WHAT HAVE THE ROMANS EVER DONE FOR US?

Apart from the sanitation, the medicine, education, wine, public order, irrigation, roads, the fresh-water system, and public health, what have the Romans ever done for us? **Stephen Mortlock** investigates.

The mighty Roman war machine ground relentlessly across Europe and Africa. Carthage, Greece, Germania and Gaul had fallen and the Roman influence extended from the Channel coast to the Caucasus, from the northern Rhineland to the Sahara. Over the Channel was another prize: Britannia.

But why invade Britain at all? It was not about economics. Rome was already rich, goods and products like cereals, olives, fruit, hides and, unfortunately, slaves from their conquered lands, were being sent to Rome, and private estates in North Africa were some of the largest exporters of grain in the Empire.

Nor was it about military security – the Channel was an effective deterrent. The invasion of Britain was a war of prestige. The emperor Caligula had been assassinated in 41 AD, and an obscure member of the imperial family, Claudius, (full name: Tiberius Claudius Caesar Augustus Germanicus) had been elevated to the throne. The new emperor was the first to be born outside Italy and he

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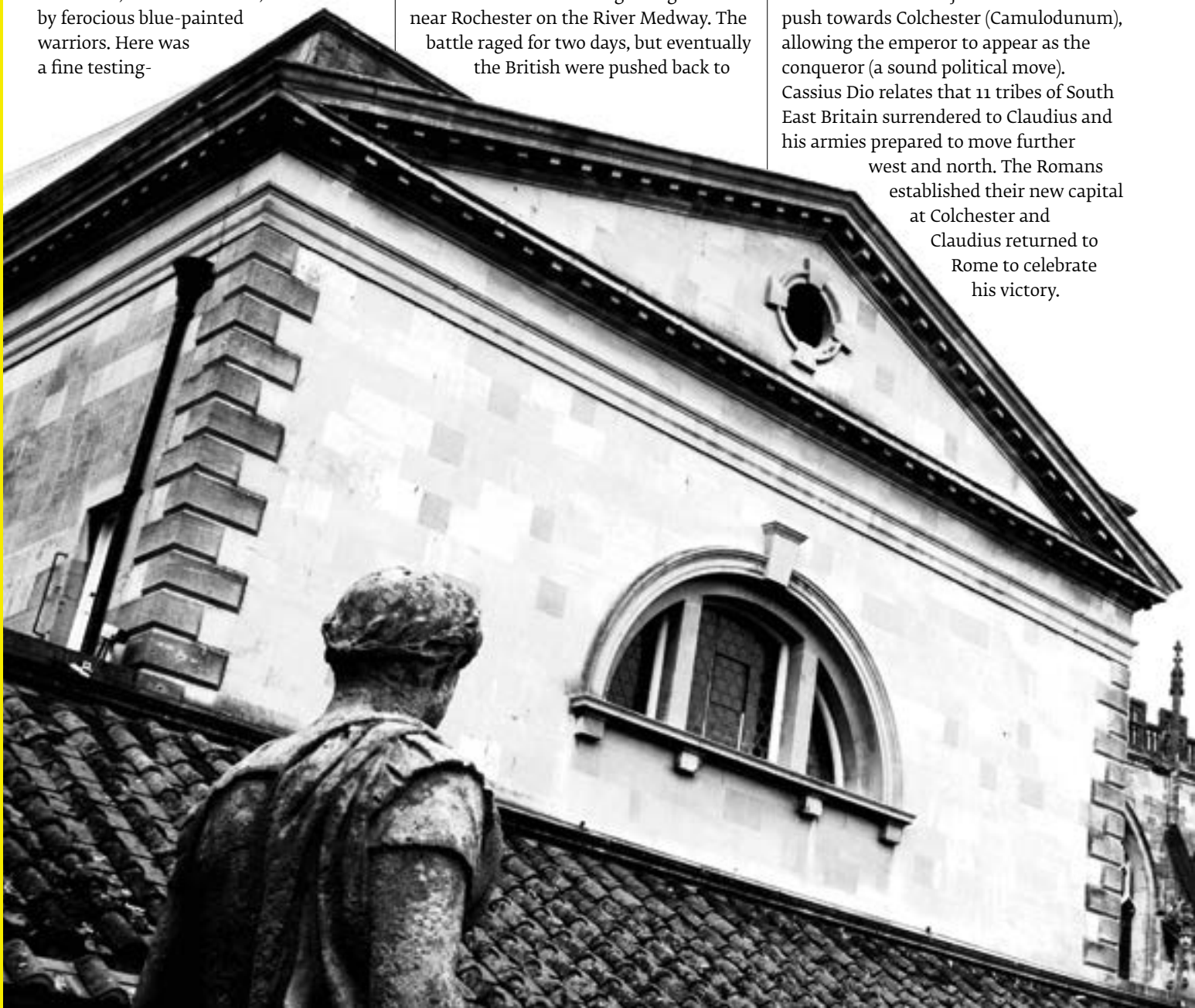
suffered from a limp and slight deafness acquired during infancy (possibly infantile polio). Because of this, he faced opposition from the Senate and he needed a quick political fix to secure his position. What better than a glorious military victory in Britain?

Since Julius Caesar's withdrawal from Britain in 54 BC the country had remained free – mysterious, dangerous and exotic. In the popular Roman imagination, it was a place of marsh and forest, mist and drizzle, inhabited by ferocious blue-painted warriors. Here was a fine testing-ground of an emperor's fitness to rule.

Contemporary records suggest that in 43 AD Aulus Plautius sailed from Boulogne to Richborough (Kent) with four Roman legions and an equivalent number of auxiliaries (about 40,000 men in total). British resistance was led by Togodumnus and Caratacus, sons of the late king Cunobeline (of the Catuvellauni tribe, from the Hertfordshire, Bedfordshire and southern Cambridgeshire area).

A substantial British force met the Romans at a river crossing thought to be near Rochester on the River Medway. The battle raged for two days, but eventually the British were pushed back to the Thames. Togodumnus died shortly after this battle but his brother escaped and would continue the resistance further west. Meanwhile, a second force under the Emperor Claudius had also arrived in Britannia, possibly near Chichester or Portsmouth, and he brought with him a war elephant which according to Polyaenus "caused the Britons and their horses to flee", allowing the Roman army to march on unopposed.

Plautius halted his advance and sent word for Claudius to join him for the final push towards Colchester (Camulodunum), allowing the emperor to appear as the conqueror (a sound political move). Cassius Dio relates that 11 tribes of South East Britain surrendered to Claudius and his armies prepared to move further west and north. The Romans established their new capital at Colchester and Claudius returned to Rome to celebrate his victory.



When the army moved forward to conquer new territory, the politicians and civil servants took over in the subdued areas. The Iron Age tribal centres were redesigned to become Roman towns, they built regular street-grids, forums (market squares), basilicas (assembly rooms), temples, theatres, bathhouses, amphitheatres, shopping malls and hotels. The towns were very Roman but, interestingly, the people in charge were not. Instead of an influx of foreign overlords stirring up resentment, the councils were formed of local warlords and they were responsible for tax-collection and keeping order in the surrounding countryside, effectively running things on Rome's behalf. Elevating the role of the conquered people was highly successful and in the space of a generation or two, the citizens converted themselves from Celtic warriors and druids into Romanised gentlemen. Britain's upper classes had found a new style. Blue paint and chariots were so last century, while Gaulish wine and the Greek myths had become sophisticated; you now had to project rank and status in the "Empire" fashion. In gratitude for having their power and property preserved, the local gentry proved loyal servants to the Empire.

The Romans had three different types of baths: baths at home, private baths and public baths run by the state

Public health

The Romans valued the same preventive approaches to health endorsed by Greek culture and medicine: proper exercise, diet, and spa-type public baths, with some aspects of divine respect and tribute included. Roman public officials had recognised that as towns enlarged into cities with large populations and trading centres, the need for good hygiene increased. Public granaries were strictly regulated for cleanliness; public latrines and plumbed sanitation to control sewage were established in many Roman areas; and a good, clean, reliable water source was a prime directive of public works in Roman cities. Certainly, piped water supplied many public fountains, which were the main source of water for poorer households.

Vitruvius wrote of the importance of such a water supply, and the aqueducts built for this reason still function today in some areas. In Roman Britain, large aqueducts were generally not needed, as water could be found close to most places in rivers or wells. Although in Dorchester there is a an aqueduct that is still largely intact which measures eight miles long, by 5ft wide and 3ft deep, capable of delivering two million gallons of water a day.

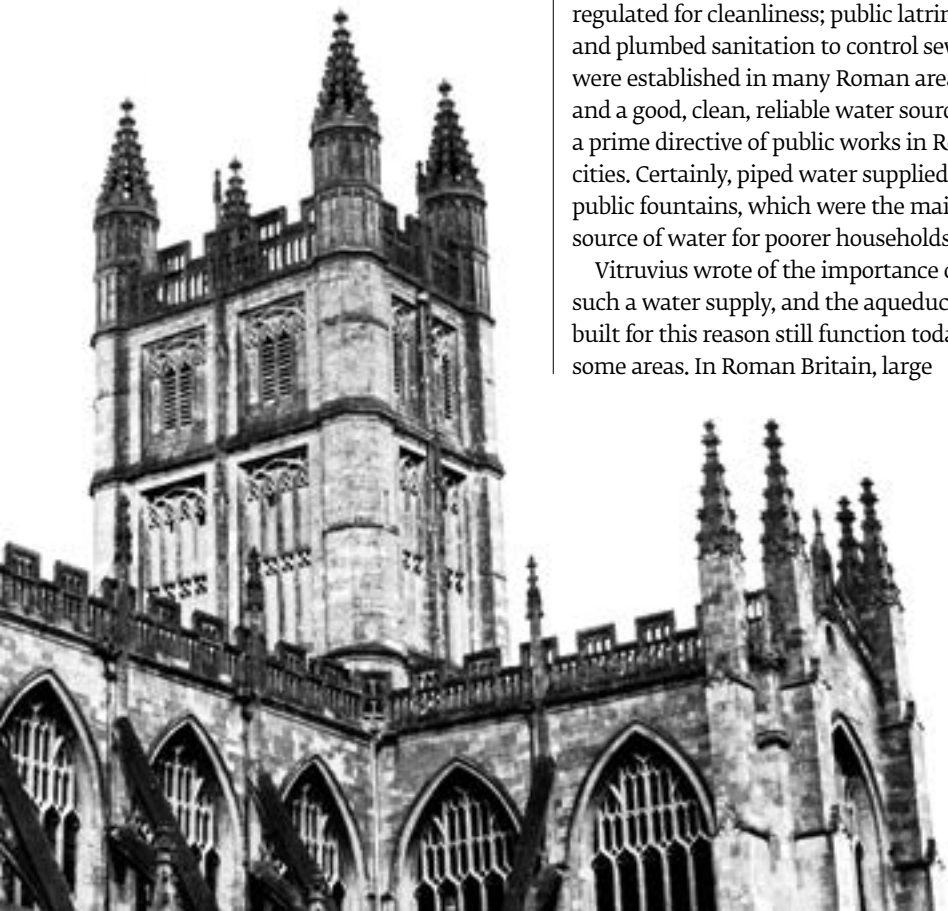
The Roman legions, far away from their homeland, built their own baths at mineral and thermal springs in the newly conquered lands. In many of the forts along Hadrian's Wall it is possible to find archaeological evidence of baths, drainage ditches and water storage facilities. The Romans had three different types of baths: baths at home, private baths, and public baths that were run by the state.

Some of the public baths later developed into huge and impressive edifices (thermae) with a capacity for thousands of people. In the heyday of Roman bathing culture, the inhabitants of Rome used 1,400 litres of water per person per day, mainly for bathing.

In Britain one of the best examples of the public baths can still be found in Bath, where the Roman's built a formal temple complex around the spring. This spring is a natural mineral spring and is the only spring in Britain officially designated as "hot".

Medical knowledge

By the first century AD, the Roman Empire had effectively assimilated the knowledge and skills of the Greek world and in the process they borrowed their medicine and caring practices. The ideas of the philosophers, such as Hippocrates and Aristotle, were taken on board, as were certain religious beliefs, certainly the Cult of Asclepius continued to be popular. But Roman medicine was really



West Asian and African medicine because most of the great doctors of the Roman Empire lived in West Asia (in Turkey and Syria), or in Africa (in Egypt), not in Europe. These doctors referenced earlier Egyptian, Indian, and Greek medical research. Roman doctors like Scribonius Largus relied heavily upon the Greeks' discoveries and practices who firmly believed in achieving the right balance of the four humors and restoring the "natural heat" of people with medical conditions. One of the most important Roman doctors was Aelius Galenus (Galen), who started his medical career by treating local peasants and performing surgery on a gladiatorial troupe while living in Pergamom (in modern Turkey), he then continued his studies in Smyrna, Corinth, and Alexandria.

In 162 AD the ambitious Galen moved to Rome where he quickly rose in the medical profession owing to his successes with rich and influential patients whom other doctors had pronounced incurable, his enormous learning, and the rhetorical skills he displayed in public debates.

He believed the theory that opposites would often cure people. For a cold, he would give the person hot pepper. If they had a fever, he advised doctors to use cucumber. In general Roman physicians were self-taught with no formal training requirements and tended to be in private practice as itinerant physicians, unfortunately this was also reflected in the low cure rates. Civic doctors in the paid service of local communities did not appear in Rome until the 4th century AD.

Throughout history, some of the biggest advances in medical practice have come during war time and Roman medicine similarly had its foundations in the innovations and discoveries on the battlefield. The Roman Empire was built upon the success of its legions and Emperor Augustus implemented a number of reforms as he identified the importance of health to cut down losses and to raise troop morale during long military campaigns. Archaeologists found the ruins of a Roman military camp in Baden (Germany) and they showed evidence of a hospital or valetudinarium, these would be more accurately be described as a "mobile military camp".

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A field-surveying text De Munitionibus Castrorum described one of first hospitals: "Usually arranged to accommodate two hundred men... hastily constructed and was not elaborately equipped." The valetudinarian soon developed from a group of tents to well-equipped military hospitals built of stone and wood. Remains found in Baden suggest that the hospital had: "An imposing façade, a colonnaded portico, and traces of walls outlining as many as fourteen rooms. The larger may have been subdivided into smaller compartments for fragments of wooden partitions have been found." The first priority for these hospitals was sanitation. Location of the building with access to clean water and adequate sewerage was planned to the finest detail. Military practicality had done away with the superstition of civilian medicine. There was an understanding about the causes of infection, as there were isolation rooms with running water, obtaining this water from sources upstream of the latrines. Where and where not to build became just as important as what to build. Marcus Terentius Varro (116BC–27BC) a Roman scholar and writer, was able to recognise the importance of micro-organisms in the pathogenesis of disease long before Louis Pasteur formalised the germ theory of disease. "Special care should be taken to place it at the foot of a wooded hill where it is exposed to health-giving winds. Care should be taken where there are swamps in the neighbourhood, because certain tiny creatures which cannot be seen by the eyes breed there. These float through the air and enter the body by the mouth and nose and cause serious disease."

Caches of surgical instruments have also been uncovered including arrow extractors, catheters, scalpels, and forceps. Inscriptions for the medical professionals stationed there often bore the titles *medicus ordinaries, medicus legionis* and *medicus cohortis*: the term "*medicus*" referred to their position as milites medici – soldiers who were exempt from other duties. The title following the word *medicus* referred to their rank within the medical corps – for example the *medicus legionis* would be the "medic" in charge of a legion while a *medicus cohortis* would be responsible for a cohort (10 cohorts in a legion). The Roman doctors had procedures to sterilise their equipment in boiling water before using it and performed minor operations using opium and scopolamine to relieve pain and acid vinegar to clean up wounds. They did not have effective anesthetics for complicated surgical procedures, but it is unlikely that they operated deep inside the body.

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Herbal remedies

As a supplement to medical interventions the Romans also employed herbal remedies based on the *De Materia Medica* written by the Greek physician Dioscorides who practiced in Rome when Nero was the ruler. Wine was a frequent component of ancient Roman medicine as it is a good means of extracting the active elements from medicinal plants. The sweet Roman drink "mulsum", a mixture of wine and honey, was served as pre-dinner drinks at Roman parties. But, the recipes include precise quantities for the ingredients, suggesting that it was also developed for medicinal purposes.

Another staple for the medicine cabinet was garlic, Galen believed it to be the cure-all herb with antibacterial, antiviral, anti-parasitic and antifungal properties. The Romans took barley (*hordeum vulgare*) with them across Europe and the Middle East, establishing it everywhere they went as a staple food and an ingredient for brewing beer but also a medicine. One of its most popular medicinal uses was as an anti-inflammatory, a property for which barley still has a sound reputation today, being widely recommended as a treatment for osteoarthritis, gastric ulcers and other inflammatory diseases. Made into a poultice and applied externally, barley has demulcent properties which make it helpful in soothing and reducing inflammation in sores and swellings. A hot poultice eases stiff and painful joints and draws the poison from boils, abscesses, stings, bites and infected cuts.

A cold poultice relieves swellings and helps with weeping eczema and other itchy skin conditions.

Who would believe that cabbage would be useful for treating wounds and sores and a hangover remedy, the Romans simply ate cabbage to ward off hangover effects. They ate it raw and served it with vinegar and lots of olive oil, sometimes boiling it. Cumin was often added too, for flavour but also for additional healing properties. Most importantly, they ate it before banquets and celebrations to prevent drunkenness. Aristotle himself practiced eating cabbage before and after alcohol intake. Nervous disorders were treated with Fennel (*foeniculum vulgare*), because Romans believed that it calmed the nerves. Historians believe an extinct plant of the genus Ferula (a variety of giant fennel) Silphium, could be used for fever, cough, indigestion, a sore throat, aches and pains, and warts. Hippocrates wrote: "When the gut protrudes and will not remain in its place, scrape the finest and most compact silphium into small pieces and apply as a cataplasm." People may have used extracts as a form of contraceptive. In *The Illiad*, Achilles treats the wounds of his friend with yarrow (*achillea millefolium*), this well-read story would have ensured this treatment was common knowledge in the Roman world. Modern research shows that yarrow is an astringent, is anti-inflammatory and promotes healing. Elecampane (*inula helenium*), also known as horseheal, is a member of the sunflower family and, according to Pliny (23-79 AD), could be used as a condiment, for digestive problems, an expectorant and for water retention.

The Romans applied unwashed wool to sores. Wool contains lanolin which has both anti-fungal and anti-bacterial properties that protect the sheep's skin from infection. It seems that Romans were also very particular about their looks, Graeco-Roman medical textbooks report several peeling applications, such as cleansing, brightening, darkening, softening and aesthetical improvement of the skin by use of peeling and chemical peeling, as well as therapy of dermatological diseases.

Conclusions

The decline of Roman influence in Britain is generally believed to have started with the revolt of Magnus Maximus against emperor Gratian in 383 AD, while in Britain General Flavius Stilicho was suffering raids by the Scoti, the Saxons, and Picts. These were followed by wars in Europe against the Visigoths and the Ostrogoths. Needing extra military manpower, Stilicho deployed men from Hadrian's Wall and shipped most of the remaining troops from Britain to fight in these wars. Finally, in 409 AD, the Britons expelled Roman authority from the country, although the repercussions lasted much longer. The historian Theodor Mommsen believed that because the Roman needs and priorities lay elsewhere in Gaul and Italy: "It was not Britain that gave up Rome, but Rome that gave up Britain...!" But they left a rich legacy behind them with their aqueducts, public baths and sewage systems and the start of an excellent medical service. Although the hospitals were initially established for military purposes, they eventually developed civic hospitals for the general public. The Empire's gradual demise in the Christian era lowered the curtain on original medical endeavour as Europe entered the dark ages. BMS