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**Ten centuries of Trade and trade routes in the Byzantine Empire  
(5<sup>th</sup> - 15<sup>th</sup> Century AD)**

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Paper

**Sailing the Early Medieval European Trade:  
the Mediterranean *Emporium* of Comacchio (6<sup>th</sup> – 10<sup>th</sup> Century AD).**

By Diego Calaon and Sauro Gelichi

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**Title**

Sailing the Early Medieval European Trade: the Mediterranean *Emporium* of Comacchio (6<sup>th</sup> – 10<sup>th</sup> Century AD)

**Authors**

Sauro Gelichi, [gelichi@unive.it](mailto:gelichi@unive.it)

Diego Calaon, [calaon@unive.it](mailto:calaon@unive.it)

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## **Abstract**

Recent researches have demonstrated both from the archaeological and historical point of view the belonging of Comacchio (Ferrara, Italy) to the mostly unknown picture of the formation and development of new settlements that characterize the upper Adriatic Sea between the 6<sup>th</sup> and 10<sup>th</sup> century AD. The importance of Comacchio as a new town, able to take a fundamental role in the management of the trading relationships on a Mediterranean scale, has to be analysed in connection with the birth of other new urban settlements.

Comacchio, as Venice (Torcello, Rialto, Olivolo and Malamocco), Cittanova, Grado and Caorle, is an extraordinary element of novelty and vivacity in an historical period traditionally considered critical and recessing.

The main feature of these new towns is, apart from their topographic localization in a marshy environment, the enhanced ability of promoting wide range commercial activities based on the incomes coming from the exploitation of the local resources (salt production and fishing). The commercial activities relate to the development of a strong local seamanship able to provide constant and efficient transports on the shallow waters of rivers and lagoons.

The new “emerging centers”, often competing against each other, are localized in a political territory that can be considered as a border between the eastern/Byzantine world and the Western Lombard/Carolingian world. The ability to differentiate their relationship with Constantinople or with the *élite* of the continental kingdoms provides their fortune in becoming true emporia.

## **Key Words**

Comacchio, Adriatic sea

Early Medieval *emporía*

Trade routes

Port infrastructures

The settled centre of Comacchio (Ferrara, Po Delta) (Fig. 1) originated in the Early Middle Ages. Written sources place the full formation and development of the settlement during the 8<sup>th</sup> century.

Comacchio takes a fundamental role within the system of ‘new centres’ which are born along the North-Western Adriatic coast between the 7<sup>th</sup> and the 9<sup>th</sup> century. These ‘new centres’ show extremely diverse material evidences both with regards to quantity and to quality. However, it is possible to classify them - from the point of view of the historical and archaeological interpretation -, as ports and markets, therefore as ‘*emporiora*’ (Gelichi, 2007a: 83-86). From the political viewpoint these new towns are located within the narrow strip of land which is under Byzantine control after the fall of Rome.

We focus on Comacchio in order to find an answer to the necessity of assessing the quality of its late antique and early medieval archaeological information. The objective is to verify the material characteristics defining the site as a *nodal-point* in the economical relationship incurring between the Adriatic and Mediterranean routes on one side and the trade with the hinterland of the Po river (and therefore the relationship with the *élites* of the Po valley) on the other side (Gelichi et al, 2006; Gelichi 2007b).

This paper is constituted of three sections:

- 1) the way that led to the birth of the settlement is firstly sketched;
- 2) secondly, the material structures of the early medieval settlement and the characteristics which identify Comacchio as an ‘emporium’ are described;
- 3) finally the last part will consider the role of Comacchio as an emporium within the early medieval Adriatic, Po river and European economy.

### **Between Late Antiquity and Early Middle Ages: the path towards a new settlement**

The delta of the Po during Late Antiquity is a territory that can be defined as an area without towns. Along the banks of the old course of the river called *Padus Vetus* a certain number of settlements have been identified. The only significant centre is a *vicus*, called *Vicus Aventia*, where imperial legates were residing, carrying out the management and administration of large areas belonging to the imperial treasury. A good quantity of funerary inscription are the indirect evidence of the presence of wide *saltus*, large estates consisting also of uncultivated land, areas partially submerged by water and large patches of woodland (Patitucci Uggeri, 1972; Uggeri, 1975; Gelichi and Calao, 2007: 395-410).

The sites, from the imperial Age onward, were

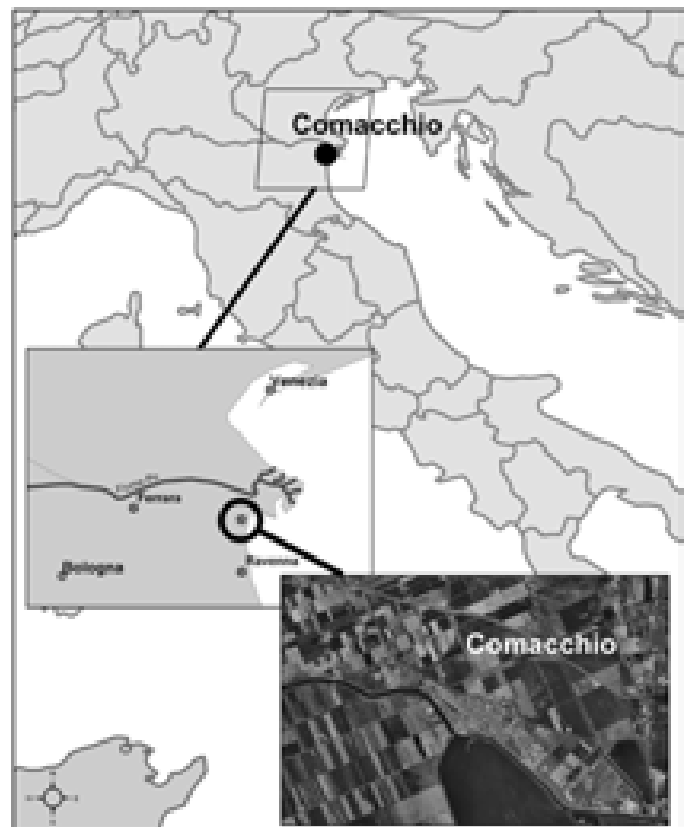


FIG. 1: LOCALIZATION OF COMACCHIO.

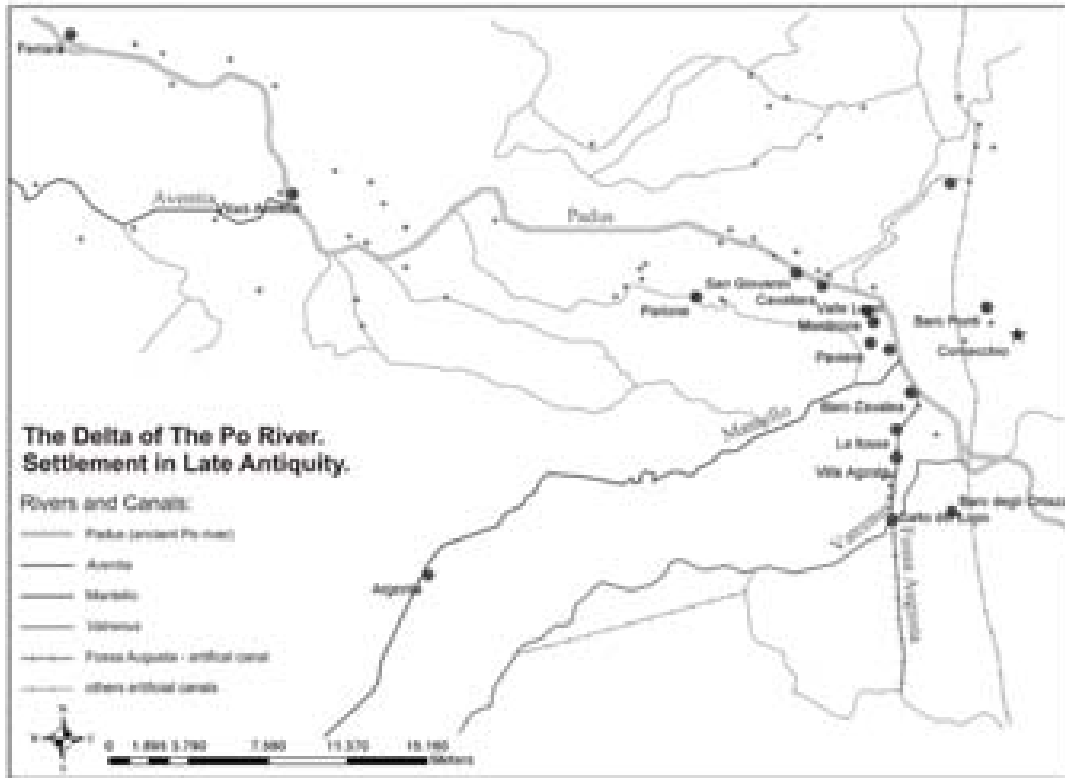


FIG. 2: DELTA OF PO RIVER: SETTLEMENT IN LATE ANTIQUITY.

located along the main river ways (fig. 2). Amongst the structures which have been found we can list houses (some with a high level *pars urbana*), structures for fish breeding, for the production of brick, salt-works and infrastructures connected with river navigation (Uggeri and Patitucci Uggeri, 1984: 59; Uggeri, 1986: 168-172).

Both written and material sources highlight how the people living around the delta in the Late Imperial Age were expert with lagoon and river navigation. Located in an area acting as a hinge between the large sea ports of the Upper Adriatic, the sites of the area of Comacchio seem to carry out the role of intermediate stop-overs in the internal lagoon routes between Ravenna and Aquilea (Gelichi 2006). Both the river routes and the land ways needed *stationes* with bridges, ferries and docks (Gelichi and Calaon, 2007).

It is not casual that at beginning of the 6<sup>th</sup> century Cassiodorus mentioned the people of the Po delta as skilful ship builders, to which emperor Theodoricus requested in 526 AD to provide qualified workers for the construction of boats («*ut per domum nostram navigandi qaererentur artifices*») (Mommsen 1894: 18,1; Patitucci Uggeri 1989: 461; Gelichi and Calaon, 2007: 399).

A change in the settlement system of the area of Comacchio is evident between the 6<sup>th</sup> and 7<sup>th</sup> century AD. Clustered *nuclei* – almost villages – are grouped around religious buildings and in close relationship with structured agricultural areas. This interpretation is however at the moment depending only on indirect data: concentrations of pottery collected during fieldwalking survey, the presence of wide collective cemeteries and the construction of new religious buildings (Patitucci Uggeri, 1975; Patitucci Uggeri, 1983).

New elements – for example - can be identified in the complex structure of the site of Motta della Girata (fig. 3). In this area the church of Santa Maria in Pado Vetere was excavated. The building, dated to the age of Justinian, was surrounded by two funerary areas. Some of the burials contained objects, like for example glass or ceramic vessels, soapstone containers, personal objects made of metal or glassy paste and above all, bone combs

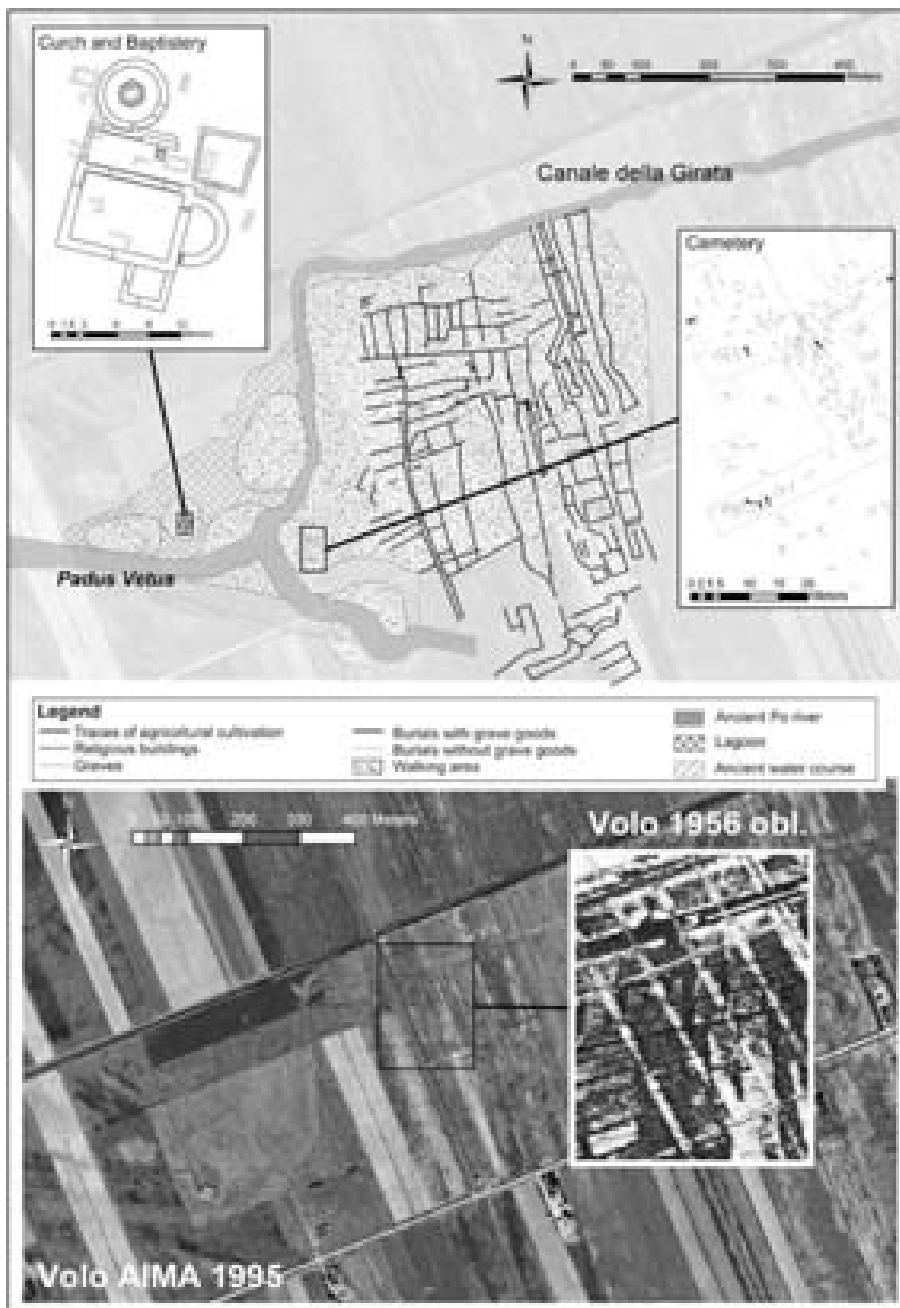


FIG. 3: SANTA MARIA IN PADOVETERE. ARCHAEOLOGICAL ELEMENTS AND AERIAL PHOTO-INTERPRETATION.

(Alfieri, 1966; Patitucci Uggeri, 1970).

The materials allow us to date the cemetery between the second half of the 5<sup>th</sup> and the 8<sup>th</sup> century, and emphasize in particular how the area was used for several burials even before the church was built (Corti, 2007).

The understanding of this settlement cannot be complete without reflecting on the specific landscape in which it was found, strongly influenced by the presence of the canal ‘della Girata’ with a possible chronology close to the 7<sup>th</sup> -8<sup>th</sup> century and by a large area of reclaimed land (Bondesan, 1986; Calzolari, 1993; Cremonini, 1993; Gelichi and Calaon, 2007: 407).

### Settlement and port facilities. Comacchio in the 8<sup>th</sup> century

The settlement of Comacchio developed between the 7<sup>th</sup> and 8<sup>th</sup> century on a series of sandy dunes separated by canals, resembling ‘islands’ (Fig. 4)(Gelichi and Calaon, 2007: 494, fig. 9). The settlement is not far from the

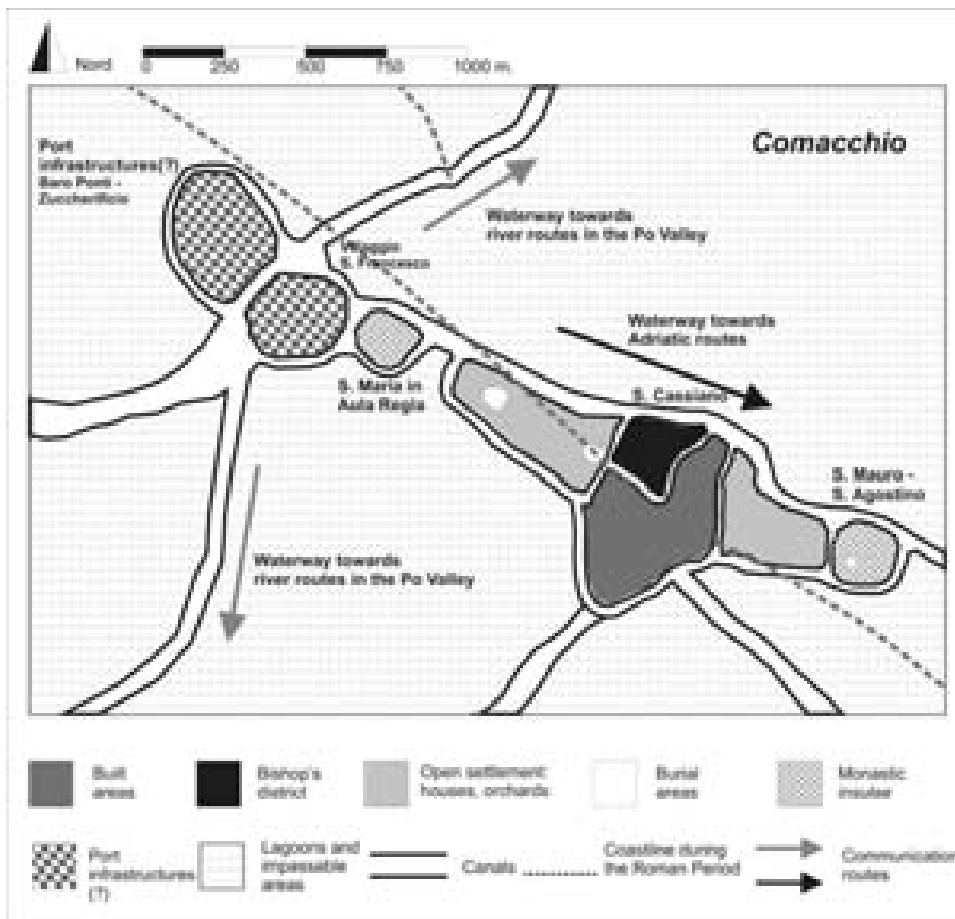


FIG. 4: COMACCHIO IN EARLY MIDDLE AGE.

Adriatic coast and is naturally protected from the outside by a wide lagoon. The knowledge available at present allows us to imagine a central nucleus of the settlement clustered around the religious buildings (built with re-used bricks) which constitutes, from the first few years of the 8<sup>th</sup> century, the Episcopal district. It is the *insula* at present corresponding with the area of the cathedral of St. Cassiano.

Two further islands seem to stretch northward and southward, with open spaces alternated to spaces used for housing, orchards and vegetable gardens. The houses were of course completely built with wood. There are also some funerary areas.

Valle Raibosola (area of St. Mauro and St. Agostino) and the *insula* where the monastery of St. Maria in Aula Regia (documented from 956 AD) is located, are peculiar settlements, corographically separated from the remaining settlement and destined to be used by two different monastic institutions (Calaon and Grandi 2007).

It is possible to identify the point of confluence of important waterways in the north-western part of the town, waterways which were connecting Comacchio with the mouth of the Po towards the north, with the settlement of St. Maria in Pado Vetere and the southern river branches towards the south (and from here with Ravenna) and finally, going past the coast dunes, with the Adriatic sea routes. It is in these areas that traces of large infrastructures, probably related to a port, focus of the commercial activity of the settlement, can be identified. It is here that Francesco Proni identified between 1924 and 1931 a series of wooden posts regularly inserted into the ground, at that time interpreted generically as pile-dwellings. It is however still possible to recognize, by looking at the pictures of that time, a platform made of wooden planks which probably constituted a walking level supported by vertical poles. Not far from here, in the present day Villaggio San Francesco, a salvage excavation found further groups of aligned posts, with different dimensions, on which the wooden planks were sometimes

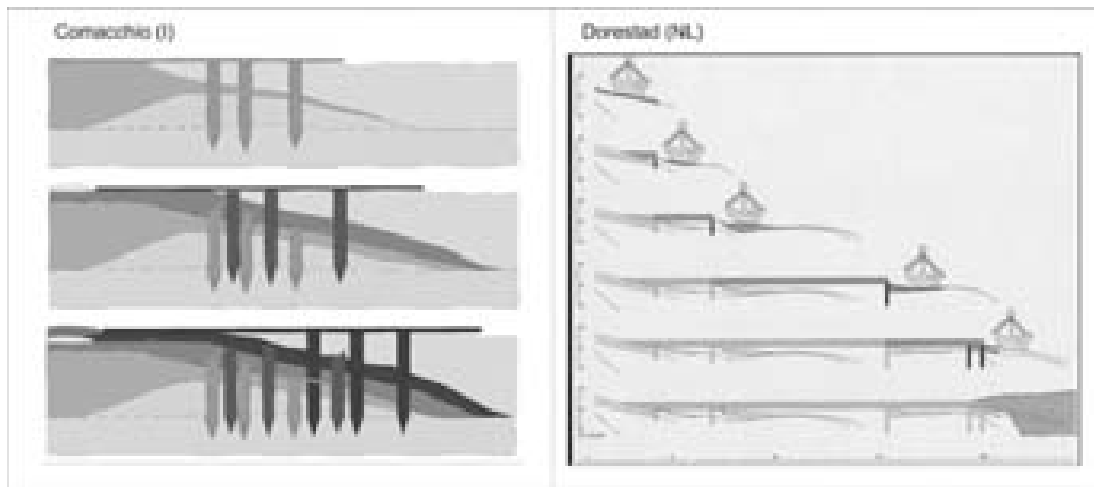
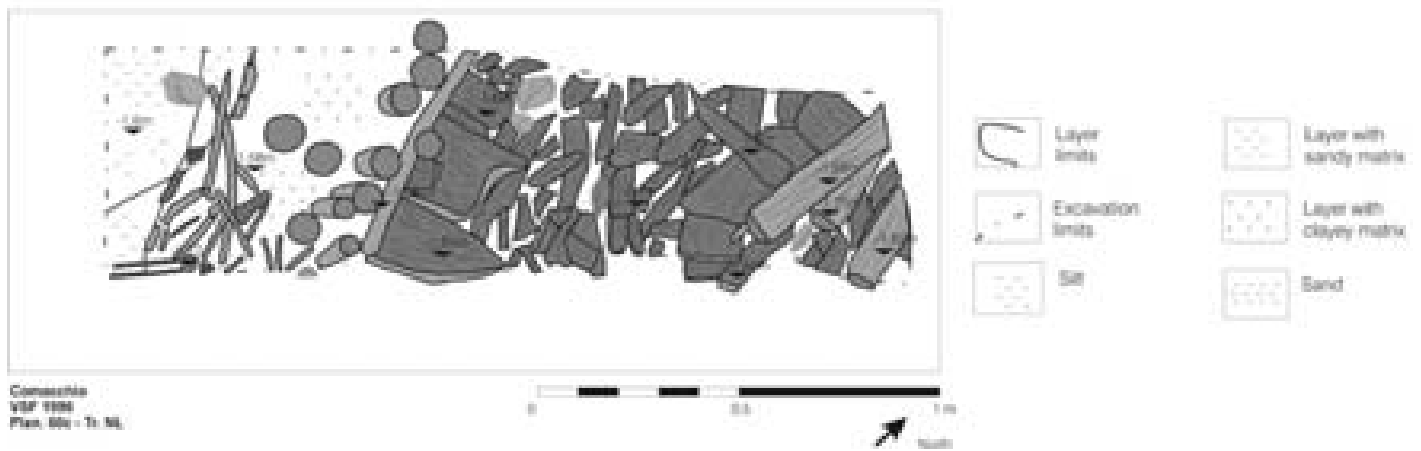
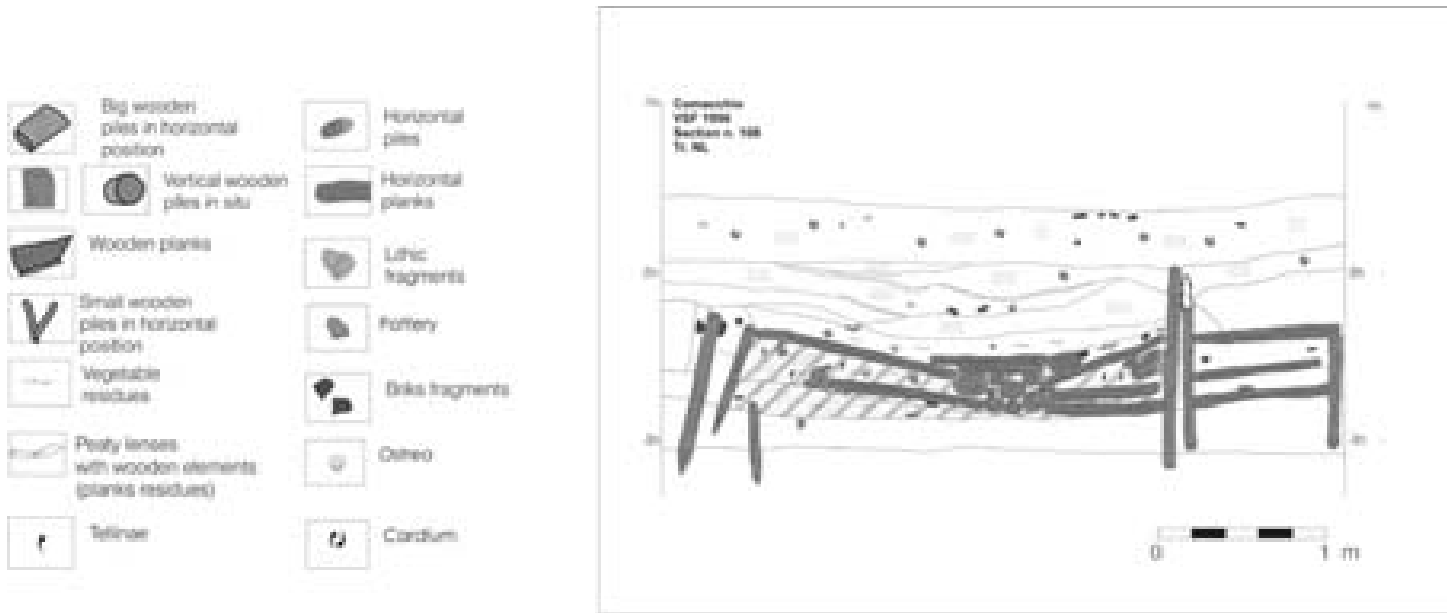


FIG. 5: VILLAGGIO SAN FRANCESCO (COMACCHIO): WOODEN PLATFORMS-DOCKS.

FIG. 6: LANDING STAGES IN COMACCHIO AND IN DORESTAD.

still visible (Calaon, 2007, fig. 3-5).

The structural typologies of the post alignments are homogeneous: they mainly relate to structures protruding towards the lagoon (platforms-docks), waterfront and embankments.

The site, which occupies a very wide area, which can be estimated to be around 75,000 sq. m., can be interpreted as a port facilities working during the 8<sup>th</sup> century (Fig. 5).

The port was connected with the external coasts by a wide tidal canal of natural origin conveying salt water towards the inside, and was protected by the lagoon. The location allowed the exchange of goods between



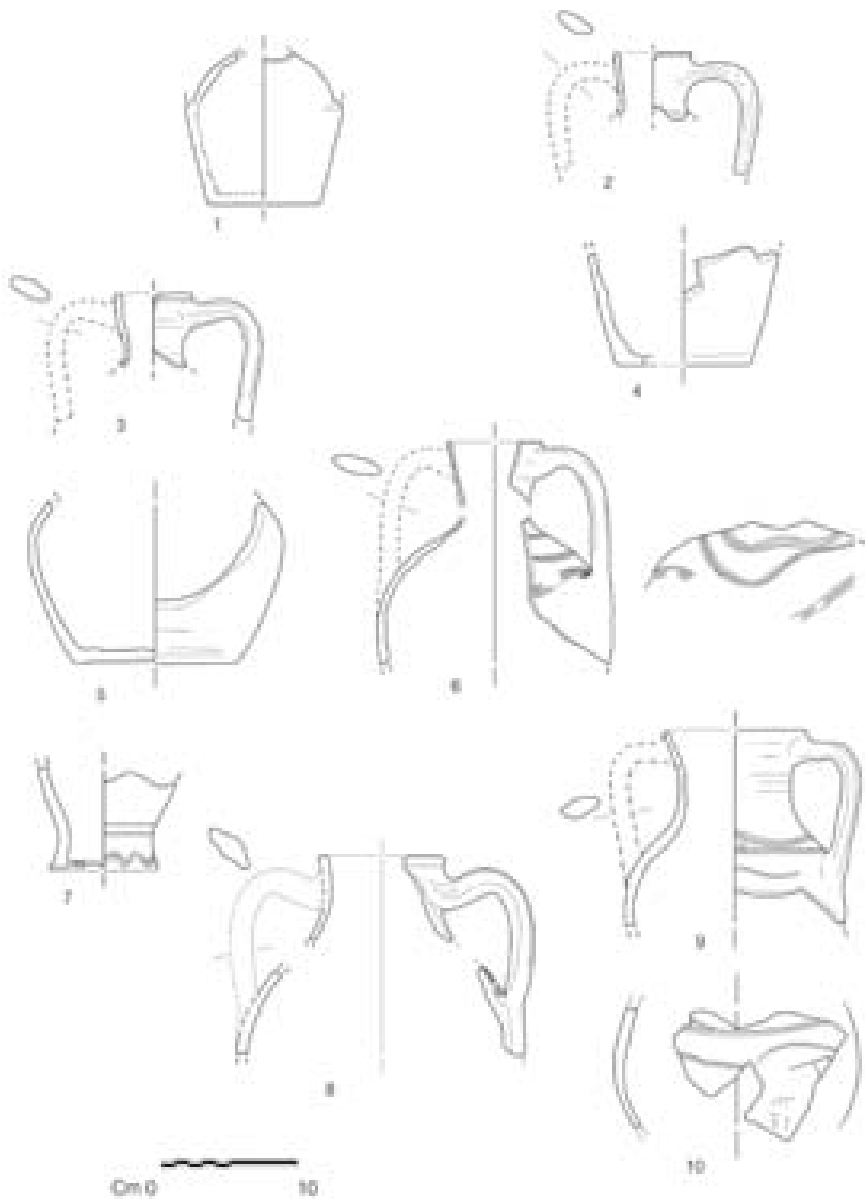


FIG. 7: LIGHT CLAY POTTERY FROM COMACCHIO.

boats arriving to Comacchio from the Adriatic sea and flat-bottom boats appropriate to navigate the low water of rivers of the Po valley.

Almost all finds are sherds of transport vessels: in the excavation of Villaggio San Francesco carried out in 1996, 89% of finds are sherds of closed vessels and transport containers, 55% of which are amphoras. Under the docks also parts of barrels (for transport?) and two stone anchors were found (Calaon, 2007: 514-516).

From a structural point of view the most evident element are the wide platforms constituted by vertical oak posts in parallel rows, planted into the soil. These posts were supporting the wooden planks. It is easy to imagine that these wide structures did not carry out only a function as docks but were also proper working platforms (Fig. 6)(Gelichi et al. 2006). These kind of structures are very similar in building materials and techniques with the wooden platforms-docks found in Dorestad (Holland, on the Rhine river, see Van Es and Verwers 1980: fig. 22), in Groß Strömkendorf (on the german baltic coast, see Tummuscheit 2003, 210) or in Resen (still in germany, see Bill and Clausen 1999: figg. 6,7 e 8).

Ceramic sherds have been found under the heads of posts – under the collapsed wooden planks connecting

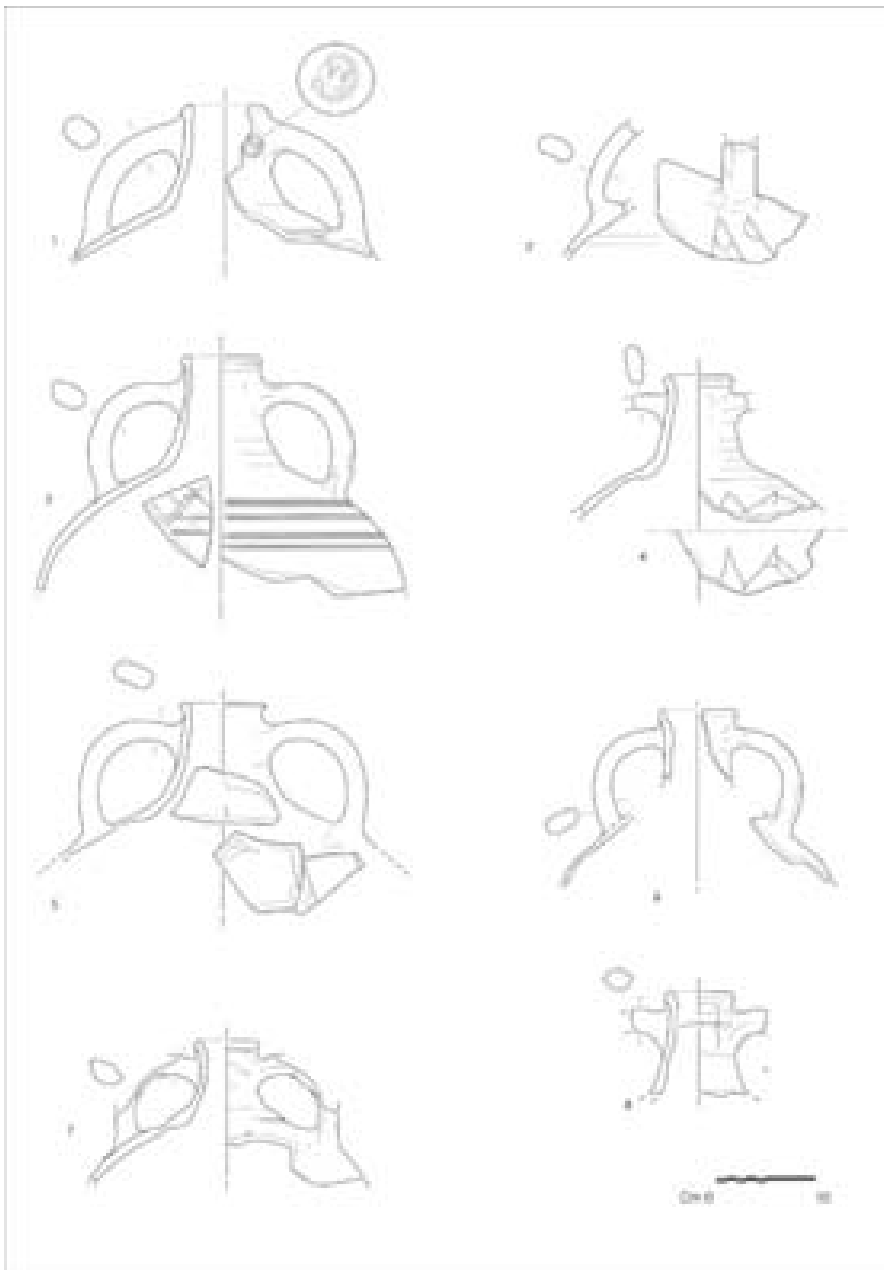


FIG. 8: EARLY MEDIEVAL GLOBULAR AMPHORAS FROM COMACCHIO.

them – or in layers of soil used for embankments and/or reclaiming of land. The pottery can be dated to the 8<sup>th</sup>-9<sup>th</sup> century.

Three peculiar elements of 8<sup>th</sup> and 9<sup>th</sup> century assemblages are the classes defined as ‘light clay pottery’, the ‘early medieval globular amphoras’ and the soapstone. Light clay pottery shows usually closed shapes, mainly with two handles (fig. 7). We hypothesize a Po river or Adriatic provenance. The presence of amphoras known as ‘early medieval globular amphoras’ (fig. 8) in the excavations of Comacchio is fundamental to frame the economy of the Comacchio emporium (Negrelli, 2007; Gelichi et al. 2007: 601-.608).

It was therefore an ‘extra-regional’ function which can be read through the amphoras, for which we suppose a consistent import from the Mediterranean and the south Adriatic area.

### **Comacchio: Po valley, Adriatic and Mediterranean “emporium”**

Trade, then, but what of?

From oil to wine, from spices to fabrics, perhaps garum: eastern products requested in the West. It is a fame of demand and offer that leads the Byzantine ships up to the Upper Adriatic and provides the local fleets with a monopoly of the river trades in Northern Italy, to which the fundamental market for the local produced salt adds up.

Trade, then, but who for?

The new towns of the upper Adriatic keep a direct contact with the Byzantine east. They belong to an area of consumption and circulation of specific goods, some eastern productions, to which also the Lombard and Franks elite progressively get interested.

Obviously the establishment of a commercial emporium with a Mediterranean scope is connected with a stable aristocratic hegemony. Elites, in fact provide the ‘demand’ in the early medieval economy. If Venice in the 9<sup>th</sup> century appears to be strictly connected with the Carolingian world, Comacchio in the 7<sup>th</sup> appears to be an emporium of Lombard economy (Fig. 9).

The importance of Comacchio (Fig. 10) within the economical dynamics of northern Italy, between Lombards and Carolingians, has been variously evaluated on the scientific level.

Written sources, in particular the the“Capitolare” (a *pactum* sansigned at the beginning of the 8<sup>th</sup> century between Lombards and the *habitatores* of Comacchio regulating trade along the Po), allow us to get a hint of the commercial role of Comacchio. Some scholars (Violante, 1953; Fasoli, 1978) have emphasized this role. They describe a certain dynamism which characterized the last phase of the Lombard age. It would be a preamble to the following Carolingian *floruit*. Other scholars (Balzaretti 1996; Wickham 2000; Wickham 2005), have belittled these functions. They place Comacchio in a net of short and medium range commercial relationships. Comacchio would have traded, basically, salt. At the same time McCormick has highlighted the decisive role of Venice in the first part of the Carolingian age, considers in a reductive perspective the economy properly pertaining to the

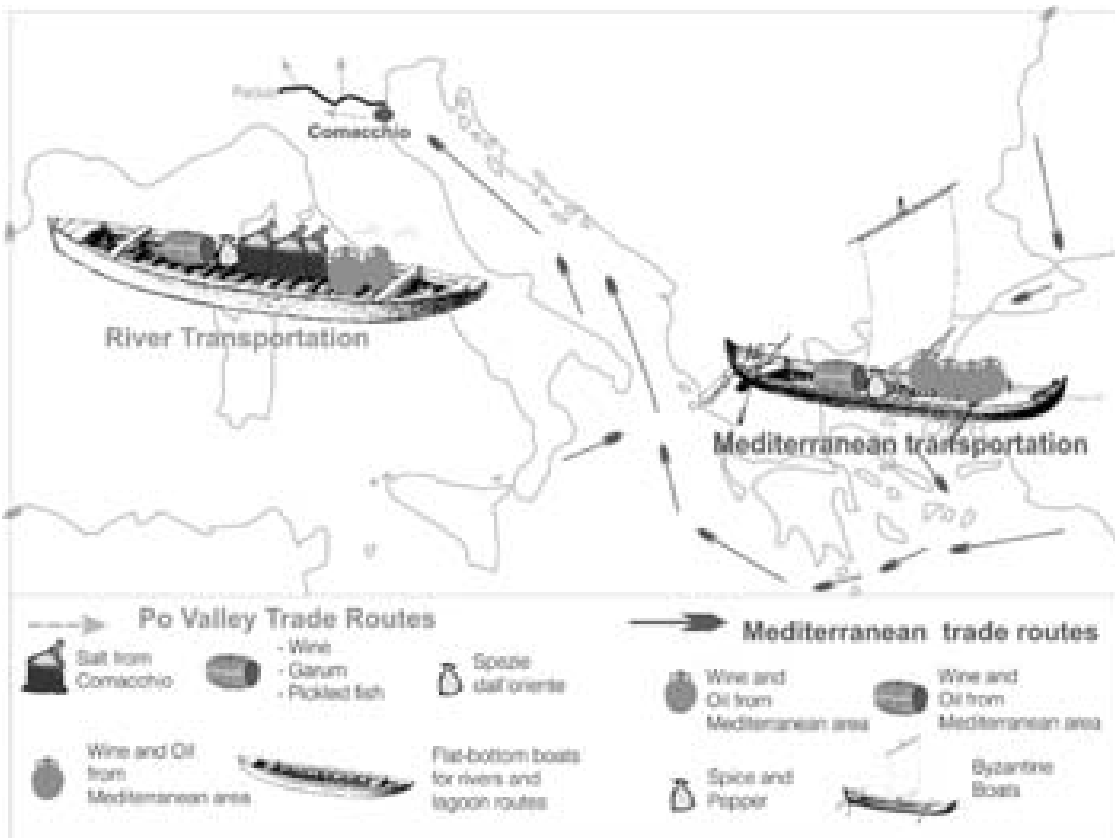


FIG. 9: THE TRADE ROUTES “FROM” AND “TO” COMACCHIO.

Lombard in the 8<sup>th</sup> century (McCormick, 2001).

### **Conclusions: from Comacchio to Venice**

Venice in the 9<sup>th</sup> century, especially after the peace treaty of Aachen, is chosen by the Carolingians as a nodal point in the trade towards the east. As a matter of fact the importance of other trade centers, like Comacchio, seem to diminish the closer we get to the 10<sup>th</sup> century. The privileged position of the Venetian doges with the Carolingian kings not only cause the decline of Comacchio, but also cause a powerful change in the economical structures of northern Italy.

During the 8<sup>th</sup> century the economy and the trade described by the archaeological evidences of Comacchio show a vitality of economy in different town of the Po valley: the framework of economical relationship is all but 'stagnant'. The rise to power of Venice in the 9<sup>th</sup> century and its 'trade' aimed to a European market give a marginal role to northern Italy.

The products which arrive and are traded in the port of Comacchio seem to be addressed to the elites of the Po valley. On the contrary the commercial relationships of the following century bypass northern Italy, which appears to be characterized by more local exchange with a short and medium span.

There is also a new fundamental change in the new market: it is not only the Byzantine ships which navigate the Adriatic to reach the emporia, but the Venetians themselves reach the whole Mediterranean. Their fleet grows bigger and stronger.

Venice however feels the need to establish its commercial power by means of war actions aimed at destroying Comacchio. The war of 932 AD is the most acute episode: Probably in that period Comacchio was still felt as an economical 'competitor' which needed to be drastically curtailed (Gelichi et al., 2006).



FIG. 10: RECONSTRUCTION OF COMACCHIO IN EARLY MIDDLE AGE (R. MERLO).

## Bibliography

- ALFIERI N., 1966. "La chiesa di S. Maria in Pado Vetere nella zona archeologica di Spina" In *Felix Ravenna*, fasc. 43, XCIV: 5-51.
- BALZARETTI R., 1996. "Cities, Emporia and Monasteries: Local Economies in the Po Valley, c. AD 700-875", In N. Christie and S. T. Loseby (Eds), *Towns in transitions. Urban Evolution in Late Antiquity and the Early Middle Ages*, 213- 234. London: Scholar Press..
- BERTI F., BOLLINI M., GELICHI S. and ORTALLI J., (Eds), 2007, *Umoni, Territorio e culto dall'Antichità all'Altomedioevo. Genti nel Delta. Da Spina a Comacchio*. Ferrara: Corbo Editore.
- BILL J. and CLAUSEN B., (eds), 1999, *Maritime Topography and the Medieval Town. Papers from the 5th International Conference on Waterfront Archaeology Copenhagen*, Copenhagen: Nationalmuseet.
- BONDESAN M., 1986. "Lineamenti di geomorfologia del basso ferrarese", In *La civiltà comacchiese e pomposiana dalle origini preistoriche al tardo medioevo (Atti del Convegno, Comacchio 1984)*, 17-28. Bologna: Nuova Alfa.
- CALAON D., 2007. "Lo scavo di Villaggio San Francesco 1996 (COM 96). Le strutture portuali di Comacchio?" In Berti et al, 2007: 505-529.
- CALAON D. and GRANDI E., 2007, "Gli scavi urbani di Comacchio Altomedievale." In Berti et al, 2007: 565-568.
- CALZOLARI M., 1993. "Prospettive della ricerca topografica-archeologica nelle Valli tra Spina e Comacchio." *Ancedota. Quaderni della Biblioteca L. A. Muratori di Comacchi*, III: 7-22.
- CORTI C., 2007. "La frequentazione dell'area di Santa Maria in Padovetere: materiali dalla Chiesa e dall'insediamento circostante." In Berti et al, 2007: 569-590.
- CREMONINI D., 1993. "Alcuni dettagli topografici per le ricostruzioni paleoambientali nella pianura padana", *Civiltà Padana. Archeologia e storia del territorio.*, IV: 145-171.
- FASOLI G., 1978. "Navigazione fluviali. Porti e navi sul Po," In *XXV Settimana di Studi di Spoleto*, 565-607. Spoleto: Cisam.
- GELICHI S., 2006. "Venezia tra archeologia e storia: la costruzione di un'identità urbana", In *Le città italiane tra la tarda antichità e l'alto Medioevo*, (Ravenna 26-28 febbraio 2004), Edited by A. Augenti, 151-183, Firenze: All'Insegna del Giglio.
- GELICHI S., 2007a. "Flourishing Places in North-Eastern Italy: Towns and Emporia between Late Antiquity and the Carolingian Age." In *Post-Roman Towns and Trade in Europe, Byzantium and the Near East*. Vol. 1. *The Heirs of Roman West*, Edited by J. Henning, 77-104. Berlin - New York: Walter de Gruyter.
- GELICHI S., 2007b. "Tra Comacchio e Venezia. Economia, società e insediamenti nell'arco nord adriatico durante l'Alto Medioevo." In Berti et al, 2007: 365-386.
- GELICHI S., CALAON D., 2007, "Comacchio: la storia di un emporio sul delta del Po.", In Berti et al, 2007: 386-416
- GELICHI S., CALAON D., GRANDI E. and NEGRELLI C., 2006. "... castrum igne combussit...". Comacchio tra la Tarda Antichità e l'Alto Medioevo". *Archeologia Medievale*, 33:19-48.
- GELICHI S., NEGRELLI C., BUCCI G., COPPOLA V. and CAPELLI C., 2007. "I materiali da Comacchio" In Berti et al, 2007: 601-648.
- MCCORMICK M., 2001. *Origins of the European Economy. Communications and Commerce. AD 300-900*, Cambridge: Cambridge University Press.
- MOMMSEN T., Ed., 1894. *Cassiodori senatoris Variarum*. Berolini: apud Weidmannos.
- NEGRELLI C., 2007. "Produzione, circolazione e consumo tra VI e IX secolo dal territorio del Padovetere e da Comacchio." In Berti et al, 2007: 437-472.
- PATITUCCI UGGERI S. 1970. "Comacchio (Valle Pega). Necropoli presso l'eccelesia beatae Mariae in Padovetere", In *Notizie degli Scavi di Antichità*, s. 8, XXIV: 69-121.
- PATITUCCI UGGERI S. 1972. "Il popolamento di età romana nell'antico delta padano. I. Valle del Mezzano." *Atti e Memorie della deputazione Ferrarese di Storia Patria* s.III, XI :37-99.
- PATITUCCI UGGERI S., 1975. "La necropoli medievale dell'insula silva sulla via Romea." In *Atti e Memorie della deputazione Ferrarese di Storia Patria*, s. III, XXI: 1-32.
- PATITUCCI UGGERI S., 1983. "Aspetti dell'insediamento nell'area lagunare a nord di Ravenna tra tardoantico ed altomedioevo." In *XXX Corso di Cultura sull'Arte Ravennate e Bizantina*, 391-433, Ravenna: Edizioni del Girasole.
- PATITUCCI UGGERI S., 1989, "I "castra" e l'insediamento sparso tra V e VIII secolo", in *Storia di Ferrara*, III –II: 408-516. Ferrara: Corbo Editore.
- TUMMUSCHEIT A., 2004, "Groß Strömkendorf: a Market Site of the Eight Century on the Baltic Sea Coast", in T. Pestell and K. Ulmschneider, (Eds) *Markets in early medieval Europe. Trading and "Productive" sites, 650-850.*, 208-220, Macclesfield: Windgather Press.
- UGGERI G., 1975., *La romanizzazione dell'antico Delta Padano*, Ferrara. Atti e Memorie della Deputazione Provinciale Ferrarese di Storia Patria, s. III, vol. XX. Ferrara: Sate.
- UGGERI G., 1986, "La romanizzazione del basso ferrarese. Itinerari ed insediamento", In *La civiltà comacchiese e pomposiana dalle origini preistoriche al tardo medioevo (Atti del Convegno, Comacchio 1984)*, 147-181. Bologna: Nuova Alfa.
- UGGERI G. and PATITUCCI UGGERI S., 1984. *L'insediamento antico e altomedievale nel delta del Po*. Bologna.
- VAN ES W. A., and VERWERS W. J. J., 1980, *Excavation at Dorestad. The Harbour: Hoogstraat .I*, Amersfoort: Rob.
- VIOLANTE C., 1953. *La società milanese in età precomunale*, Bari: Laterza.
- WICKHAM C., 2000. "Overview: production, distribution and demand" in I. L. Hansen – C. Wickham (Eds), *The Long Eight Century: Production, Distribution and Demand (Transformation of the Roman World)*, 345-377. Leiden: Brill.
- WICKHAM C., 2005. *Framing the Early Middle Ages*, Oxford: Oxford University Press.