## Production centres of African red slip ware (3rd-7th c.) in northern and central Tunisia:

archaeological provenance and reference groups based on chemical analysis

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In the past two decades our knowledge of the production, chronology, and distribution area of N African sigillata has increased enormously. Of particular interest are the specialised and highly productive pottery-making centres which produced not only to meet limited local needs but also the needs of at least a regional market, while their finest wares were distributed across a large part of the Mediterranean basin. On the basis of clearly defined criteria, the provenance of this fine pottery can be determined at least by region, and some individual potteries can even be identified. This is the prerequisite for, and the basis of, chronologically-differentiated distribution maps and comparative analyses of urban and rural markets in the provinces of Africa Proconsularis, Byzacena and Tripolitana, as well as for reconstructing the mechanisms governing delivery to and supply of large cities such as Carthage.<sup>2</sup>

In the western Mediterranean countries the classification of various kinds of N African red slip ware as sigillata chiara A, C and D, defined by N. Lamboglia in 1958 and 1963, was widely applied. J. W. Salomonson recognised in 1968 not only the appliqué-decorated El Aouja ware as a "transitional phase", manufactured in central Tunisia, and named it sigillata chiara A/C, but he also observed a gradual deterioration of the fabric of sigillata chiara C. These three groups were then classified by A. Carandini as C¹ (early C, similar to El Aouja or A/C quality), C² (classical C) and C³ (late C). Although J. W. Hayes had clearly distinguished and carefully described the various fabrics of the African Red Slip Ware in 1972, he declined to classify them. A very elaborate system of classification was suggested in 1981 by A. Carandini, L. Sagui, S. Tortorici and S. Tortorella who differentiated the main classes and fabrics of sigillata africana, as described by Hayes, by A¹-², C¹-⁵, D¹-² and E; later, transitional fabrics A/D and C/E were introduced and the relief-decorated sigillata with appliqués was classified as C¹-² (the former A/C), C³ (former C) and the relief-decorated mould-made C⁴ (former D). At least for the A¹-² and D¹-² sigillata they rightly suggested a northern Tunisian provenance, and for the C¹-⁵ and E sigillata a central Tunisian provenance.³

By the early 1980s, J. W. Salomonson, J. W. Hayes and A. Carandini had distinguished regional groups of stamp or relief-decorated sigillata on the basis of form, decoration and fabric, although the centres at which it was made (some of which were already known) had not yet been systematically studied. With the focussed surveys which I have carried out since 1981 in the hinterland of Carthage, south of Tebourba (Thuburbo Minus),<sup>4</sup> and which D. P. S. Peacock, F. Bejaoui and N. Ben Lazreg conducted from 1984 in central Tunisia<sup>5</sup> (fig. 1), it has been possi-

See the extensive research reports by S. Tortorella, "La ceramica africana: un riesame della problematica," in P. Lévêque and J.-P. Morel (edd.), *Céramiques hellénistiques et romaines* II (Paris 1987) 279-327; id. 1995, 79-101.

<sup>2</sup> Cf. Hayes 1972, 453-58; 462 f. maps 1-12 and 19-30; M. Fulford, "Pottery and the economy of Carthage and its hinterland," Opus 2 (1983) 5-14; S. Tortorella, "Produzione e circolazione della ceramica africana di Cartagine (V-VII sec.)," ibid. 15-30; Mackensen 1993, 651-61 figs. 128-29; id. 2002; P. Reynolds, Trade in the Western Mediterranean, AD 400-700: the ceramic evidence (BAR S604, Oxford 1995).

N. Lamboglia, RStLig 24 (1958) 257-330; ibid. 29 (1963) 145-212; J. W. Salomonson, BABesch 43 (1968) 80 ff. esp. 108-13; A. Carandini, Ostia I. Le Terme del Nuotatore (StMisc 13, 1968) 34-36; Hayes 1972, 287-92; Atlante delle forme ceramiche, I. Ceramica fine romana nel bacino mediterraneo (medio e tardo impero) (EAA; Rome 1981) 58 f., 78 f., 117 f., 147 f., 156 f. For critiques see, for instance, Mackensen 1993, 168-70; Pröttel 1996, 13 f.; S. Ladstätter, Die materielle Kultur der Spätantike in den Ostalpen (Mitt. Prähist. Komm. 35, Vienna 2000) 85 f.

Mackensen 1993; id. 1998a.

<sup>5</sup> Peacock, Bejaoui and Ben Lazreg 1990.