RECENT DISCOVERIES MADE IN BATH ON THE SITE OF THE ANCIENT ROMAN BATHS.[1]

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On the occasion of a visit of the Archæological Institute to a northern city, and a neighbourhood so famed for its relics of Roman conquest and Roman power, it may not be inappropriate to bring before the meeting an account of recent discoveries in the south west of Britain, not indeed, of camps or fortified stations, or of a barrier such as the north can boast, extending from sea to sea, but of Roman refinement and Roman culture, as well as of Roman luxury and the art of healing.

The baths of Bath, the Roman "Aquæ Solis," have long been known for their efficacy, and their high temperature and abundant supply of water, and they have continued ever since the Roman period to diffuse health and relief to human ailments so that the description of them by Solinus has been proved to be true by their use for well nigh 2,000 years; but it remained for modern, and I may add very recent discovery, to unfold in some degree what an extent of ground they covered, and the grandeur of their structure.

It is not more than 125 years ago, that in the construction of public buildings for the convenience and accommodation of visitors and invalids, who came to Bath for recreation or for health, at a depth of from sixteen to twenty feet below the level of the present city, remains of the substructure of Roman buildings were found, which gave some intimation of the extent and magnificent arrangement of the ancient city. Happily these remains were planned and recorded, and the fragments of sculpture or inscribed stones preserved. Dr. Lucas (1755) and Dr. Sutherland (1763) have left accounts of the discoveries then made.

[1] Read in the Section of Antiquities at the Carlisle Meeting, August 3rd, 1882.

The form of the baths was at that time laid down conjecturally from measurement of the portions opened, and by comparison with the plans of continental Roman baths, and it was supposed that the building had consisted of two rectangular wings with a large central bath placed between. This is the plan given in Collinson's History of Somerset, and other works on the Roman Baths of Bath, and one portion is correct, but recent discoveries have shewn that the plan of the western portion, where the dotted lines are laid down conjecturally, is quite the reverse of true.

The mineral springs belong to the Corporation of Bath, and every care has of late been taken to prevent the source of the supply being injured by the accumulation of waste water, or by imperfect drainage. In order to effect this more completely, it occurred to the architect and engineer, Major Davis, that the old Roman drains might be utilized, and it was in clearing out and adapting these to modern use, that the recent discovery took place. The Roman drain, which is a solid structure of Bath stone, and of the best workmanship, and the height, such as to enable a man to stand upright, has been traced inward from near its outlet at the river, and it was in following this drain in the direction of the Roman baths, that the sources of the Roman spring were discovered. This drain was found to pass two feet below the floor of the structure now called the King's Bath, and in following it the large Roman reservoir for the reception of the thermal water was found to be immediately underneath that building.

The form of this tank or reservoir when cleared was discovered to be octagonal, but not regular in form, some portions being somewhat circular. It took this form probably from the desire to enclose all the springs which forced themselves up through the earth, or, it may be, that the Romans found a rude basin already constructed, and were unwilling to alter the traditional form. The whole area of the tank was found covered with sheet lead half an inch thick, and the water bubbled up at many points; within were found squared and circular bases, as if of pedestals for supporting figures, near the sides. The diameter of the tank is 50 feet, and the sides constructed of good Roman masonry. There is a perfect Roman arch in one part. Cut in the masonry of this chamber, built by the

Romans to protect the springs, was an overflow channel filled with a piece of oak, and lower down another outlet also plugged with oak, and still lower down a third.[1] This lower outlet seems to have been found insufficient in Roman times to prevent the rise of the river in floods from interfering with the contents of the tank, it was therefore plugged, and the sides of the tank heightened. The level of the highest plug is eleven feet below the bottom of the present bath, called the King's. The builders of that bath, seem to have known nothing of what was underneath when they erected it and the Grand Pump Room.

The wall of separation between the King's and Queen's baths rests upon the line of wall of the Roman reservoir, but the builders of the wall were unaware of what was below, and had put in baulks of timber to support their wall. The Roman buildings appear, after their disuse, to have been levelled to the surface of the ground, and left in a swamp, caused by the drain being choked, for earth to accumulate, which it did for centuries after the superstructure was ruined, and the materials carried away for building purposes.

The chief destruction probably took place when the Saxon nunnery was erected; and still later, in Norman times, when the abbey and its noble church were built. The Norman drains of the abbey have, in places, been carried through the Roman work. The enclosure of the springs in the reservoir seems to have been the earliest Roman work in Bath, and preliminary to forming the elaborate system of baths which afterwards arose adjacent to the springs.

In the course of the examination of the ancient drains conducted by Major Davis, he found that the Roman baths were, from the first, built below the natural surface of the ground, so as to be filled by gravitation, instead of by pumping, as in the case of the modern baths.

The debris of the Roman city had completely filled up the ancient baths, and new baths were built above them, in entire ignorance of what was underneath; therefore, by excavating, it will be possible to recover the whole plan of the original structure. A committee has been formed for this purpose, and a fund raised,

[1] See account in proceedings of 'Bath Field Club,' vol. iv., p. 307, 1881.

and a considerable sum already expended, as it has been needful to purchase and to remove a house which stood upon a portion of the *Large Bath*. Another house still remains encumbering the site, but the committee confidently rely upon public spirit to enable them to remove this obstruction and so carry on a work which is of great public interest. If the large Roman bath can be cleared of buildings, and can be brought into its original condition, it is purposed again to restore it to its former use.

In the course of clearing the tank and following the drains, some articles of interest have been found. Two jugs of white metal like tin,[1] earthenware vessels and dishes; also an inscribed tablet or plate of metal, which has been variously read, but appears to be the attestation of a recovery by the use of the waters;[2] and another covered with markings and signs as yet undeciphered. A small sculpture, representing Minerva, helmeted, and with the Gorgon's head upon the breast, leaning upon a spear, has also been found; and a mutilated sculpture of a nymph reposing upon a couch, through the body of which a pipe has been carried for conveying water to a cistern, on the south side of the large bath into which the water was probably poured from an urn held by the figure.

Large masses of masonry containing hollow tiles, some formed in wedge-shape for constructing arches, have been found within and around the great bath, and these seem to have formed the roof of the ambulatory which surrounded it, and which has circular recesses or seats on three sides, and also a square one.

The fragments of sculptured stone which have been preserved from former excavations, as well as those lately discovered, give evidence of the best period of Roman art, and are very superior to those found in the north of England. They may probably be referred to the age of the Emperor Titus, or soon after.

It was in the time of Claudius, that the western portion of Britain was brought under Roman rule; and the earliest remains are found among the lead workings of the

[1] Similar to those carved on the sides of Roman altars.
[2] See *Academy*, March 12th, 1881, No. 462.

Mendip Hills, from whence the lead which covered the Roman baths at Aquæ Solis may have been obtained. One pig, with the name of Britannicus inscribed, found some years since, and another, not long ago, with the name of Vespasian, before Titus was associated with his father in the empire, show the antiquity of the workings. It will be recollected that Vespasian had the command of the Second Legion, which conquered this part of Britain; so that perhaps we may fix the completion of the building of the Roman bath to the government of Agricola.

It may not be out of place here, to mention some remains of Roman baths that have been found in the more northern provinces of the empire. Many of us have seen the vast thermal structures in Rome, and all the accompaniments of health and pleasure, luxury and refinement, which they disclose; and this was imitated in the provinces, though in a humbler manner. In plan and arrangement, they have a general agreement. Here in Britain, the Romans seem to have found a supply of water, and a spot quite suited to their tastes and habits, and, therefore, to have made the most of it, and to have used all their science and skill in making their buildings grand and attractive.

Perhaps the best-preserved specimen of a provincial Roman bath, and one the structure and arrangement of which seems to present some analogy to the remains at Bath, is the bath at Baden Weiler, in the Black Forest, the ancient Mons Arnobie.[1]

There is, at Pod'-Weiler, a mineral spring of a tepid degree of warmth, not so great as those at Bath, but approaching nearer to that of the Hot Wells at Bristol. These waters are, like those of Bath, used for drinking as well as for bathing; and the entire arrangement of the building has been accurately made out. They were divided into two portions, one for males, the other for females; and these quite correspond in their arrangement. They front the south, and at the extremities, east and west, there are courts for various exercises and games. They had a vestibule and two entrances; two porticos, which communicated, on the south front. There were passages from the outer courts, where seats were placed, and niches or recesses. There were hypocausts on each side of the

[1] See Pownall's *Antiquities*, Appendix, p. 183. London, J. Nichols, 1788.

building. Piscinæ also are found, one on each side, which received the waters from the hot spring. Two more parallel to the above, where the water was heated by hypocausts. They were all of them four feet in depth, and the marble seats remain on opposite sides; four steps led down into each bath, the sides of which had been covered with stucco. There were two circular laconica, or sudatories, with their domes, and valves for regulating the temperature.

There were also two cooling chambers and rooms for anointing as well as single baths, and places for storing wood and fuel, and outer stoves for heating the coppers.

On a pedestal, which had once supported a statue, were inscribed the words DIANÆ ARNOBIÆ, —To Diana of the Black Forest. Arrangements of a similar kind will probably be discovered at Bath.

The Pantheon at Rome is now ascertained to be only the circular Laconicam or Sudatorium, with niches, in the thickness of the wall, used for heated chambers, the heating apparatus being placed outside. This is proved from a comparison with the remains of a similar building at the Baths of Caracalla, but such a chamber and its accessories were rendered unnecessary in Bath by reason of the great natural heat of the waters. The quantity of hot water which rises from the hot springs in Bath is calculated at 385,000 gallons daily, but late improvements have brought the supply up to 50 gallons per minute more, and this, it is believed, may yet be considerably increased.[1]

[1] See the "Mineral Baths of Bath," by C. E. Davis, F.S.A., &c., City Architect, Bath, 1883, p. 80. Major Davis gives the area of the bath discovered by him, including the surrounding ambulatory, as 111ft. 4in., by 22ft. 10in. The form is rectangular, but there are recesses. The bath in the centre is complete, with steps into it all round, the length being 83ft. 10in. by 40ft. 8in. in width.