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Reflections on Early Medieval resources in northern Italy: The archaeobotanical and archaeozoological data

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ABSTRACT

Archaeobotanical and archaeozoological research about Early Middle Age in Northern Italy testify a very diversified use of vegetal and animal resources. Several types of cereals and legumes are cultivated; fruits and vegetables are grown and at same time spontaneous plant species are collected. Together with the breeding of pigs, goats, sheep and cattle, hunting and fishing are widespread. We discuss the possible causes of the utilization of such a broad spectrum of resources in relation to social and economic factors (such as the political instability, the absence of trade, the population decline). We suggest that the hypothesis derived from archaeobiological data could modify and moreover enrich the hypothesis made on the basis of historical sources.

1. Introduction

Among the great economic transformations that Europe experienced between the fall of the Roman Empire until the year 1000, changes in the systems of production and exchange foodstuffs are one of the most debated subjects in medieval history. From the end of the 1970s onwards, following the publication of *L'Agriculture au Moyen Age* by Grand and Delatouche (1950), the Italian translation of which appeared in Grand and Delatouche (1968), this topic has provoked lively discussion in Italy. Historians such as Fumagalli, Montanari, Castagnetti and Andreolli have made various important contributions, especially with regard to modifications of systems of production and the diet of peasants in the Early Medieval period (Fumagalli, 1976; Castagnetti, 1977, 1982; Montanari, 1979; Andreolli and Montanari, 1985; Andreolli et al., 1985; Montanari, 1993; Andreolli, 1999).

The accurate research of these scholars into cultivated plants and animal breeding practices, in particular from the 8th to 10th centuries (based on 'polyptych' documents and farm agreements), have however had little influence on archaeobotanical and archaeozoological analyses that were produced during the same period.

Specialists in these latter disciplines often merely listed the finds from the various archaeological contexts and gave an outline of local consumption without making larger-scale hypotheses of an economic nature (some attempts that were made: see Baker, 1994; Castiglioni et al., 1999, 2001). What was almost completely lacking was a constructive debate between scholars of different persuasions that might have led to the study of written sources in the light of archaeobiological data – and, conversely, to a fuller understanding of these micro- and macroeconomic phenomena. Great caution was used even when archaeological materials furnished clear evidence for the reconstruction of medieval economic systems (see e.g. Molinari, 2003 for pottery imports). Only recently, in face of the impossibility of resolving certain historical problems due to the paucity of sources (pointed out by Castagnetti in 1982), the accumulation of archaeological data and the ability to analyze them using more sophisticated instruments seems to have altered the relationship between the various fields of study that deal with the Middle Ages.

The closer integration between different archaeobiological branch of knowledge (e.g. between the study of macrofossil and pollen analyses, see Mercuri et al., 2010) and between them and excavation data has led over time to a greater awareness of the knowledge acquired. Now archaeologists, including those who study material culture, put forward historical hypotheses about the mechanisms of short and medium-term economic change (see e.g. the work of Cantini, 2011 for pottery).

The purpose of this paper is to summarize some of the information obtained from archaeobotanical and archaeozoological studies on Early Medieval sites (5th/6th– 11th cent.) in northern Italy, evaluating their strengths and limitations, so as to arrive at some pointers to the diet of the period and advance some hypotheses regarding economic aspects.

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2. Plant remains and palynological studies

The first study of macroscopic plant remains from an Italian medieval context was carried out, to the best of my knowledge, in 1975, when two articles were published in the journal *Archeologia Medievale* (Castelletti, 1975a, 1975b). Subsequently archaeobotanical analyses, although particularly popular in Italian medieval archaeology circles, have been conducted for a limited number of settlements. Only very recently has the study of fruits and seeds and wood/charcoal fragments become a more regular feature of archaeological practice. Pollen studies are a different story; notwithstanding a stronger tradition in Italy, these studies were performed occasionally in archaeological excavations often based on prejudice of poor preservation of pollen in archaeological layers; pollen analyses focused even more rarely the medieval period, considered until recent years to be of little interest (see on the contrary Bosi et al., 2011). With regard to northern Italy, Castiglioni and Rottoli (2010) in their reviews of the spread of sorghum during the Middle Ages and – more generally – Early Medieval cereal cultivation, identified 32 sites with macroscopic botanical remains, dating from the 5th/6th–11th century AD (Castiglioni and Rottoli, 2012b; 2013, Fig. 1 and Table 1). Previously, Arobba et al. (2003), had published a summary of Roman and medieval botanical studies performed in Liguria (10 sites, several with deep stratification) that combined information from various types of analysis (seeds, charcoals and pollen), while a synthesis of macroscopic remains (wood, charcoals and seeds) found on 60 sites throughout Italy was published in Grasso and Fiorentino (2009). Currently two new reviews of Italian archaeobotanical research are in course of publication, these include work on medieval sites: a database that lists 630 sites (116 of which medieval, Mercuri et al. forthcoming) and a summary of the main lines of research in Italy (Mariotti Lippi et al. forthcoming).

The sites from which macroscopic remains have been studied are of various kinds: about a half were in settlements (urban and rural buildings), whereas fewer analyses concern monasteries, castles and other fortified areas, churches, burial grounds and craft workshops. The contexts most frequently investigated are hearths, deposits related to use or collapse/abandonment; storehouses, latrines, rubbish tips and ovens were more rarely involved (Grasso and Fiorentino, 2009). The compilers of these summaries are agreed that studies often suffer from a lack of territorial coordination and/or the absence of standardized systems for sample collection.

The number of finds analyzed per site varies from a few dozen to several thousand. The contexts are usually dry: in such circumstances only burnt remains are preserved. Combustion is usually connected with food cooking operations, or crop treatment for the elimination of unwanted components. Occasionally, fires occur accidentally, or in connection with specific events (wars or individual battles). The burning of stores used by families or larger groups (villages, military detachments) makes it possible that large quantities of botanical specimens, especially cereals and legumes and sometimes nuts, may survive for long periods. In the absence of burning, cereals especially, often subjected to heat treatment, are most likely to be preserved, whereas pulses (which need less such processing) are always under-represented. In anaerobic deposits, the situation is inverted: remains of fruit (in particular that eaten fresh) are notably well-represented, whilst cereals and legumes may be absent (Jacomet et al., 1999). Records concerning vegetables are incomplete, being limited to waterlogged deposits or those where mineralization has taken place (latrines and rubbish dumps); in the latter case, however, remains show considerable modification of shape which often impedes the identification of species. Occasionally, relatively recent layers involved in pollen analyses have been directly dated by ^{14}C; but for such contexts

Table 1
Early Middle Age sites from northern Italy checked to prepare this synthesis (plant remains): chronology, type of site and archaeobotanical references.

Sites		Chronology	Type of site	References
1	Battistero di Ventimiglia	VI–VII cent. AD	Urban site	Arobba 2000
2	Finalborgo	X–XI cent. AD; XI–XII cent. AD	Urban site	Arobba et al., 2003
3	Sant'Antonino di Perti	VI–VII cent. AD	*Castrum*	Arobba and Murialdo, 2001
4	Priamar, Palazzo della Loggia	VI–VII cent. AD; IX–X cent. AD	*Castrum* – craft area	Cottini and Rottoli, 2001
5	Luni, Ortonovo	VIII cent. AD; ca. 1000 AD	Urban site	Castelletti, 1977
6	Filattiera, Sorano	V–VI cent. AD	Urban site	Rottoli and Negri 1998
7	Sarzana, Sant'Andrea	XI cent. AD	Craft area – bell furnace	Castelletti 1975b
8	Cherasco, Castello di Manzano	XI–XII cent. AD	*Castrum*	Rottoli unpublished; Castelletti and Motella De Carlo 1998
9	Alba, via Vernazza	Early Middle Age	Urban site	Castiglioni unpublished; Castelletti and Motella De Carlo 1999
10	Alba, Chiesa di San Giuseppe	V cent. AD	Urban site	Motella De Carlo, 2002
11	Collegno	VI–VII cent. AD	Rural site	Castiglioni et al., 2004
12	Trino, San Michele	VIII–XI cent. AD	Religious site	Nisbet, 1999
13	Mombello Monferrato	V–VI cent. AD	Rural site	Castelletti and Motella De Carlo 2007
14	Trezzo, Cascina San Martino	IV–VI cent. AD	Rural site	Castiglioni and Rottoli 2012a
15	Monte Barro	V–VI cent. AD	*Castrum*	Castelletti and Castiglioni 1991; Castiglioni et al., 2001
16	Lomello, Villa Maria	IV–V cent. AD	*Castrum*	Nisbet 1987
17	San Bartolomeo de Castelaz	IX–X cent. AD	Rural site	Castiglioni 2009
18	Chiari, piazza Zanardelli	VIII–X cent. AD	Urban site	Breda et al., 2011; Castiglioni and Cottini in press
19	Brescia, S. Giulia	450–569 AD	Urban site – stores	Castiglioni et al., 1999
20	Brescia, via Alberto Mario	V–VI cent. AD	Urban site	Castelletti and Maspero 1988
21	Sirmione, via Antiche Mura 11	V–VI cent. AD	Urban site	Rottoli, 1998
22	Desenzano, località Faustinella	V–VI cent. AD	Rural site	Castiglioni and Rottoli, 2007
23	Nogara, località Mulino di Sotto	IX–XI cent. AD	Urban site (*waterlogged*)	Castiglioni and Rottoli 2011
24	Vittorio Veneto, località San Rocco	IV–VI cent. AD; VI cent. AD?	Urban site	Castiglioni et al in press
25	Monte San Martino ai Campi di Riva	IV–V (VI) cent. AD	Rural site	Castiglioni, 2007
26	Loppio, Isola di S. Andrea	V–VII AD	*Castrum*	Moser, 2006
27	San Candido, Casa dell'Organista	Early Middle Age	Rural site	Castiglioni, 2005
28	San Candido, Cantiere Municipio	Early Middle Age	Rural site	Castiglioni, 2005
29	Cognento	VI–VII cent. AD	Rural site (*waterlogged*)	Bandini Mazzanti et al., 1999
30	Classe	VIII–X cent. AD	Urban site (*waterlogged*)	Augenti et al., 2006
31	Domagnano	VI cent. AD	Rural site	Mercuri et al., 2009
32	Parma, via Cavestro	X–XI cent. AD	Urban site (*waterlogged*)	Bosi et al., 2012