



Imperial Rome and Ostia

Roman baths

Colin Chant

The real innovations in heating technology were developed by the Romans for their famous hot baths. Air heated by a furnace circulated under a raised floor, the Roman hypocaust. Such a furnace can be seen at this smaller private baths, the Baths of Buticosis.

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An important part of daily life for most Romans would be, following work, a trip to the local baths. The first thing you would do on entering the baths would be to go to the dressing room and remove your clothes and your clothes would be stored in the dressing rooms either under the charge of your slave if you were lucky enough to own one, or you could pay a small fee to the cloak room attendant who would guard them for you and we know that toga thievery was a relatively common practice, common enough to enter into the standing jokes of the imperial period.

The water for the hot pools in the caldarium or hot room was heated separately in a large metal boiler in the service area. Connecting to the pool is a metal plate set over a furnace keeping the water in the pool at an even temperature. The pools were never more than a few feet deep.

In the large Forum Baths at Ostia, the caldarium had more than one hot pool as it was designed to cater for several hundred customers at busy times. Steps led up to the pools which were clad in marble. Like all the pools, the large semicircular pool at the public baths would have been built in concrete and lined with marble. It is set beside the south facing wall and below a columned window. The glazed window was essential as it provided the only source of light and attracted further heat from the sun in the afternoons when the baths functioned.

Although the bath buildings were designed to maximise the efficiency of light and heat in all the different heated rooms, what they relied on most was the central heating system or hypocaust connected to the furnaces underneath. In order to achieve the elevated temperatures necessary for a hot room, a hot sweating room, hollow terracotta tubes were attached to the walls, which continued down to the hypocaust underneath, the hot gases rise up through the tubes, and create basically a bank of radiators. So that the sweating is achieved the high temperature is achieved through radiant heat and there are usually benches for the bathers to sit on, with their backs against the heated surfaces. The tubes are then of course covered with marble.

Colin Chant

In the bath buildings of Ostia and Rome, the Romans applied and extended technologies of water supply and heating which the Greeks used in their own hot baths. The terms the Romans used for their baths - *thermae* for their public baths, and *balnea* for smaller private bathhouses - show their debt to the Greeks in this area. The term hypocaust is also Greek, though the system of central heating to which it refers is a distinctively Roman development. The Roman baths also display Roman engineering at its most innovative: the building technology of brick-faced concrete.