LECTURE 8: Hydraulic technology

Frontinus, *On the aqueducts of Rome*.ca. AD 95.
Springs at Tel Hazor (1200 BC), Mycenae (1250 BC).
shaduf (counterweighted beam to lift water) ca. 1600 BC.
Lake Copais, Mycenaean drainage; Nineveh, Assyrian aqueduct 700 BC
Athens, Agora drain; Rome, *cloaca maxima* ("Great Drain")
aquae pluviae arcendae (control of run-off water)
cuniculus (Etruscan underground drainage tunnel)
Claudius, Lake Fucinus (40s AD), 5.64 km drainage tunnel
Nineveh conduit (700 BC)
Tunnel of Eupalinos, Samos (550 BC), 1100 m aqueduct tunnel
Pergamon; inverted siphon (ca. 180 BC), descends 160 m; Lyon siphon (2C AC), 9 x 2.3 km long lead pipes, 2000 tons.
Pont du Gard, Nîmes (25 BC), L 275 m, H 49 m
Specus (underground aqueduct channel)
Sinter (calcium carbonate deposit)
Castellum: reception tank to apportion water
quinaria (Roman measure for water volume, amt unknown)
stopcocks
nymphaeum (monumental fountain); Miletus, Jerash (2C AC).
Water-screw (Archimedes, 250 BC), force pump (Ctesibios, 275 BC), compartmented wheel, chain pump, *saqiya* (animal-driven gear drive, 2C BC?)