


I PERCORSI DELL'UOMO DALL'ANTICHITÀ AD OGGI

I

ACQUE INTERNE: USO E GESTIONE DI UNA RISORSA

A CURA DI
MARIAVITTORIA ANTICO GALLINA



CENTRO STUDI BENI CULTURALI E AMBIENTALI



ABSTRACTS

PIETRO ALEMANI

GEOLOGICAL AND HYDROGEOLOGICAL FEATURES OF THE PO RIVER PLAIN

The paper illustrates the geological, stratigraphic and hydrogeological peculiarities of the Po plain. Its surface lithology is examined in detail, showing a progressive decrease in particle size, from the piedmont to axial areas. Lithological features have a strong influence on the hydrogeological setting of the flatlands around the Po, which are very rich in groundwater. Furthermore, in addition to its great and renowned abundance of surface waters, the Po plain has vast areas that hold groundwater of excellent quality in large quantities, with shallow or very shallow piezometric surface. The paper describes in details the "fontanile", a natural rising to the surface of groundwater on human settlements in the Po Valley.

GIOVANNA BAGNASCO GIANNI

Ἄριστον μὲν ὕδωρ

WATER SUPPLY AND DRAINAGE IN ETRURIA: THE CASE OF TARQUINIA

(With a note by GIANLUCA PADOVAN, Speleology and Artificial Caves)

Artificial caves often no longer serve any substantial purpose today, their functions having been lost or given over to other sites. However, such caves must once have had a major role both in the daily life and in the intellectual life of Etruscan communities. This is a logical conclusion if we consider the implications of the efforts required not only to build the caves but to maintain them. These efforts certainly emanated from a centrally organized institution.

This paper illustrates a pilot project for research into problems of water supply and drainage in the ancient city of Tarquinia, organized in cooperation with excavations conducted by the University of Milan at Tarquinia (Civita) under the direction of Professor Maria Bonghi Jovino. The cooperative effort joins archaeologists with speleologists of the association S.C.A.M., which is part of the Italian Speleological Society (S.S.I.).

The aim of this joint research is to uncover historical patterns in the original functions of artificial caves. Comparative data from the two fields is necessary for a full understanding of the differences among such caves.

ANTONIO VIOLANTE

THE LAGOON AND RIVER BRANCHES IN CLEONIMUS'
CAMPAIGN AGAINST *PATAVIUM*

The objective of this study is to make a return visit to the places touched by Cleonimus' forays into the countryside around Padua in 302 B.C.

From Livy (X,2) we deduce that the Spartan adventurer almost certainly reached the Venetian lagoon only for piracy, with limited contingents obeying his orders, and soon met defeat because he was incapable of foreseeing the sudden reaction of his adversary. As a matter of fact, if the Spartan prince had gone there following a meditated war plan against Padua, he would neither have incautiously dispersed his forces to sack the villages below the town, nor attempted to go upstream from the mouth of river Meduaco with his fleet. He actually silted up in the shoals because of his ignorance of the place.

MARIAVITTORIA ANTICO GALLINA

TECHNICAL EVALUATION OF THE SO-CALLED
DRAINING FUNCTION OF EMBEDDED AMPHORAE

The aim of this study is either to identify the unknown place of origin of this peculiar building method or to establish its true purpose.

A huge bibliography defines this construction technique as a drainage system, but without any supporting geological data. Embedded-amphorae structures have not been thoroughly examined to determine their special properties. This study offers some technical factors for analysis of the possible function of this building method (i.e. to reclaim land and improve geotechnical or hydrological conditions), with regard to the natural state of lands, their static lift, etc.

The study proposes key issues for an improved interpretation.

MARINA CASTOLDI

ROMAN WELLS IN MILAN: FROM USE TO DISUSE

The author surveys the Roman wells in Milan, in terms of town planning and technology. In particular, she points out the historical significance wells acquire when, because of traumatic events, they become makeshift hiding-places for precious objects.

MAURO CALZOLARI

THE LAKES OF MANTUA IN ROMAN TIMES

The lakes of Mantua are connected bodies of water created by the expansion of the Mincio River around the town of Mantua. They have been referred to in written sources since 214 BC, particularly in terms of the triumviral confiscations that involved the poet Virgil, among others.

This article is about the topography of the lakes in Roman times and their economic value in that period, particularly as part of the waterway from the Po River to the Mincio River to Garda Lake. Among the research proposals outlined in the article, we point out the need to undertake a real “archaeology of inland waters” for both the lakes of Mantua and the Mincio River. The study will need to be integrated with environmental and ethnographic research concerning the river and its natural park.

SERGIO LAZZARINI

CUNICULUM VIOLARE NE LICETO
ROMAN MINING RULES AND WATER BACKUPS

The *lex metallix dicta*, attested in the second tablet of Aljustrel, shows mining rules enforced in the Spanish district of Vipasca. In particular, it imposes strict respect for the drainage cuniculus, whose use in the quest for new veins is subject to prior permission from the *procurator metallorum*.

ELIDE MERCATILI INDELICATO

“*DOMUS PROPE FOSSADOLTUM SUPER SCLERAM*”
A *DOMUS HUMILIATORUM* ON THE SILLARO RIVER
(THIRTEENTH CENTURY)

This contribution intends to consider the question of how the *ordo humiliatorum* used to select sites for settlement. The lack of sources concerning the early life of the order and the absence of a founder and of a common rule to regulate this aspect of life in the order mean that there is much to be gained from specific research into topographic and environmental conditions in the territory where the first *domus* was established.

The research relates to the *Domus Omnium Sanctorum* in Fossadolto (1202-1203) and has analyzed some unpublished documents from the years 1263-1264. A preference for sites located near waterways and main routes emerges. This is a result of the interest shown by the *ordo humiliatorum*, from the time of its founding, in charitable institutions and agricultural activity. These aspects of the order’s existence have often been neglected by a historiography that has tended to consider handicrafts the characteristic enterprise of the Humiliati.

CARLO PEROGALLI

WATER AS AN ELEMENT OF DEFENSE

In the Middle Ages, strongholds were built in elevated areas best suited to defense. After the last barbarian incursions in the ninth and tenth centuries, people began to build on lower lands. To offset the disadvantages of a less defensible position, moats were dug around castles and town walls. If possible, the moats were flooded, and water thus took on a role alongside walls in defense. The control and defense of a river or lake was sometimes ensured by castles and occasionally by fortified docks.

The coasts were guarded by chains of towers at distances suitable for sighting pirates. Water could thus also represent a threat, quite the contrary to its role as a defense. There are also examples of close connection between fortified buildings and the water: fortified watering places, fortified mills and fortified lazarets.

ROBERTINO GHIRINGHELLI

THOUGHT AND CIVIL WORKS IN THE FIELD OF PUBLIC WATERS
UNDER LOMBARD-VENETIAN ADMINISTRATION:
THE TEACHINGS OF GIAN DOMENICO ROMAGNOSI

In this paper, the author, professor of the history of political thought at the Catholic University of Milan, shows the role of Gian Domenico Romagnosi's (1761-1835) thought and work in the formation of modern civil jurisprudence in the field of public waters, with reference to the Latin, medieval and *jus commune* juridical traditions and especially to the customary law of the Po Valley area.

In the 1400 pages he devoted to the subject, Romagnosi describes techniques of water extraction, canalization and agricultural and industrial use. He also quotes the more interesting opinions regarding disputes about the concept of private property of waters and their public and private use. The picture that emerges is one of a Lombard society open to new social and economic players under rigid state administration, such as that of Lombardy-Venetia.

ETTORE DEZZA

REFORMING THE LAW OF WATERS: GIACOMO GIOVANETTI AND
THE CIVIL CODE IN THE KINGDOM OF SARDINIA (1837)

Giacomo Giovanetti (1787-1849), a lawyer and politician, played a leading role in reforming the law of waters in the Kingdom of Sardinia during the reign of Charles Albert (1831-1849).

As adviser to the royal commission responsible for drafting a new civil code from 1831 to 1837, Giovanetti worked out proposed legislation based on the free and full use of waters that was soon thereafter judged to be in the vanguard of European law.