there were no less than sixteen jets, in the house of the Silver Wedding, seven; and an equally generous distribution is found in many other of the more extensive private establishments. Large quantities of water were used also in the public baths. The water pipes were made of sheet lead folded together, a transverse section showing the shape of a pear. They were of all sizes, according to the pressure; the flow of water was regulated by means of stopcocks, much like those in use to-day.

Across the street from the Baths near the Forum, on the west, is a deep reservoir, of which we give the plan (Fig. 104). It is built partly below the level of the sidewalk, and measures about 50 feet in length and 13 in width, being covered by a
vault. In the south end is a window (c), reached from one of the stairways; when the reservoir was filled to the bottom of the window, it contained not far from ninety-five thousand gallons. There were two outlets. One was at the level of the floor, closed by means of a bronze slide; the grooves in which the slide worked are preserved. This must have been used only when the reservoir was cleaned. The other outlet was placed about three feet above the floor, so that the water could be drawn off without disturbing the bottom. On the flat roof were rooms the arrangement of which cannot be determined.

Similar reservoirs are found in Constantinople, designed to furnish a supply of water in case of siege. Such may have been the purpose of our structure, which seems to have been built in the early years of the Roman colony. The residents, remembering the hardships of the siege of Sulla, may have thought it necessary to make provision against a similar strait in the future.

The source from which the city received its water supply has not been discovered. Evidently it did not draw upon the sources of the Sarno; the water channel constructed by Fontana (p. 25) runs through the city at a height of less than sixty feet above the level of the sea, while the ancient aqueduct that supplied Pompeii had so great a head that in the highest parts of the city, more than 130 feet above the sea, it forced the water to the top of the water towers, at least twenty feet more. Copious springs can never have existed on the sides of Vesuvius; water must have been brought to the city from the more distant mountains bounding the Campanian plain on the east.

We can hardly believe that the construction of a water channel for so great a distance lay within the resources of so small a town. We find, however, the remains of a great aqueduct which, starting near Avelino, a dozen miles east of Nola, skirted the base of Vesuvius on the north and extended westward, furnishing water not only to Naples but also to Puteoli, Baiae, and Misenum. This ancient structure drew from the same springs, and followed substantially the same route, as the new aqueduct which since 1885 has been bringing water to Naples. No inscription in regard to it has been found, and there is no reference to it in ancient books. The remains—of which the longest section, known as Ponti Rossi, 'Red Bridges,' may be seen near Naples—seem to indicate two styles of construction, extensive repairs having been made after the aqueduct had been partly destroyed; but up to the present time it has not been possible to determine the period to which they belong.

The water system of Pompeii goes back to the time before the founding of the Roman colony. This is evident, not only from the arrangements of the older baths, which contemplated a frerer use of water than could well have been provided by cisterns, but also from the existence of three marble supports for fountain basins, which, as shown by their style of workmanship, the use of Oscan letters as mason's marks, and their location in pre-Roman buildings—the temple of Apollo, the Forum Triangulare, and the house of the Faun—belonged to the earlier period. If we may ascribe the building of the great aqueduct to the time of peace and prosperity in Campania between the Second Punic War and the Social War, and suppose that Pompeii, joining with other towns in its construction, was supplied by a branch from it, we have a simple and highly probable solution of the problem. Nothing in the character of the masonry requires us to assign the aqueduct to a later date.

The shrines along the streets, with few exceptions, were dedicated to the guardian deities presiding over thoroughfares, particularly the gods of street crossings, *Lares Compitales*. The worship of these divinities in Rome was reorganized by Augustus and placed in charge of the precinct wardens, *vicorum magistri*, who were to see that the worship of his guardian spirit, Genius, was associated with that of the *Lares* at each shrine. The arrangements at the Capital were naturally followed by the colonies and other cities under Roman rule.
At Pompeii the shrines of the street gods differ greatly in size and character. Sometimes there is a small altar against the side of a building, with two large serpents, personifications of the Genius of the place, painted on the wall near it; one of the serpents, with a conspicuous crest, represents a male, the other, a female.

Frequently the place of the altar is taken by a niche, in which the passer-by could deposit his offering. In our illustration (Fig. 105) we see an ancient street altar which was carefully preserved when the Central Baths were built, a niche being made over it in the new wall.

Fig. 105.—Ancient altar in new wall, southeast corner of the Central Baths.

Sometimes a large altar is found, and the Lares, with their offerings, are painted on a wall above it. Such a shrine may be seen at the northwest corner of Stabian and Nola streets, between the fountain and the water tower (Fig. 103). Back of the altar is a wall terminating in a gable (the tiles are modern) on which was a painted altar with four worshippers clad in togas, and a flute-player, the inseparable accompaniment of a Roman sacrificial scene; at the sides were the two Lares, represented as youths, in loose tunics confined by a girdle, holding in one hand, high uplifted, a drinking horn (rhyton), from which a jet of wine flows into a small pail (situla) in the other hand. It is remarkable that we do not find in this or similar paintings at Pompeii, any figure representing the Genius of the emperor, while in private houses the Genius of the proprietor often has a place with the Lares, and sometimes the Genius of the emperor also; in theory at least, as already remarked (p. 104), the emperor stood to all men in the relation that the master of a house bore to the household.

There is also a small chapel for the worship of the street gods on the west side of Stabian Street, near Abbondanza Street. As may be seen from the accompanying plan (Fig. 106), at the left as you enter is a bench of masonry (1), at the rear a long altar (2). In the wall at the right is a niche for the bronze or terra cotta figures of the Lares and the Genius, while the surface of the altar is divided into two parts, for the separate worship of the same divinities. A similar chapel is situated on the west side of Mercury Street (VI. viii. 14). Here also we find a bench of masonry, with two niches above it; in the middle was a block of limestone which may have been used as an altar. At the rear is a door leading into a small back room. This chapel was formerly thought to be a barber shop.

It has been customary to assign to the street gods all of the shrines at the side of the street. Occasionally, however, other divinities were thus honored; and the only street altar found with an inscription is consecrated to a different deity. This altar is near Nola Street, on the east side of Insula IX. vii. On the wall above two cornucopias are painted the words Salutei sacrum, 'Sacred to Salus'; the goddess of health was worshipped here.

Near the upper end of the Forum, on the north side of Insula VII. vii, is another altar, above which is a stucco relief representing a sacrifice; at the sides of the relief are pilasters, and over it a gable, in which an eagle is seen. This indicates that the shrine was dedicated to Jupiter.

The largest of the street altars, of tufa, stands free in a vaulted niche on the north side of Insula VIII. ii, but no traces of painting are to be seen near it (Fig. 107).
Various divinities are painted on the outside of houses. The largest picture of this kind is at the corner of Abbondanza Street, on the east side of Insula VIII. iii. It contains figures of the twelve gods, distinguished by their attributes—Vesta, Diana, Apollo, Ceres, Minerva, Jupiter, Juno, Vulcan, Venus Pompeiana, Mars, Neptune, and Mercury. Underneath are the two serpents, facing each other, on either side of a painted altar; near the altar are other figures that cannot be plainly distinguished, probably of men offering sacrifice. This is not a shrine—there is no place for the offerings. The owner of the property (house of the Boar), desired to place his household under the protection of these gods, perhaps also to preserve the corner from defilement. We often find roughly sketched figures of single gods, to the guardian care of whom the master of a house wished to commit his interests—most frequently Mercury, the patron divinity of traders, and Bacchus; but also Jupiter, Minerva, and Hercules.

Sometimes merely a pair of serpents are painted on a wall, in order to give a religious association to the place, as a means of protection. In one case (east side of Insula VII. xi. 12) an explicit warning was painted on the plaster beside them: *Ostasis locus hic non est; discede, morator,*—‘No place for loafers here; move along!'