

Water in the Roman town: new research from *Cura Aquarum* and the *Frontinus Society*

A. O. Koloski-Ostrow, N. de Haan, G. de Kleijn, and S. Piras

Water was everywhere in cities across the Graeco-Roman world. A metaphor for life itself, it gave an underlying structure to the ancient city. It shaped urban topography and even local history. Water was hidden in deep wells and cisterns and gushed unseen through the conduits and armatures of aqueducts, to be distributed by the *castellum aquae* or to be used for irrigation outside the city. It bubbled openly in *nymphaea*, public fountains, baths and in the labyrinthine sewer networks that served them. Invisibly and visibly it lent form.

The most impressive fragments of ancient waterworks are the aqueducts whose massive arches marching across the Roman countryside still suggest their tremendous power. Recent publications on aqueducts (e.g., Hodge 1992, and Fabre, Fiches, and Paillet 1991) demonstrate a continuing admiration for their technology and design. In recent decades, however, much new work has been done on water-supply and water technology in the ancient city. This article offers an overview of such research for the Roman world in particular, and gives special attention to the Ninth International Congress on the History of Water Management and Hydraulics in the Mediterranean area, *Cura Aquarum* in Campania, held in Pompeii in October 1994. Included is a brief history of the series of symposia, and discussion of possible future directions.

Earlier symposia on water management and hydraulics and the Frontinus Society

With the aim of exchanging information, a group of hydraulic engineers 32 years ago in Germany started a study group focused on the history of hydraulic engineering, water resource management, and hydrology in general. From this larger group, a number of engineers and archaeologists organized themselves to study water-supply and hydraulics in antiquity. This subgroup designed and financed a series of international symposia held every two or three years: Koblenz 1975; Lyon 1977; Istanbul 1979; Athens 1981; Jerusalem 1983; Cairo 1985; Rome 1988; Mérida (Spain) 1991; and Pompeii 1994. Up until 1991 these events were organized by G. Garbrecht and H. Fahlbusch of the Technical University at Braunschweig in close co-operation with local researchers. Each successive conference was attended by an ever more international crowd of scientists, representing a wider and wider range of disciplines. The most recent conference held at Pompeii was organized by a group of Dutch scholars of the Catholic University of Nijmegen. Most of the proceedings have been published by the Leichtweiß-Institut für Wasserbau der Technischen Universität Braunschweig (*Mitteilungen aus dem Leichtweiß-Institut für Wasserbau der Technischen Universität Braunschweig* — 1979: Istanbul; 1981: Athens; 1984: Jerusalem; 1986: Cairo; 1989: Rome; 1992: Mérida). The contributions at the Lyon meeting were published in France (1983), and the Pompeii proceedings were published in the Netherlands (1996).

At about the same time that the first symposium was held, there arose a second organization called the Frontinus Society, named in honor of Sextus Iulius Frontinus, *curator aquarum* of Rome at the end of the 1st c. A.D. and author of *De aquaeductu urbis Romae*. The society promotes scientific research in conduit technology (water conduits and gas pipes) and fosters education in the history and cultural importance of the field. In addition to its own annual journal, *Schriftenreihe der Frontinus Gesellschaft*, the Society has published supplements (for example, Grewe 1985a, and Jansen 1993) and books on the history of water-supply in antiquity and in the Middle Ages (see bibliography, *Wasserversorgung I-IV*). Many attendees of the symposia are members of the original study group or of the Frontinus Society or both. These ties are manifest in the moral and financial support offered by both groups for the international meetings.

The Frontinus Society has stimulated research mainly among German archaeologists and engineers and is still not well known in the English-speaking world. Nevertheless, the fact that increasingly non-Germans have become members proves that there is a need for an