

SURVEY ARTICLES

ROMAN AFRICA: AN ARCHAEOLOGICAL REVIEW

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I. INTRODUCTION¹

The significance of the African provinces is well-appreciated in historical studies of the Roman Empire, but there is a distinct lack of good summaries in English on recent developments in the field of study.² Some introductory books sacrifice readability in favour of detail, others offer a more synthetic view, but lack depth.³ The bibliography is now vast and ever more intimidating for the uninitiated; we hope that what follows will serve both as a useful introduction for those new to the field and as a refresher for others. In this review we have concentrated on developments which seem to us to be of particular importance, whilst directing the reader's attention to basic references in other areas. The emphasis throughout is on archaeological work and this will explain short measure having to be given to some important historic and epigraphic studies. Another choice had to be the geographical limits of the study and, mostly, we have restricted our coverage to Africa Proconsularis and Numidia, though certain themes demand expanding the horizons to sites in the Mauretanian provinces and Cyrenaica also. We have considered 1970 as an appropriate start-date for our survey, allowing us to review developments across the last twenty five years, though necessarily with greater emphasis being placed on publications of the last decade.⁴

The bibliographic sources on Roman Africa are relatively abundant.⁵ First mention must go to the unsurpassed *Bibliographie Analytique*, which provides not only full details of a remarkably wide range of material, but also critical and helpful comment on each entry (over 4,300 items from 1970–1988).⁶ The only drawback with the bibliography is the time-lag in its publication (though the backlog is being reduced by the current editors). Sadly, a second specialized bibliography which appeared only a year

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² Useful, but already superceded in part, are J. D. Clark (ed.), *The Cambridge History of Africa I. From the Earliest Times to 500 BC* (1982); J. D. Fage (ed.), *The Cambridge History of Africa II, c. 500 B.C.–A.D. 1050* (1978); J. Ki-Zerbo (ed.), *UNESCO General History of Africa I, Methodology and African Prehistory* (1980); G. Mokhtar (ed.), *UNESCO General History of Africa II. Ancient Civilisations of Africa* (1981); M. Elfasi (ed.), *UNESCO General History of Africa III, Africa from the Seventh to the Eleventh Century* (1988). See also A. Carandini, L. Cracco Ruggini and A. Giardina (eds),

Storia di Roma III.2 (1993), 309–78; *Reallexicon fur Antike und Christentum. Schwoorterbuch sur Amuseinandersetzungs des Christentums mit der Antiken Welt* (1985), cols 134–239.

³ I. M. Barton, *Africa in the Roman Empire* (1972); F. Decret and M. Fantar, *L'Afrique du Nord dans l'Antiquité, histoire et civilisation* (1981); P. MacKendrick, *The North African Stones Speak* (1980); E. L. Manton, *Roman North Africa* (1988); S. Raven, *Rome in Africa* (3rd edn, 1992).

⁴ The early 1970s saw the appearance of the last great archaeological synthesis, P. Romanelli, *Topografia e archeologia dell'Africa Romana = Enciclopedia Classica III.x.7* (1970); the writing of the first revisionist histories, A. Laroui, *L'histoire du Maghreb, un essai de synthèse* (1970); the formal identification of African amphorae, F. Zevi and A. Tchernia, *Ant. af 3* (1969), 173–214; the emergence of a clear typology for African Red Slip ware, J. W. Hayes, *Late Roman Pottery* (1972, with *Supplement*, 1980); the start of the international campaign to save Carthage (cf. B. H. Warmington, *Carthage* (2nd edn, 1969) for a reminder of how much new information has subsequently been gained).

⁵ Usefully summarized by Y. Le Bohec, 'La recherche bibliographique sur l'Afrique romaine', *Af Rom* vii (1990), 1001–8.

⁶ BAAA = *Bibliographie Analytique de l'Afrique Antique* 1 (1963) [1965] – 23 (1989) [1994]. Numbers 1–19 compiled by J. Desanges and S. Lancel, 20f. by J.-M. Lassère and Y. Le Bohec. Numbers 1–3 published in BAA 1 (1965) – 3 (1968), 4–12 by de Boccard, Paris, 13f. by Ecole Française de Rome. Numbers 22 and 23 both appeared in 1994 (23 too late to be of use to us), and the editors are to be congratulated for an acceleration in publication that should see the appearance of Numbers 24 (1990) and 25 (1991) in 1995.

behind events, listing titles under a series of headings, is now defunct.⁷ A 'North African Newsletter' in the *American Journal of Archaeology* also disappeared after a promising start.⁸ There have been a series of area or subject specific bibliographies, of which reference must be made to Le Bohec's compilation of literature on the Roman army⁹ and to a useful summary of relevant periodicals and series,¹⁰ and to the abundant publications on mosaics.¹¹ Work on Late Antiquity has recently been masterfully summarized by Duval.¹² For Libya there are the bibliographies published regularly by Italian scholars,¹³ while Tunisia is served by listings for Carthage¹⁴ and, less up-to-date, for the rest of the country.¹⁵ Recent bibliographies specifically dealing with Morocco and Algeria are lacking.¹⁶ Epigraphy has always been at the heart of research on Roman Africa, and indeed continues to dominate many aspects of the subject. In the period under review several major corpora of inscriptions have appeared¹⁷ and overviews of the most important material are readily available.¹⁸

These bibliographical sources are supplemented by a prolific outpouring of conference proceedings and commissioned thematic volumes on specific areas, provinces, or themes. Cyrenaica has been the subject of four published conferences and Tripolitania of one,¹⁹ with the history and archaeology of Libya as a whole featured in a review covering the period 1969–1989.²⁰ An important series of international colloquia on the history and archaeology of North Africa has dealt predominantly with

⁷ AAAB = *Archéologie de l'Afrique Antique 19XX. Bibliographie des ouvrages parus en 19XX et compléments des années antérieures*, CNRS, Aix en Provence. Compiled by S. Sempere (1964–9), P. Courtot (1970–2), P. Courtot and D. Terrer (1973), D. Terrer (1974–6), M. Euzennat and D. Terrer (1977–8), M. Euzennat (1979), M. Euzennat and S. Giraud (1980–85), the regrettably defunct series covers the years 1964 [1965]–1985 [1985]. Sifting all the African material from sources such as *Année Philologique*; *Bull Analitique Hist Romaine* etc. is very time-consuming.

⁸ J. H. Humphrey, *AJA* 82 (1978), 511–20; idem, *AJA* 84 (1980), 75–87; J. H. Humphrey, A. Ennabli and B. Ejeily, *AJA* 87 (1983), 197–208.

⁹ Y. Le Bohec, *Bibliographie analytique de l'archéologie militaire de l'Afrique du nord* (1979); idem, *Ant af 27* (1991), 21–31, complemented by his two major monographs, *La IIIe Légion Auguste* (1989) (hereafter *IIIe Légion*) and *Les unités auxiliaires de l'armée romaine dans les provinces d'Afrique Proconsulaire et de Numidie* (1989).

¹⁰ R. Rebuffat, I. Gabard and Y. Le Bohec, *Bibliographie de l'Afrique du Nord antique. Périodiques et séries* (1980).

¹¹ The journal *Bull. AIEMA* contains regular bibliographic round-ups (e.g. fasc. 14 (1993) covered publications for 1991–2).

¹² N. Duval, 'Quinze ans de recherches archéologiques sur l'antiquité tardive en Afrique du nord 1975–1990. I, généralités et Tunisie (Carthage)', *REA* 92 (1990), 349–87; 'Deuxième chronique et suppléments à généralités et Carthage', *REA* 95 (1993), 583–640. Note also the annual 'Chronique' in *Revue des Études Augustiniennes*.

¹³ L. Gasperini and G. Paci, 'Bibliografia archeologia della Libia 1967–1973', *QAL* 7 (1975), 189–206; G. Paci, 'Bibliografia archeologia della Libia: 1972–1977', *QAL* 10 (1979), 105–32; idem, 'Bibliografia archeologia della Libia: 1978–79', *QAL* 11 (1980) 139–53; cf. also G. Caputo, 'Attività archeologica in Libia, Algeria, Tunisia 1966–1975', *Quaderni della ricerca scientifica* 100 (1978), 173–224.

¹⁴ L. Ennabli, 'Bibliographie', in A. Ennabli (ed.), *Pour Sauver Carthage* (1992), 203–27.

¹⁵ A. Ennabli, 'Bibliographie d'archéologie et d'histoire ancienne de Tunisie (Carthage excepté) 1957–1979', *CEDAC* 5 (1985), 33–55; idem, *AJA* 87 (1983), 197–206; *30 ans au service du patrimoine: de la Carthage des Phéniciens à la Carthage de Bourguiba* (1986); for pre-Independence work see the useful summary by G.-Ch. Picard, *CEA* 16 (1985), 11–20.

¹⁶ Though note F. Laubenheimer, 'Bibliographie d'archéologie Marocaine 1961–1970', *BAM* 8 (1972), 249–77.

¹⁷ Z. B. Ben Abdallah, *Catalogue des inscriptions païennes du musée du Bardo* (1986); *IAM* = M. Euzennat, J. Marion, J. Gascou, and Y. de Kisch (eds), *Inscriptions antiques du Maroc 2. Inscriptions latines* (1982); *ILAlg II.2* = S. Gsell, H. C. Pflaum et al. (eds), *Inscriptions latines d'Algérie II.2 Inscriptions de la confédération Cirtéenne, de Cuicul et de la tribu des Suburbures* (1976); *IPT* = G. Levi della Vida and M. Amadasi Guzzo (eds), *Iscrizioni puniche della Tripolitania (1927–1967)* (1987).

¹⁸ In addition to the annual summaries in *AE*, see M. Le Glay, *Chiron* 4 (1974), 629–46; A. Mastino, 'La ricerca epigrafica in Tunisia (1973–83)', *Af Rom* 1 (1984), 5–64; idem, 'La ricerca epigrafica in Algeria (1973–85)', *Af Rom* III (1986), 113–66; idem, 'La ricerca epigrafica in Marocco (1973–86)', *Af Rom* IV (1987), 337–84; R. Rebuffat, 'Compléments au recueil des Inscriptions Antiques du Maroc', *Af Rom* IX (1992), 439–501; J. M. Reynolds, 'Twenty years of inscriptions', *Lib Studs* 20 (1989), 117–26. M. Dondin-Payre, *Un siècle d'épigraphie classique. Aspects de l'oeuvre des savants français dans les pays du bassin méditerranéen* (1988), is very illuminating on the historiography of French epigraphic research. Note also, N. Gauthier, 'Épigraphie latine chrétienne 1980–92', *REA* 94 (1992), 467–8; contributions in *Colloque la terza età dell'epigrafia 1986* (1988).

¹⁹ Cyrenaica: G. Barker, J. Lloyd and J. Reynolds (eds), *Cyrenaica in Antiquity* (1985); J. M. Reynolds (ed.), *Cyrenaican Archaeology: An International Symposium = Lib Studs* 25 (1994); S. Stucchi (ed.), *Cirene e la Grecia = QAL* 8 (1976); S. Stucchi and M. Luni (eds), *Cirene e i Libyi = QAL* 12 (1987); Tripolitania: D. J. Buck and D. J. Mattingly (eds), *Town and Country in Roman Tripolitania. Papers in Honour of Olwen Hackett* (1985), hereafter, Buck and Mattingly, *Town and Country*. For Cyrenaica, note also the earlier review, J. Reynolds and M. Vickers, 'Cyrenaica 1962–1972', *Archaeological Reports* 18 (1972), 27–47, and the seminal studies of A. Laronde, *Cyrène et la Libye hellénistique* (1987) and S. Stucchi, *Architettura Cirenaica* (1975). For Tripolitania, see now, D. J. Mattingly, *Tripolitania* (1995), hereafter Mattingly, *Tripolitania*.

²⁰ D. J. Mattingly and J. A. Lloyd (eds), *Libya: Research in History, Archaeology and Geography = Lib Studs* 20 (1989). Note also the still often cited F. F. Gadallah (ed.), *Libya in History. Proceedings of a Conference held at the Faculty of Arts, University of Libya 1968* (1971), hereafter Gadallah, *Libya in Hist.*

Francophone Tunisia, Algeria, and Morocco.²¹ Since 1983, an annual conference on Roman Africa has been held in Sardinia and, though it has tended to be dominated by epigraphic studies, this has produced some very important archaeological papers.²² The conferences of Maghrebian historians, generally linked to specific themes, have also regularly featured important archaeological or ancient historical papers.²³ A number of one-off conferences have led to valuable publications.²⁴ On military matters there have been regular contributions to the international *Limeskongress* series,²⁵ and a small Table Ronde on the African army has recently appeared.²⁶ There have also been a number of major touring exhibits of Maghrebian antiquities in recent years, with accompanying catalogues.²⁷ Finally, the series of International Colloquia on Ancient Mosaics features an increasing amount of new North African material.²⁸

While the vitality of Roman African studies can scarcely be doubted from the number and range of active scholars contributing to these various conferences, the picture is not so rosy when the main periodicals are reviewed. The national periodicals of the Antiquities Services of Morocco (*Bulletin archéologique du Maroc*), Algeria (*Bulletin archéologique d'Algérie*), Tunisia (*Africa*), and Libya (*Libya Antiqua*) all appear only sporadically and are now some years behind their publication schedules.²⁹ In Tunisia, however, there have been three significant new developments, with the appearance of a journal for the site of Carthage (*CEDAC Carthage Bulletin*), another for Punic archaeology (*Reppal*), and the publication of work presented at archaeological seminars (*BTINAA*, now *BTINP*).³⁰ *Les Cahiers de Tunisie*, another influential Tunisian periodical, frequently features archaeology. Some of the major European-based journals that carry North African material are also published after considerable delays.³¹ Amongst specialist journals, pride of place must go to *Antiquités africaines*, though a number of other refereed journals regularly feature material on Roman Africa.³² The Canadian *Cahiers des Études Anciennes* has devoted numerous volumes to reporting work at Carthage and elsewhere in Tunisia.³³ The *Encyclopédie Berbère* also has much to offer the Classical archaeologist or historian, though currently the fascicles only run up to letter C.³⁴

²¹ CHAAN = *Colloque internationale d'histoire et archéologie de l'Afrique du Nord, Actes*. Published as follows: CHAAN 1 = *BCTH* ns 17B, 1983 [1984]; CHAAN 2 = *BCTH* ns 19B, 1983 [1985]; CHAAN 3 = *Histoire et archéologie de l'Afrique du Nord, 3e Colloque International Montpellier* (1986) (= 111e Congrès national des Sociétés savantes); CHAAN 4 (Strasbourg 1988) = I *Carthage et son territoire dans l'antiquité* (1990) and II *L'armée et des affaires militaires* (1991) (= 113e Congrès national des Sociétés savantes); CHAAN 5 (Avignon 1990) = *Afrique du Nord antique et médiévale. Spectacle, vie portuaire, religions* (1992) (= 115e Congrès national des Sociétés savantes); CHAAN 6 (Pau) = forthcoming (1995).

²² Published as *L'Africa Romana* 1 (1983)–x (1994). Hereafter cited as *Af Rom*. 'L'Africa Romana XI' was held in Carthage in December 1994.

²³ *ACHCM* = *Actes du Congrès d'Histoire et de Civilisation du Maghreb* as follows: *ACHCM* 1 = *Actes du Ier Congrès d'Histoire et de Civilisation du Maghreb*, 2 vols (1979); *ACHCM* 2 = *Cahiers du Tunisie* 29 (117–18) (1981) (Dépendance, résistances et mouvements de libération au Maghreb); *ACHCM* 3 = *Actes du IIIe Congrès d'Histoire et de Civilisation du Maghreb*, 2 vols (1987) (Le monde rurale maghrébin. Communautés et stratification sociale); *ACHCM* 4 = *Cahiers du Tunisie* 34 (137–138) (1986) (Villes et Sociétés urbaines au Maghreb); *ACHCM* 5 = *Cahiers du Tunisie* 43 (155–156) (1991) (La Maghreb et les pays de la Méditerranée: échanges et contacts). The post-colonial debate is at its most vigorous here, with an increasing number of Maghrebian scholars now choosing to publish in Arabic. At the other end of the spectrum lies an extraordinary international conference held in Senegal in the 1970s under Italian influence and published in Latin, *Africa et Roma. Acta omnium gentium ac nationum conventus latinis litteris linguaeque fovendis* (1979).

²⁴ *L'Afrique dans l'Occident romain (1er siècle av. J.-C. – IV e siècle ap. J.-C.)* (1990), hereafter *Afrique Occ. Romain*; *Lixus. Actes du Colloque Larache 8–11 novembre 1989* (1992); *Actes du Colloque Int. sur l'histoire de Sétif.* (= 7e Supp BAA) (1993); *Carthage VI/VII/VIII/IX. Actes du Congrès international sur Carthage, Trois-Rivières octobre 1984*, published as *CEA* xvi (1984), xvii (1985), xviii (1986), xix (1986); *150 Jahr-Feier Deutsches Archäologisches Institut Rom* (= Rom. Mitt. Ergänzungsheft 25) (1982), hereafter *150 Jahr-Feier* (1982); C. M. Wells (ed.), *Roman Africa/L'Afrique Romaine. The 1980 Vanier Lectures* (1982), hereafter Wells, *Vanier*.

²⁵ *Limes* 10 = *Studien zu den Militärgrenzen Roms II: Vorträge des 10 Internationalen Limeskongress in der Germania inferior* (1977); *Limes* 11 = J. Fitz (ed.), *Acten des Internationalen Limeskongress, 1976* (1977); *Limes* 12 = W. S. Hanson and L. J. F. Keppie (eds), *Roman Frontier Studies 1979. Papers presented to the 12th International Congress of Roman Frontier Studies*, 3 vols (1980); *Limes* 13 = *Acten des 13 Internationalen Limeskongresses Aalen, Sept. 1983* (1986); *Limes* 14 = *Der römischen limes in Osterreich. Akten des 14 Internationalen Limeskongress 1986 in Carnuntum* (1989); *Limes* 15 = V. A. Maxfield and M. J. Dobson (eds), *Roman Frontier Studies 1989. Proceedings of the XVth International Conference of Roman Frontier Studies* (1991).

²⁶ *L'armée romaine d'Afrique et la IIIe légion Auguste* = *Ant* af 27 (1991).

²⁷ For example, A. Ben Abed and D. Soren, *Carthage. A Mosaic of Ancient Tunisia* (1987); Horn and Ruger, op. cit. (n. 44); *De Carthage à Kairouan* (1982); *Carthage. L'histoire, sa trace et son écho* (1995).

²⁸ Recent volumes, *III Colloquio Internazionale sul mosaico antico (Ravenna 1980)* (1984); *La mosaïque Greco-maghraine IV (Treves 1984)* (1995); P. Johnson, R. Ling and D. J. Smith, *Fifth International Colloquium on Ancient Mosaics (Bath 1987)*, 2 vols (1994/1995). In October 1994, the VII Colloquio International was held in Tunis.

²⁹ *BAM* 1 (1956)–17 (1987–88) [1994]; *BAA* 1 (1965)–7 (1977–79) [1985] and *BAA Supp.* series; *Africa* 1 (1966)–11/12 (1992–93) [1994], *LA* 1 (1964)–15/16 (1978–79) [1987] and *LA Supp.* series.

³⁰ *CEDAC* = *CEDAC Carthage Bulletin* 1 (1978)–13 (1994); *Reppal* 1 (1985)–7/8 (1993), *BTINAA* 1 (1988)–6 (1993) (NB the series is renamed *BTINP* from vol. 5).

³¹ *BCTH* new series (NB *Africana* were published in fasc. B up to vol. 20, thereafter renamed 'L'Afrique du Nord'); *Karthago*; *QAL*.

³² *Inter alia* see, *AESC*; *Ant Tardive*, *BSAF*; *CRAI*; *JRA*; *Ktama*; *Lib Studs*; *MEFRA*; *REA*; *Rev August.*

³³ *Carthage Reports* 1–IX = *CEA* 6 (1976), 9 (1978), 10 (1979), 12 (1980), 13 (1981), 16 (1983), 17 (1985), 18 (1986), 19 (1986), *Sullectum Report* I = *CEA* 22 (1989).

³⁴ *Encyclopédie Berbère* 1984f. (most recent seen, Fascicule 12, Capsa – cheval, 1993).

Several important *Festschriften* or collected papers with an African focus have been published, notably selected papers of Goodchild, Gsell, Pflaum, Romanelli and a memorial volume for Le Glay.³⁵ The revised edition of Picard's classic work on the civilization of Roman Africa merits notice here too, not least because of the historiographic importance of his perspective on recent developments.³⁶ Minor sketches of many sites are to be found, of course, in the standard compilations.³⁷

The cartography of Roman Africa appears to offer research tools of a sort unavailable in most other provinces, most notably for Algeria and Tunisia where detailed maps exist based on the early work of the French 'brigades topographiques', and of scholars studying air-photographs of centuriation.³⁸ That this work urgently needs updating, to take account of the continuing degradation of monuments and the improved archaeological knowledge of many periods and of types of site unconsidered at the end of the nineteenth century, is at last being recognized.³⁹ Morocco has a mapping programme in place for its prehistoric sites, Tunisia has instituted an even more ambitious scheme for a prehistoric series at 1:200,000 and a new series of general archaeological maps at 1:50,000.⁴⁰ The successful completion of these mapping programmes must be one of the key aims of the next decade. Ideally, this sort of work should combine with more intensive forms of field survey and with renewed air-photography in the Maghreb countries.⁴¹ More work on toponomy in Roman Africa is needed,⁴² a task that must be done in conjunction with Berber and Phoenician specialists. There is regrettably nothing to compare with Rivet and Smith's compendium of Romano-British place-names.⁴³

In what follows we shall illustrate some of the dramatic developments in Romano-African studies across the last quarter century.⁴⁴ But, equally, a review of this sort should take stock of both the current state and future evolution of the subject. If we are occasionally critical of the present academic priorities, this is expressed in the hope that the next quarter century may produce even more significant advances.

³⁵ R. G. Goodchild, *Libyan Studies: Selected Papers of the late R. G. Goodchild* (ed. J. M. Reynolds) (1976); S. Gsell, *Etudes sur l'Afrique Antique, scripta varia* (1981); H. G. Pflaum, *Afrique Romaine. Scripta Varia* 1 (1978); P. Romanelli, *In Africa e a Roma* (1981); Y. Le Bohec and C. Deroux (eds), *Mélanges Marcel Le Glay. L'Afrique, la Gaule, la religion à l'époque romaine* (1994); B. D. Shaw, *Environment and Society in Roman North Africa* (1995).

³⁶ G.-Ch. Picard, *La civilisation de l'Afrique romaine* (2nd edn, 1990), hereafter Picard, *Civilization*, there is an extensive annotated bibliography, though including comparatively little non-French language scholarship.

³⁷ *Enciclopedia di arte antica; Oxford Dictionary of Byzantium* (1991); R. Stillwell (ed.), *The Princeton Encyclopaedia of Classical Sites* (1976).

³⁸ E. Babelon, R. Cagnat, A. Merlin and S. Reinach, *Atlas archéologique de la Tunisie* (1892-1926); S. Gsell, *Atlas archéologique de l'Algérie* (1902-11); A. Caillemer and R. Chevallier, *Atlas des centuriations romaines de Tunisie* (1959).

³⁹ At a scale of 1:1,000,000 (1:50,000 for Tunisia and central Numidia) this will be achieved by the current APA sponsored project (directed by Richard Talbert) for a new *Atlas of the Greek and Roman World*, due for publication in 1999.

⁴⁰ G. Souville, *Atlas préhistorique du Maroc. 1. Le Maroc atlantique* (1978); *Atlas préhistorique de la Tunisie* (sheets at scale of 1:200,000 and descriptive text so far published include 1-9 Tabarka-Sousse (1985-1992) and 23 Gabes (1985)); *Carte nationale des sites archéologiques et des monuments historiques* (1995f.), 1:50,000 scale, to be published by Institut National du Patrimoine and Ministère de la Culture, Tunis. The project is directed by S. Ben Baaziz (see *BTINP* 6, p. 1-16, for description of the project) and the first batch of these beautifully produced maps and gazetteers should be available by the end of 1995.

⁴¹ G. D. B. Jones in D. Kennedy (ed.), *Into the Sun. Essays on Air Photography in Archaeology Presented to D. Riley* (1989), 25-43.

⁴² J. Desanges, (*Plinè l'Ancien*), *Histoire Naturelle, Livre V, 1-46 (L'Afrique du Nord)* (1980); idem, 'La

Toponomie de l'Afrique du Nord Antique. Bilan des recherches depuis 1965', *Afrique Occ Romaine*, 251-72.

⁴³ A. L. F. Rivet and C. Smith, *The Place-names of Roman Britain* (1979).

⁴⁴ Some of the most frequently referenced monographs are abbreviated below as follows:

M. Benabou, *La résistance africaine à la romanisation* (1976), hereafter Benabou, *Résistance*

N. Ben Lazreg and D. J. Mattingly, *Leptiminus (Lamta), a Roman Port City in Tunisia. First Report* (1992), hereafter Ben Lazreg and Mattingly, *Leptiminus*

N. Benseddik and T. Potter, *Fouilles du Forum de Cherchel* (1993), hereafter Benseddik and Potter, *Cherchel*

A. Ennabli (ed.), *Pour Sauver Carthage* (1992), hereafter Ennabli, *Carthage*

E. W. B. Fentress, *Numidia and the Roman Army. Social, Military and Economic Aspects of the Frontier Zone* (1979), hereafter, Fentress, *Numidia*

P.-A. Février, *Approches du Maghreb romain*, 2 vols (1989/1990), hereafter Février, *Approches IIII*

H. G. Horn, and C. B. Rugey, *Die Numider* (1979), hereafter, Horn and Rugey, *Die Numider*

J.-M. Lassère, *Ubique Populus. Peuplement et Mouvements de Population dans l'Afrique Romaine de la chute de Carthage à la fin de la dynastie des Sévères (146 a.C.-235 p.C.)* (1977), hereafter Lassère, *Ubique Populus*

Y. Le Bohec, *La IIIe Légion Auguste* (1989), hereafter Le Bohec, *IIIe Légion*

C. Lepelley, *Les cités de l'Afrique romaine au Bas-Empire. I, La permanence municipale* (1979); idem, *Les cités de l'Afrique romaine au Bas-Empire. II, Notices d'histoire municipale* (1981), hereafter, Lepelley, *Les cités IIII*

P. Leveau, *Caesarea de Maurétanie: une ville romaine et ses campagnes* (1984), hereafter, Leveau, *Caesarea*

P. Leveau, P. Sillières and J.-P. Vallat, *Campagnes de la Méditerranée romaine, Occident*. (1993), hereafter, Leveau et al., *Campagnes...*

II. HISTORIOGRAPHY

The historiography of Roman Africa is indelibly linked to the history of modern colonial occupation of the region and to the post-colonial reactions that have followed. The late nineteenth and early twentieth centuries were the great age of excavation and epigraphic research. Several generations of French and Italian epigraphists learned their trade recording the 60,000 plus inscriptions from the region. Small wonder that the academic and intellectual structure of the subject has been dominated by Latin epigraphists to an extent that is perhaps only paralleled by the pre-eminence of Greek epigraphists in Asia Minor. Whereas research on other provinces of the Roman Empire, particularly those in north-western Europe, became more dependent on archaeology as a source of knowledge in the face of a meagre epigraphic record, scholarship on Roman Africa, despite the unparalleled richness of archaeology in the Maghreb, brought the study of the inscribed stone virtually to the status of an axiology. A consequence of this is a remarkable and unnecessary imbalance favouring eventist history over the structural/material domain in Roman African historiography. Indeed, this imbalance has contributed in part to the Romanization-Resistance debate within the field over the last two decades (see below).⁴⁵

The close links created between the colonial governments and Roman archaeology in North Africa have left a difficult legacy in the post-colonial world.⁴⁶ Many government servants (public administrators, serving and retired soldiers etc.) carried out and published work on Roman sites. A lot of the early large-scale excavations involved extensive clearance of sites, as at Lambaesis, Timgad, Dougga, Lepcis Magna etc., in order to produce an archaeology of Empire, though tourism was (and to some extent remains) another motivating force behind excavation. Roman military sites have particularly unpleasant associations for the independent countries of the Maghreb and there has been a near total moratorium on work on them in recent decades, leaving the interpretation of the frontiers in an intellectual time-warp.⁴⁷ The inherent antipathy of the independent nations of the Maghreb to a colonial past, however remote in time, is augmented by the current academic vogue for post-colonial perspectives that expose the crude stereotypes, institutionalized bigotry, insensitivity, and delusions of the European imperialist age.⁴⁸ The French and Italian governments presented themselves as the direct descendants and inheritors of the Romans in Africa. In military affairs, in relations with the indigenous peoples, in farming, and in the revival of hydraulic systems they claimed to be emulating and surpassing the achievements of Rome.⁴⁹ Colonialist ideology disinherited the North African peoples of their cultural history, by ascribing to immigrants all the positive achievements of Roman Africa and by portraying the Africans either as passive recipients of superior culture or as nomadic and lawless people incapable of self-government.⁵⁰ Some scholars have continued to maintain an extremely Euro-centric view of Roman Africa,⁵¹ and, although most would claim no longer to subscribe to a colonialist perspective, there has been little formal repudiation of objectionable views whose influence remains pervasive.⁵² Little wonder that there has

⁴⁵ Dondin-Payre, *op. cit.* (n. 18), 30–52; B. D. Shaw, 'Archaeology and knowledge: the history of the North African provinces of the Roman Empire', *Florilegium* 2 (1980), 28–60.

⁴⁶ M. Dondin-Payre, 'L'exercitus Africae inspiration de l'armée française: ense et aratro', *Ant* 27 (1991), 141–57.

⁴⁷ J. Baradez, *Vue aérienne de l'organisation romaine dans le sud Algérienne. Fossatum Africae* (1949); C. R. Whittaker, *Frontiers of the Roman Empire. A Social and Economic Study* (1994), esp. 1–9 for historiography of frontiers.

⁴⁸ The structure of the colonial dialogue is brilliantly explored by M. Bernal, *Black Athena: The Afroasiatic Roots of Classical Civilization*, 2 vols (1987/1991); E. W. Said, *Orientalism* (1978); *idem*, *Culture and Imperialism* (1992). The bias of European scholarship extended also to the Phoenicians, M. Szyzner, 'L'expansion phénico-punique dans la Méditerranée occidentale (problèmes et méthodes)', in M. Galley (ed.), *Actes du 2e Congrès Int. d'étude des cultures de la Méditerranée Occidentale* 1 (1978), 35–48.

⁴⁹ Février, *Approches* I, esp. 23–90; *idem*, *CHAAN* 3, 87–106; J. Frémeaux, 'Souvenirs de Rome et présence français au Maghreb: essai d'investigation', in J.-Cl. Vatin (ed.), *Connaissances du Maghreb: science sociales et colonisation* (1984), 29–46; J. Malarkey, 'The dramatic structure of scientific discovery in colonial Algeria: a critique of the journal "Société archéologique de Constantine (1853–1876)"', in *ibid.*, 137–60.

⁵⁰ Interestingly, attempts continue to be made to argue,

in the face of the evidence, that the family of Septimius Severus was of immigrant status, C. Leta, *Af Rom* 19 (1987), 31–45; cf. A. R. Birley, *The African Emperor. Septimius Severus* (1988). The Italian habit of referring to Lepcis Magna (Punic *Lpqy*) by its Latinized (Italianized) name Leptis Magna is another example of the same tendency.

⁵¹ A. Deman (with appendix by J. H. Michel), 'Matériaux et réflexions pour servir à une étude du développement et du sous-développement dans les provinces de l'empire romain', *ANRW* II, Principat, 3 (1975), 3–97, attempted to argue from modern prejudice that Roman Africa was drastically under-developed in comparison to Roman Gaul; soundly rebutted by J. M. Lassère, *REA* 81 (1979), 35–53 and L. A. Thompson, *Klio* 64 (1982), 383–401.

⁵² P. Mackendrick, *The North African Stones Speak* (1980), 330: 'It would be pleasant to be able to report, too, that Romanization took place without confrontation, but the fact is that the Berbers, however self-denying and enduring they were, were backward and uninnovative, with no gift for politics or urbanization. They also proved themselves, on occasion, faithless, murderous and (in Jugurtha's case) manic-depressive. To idealize them is to do them a disservice, for to present a falsified picture of a people's past is to betray them. Historical truth, however harsh and cruel, never fails to give to those who know how to receive it — who can grasp the past with human understanding — the consistent clarity of vision that alone makes it possible to plan for the future.'

been a post-colonial backlash against Roman studies amongst the current generation of Maghrebi historians.

The first landmark study of the post-colonial period was Laroui's history of the Maghreb, which set the pattern for further studies in the genre.⁵³ Laroui inverted the colonial stereotype by reinterpreting the history of Roman Africa as one of continuous 'nationalist' resistance to alien rule, at the same time minimizing the significance of the 'achievements' of Roman Africa (towns, wealth creation, art). Benabou has taken this argument a stage further by suggesting that Africans sought to oppose foreign rule not only through armed struggle but also through cultural resistance.⁵⁴ This has provoked a storm of controversy, with many European scholars dismissing the idea of unremitting resistance as an anachronism, based on recent nationalistic experience, and suggesting that the cultural divergence of Africa from other Roman provinces was a normal product of Romanization rather than of resistance.⁵⁵ There is certainly a danger that one crude colonial stereotype may be replaced by another equally dubious post-colonial one, but the scholarly reaction to Laroui and Benabou has been unjustifiably harsh. North Africa, more than most provinces in the Roman world, is studied against a profound ideological backdrop. It is essential that discrepant experiences are explored and that the debate about the impact and meaning of Rome in Africa remains an open one.⁵⁶ Equally, though resistance is undoubtedly an important theme, it is certainly not the only one worth pursuing.⁵⁷

Further criticisms can be levelled at both colonial and post-colonial analyses because of their over-use of 'binary oppositions' for rhetorical purposes: thus nomad and sedentarist, desert and sown, Tell and Sahara, Roman and African. These dichotomies have tended to oversimplify the complex ecological and sociological make-up of North Africa. The possible gradations (social, spatial and temporal) between nomad and sedentarist, for instance, promise a far more interesting debate.⁵⁸

Laroui also raised complaints about the agenda of classical archaeology, pointing out that it has tended to concentrate on the forts, towns, and major monuments, whilst virtually ignoring the traces of Berber villages and rural sites and leaving the Africans as invisible in the archaeological record as they appeared to be in history.⁵⁹ This is slowly changing, as we shall see below, but it is a fair comment that the archaeological priorities of the Antiquities Services with respect to the Roman period have tended to be fairly traditional ones (towns, churches, epigraphy).

These debates are, of course, also current in studies of other regions of the Roman Empire, but in comparison with many of those areas, archaeology remains a very under-developed tool of research in Africa: it lags behind in intellectual debates, methodology, and scope.⁶⁰

⁵³ A. Laroui, *L'histoire du Maghreb, un essai de synthèse* (1970), astonishingly this tour de force was ignored by both the BAAA and the AAAB listings (nn. 6–7 above) at the time of its publication. Among other works influenced by Laroui's approach: J. M. Abun-Nasr, *A History of the Maghreb* (2nd edn, 1975); M. Kaddache, *L'Algérie dans l'antiquité* (1971); C. and Y. Lacoste (eds), *L'état du Maghreb* (1991).

⁵⁴ M. Benabou, *Résistance*; see also idem, *Taefarinas, insurgé berbère contre la colonisation romaine* (1977); idem, *AESC* 33 (1978), 83–8; idem in M. Galley (ed.), *Actes du 2^e Congrès int. d'étude des cultures de la Méditerranée Occidentale II* (1978), 139–44; idem in D. Nordman and J.-P. Raison, *Sciences de l'homme et conquête coloniale. Constitution et usage des sciences humaines en Afrique XIXe–XXe siècles* (1980), 15–22.

⁵⁵ P. D. A. Garnsey in P. D. A. Garnsey and C. R. Whittaker (eds), *Imperialism in the Ancient World* (1978), 223–54.; Picard, *Civilisation*, 12; Y. Thébert, 'Romanisation et déromanisation. Histoire décolonisée ou histoire inversée', *AESC* 33 (1978), 64–82; C. R. Whittaker, *Klio* 60.2 (1978), 331–62.

⁵⁶ M. Benabou, 'L'Afrique et la culture romaine: le problème des survivances', *ACHM* 2, 9–21; idem, 'Les survivances pré-romaines en Afrique romaine', in Wells, *Vanier*, 13–27; E. Fentress, 'La vendetta del Moro: recenti ricerche sull'Africa romana', *Dialoghi di Archeologia* ns 4.1 (1982), 107–13; T. Kotula, 'Les Africains et la domination de Rome', *Dial. Hist. Anc.* 2 (1976), 337–58; E. Lamirande, 'Nord-africains en quête de leur passé. Coup d'oeil sur la période romaine et chrétienne', *Rev. de*

l'Univ. d'Ottawa 46 (1976), 5–23; P. Le Roux, 'Pouvoir centrale et province', *REA* 86 (1984), 31–53; R. Sheldon, 'Romanizzazione, acculturazione e resistenza: problemi concettuali nella storia del Nordafrica', *Dialoghi di Archeologia* ns 4.1 (1982), 102–6.

⁵⁷ The three cornered debate between, M. Benabou, P. Leveau, and Y. Thébert, *AESC* 33 (1978), 64–92, illustrates the dynamic possibilities; similarly the exchange of views between E. Fentress and B. D. Shaw, *Opus* 2, 133–75.

⁵⁸ P.-A. Février, 'Quelques remarques sur troubles et résistances dans le Maghreb romain', *ACHCM* 2 (1981), 40; R. I. Lawless, 'The concept of "Tell" and "Sahara" in the Maghreb: a reappraisal', *Trans. Inst. Br. Geog.* 57 (1972), 125–37. Cf. E. W. Said, *Orientalism* (1978), 31–73 (on the use of binary oppositions in Western writing on the East).

⁵⁹ Laroui, op. cit. (n. 53), 41.

⁶⁰ For a range of new approaches, see *inter alia*, S. Alcock, *Graecia Capta. The Landscapes of Roman Greece* (1993); J. Bintliff (ed.), *The Annales School and Archaeology* (1991); M. Carver, *Underneath English Towns* (1987); S. L. Dyson, 'From New to New Age archaeology, archaeological theory and Classical archaeology: a 1990s perspective', *AJA* 97.2 (1993), 195–206; A. B. Knapp, *Archaeology, Annales and Ethnohistory* (1992); M. Millett, *The Romanization of Britain* (1989); K. Randsborg, *Europe in the First Millennium AD* (1991); D. B. Small, (ed.), *Methods in the Mediterranean. Historical and Archaeological Views on Texts and Archaeology* (1995).

III. PEOPLE

One of the greatest historiographical advances of recent decades has been the exploration of the potential of demographic studies of Romano-African society. Based on the epigraphic wealth of the region, the ground-breaking work of Lassère is important not least for the way he judiciously handles the evidence for diverse groups: the majority Africans and the important minorities (immigrant Romans, Jews etc.).⁶¹ In this section we shall examine the significance of this type of study in the context of changing perspectives on the people of Roman Africa.

The early prehistory of the Maghreb is still imperfectly known, but advances in the study of Saharan communities and their rock art have suggested some lines of development between the late neolithic hunting and herding communities and the tribal peoples encountered by Rome in the same areas.⁶² It is still generally accepted that a key factor in late prehistory was the migration of Berber tribes from the eastern Sahara (though the question is very complex and, especially in Morocco, early contact with other Mediterranean lands is not to be excluded).⁶³ The introduction of chariots (attested by over 650 depictions in Saharan rock art) may indicate not the first spread of the Berbers, but rather the emergence of a tribal aristocracy in the first millennium B.C.⁶⁴ Knowledge of the tribal societies of pre-Roman Africa still rests on the basis laid by Bates and Desanges,⁶⁵ but the subject has been revolutionized by new research on these people, variously characterized as Africans, Berbers, Libyans, and Moors, and by anthropological studies.⁶⁶ Of particular note is the attention paid to the Numidian and Mauretanian kingdoms, with their increasingly Punicized and Hellenized culture and architecture in the later centuries B.C.⁶⁷ The great tombs and royal monuments such as at Dougga, the Medracen, and Chemtou (the latter revealing the early exploitation of Numidian 'marble') demonstrate the power, wealth, and Hellenization of the Numidian state, while excavations at Caesarea and Volubilis, for instance, show the urban accomplishments of the Mauretians before annexation of their territory by Rome.⁶⁸ In the desert interior, survey and excavations of Garamantian sites (Fezzan, modern Libya) have overturned many cherished beliefs about the level of development, economic mode, and sophistication of people who remained always on the fringe of the Empire.⁶⁹ This tribe cultivated wheat early in the first millennium B.C., developed proto-urban settlements, and incorporated a huge range of Mediterranean material culture into their funerary assemblages. Several other tribes have been studied primarily in the context of contact situations with Rome, revealing much about the operation of Roman diplomacy and hegemony.⁷⁰ Although many of these tribes were assimilated into the administrative and civil structures of province, tribal units remained important throughout the history of Roman Africa and enjoyed something of a resurgence towards its end.⁷¹ The presence of black Africans in the oases of the

⁶¹ Lassère, *Ubique Populus*.

⁶² G. W. W. Barker, 'From classification to interpretation: Libyan prehistory 1969-1989', *Lib Studs* 20 (1989), 31-43; R. Oliver and B. M. Fagan, *Africa in the Iron Age, c. 500 B.C. to A.D. 1400* (1975), 1-11, 47-58; J. Zoughlami, 'La recherche préhistorique en Tunisie', in G. Sotgiu (ed.), *Attività di ricerca e di tutela del patrimonio archeologico e storico artistico della Tunisia* (1991), 11-32.

⁶³ G. Camps, 'L'origine des Berbères', *Les Cahiers du CRESM* 12 (1981), 9-33.

⁶⁴ idem, *Ant af* 25 (1989), 11-40; idem, *CHAAN* 4.2 (1991), 267-88; G. Camps and M. Gast (eds), *Les chars préhistoriques du Sahara* (1982); cf. H. Lhote, *Les chars rupestres sahariennes, des Syrte au Niger par le pays du Garamantes et des Atlantes* (1982).

⁶⁵ O. Bates, *The Eastern Libyans* (reprint 1970); J. Desanges, *Catalogue des tribus africaines de l'Antiquité classique à l'ouest du Nil* (1962).

⁶⁶ Benabou, *Résistance, passim*; G. Camps, *Berberes. Aux marges de l'histoire* (1980); idem, *Les Berbères. Mémoire et identité* (1987); J. Desanges, 'Une notion ambiguë: la gens Africaine. Réflexions et doutes', *BCTH* 22 (1993), 169-75; E. W. B. Fentress and M. Brett, *The Berbers* (forthcoming 1995); Février, *Approches II* (1990), 111-57; C. R. Whittaker, *Klio* 60.2 (1978), 331-62.

⁶⁷ G. Camps, 'Une frontière inexploité: la limite de la berberie orientale de la protohistoire au Moyen-Age', in *Mélanges offerts à Jean Despois* (1973), 39-67; idem, 'Les Numides et la civilisation punique', *Ant af* 14 (1979), 43-53; J. Desanges, 'Hellenisme dans le royaume protégé de Maurétanie 25 avant J.C. - 40 après J.C.', *BCTH* ns

20-21, *Afrique du Nord* (1989), 53-61; Horn and Ruger, *Die Numider*; E. Smajda, 'Modes de contact, sociétés indigènes et formation de l'état Numide au second siècle avant notre ère', in *Modes de contacts et processus de transformation dans les sociétés antiques* (1983), 685-702.

⁶⁸ Benseddik and Potter, *Cherchel*, 29-37, 371-5; A. Jodin, *Volubilis Regia Iubae. Contribution à l'étude des civilisations du Maroc antique préclaudien* (1987); Leveau, *Caesarea*, 9-20; F. Rakob, 'Numidische Königsarchitektur in Nordafrika', in Horn and Ruger, *Die Numider*, 119-71; idem, 'Architecture royale Numide', in *Architecture et société de archaïsme grec à la fin de la République romaine* (1983), 325-48.

⁶⁹ C. M. Daniels, *The Garamantes of Southern Libya* (1970); idem in Gadallah, *Libya in Hist.*, 261-85; idem, *Lib Studs* 20 (1989), 45-61; see also, E. M. Ruprechtsberger, 'Die Garamantien', *Antike Welt* 20 Jahrgang 1989 (special theme issue); M. van der Veen, 'Garamantian agriculture: the plant remains from Zincheera, Fezzan', *Lib Studs* 23 (1992), 7-39.

⁷⁰ M. Euzennat, 'Les Zégrénses', in *Mélanges W. Seston* (1974), 175-86; Fentress, *Numidia*, 18-78; idem, 'Tribe and faction: the case of the Gaetuli', *MEFRA* 94 (1982), 325-34; L. Galand, 'Les Quinquégentanei', *BAA* 4 (1971), 277-9; Mattingly, *Tripolitania* (ch. 2); M. C. Sigman, 'The Romans and the indigenous tribes of Mauretania Tingitana', *Historia* 26 (1977), 415-39.

⁷¹ M. T. Jerary, *The Luwata: Prolegomena, Source Book and Preliminary Study* (unpub. PhD thesis, University of Madison, 1976); D. J. Mattingly, *Lib Studs* 14 (1983), 96-108.

northern Sahara and in the Roman Empire is indisputable, though their numbers and status remain uncertain.⁷² Roman exploration and contact certainly extended into Sub-Saharan Africa.⁷³

The archaeology of the Libyan tribes still remains underdeveloped. Only a few detailed studies of native settlements have been carried out, primarily relating to hill forts,⁷⁴ but the most interesting sites are potentially the oasis-related ones that in many cases developed proto-urban or urban characteristics.⁷⁵

There has also been a major rethinking of the nature of nomadism and pastoralism in North Africa, with the colonial view of endemic raiding⁷⁶ now increasingly modified in favour of a more symbiotic model of nomad-sedentary interaction and with greater emphasis being placed on the transhumant nature of much of the attested movement of people and livestock.⁷⁷ Most of the work on nomadism-pastoralism is, however, guilty of 'upstreaming'; that is, an over-reliance on recent history as a guide to historical processes of a distant past. Both sides of the debate on resistance have overemphasized continuity in an attempt to deny fundamental and real changes which occurred in pastoralism in ancient Africa.⁷⁸

There are several distinct Libyan alphabets now known, suggesting regionalized dialects and traditions, and Libyan inscriptions are attested from the mid-first millennium B.C. to post-Roman times.⁷⁹ The variation in the alphabets would seem to indicate that literacy did not spread from a single point of contact (Carthage-Numidian relations say), but that separate evolution occurred in Tripolitania, Numidia, and the Sahara, reflecting local choices and aspirations.⁸⁰ Moreover, the occurrence of Libyan graffiti might suggest that literacy was not an élite monopoly, but more widespread in African society. In fact the élite may have shown more of a tendency to employ Punic and later Latin as their written language to show off their status.

The process of Phoenician colonization of the African littoral and the emergence of Carthaginian dominance among the Phoenician emporia were events of Mediterranean significance.⁸¹ The social make-up and culture of the Punic and Libyphoenician communities have come into much closer focus in recent years.⁸² Despite the violent destruction of Carthage, Punic language and culture had a very long after-life in Roman Africa.⁸³

In addition to the native African and Phoenician elements of the indigenous population, there were Roman colonists and settlers, though their ethnic background was in fact extremely heterogeneous and

⁷² J. Desanges, 'The iconography of the Black in Ancient North Africa', in *The Image of the Black in Western Art. 1. From the Pharaohs to the Fall of the Roman Empire* (1976), 248–54; idem, *Recherches sur l'activité des méditerranéens aux confins de l'Afrique* (1978); idem, in *L'Afrique noire et monde Méditerranéen dans l'antiquité* (1978), 29–53; R. Mauny in *ibid.*, 122–46.

⁷³ cf. previous note; Horn and Ruger, *Die Numider*, 251–4 (Tin Hinan); M. Mirabelle-Robert et al., *Sahara* 3 (1990), 112, for a recently discovered Latin inscription cut on a cliff 200 km southwest of the well-known, but still enigmatic site of Tin Hinan.

⁷⁴ C. M. Daniels, 'The Garamantes of Fezzan, excavations on Zincheira 1965–1967', *Af* 50 (1970), 37–66; N. Ferchiou, 'L'habitat fortifié pré-impérial en Tunisie antique. Aperçus sur la typologie des sites perchés et des sites de versant', *CHAAN* 4.1 (1990), 229–52; idem, 'Habitats fortifiés pré-impériaux en Tunisie antique', *Ant* af 26 (1990), 43–86; idem, *BTINP* 5 (1994), 7–17; Mattingly, *Tripolitania*, 41–9.

⁷⁵ C. M. Daniels, *The Garamantes of Southern Libya* (1970); P. Troussset, 'Les oasis présahariennes dans l'antiquité: partage de l'eau et division du temps', *Ant* af 22 (1986), 161–91; idem, 'L'organisation de l'oasis dans l'antiquité (exemples de Gabes et du Jerid)', in A. De Reparaz (ed.), *L'eau et les hommes en Méditerranée* (1987), 25–41.

⁷⁶ Most recently canvassed by M. Rachet, *Rome et les Berbères. Un problème militaire d'Auguste à Diocétien* (1970).

⁷⁷ Fentress, *Numidia*, 18–26; Mattingly, *Tripolitania*, 17–24, 37–8; R. Rebuffat, 'Nomadisme et archéologie', in *Afrique Occ Romaine*, 231–47; B. D. Shaw, 'Fear and loathing: the nomad menace in Roman Africa', in Wells, *Vamier*, 29–50; idem, *Ancient Society* 13–14 (1982–83), 5–31; P. Troussset, 'L'image du nomade saharien dans l'historiographie antique', *Production pastorale et société* 1982 10 (1982), 97–105.

⁷⁸ See below n. 303.

⁷⁹ O. Brogan, 'Inscriptions in the Libyan alphabet from Tripolitania and some notes on the tribes of the region', in

J. and T. Bynon (eds), *Hamito-Semitic* (1975), 267–89; G. Camps, 'Recherches sur les plus anciennes inscriptions libyques de l'Afrique du nord et la Sahara', *BCTH* ns 10–11B (1975), 143–66; C. M. Daniels, 'An ancient people of the Libyan Sahara', in Bynon and Bynon, *op. cit.*, 249–65; L. Galand, 'Les alphabets libyques', *Ant* af 25 (1989), 69–81; R. Rebuffat, 'Graffiti en Libyque de Bu Njem', *LA* 11–12 (1975), 165–87.

⁸⁰ G. Camps, 'L'araire berbère', *CHAAN* 3 (1986), 177–84, notes that variation in plough technology also corresponds to different linguistic groups.

⁸¹ M. Snyzer, 'L'expansion phénico-punique dans la Méditerranée occidentale (problèmes et méthodes)', in M. Galley (ed.), *Actes du 2e Congrès Int. d'étude des cultures de la Méditerranée Occidentale* 1 (1976), 35–48; C. R. Whittaker, *Proc. Cambridge Phil. Soc.* n.s. 20 (1974), 58–79; idem, 'Carthaginian imperialism in the fifth and fourth centuries', in P. D. A. Garnsey and C. R. Whittaker (eds), *Imperialism in the Ancient World* (1978), 59–90.

⁸² The state of the subject is almost unrecognizable from that described by P. Cintas, *Manuel d'archéologie punique*, 2 vols (1970/1976). Note especially, many good papers in *I Congresso di Studi Fenici e Punici* (1983). Libyphoenicians: M. G. Amadasi Guzzo, 'Una grande famiglia di Lepcis in rapporto con la ristrutturazione urbanistica della città (I sec AC – I sec DC)', *Architettura et società de l'archaisme grec à la fin de la republique romaine* (1983), 377–85; civilization: M. Fantar, *Carthage. Approche d'une civilisation*, 2 vols (1993); see also below Section VII 'Carthage'.

⁸³ Numerous papers in *Af Rom* VII, especially M. Fantar, 'Survivances de la civilisation punique en Afrique du nord', *Af Rom* VII (1990), 53–71; idem, 'L'épigraphie punique et néopunique en Tunisie (1982–1992)', *Af Rom* IX (1992), 65–72; D. J. Mattingly, 'Libyans and the "limes": culture and society in Roman Tripolitania', *Ant* af 23 (1987), 71–94; F. Millar, 'Local cultures in the Roman Empire: Libyan, Punic and Latin in Roman Africa', *JRS* 58 (1968), 126–34.

they were always a minority in society as a whole.⁸⁴ These groups included Latins, Etruscans, other Italians,⁸⁵ Celts,⁸⁶ an increasing array of people of Eastern Mediterranean origin,⁸⁷ Jews,⁸⁸ individuals from the Danubian provinces and the Balkans.⁸⁹ That much can be learned about these groups is owed to the development of a more secure dating framework for African funerary inscriptions.⁹⁰ Studies of military epigraphy have helped to refine modern theories about the shift from Italian to provincial recruitment.⁹¹ Work on civic epigraphy has produced some exceptionally important documents or groups of texts, allowing detailed analyses to be made of the composition of the élite orders in several towns.⁹²

The data relating to personal nomenclature in North Africa are exceptionally numerous and rich in detail. There are, for instance, over 900 Libyan personal names known from Latin sources alone,⁹³ and a similarly impressive catalogue of Punic and Phoenician names has also been compiled.⁹⁴ Latin naming patterns have been discussed in detail and excellent onomastic indexes produced.⁹⁵ In this context one of the most fascinating things to emerge is the pattern of Latin name selection by Africans and Libyphoenicians acquiring citizenship.⁹⁶ An article by Birley⁹⁷ demonstrates the three main criteria behind such choices at Libyphoenician Lepcis Magna: first, names with a historical resonance were selected, such as P. Cornelius Balbus or names derived from the emperor or a senatorial patron; second, names that sounded like Punic originals, Aemilius for Himilis, Macer for Mqr etc.; third, names that reflected the theophoric pattern of many Punic names, Donatus as shorthand for Muttunba'al (gift of god) and so on. More analysis of this sort is required in relation to the transference from Libyan to Latin nomenclature. Another important theme to emerge from studies of nomenclature has been that of internal migration within the African province and emigration of Africans to Rome and elsewhere, while, for the later Roman period, onomastic studies are now greatly facilitated by the corpus of 12,565 named individuals connected with the Christian churches in Africa.⁹⁸

What remains to be done? The status and roles of women in North African society have yet to be systematically assessed, though some studies from opposite ends of the social scale have recently appeared.⁹⁹ More work on intermarriage between the Punic, Libyan and immigrant 'Roman' populations is an essential prerequisite to the study of acculturation processes. There is also scope for demographic work on the Romano-African population. Attempts to model the demographic profile on the basis of the abundant tombstone data have rightly been highlighted as one possible approach, though there remain problems of chronology and interpretation.¹⁰⁰ The value of this sort of work will be vastly enhanced when it can be compared with age profiles constructed from cemetery excavations, including a

⁸⁴ Lassère, *Ubique Populus*, 75–465; idem, 'Onomastica africana I-IV', *Ant af* 13 (1979), 227–36; idem, 'Remarques sur le peuplement de la Colonia Iulia Augusta Numidia Simitthus', *Ant af* 16 (1980), 27–44; idem, 'Onomastica africana V-VIII', *Ant af* 18 (1983), 167–75.

⁸⁵ J. Heurgon, 'Inscriptions Etrusques de Tunisie', *CRAI*: 1969, 526–51; Lassère, *Ubique Populus*, 388–91; idem, 'L'organisation des contacts de population dans l'Afrique romaine sous la République et au Haut-Empire', *ANRW* II, Principat 10.2 (1982), 397–426.

⁸⁶ A. Beschtaouch, 'Elements Celtiques dans la population du pays de Carthage', *CRAI*: 1979, 395–9; M. Le Glay, *Les Gaulois en Afrique* (1962); Lassère, *Ubique Populus*, 393–94.

⁸⁷ Lassère, *Ubique Populus*, 397–405; Y. Le Bohec, 'Les Syriens dans l'Afrique romaine, civils ou militaires', *Karthago* 21 (1987), 81–92.

⁸⁸ C. Iancu and J.-M. Lassère, *Juifs et judaïsme en Afrique du nord dans l'Antiquité et le Haut Moyen Age* (1985); Lassère, *Ubique Populus*, 411–26; Y. Le Bohec, 'Juifs et judaïsme dans l'Afrique romaine. Remarques onomastiques', *Ant af* 17 (1981), 209–29; idem, 'Les sources archéologiques de judaïsme africaine sous l'empire romain', in Iancu and Lassère, op. cit., 13–48.

⁸⁹ Lassère, *Ubique Populus*, 394–6.

⁹⁰ J.-M. Lassère, 'Recherches sur la chronologie des épitaphes païennes de l'Afrique', *Ant af* 7 (1973), 7–151; though more effort is required to reconcile epigraphic criteria with dates derived from associated grave contexts.

⁹¹ J.-M. Lassère, 'Remarques onomastiques sur la liste militaire de Vezereos (ILAf 27)', *Limes* 12 (1980), 955–75; Le Bohec, *IIIe Légion*, 494–530.

⁹² A. Chastagnol, *L'Album municipale de Timgad* (1978); Y. Le Bohec, 'Onomastique et société à Volubilis', *Af Rom* VI (1989), 339–56; Leveau, *Caesarea*, 89–141; A. M'Charek, *Aspects de l'évolution démographique et sociale à Mactaris au IIe et IIIe siècles après J.C.* (1986); Y. Thébert, 'La romanisation d'une cité indigène d'Afri-

que, Bulla Regia', *MEFR* 85 (1973), 247–310; M. Torelli, 'Per una storia della classe dirigente di Lepcis Magna', *RAL* series 8.28 (1973), 377–410.

⁹³ G. Camps, 'Liste onomastique libyque d'après les sources latines', *Reppal* 7–8 (1993), 39–73.

⁹⁴ F. Vattioni, 'Per una ricerca sull'antroponima fenicio-punica', *Stud Mag* 11 (1979), 43–123; 12 (1980), 1–82.

⁹⁵ Z. B. Ben Abdallah and L. Ladjimi Sebâi, *Index onomastique des inscriptions latines de la Tunisie, suivie de index onomastique des inscriptions latines d'Afrique* (1983); Lassère, *Ubique Populus*, 451–4, 459–63; Le Bohec, *IIIe Légion*, 259–332.

⁹⁶ M. Dondin-Payre, 'Recherches sur un aspect de la romanisation de l'Afrique du nord: l'expansion de la citoyenneté romaine jusqu'à Hadrien', *Ant af* 17 (1981), 93–132; Lassère, *Ubique Populus*, 439–66.

⁹⁷ A. R. Birley, 'Names at Lepcis Magna', *Lib Studs* 19 (1988), 1–19.

⁹⁸ Emigration: C. Ricci, *Ant af* 30 (1994), 189–207; V. G. Swann, *Journ. Roman Pottery Studs* 5 (1992), 1–33 (for a remarkable identification of African soldiers in Britain, based on their distinctive ceramic assemblages and cooking traits). Late Roman period: A. Mandouze, *Prosopographie Chrétienne du Bas Empire. I, Afrique* (303–533) (1982).

⁹⁹ L. Ladjimi Sebâi, 'La femme en Afrique à l'époque romaine (étude menée à partir de la documentation épigraphique)', in G. Sotgiu (ed.), *Attività di ricerca e di tutela del patrimonio archeologico e storico artistico della Tunisia* (1991), 77–88; idem, *Africa* x (1988), 212–19 (slave chain of female prostitute); idem, *MEFR* 102 (1990), 651–86 (female flaminiate in North Africa).

¹⁰⁰ R. Saller and B. Shaw, *JRS* 74 (1984), 124–56; R. P. Duncan-Jones, *Chiron* 7 (1977), 333–54; idem, *Structure and Scale in the Roman Economy* (1990), 79–92; Lassère, *Ubique Populus*, 479–596; E. A. Meyer, *JRS* 80 (1990), 74–96.

significant proportion of unmarked (that is, lower order) graves. At present there are relatively few detailed osteological and pathological studies of skeletal remains from North Africa, but the published studies seem to indicate far higher levels of infant mortality and far shorter adult life-spans than the epigraphic material suggests. The general health and nutrition of the bulk of the population can also be assessed by such studies and this information has importance in the debate about the relative prosperity or poverty of Africans in the Roman Empire. At both Carthage and Leptiminus, for instance, dentition suggests a relatively poor diet for the common people and there are some signs of malnourishment.¹⁰¹

IV. THE ARMY

The army is a subject where epigraphic work has far outstripped active fieldwork in recent decades. There have been advances and achievements, most notably Le Bohec's comprehensive review of existing knowledge about the IIIrd legion and its auxiliary units.¹⁰² Several overviews of the African frontiers have been published,¹⁰³ though the overall framework of the subject remains fairly traditional because of the lack of opportunities for new excavation and fieldwork (Fig. 1). Moreover, with a few exceptions,¹⁰⁴ conceptual thinking about the African frontier has been hidebound by the colonial discourse or by the *lacunae* in our archaeological knowledge of deployment, chronology, and logistics.¹⁰⁵ Speculative interest has continued on the causes and courses of the principal wars featured by the literary sources, though it is questionable whether a purely events-based approach to the study of the frontiers can be adequately served by archaeology.¹⁰⁶

Knowledge of the military deployment in Cyrenaica remains very patchy and almost entirely reliant on epigraphic discoveries.¹⁰⁷ However, Tripolitania has seen some impressive advances,¹⁰⁸ notably through the work of Rebuffat in and around Bu Njem (Gholaia)¹⁰⁹ and Euzennat and Troussset in western Tripolitania.¹¹⁰ Of particular significance has been the work on the series of linear barriers (conventionally known as *clausurae*) that are now interpreted as elements in a system to monitor and regulate transhumance movements, rather than as defences against camel nomads. It is also recognized that these structures had a long history of use in North Africa from the second to fifth centuries A.D.¹¹¹ There is still little known about the early Roman deployment in the rest of Africa Proconsularis, though the continued presence of troops at sites such as the marble quarries at Chemtou suggests that the region

¹⁰¹ L. Kilgore and R. Jurmain in J. H. Humphrey (ed.), *The Circus and a Byzantine Cemetery at Carthage* (1989), 257–83; C. Osborne in Ben Lazreg and Mattingly, *Leptiminus*, 267–70.

¹⁰² Y. Le Bohec, *La IIIe Légion Auguste* (1989); idem, *Les unités auxiliaires de l'armée romaine dans les provinces d'Afrique Proconsulaire et de Numidie* (1989); cf. also idem, 'Un nouveau type d'unité connu par l'épigraphie africaine', *Limes* 12 (1980), 945–54; idem, 'Encore les Numeri Collati', *Af Rom* III (1986), 233–41; *L'armée romaine d'Afrique et la IIIe légion Auguste = Ant af 27* (1991).

¹⁰³ C. M. Daniels, 'Africa', in J. Wachter (ed.), *The Roman World* 1 (1987), 223–65; M. Euzennat, 'Recherches récentes sur la frontière d'Afrique (1964–74)', *Limes* 10 (1977), 429–44; idem, 'Les recherches sur la frontière romaine d'Afrique', *Limes* 11 (1977), 533–43; idem, 'La frontière d'Afrique 1976–83', *Limes* 13 (1986), 573–83; idem, 'La frontière romaine d'Afrique', *CRAI* 1990, 565–80; Y. Le Bohec, 'La recherche récente sur l'armée romaine d'Afrique (1977–1989)', *Ant af 27* (1991), 21–31.

¹⁰⁴ D. J. Buck, 'Frontier processes in Roman Tripolitania', in Buck and Mattingly, *Town and Country*, 179–90; R. Rebuffat, 'Au-delà des camps romains d'Afrique Mineure, renseignement, contrôle, pénétration', *ANRW* II, Principat, 10.2 (1982), 474–513; P. Troussset, 'Signification d'une frontière: nomades et sédentaires dans la zone du "limes" d'Afrique', *Limes* 12 (1980), 931–43; idem, 'L'idée de frontière au Sahara d'après les données archéologiques', in P. Baduel (ed.), *Enjeux Sahariens* (1984), 47–78; idem, 'Limes et frontière climatique', *CHAAV* 3 (1986), 55–84; idem, 'De la montagne au désert: Limes et maîtrise de l'eau', *R.O.M.M.* 41–41 (1987), 90–115; C. R. Whittaker, *Les frontières de l'empire romain* (1989); idem, *Frontiers of the Roman Empire. A Social and Economic Study* (1994). There is

nothing at present on Africa to compare with B. Isaac, *The Limits of Empire. The Roman Army in the East* (1990).

¹⁰⁵ Benabou, *Résistance*; Le Bohec, op. cit. (n. 9) (1979); J. C. Mann, 'The frontiers of the Principate', *ANRW* II.1 (1974) 508–33.

¹⁰⁶ For example, A. Berthier, *La Numidie. Rome et la Maghreb* (1981); J.-M. Lassère, 'Un conflit "routier": observations sur les causes de la guerre de Tacfarinas', *Ant af* 18 (1982), 11–25. Cf. R. Jones in J. Bintliff (ed.), *The Annales School and Archaeology* (1991), 93–107.

¹⁰⁷ J. M. Reynolds, 'Military inscriptions of Cyrenaica', *Actes VIIe Congrès Int. Epig. Grec et Rom* (1979), 458–60; note also E. M. Ruprechtsberger, *Die römische Limeszone in Tripolitania und der Kyrenaika Tunesien-Libyen* (1993).

¹⁰⁸ D. J. Mattingly, 'Farmers and frontiers. Exploiting and defending the countryside of Roman Tripolitania', *Lib Stud* 20 (1989), 135–53; idem, *Tripolitania*, esp. chs 4, 5, 9, 10; R. Rebuffat, 'Une zone militaire et sa vie économique: le "limes" de Tripolitaine', *Colloques Nationaux du CNRS 936: Armées et fiscalité dans le monde antique* (1977), 395–419.

¹⁰⁹ R. Rebuffat, 'La frontière romaine en Afrique, Tripolitaine et Tingitaine', *Ktema* 4 (1979), 225–47; idem, *CRAI* 1982, 188–99.

¹¹⁰ M. Euzennat, 'Quatre années de recherches sur la frontière romaine en Tunisie méridionale', *CRAI* 1972, 7–27; P. Troussset, *Recherches sur le "limes Tripolitanus" du chott el-Djerid à la frontière tuniso-libyenne* (1974).

¹¹¹ O. Brogan, 'Hadd Hajar, a "clausura" in the Tripolitanian Gebel Garian south of Asabaa', *Lib Stud* 11 (1980), 45–52; D. J. Mattingly and G. D. B. Jones, 'A new "clausura" in Western Tripolitania: Wadi Skiffa South', *Lib Stud* 17 (1986), 87–96; P. Troussset, 'Note sur un type d'ouvrage linéaire du "limes" d'Afrique', *CHAAV* 1 (1984), 383–98.

was not as demilitarized as has often been assumed.¹¹² There is also a useful summary of the evidence for the garrison at Carthage.¹¹³ The Algerian frontier of Numidia has been reassessed by Fentress and others, but the major advances have come from new or revised inscriptions and previously unpublished discoveries.¹¹⁴ The frontier situations in Mauretania Caesariensis were described with great clarity by Salama in 1977.¹¹⁵ Little has changed in the interim, though we now have a study of the auxiliary garrison.¹¹⁶ Of all the provinces, Mauretania Tingitana has perhaps witnessed the greatest volume of publication and fieldwork on its frontier works.¹¹⁷

The legionary fortress at Lambaesis and its associated works have been the subject of several studies.¹¹⁸ A number of colonial-period excavations of forts have been published, such as those at Remada in Tripolitania, Gemellae in Numidia, and Rapidum in Mauretania Caesariensis (correcting a much reproduced and incorrect plan of the fort and walled town).¹¹⁹ Two sites have seen major excavations and an impressive level of publication: Thamusida in Mauretania Tingitana¹²⁰ and Bu Njem in Tripolitania.¹²¹ These excavations have concerned both the defences and internal buildings of forts and also their relationship with the large civil settlements that grew around them. Bu Njem and its westerly neighbour at Gheriat el-Garbia, again the object of recent study, are particularly important, on account of their fine preservation, for general study of Roman stone towers and gates.¹²² Smaller installations of the frontier have not received much attention, though the well-preserved frontier landscapes of North Africa offer tremendous possibilities for the dissection of Roman *limes* organization.¹²³

The epigraphic finds from Bu Njem were particularly rich, with texts illuminating the chronology of the site's construction, the command structure of the garrison, its religious activities and calendar, and the mid-third-century overhaul of the frontier organization.¹²⁴ The most valuable information, however, was that provided by a remarkable series of 158 ostraca, mostly found in and around the *principia*, and comprising correspondence between the fort and outposts or neighbouring garrisons, day lists, strength reports, documents concerning military supply, the use of tribal spies etc.¹²⁵

The scale and extent of warfare on the African frontiers has been much debated, with the colonial vision of supposed 'natural' bellicosity of native Africans being reshaped as nationalist freedom fighting by many Maghrebi historians.¹²⁶ The evidence from the Mauretanian provinces in particular poses awkward questions about the security of Roman control. Clearly periodic reinforcements of the

¹¹² M. Khanoussi, *CRAI* 1991, 825–39; idem, *Af Rom* IX (1992), 319–28.

¹¹³ F. Berard, *Ant af* 27 (1991), 39–51; Y. Le Bohec, N. Duval and S. Lancel, 'La garnison de Carthage', *BCTH* ns 15–16B (1980), 33–89.

¹¹⁴ Fentress, *Numidia*; idem, 'Limes — Africa', in E. De Ruggiero (ed.), *Dizionario Epigrafico di Antichità Romana* IV fasc. 43.2–3 [1376] (1986), 21–47; Le Bohec, *IIIe Légion*; idem, 'Inscriptions inédites ou corrigées concernant l'armée romaine d'Afrique', *Ant af* 25 (1989), 191–226; idem, *Epigraphica* LXIII (1981), 127–60 (important study of military brickstamps).

¹¹⁵ P. Salama, 'Les déplacements successifs du limes en Maurétanie Césarienne', *Limes* 11 (1977), 577–95 (cf. also, R. I. Lawless, *Mauretania Caesariensis: An Archaeological and Geographical Survey* (unpub. PhD thesis, University of Durham, 1970)).

¹¹⁶ N. Leseddik, *Les troupes auxiliaires de l'armée romaine en Maurétanie Césarienne sous le haut empire* (1982); idem, 'Limes — Mauretania Caesariensis', in E. De Ruggiero (ed.), *Dizionario Epigrafico di Antichità Romana* IV fasc. 43.2–3 [1376] (1986), 47–67; see also P. Salama, *Ant af* 27 (1991), 93–105.

¹¹⁷ M. Euzennat, *Le limes de Tingitane I, la frontière méridionale* (1989), with much detail on the forts and other installations; M. Lenoir, 'Le camp de Tamuda et la chronologie de quelques camps du Maroc', *CHAAN* 4.2 (1990) 355–65; M. Malavolta, 'Limes — Mauretania Tingitana', in E. De Ruggiero (ed.), *Dizionario Epigrafico di Antichità Romana* IV fasc. 43.2–3 [1376] (1986), 67–76; R. Rebuffat, 'Les principia du camp romain de Lalla Djilaliya (Tabernae)', *BAM* 9 (1975), 359–76; idem, 'Au delà des camps romains', *BAM* 9 (1975), 377–408; idem, 'Le fossé romain de Sala', *BAM* 12 (1980), 237–58; idem, 'L'implantation romaine en Maurétanie Tingitane', *Af Rom* IV (1987), 31–78; M. Roxan, 'The auxilia of Mauretania Tingitana', *Latomus* 32 (1973), 838–55; idem, *Roman Military Diplomacy 1954–77* (1978).

¹¹⁸ M. Janon, 'Recherches à Lambèse', *Ant af* 7 (1973), 193–254; idem, 'Lambèse et l'occupation militaire de la

Numidie méridionale', *Limes* 10 (1977), 473–86; Le Bohec, *IIIe Légion*, 407–24; F. Rakob and S. Storz, 'Die Principia des römischen Legionslagers in Lambaesis', *MDAI* 81 (1974), 253–80.

¹¹⁹ M. Euzennat and P. Troussset, 'Le camp de Remada, fouilles inédites du commandant R. Donau', *Africa* v–vi (1978), 111–89; J.-P. Laporte, *Rapidum. Le camp de la cohorte des Sardes en Maurétanie Césarienne* (1989); P. Troussset, 'Le camp de Gemellae sur le "limes" de Numidie d'après les fouilles de Colonel Baradez (1947–50)', *Limes* 11 (1977), 559–76.

¹²⁰ J.-P. Callu, J.-P. Morel, R. Rebuffat and G. Hallier, *Thamusida* I (1965); R. Rebuffat and G. Hallier, *Thamusida* II (1970); R. Rebuffat, *Thamusida* III (1977).

¹²¹ R. Rebuffat (with contributions by others), 'Bu Njem 19xx', *LA* 3–4 (1967), 49–137; 6–7 (1970), 9–105, 107–65; 11–12 (1975), 189–242; 13–14 (1977) 37–77. Summarized by idem, 'Le camp romain de Gholaiia (Bu Njem)', *Lib Studs* 20 (1989), 155–67.

¹²² Mattingly, *Tripolitania*, 92–7; D. Welsby, 'The Roman fort at Gheriat el-Garbia', *Lib Studs* 14 (1983), 57–64; idem, 'The defences of the Roman forts at Bu Njem and Gheriat el-Garbia', in P. Bidwell, R. Miket and B. Ford (eds), *Portae cum turribus. Studies of Roman Fort Gates* (1989), 63–82; idem, 'Observations on the defences of Roman forts in North Africa', *Ant af* 26 (1990), 113–29.

¹²³ Mattingly, *Tripolitania*, 98–106; Troussset, *Recherches sur le limes Tripolitanus*, 130–42; idem, 'Tours de guet (watch-towers) et system de liaison optique sur le limes Tripolitanus', *Limes* 14 (1990), 249–77.

¹²⁴ R. Rebuffat, *LA* 9–10 (1973), 99–120; *ibid.*, 121–34; *ibid.*, 135–45; idem, 'Ara Cerei', *MEFR* 94–2 (1982), 911–19; idem, 'Le "limes" de Tripolitaine', in Buck and Mattingly, *Town and Country*, 127–41; idem, 'Les centurions de Gholaiia', *Af Rom* II (1985), 225–38.

¹²⁵ R. Marichal, 'Les ostraca de Bu Njem', *CRAI* 1979, 436–52; idem, *Les ostraca de Bu Njem*, *LA Supp.* VII (1992). Cf. J. N. Adams, *JRS* 84 (1994), 87–112.

¹²⁶ Above n. 53.

provincial garrison point to problems beyond mere local skirmishing.¹²⁷ On the other hand, the case for incessant warfare in Tingitana, based on the occurrence of regular peace treaties between Roman governors and tribal leaders of the Baquates, Bavares, and Macennites,¹²⁸ may well be an inversion of the true significance of these remarkable inscriptions. If they are accepted at face-value the altars can, in fact, be understood as the regular confirmation of long-standing treaty relations with successive tribal leaders of this tribal confederation.¹²⁹ None the less the geographical peculiarities of the Mauretanian provinces presented Rome with special problems of control and potential insecurity, notably in the mountain fastnesses of the Rif and Atlas interposed between the two provinces. There are lessons here for the rest of Africa and rather than adopting an attitude of despair and consigning the entire history of the region to the level of conflict, it is possible to recognize a more proactive face of imperialism in Africa, by which control over such areas was maintained for long periods of time by hegemonic links.¹³⁰

The later Roman frontier in Africa plainly came under some pressures, both from internal banditry and tribal unrest and external raiders (though this was clearly not a continuous threat and the evidence for raids is most compelling in Cyrenaica and Tripolitania). It is apparent that the disbandment of the IIIrd Legion between 238–254, necessitated some sort of tactical rethinking, though the suggestion that the mid-third century was a time of increasing military crisis in Africa has been overstated in the past.¹³¹ The more significant changes seem to have come in the fourth century, with the progressive build up of the new field army (*comitatenses*), with important consequences for the status and relations of the border troops (*limitanei*) and the frontier-zone people (*gentiles*).¹³² The cultural dynamics of the late Roman frontier zone are still very poorly understood, though socio-economic changes may have profoundly altered the political map. Here the lack of modern excavation at the frontier forts and settlements is particularly critical, denying us information on the changing nature of the late garrison and of their possible replacement by native levies from the *gentiles*. Once again, North Africa would seem to have enormous and unfulfilled potential for testing theories, in this case about the nature of frontier decline and collapse.¹³³

V. GOVERNMENT

The extensive literature on this topic produced since 1970 reflects the richness of the epigraphic record on governing structures, institutions, processes, and élites in Roman Africa.¹³⁴ The origins of the provinces of Africa Proconsularis, Numidia, Mauretania, and Tripolitania have been the subject of renewed investigation, as has the function and course of the Fossa Regia.¹³⁵ Attention has also been paid to the responsibilities of governors, other provincial administrators, and the role of the provincial

¹²⁷ M. Christol, *Ant af* 17 (1981), 133–41; M. Euzennat, *CRAI* 1984, 372–93; P.-A. Février, *ACHCM* 2 (1981), 23–40; E. Frezouls, *ACHCM* 2 (1981), 41–69; R. I. Lawless in M. Galley (ed.), *Actes du 2e Congrès Int. d'étude des cultures de la Méditerranée Occidentale* 11 (1978), 161–7; P. Leveau, *AESC* 41 (1986), 1345–58; Y. Moderan, *MEFR* 101 (1989), 821–72; P. Salama, *CHAAAN* 4.2 (1991), 455–70; M. Speidel, 'Africa and Rome: continuous resistance? A vexillation of the Norican Ala Augusta in Mauretania', *Proc. African Classical Association* 13 (1975), 36–8; idem, 'Legionary cohorts in Mauretania: the role of legionary cohorts in the structure of expeditionary armies', *ANRW* 11, Principat, 10.2 (1982), 850–60.

¹²⁸ See *inter alia*, Rachtel, op. cit. (n. 76); Sigman, op. cit. (n. 70).

¹²⁹ E. Frezouls, 'Rome et la Maurétanie Tingitane: un constat d'échec?', *Ant af* 16 (1980), 65–93; B. D. Shaw, 'Autonomy and tribute: mountain and plain in Mauretania Tingitana', *R.O.M.M.* 41–41 (1987), 66–89; though few would go as far as denying the existence of any incidents of warfare/revolt, as does J. E. H. Spaul, 'The Roman "frontier" in Morocco', *Bull Inst Arch London* 30 (1994), 105–19.

¹³⁰ D. J. Mattingly, 'War and peace in Roman Africa. Some observations and models of state/tribe interaction', in B. Ferguson and N. Whitehead (eds), *War in the Tribal Zone. Expanding States and Indigenous Warfare* (1992), 31–60.

¹³¹ Y. Le Bohec in *CHAAAN* 3 (1986), 377–90.

¹³² G. Donaldson, 'The "praesides provinciae Tripolitaniae" — civil administrators or military commanders', in Buck and Mattingly, *Town and Country*, 165–77; B.

Isaac, 'The meaning of "limes" and "limitanei" in ancient literary sources', *JRS* 78 (1988), 125–47; J. Matthews, 'Mauretania in Ammianus and the Notitia', in P. Bartholomew and R. Goodburn (eds), *Aspects of the Notitia Dignitatum* (1976), 157–86; idem, *The Roman Empire of Ammianus* (1989); Mattingly, *Tripolitania*, 186–201; A. Rushworth, *Soldiers and Tribesmen: The Roman Army and Tribal Society in Late Roman Africa* (unpub. PhD thesis, University of Newcastle upon Tyne, 1992, OUP forthcoming).

¹³³ Whittaker, op. cit. (n. 104), (1994), 192–278.

¹³⁴ See generally M. Benabou, *Résistance*; M. Le Glay, 'L'épigraphie juridique d'Afrique romaine', in *Epigraphia juridica romana. Actas del colloquio internacional AIEGL* (1989), 189–94; see also nn. 136, 139, 143.

¹³⁵ G. Di Vita-Evrard, 'Regio Tripolitana — a reappraisal', in Buck and Mattingly, *Town and Country*, 143–63; idem, 'L. Volusius Bassus Cerealis, légat du Proconsul d'Afrique T. Claudius Aurelius Aristobulus, et la création de la province de Tripolitaine', *Af Rom* 11 (1985), 149–77; idem, 'La "Fossa Regia" et les diocèses d'Afrique proconsulaire', *Af Rom* 111 (1986), 31–58; idem, 'Une inscription errante et l'extra-territorialité de Theveste au IVe siècle', *Af Rom* vi (1988), 293–320; idem, 'IRT 520, le proconsulat de Cn Calpurnius Piso et l'insertion de Leptis Magna dans la provincia Africa', *Afrique Occ Romaine*, 315–31; D. Fishwick, 'The annexation of Mauretania', *Historia* 20 (1970), 467–87; idem, 'On the origins of Africa Proconsularis I, the amalgamation of Africa Vetus and Africa Nova', *Ant af* 29 (1993), 53–62; idem, *Ant af* 30 (1994), 57–80; M. Speidel, 'The singulares of Africa and the establishment of Numidia as a province', *Historia* 22 (1973), 125–7.

assemblies.¹³⁶ Roman policy towards and supervision of African tribes has been further clarified by new epigraphic information and studies of tribal prefects.¹³⁷

Sicca Veneria and Lepcis Magna have been added to the list of cities with large territorial circumscriptions, and other inscriptions have permitted the identification of previously unknown or unlocated towns.¹³⁸ The municipal history of African towns has been elucidated in great detail; the studies of Gascou and Lepelley topping the list.¹³⁹ The latter have both demonstrated the enormous impact that Rome had on the political culture of towns. Attempts at reconstructing programmes and policies of specific emperors toward cities, on the other hand, have proved more difficult to sustain.¹⁴⁰

While many towns in Proconsularis retained Punic customs and municipal institutions well into the Empire,¹⁴¹ the search for accommodation *vis-à-vis* Roman rule seems to have led one town to adopt Roman law well in advance of its achievement of colonial status.¹⁴² The *curatores* are now understood as a new tier in provincial administration, fulfilling some of the financial duties of the governor and exerting a more positive influence on urban development than previously thought.¹⁴³ Prosopographical studies have revealed the extent to which African towns produced Romanized élites,¹⁴⁴ and over time equestrian civil servants and senators.¹⁴⁵ The role of patronage in Africa has also received attention.¹⁴⁶

The contribution of archaeology to our knowledge of Roman government ought to be more than as a servant to epigraphic studies. Greater emphasis could fruitfully be placed on archaeological investigation

¹³⁶ A. Beschaouch, 'Une hypothèse sur les légats du proconsul d'Afrique sous le Haut-Empire', *Africa* vii-viii (1982), 117-26; A. Chastagnol, *L'Italie et l'Afrique du Bas Empire. Etudes administratives et prosopographiques. Scripta varia* (1987); M. Christol and A. Magioncalda, *Studi sui procuratori delle due Mauretaniae* (1989); M. Dondin-Payre, 'L'intervention du proconsul d'Afrique dans la vie des cités', in *Afrique Occ Romain*, 333-49; W. Eck, 'Terminationem als Administratives Problem: das Beispiel der nordafrikanischen Provinzen', *Af Rom* vii (1990), 933-41; J. Kolendo, 'Activité des proconsuls d'Afrique d'après les inscriptions', *Epig. et Ordine Senatorio* i (1983), 351-67; T. Kotula, *Les assemblées provinciales dans l'Afrique romaine sous le Bas-Empire* (French resumé only, 1965); C. Lepelley, 'Les sièges des conventus judiciaires de l'Afrique proconsulaire', *BCTH* 23 (1994), 145-57; W. Seston and M. Euzennat, 'Un dossier de la chancellerie romaine: la "Tabula Banasitana". Étude de diplomatique', *CRAI* 1971, 468-90; J. E. H. Spaul, 'The governors of Tingitana', *Ant af* 30 (1994), 235-60; B. E. Thomasson, *Laterculi Praesidium* 1/11 (1972/1984); idem, 'Zur Verwaltungsgeschichte der römischen Provinzen Nordafrikas', *ANRW* II, Principat 10.2 (1982), 3-61; P. I. Wilkins, 'Legates of Numidia as municipal patrons', *Chiron* 23 (1993), 189-206.

¹³⁷ Z. B. Ben Abdallah, 'Du côté d'Ammaedara (Haidra), Musulamii et Musunii Regiani', *Ant af* 28 (1992), 139-45; J. Desanges, 'Un princeps gentis à Setif', *BCTH* ns 12-14B (1978), 123-9; E. W. B. Fentress, 'Tribe and faction: the case of the Gaetuli', *MEFRA* 94 (1982), 325-34; Février, *Approches* II, 75-93, 122-30; M. Le Glay, 'Les Flaviens et l'Afrique', *MEFR* 80 (1968), 201-46; C. Lepelley, 'La préfecture de tribu dans l'Afrique du Bas-Empire', *Mélanges W. Seston* (1974), 285-95; Mattingly, op. cit. (n. 130), 31-60. See also M. Christol, 'Une correspondance impériale; témoignium et suffragatio dans la Table de Banasa', *Rev Hist Droit fr. et étr.* 66 (1988), 31-42.

¹³⁸ A. Beschaouch, 'Le territoire de Sicca Veneria (El Kef), nouvelle Circa, en Afrique Proconsulaire (Tunisie)', *CRAI* 1981, 105-22; G. Di-Vita-Evrard, 'Quatre inscriptions du Djebel Tarhuna: le territoire de Lepcis Magna', *QAL* 10 (1979), 67-98. The list of cities with large territories includes Carthage, Circa, Hadrumetum, Thelepte. New towns identified, see, *inter alia*, A. Beschaouch, 'Découverte de trois cités en Afrique Proconsulaire', *CRAI* 1974, 219-51; idem, 'Découverte épigraphique dans le pays de Carthage', *CRAI* 1975, 103-11; idem, 'Sur la localisation d'Abitina', *CRAI* 1976, 255-66. NB many similar references in the reports of 'Seances' in *BCTH*.

¹³⁹ J. Gascou, *La politique municipale de l'Empire romain en Afrique Proconsulaire de Trajan à Septime Sévère* (1972); idem, 'La politique municipale de Rome en Afrique du Nord (Parts 1 and 2)', *ANRW* II, Principat 10.2 (1982), 136-320; C. Lepelley, *Les cités I*.

¹⁴⁰ Le Glay, op. cit. (n. 137), 201-46; R. Rebuffat, 'Maximien en Afrique', *Klio* 74 (1992), 371-79; J. Schwartz, *L. Domitius Domitianus* (1975); G. Waldherr, *Kaiser Baupolitik in Nordafrika* (1989).

¹⁴¹ S. Aounablah, 'Une nouvelle inscription de Vina, Cap Bon (Tunisie)', *Af Rom* ix (1992), 299-318; Z. B. Ben Abdallah, 'Une cite sufétale d'Afrique proconsulaire: Limisa', *MEFRA* 102.2 (1990), 509-15; J. Gascou, 'Les curies africaines, origine punique ou italienne', *Ant af* 10 (1976), 33-48; G.-Ch. Picard, 'Les cités sufétales dans l'Afrique romaine', *Atti del Conv. Int. I diritti locali nelle provincie romane* (1974), 123-33.

¹⁴² D. Lengrand, 'L'inscription d'Henchrir Snobbeur, témoin de la romanisation d'une cité pérégrine d'Afrique Proconsulaire au II^e siècle', *Ant af* 29 (1993), 127-35. The role of wealthy imperial freedmen in the Romanization of towns is effectively drawn out by J. Gascou, 'La carrière de Marius Caelius Phileros', *Ant af* 20 (1984), 105-20; M. Le Glay, *MEFRA* 98 (1986), 643-64.

¹⁴³ F. Jacques, *La privilège de liberté. Politique impériale et autonomie municipale dans les cités de l'occident romain (161-244)* (1984); idem, 'Les curateurs des cités africaines au III^e siècle', *ANRW* II, Principat 10.2 (1982), 62-135.

¹⁴⁴ M. Torelli, *QAL* 6 (1971), 105-11. Investigations of the flaminiate, both priests and priestesses, have drawn attention to its importance as an indicator of municipal families' wealth, status, and political loyalty to Rome, H. Pavis-D'Ecurac, 'Flaminat et société dans la colonie de Timgad', *Ant af* 16 (1980), 183-200.

¹⁴⁵ M. Corbier in *Epig. et Ordine Senatorio* i (1982), 685-754; G. Di Vita-Evrard, *ibid.*, 453-65; M. Jarrett, 'An album of the equestrians from North Africa in the emperor's service', *Epig Stud* 12 (1972), 146-292; A. H. M. Jones *et al.*, *Prosopography of the Later Roman Empire*; M. Le Glay in *Epig. et Ordine Senatorio* II (1982), 755-81; C. Lepelley, 'Une emigration de l'ambition: carrières d'africains hors d'Afrique à l'époque romaine tardive', *ACHCM* 5 (1992), 185-210; H. G. Pflaum, *Les carrières procuratoriennes équestres sous le Haut empire romain, Supplement* (1982).

¹⁴⁶ R. P. Saller, *Personal Patronage under the Early Empire* (1982).

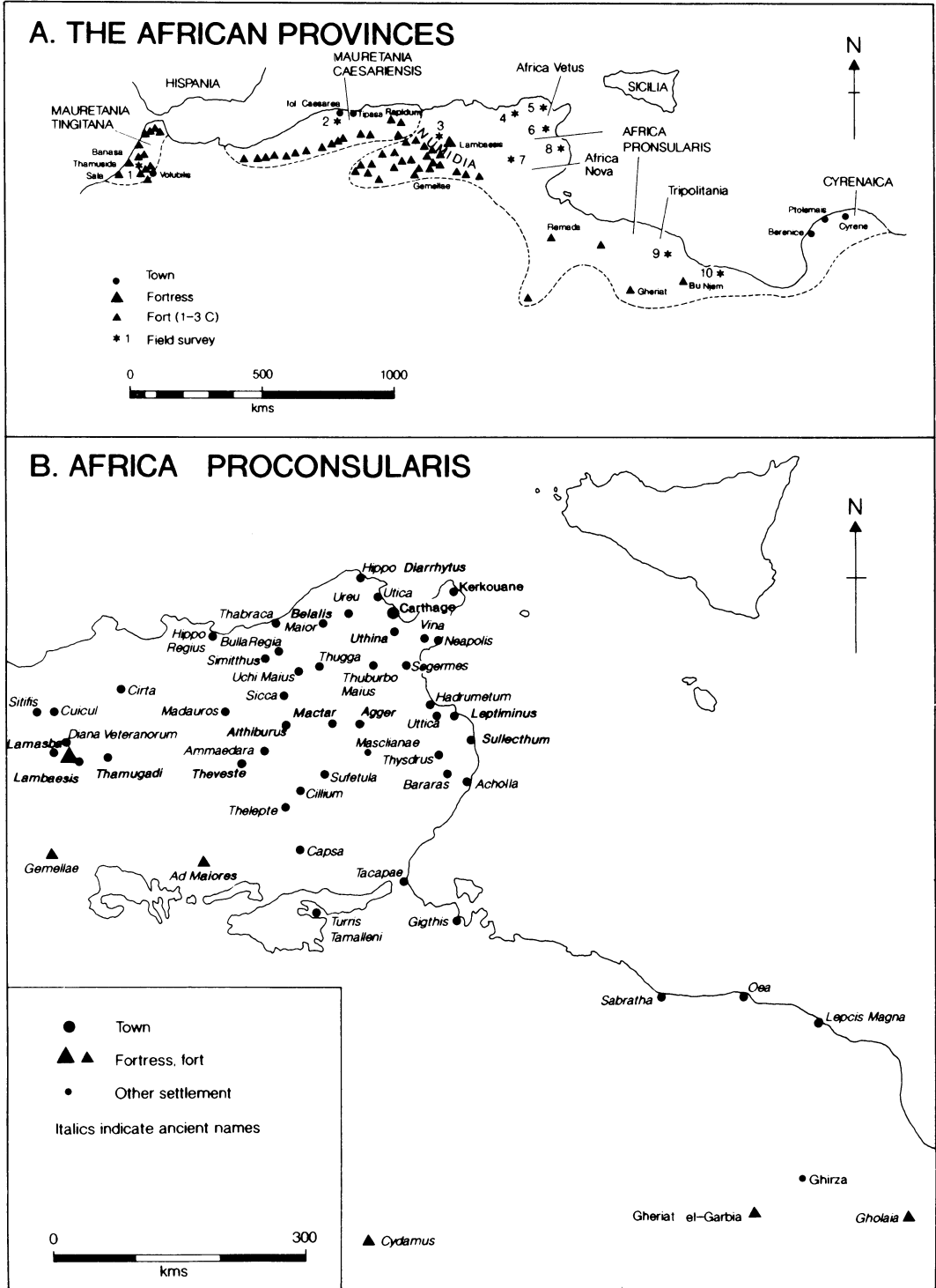


FIG. 1. A. MAP SHOWING THE AFRICAN PROVINCES, PRINCIPAL ROMAN FORTS, LOCATION OF SELECTED SITES IN MAURETANIA TINGITANA, MAURETANIA CAESARIENSIS, AND CYRENAICA, AND MAIN ARCHAEOLOGICAL SURVEYS MENTIONED IN THE TEXT (1 = SEBOU AREA, 2 = CAESAREA, 3 = DIANA VETERANORUM, 4 = WORK OF PEYRAS; 5 = WORK OF GREENE NEAR CARTHAGE, 6 = SEGERMES, 7 = KASSERINE, 8 = LEPTIMINUS, 9 = ULVS (ANGLO-LIBYAN), 10 = ULVS (FRANCO-LIBYAN)).

B. PRINCIPAL SITES OF AFRICA PROCONSULARIS AND NUMIDIA REFERRED TO IN THE TEXT.

of the well-preserved Roman centuriation patterns¹⁴⁷ or of the Fossa Regia.¹⁴⁸ The methods of field survey could also be effectively employed in defining and clarifying tribal and urban territories.

VI. ROADS AND COMMUNICATIONS

Studies of the Roman road system in North Africa have depended heavily on the discovery of milestones, more so than on the actual traces of the roads themselves.¹⁴⁹ Accordingly we lack knowledge of the courses and engineering of even the most major roads, to say nothing of secondary routes, tracks, and bridges. There have been, none the less, some recent efforts to locate and record the remnants of key roads including the great Carthage-Ammaedara road,¹⁵⁰ trans-Saharan and trans-Maghreb routes,¹⁵¹ ancient seasonal tracks through the chotts of southern Tunisia,¹⁵² and probable Roman period caravan routes between the Egyptian and Libyan oases. Studies of the milestones themselves have advanced beyond the traditional interest in imperial chronology and titulature which they have naturally inspired.¹⁵³ Salama,¹⁵⁴ in particular, has shown through a study of the large number of milestones dated to the late third and fourth centuries that the road system in Africa Proconsularis was substantially repaired and provided with local collection centres and checkpoints to insure the efficient movement of goods for the *annona*. Problems of itineraries and the location of sites mentioned in them have also continued to generate interest, though we still lack archaeological studies of roadside settlements.¹⁵⁵

VII. TOWNS

The work on Roman Africa over the last twenty five years has been dominated by research on its towns (Fig. 1), despite recent progress in the investigation of rural settlement (see below). The reasons for this are partly pragmatic: the pace of modern development since independence has posed a serious threat to many urban sites requiring considerable investment by the antiquities services in rescue archaeology.¹⁵⁶ Economic considerations such as the need to develop and expand tourism, and political interest in demonstrating the importance of past monuments to the national patrimony also contribute to the privileging of urban over rural sites in national excavation agendas and bilateral projects. The pre-eminence of the city in Romano-African studies is ultimately a consequence of the profound objectification of the town in classical studies in general and in the historiography of Roman Africa from its earliest days, a phenomenon sustained by the mainly urban epigraphic record.¹⁵⁷ The irony here is that, despite its past accomplishments and enormous potential, urban archaeology in North Africa

¹⁴⁷ O. A. W. Dilke, *The Roman Land Surveyors: An Introduction to the Agrimensores* (1971), 151–8; F. Favory, 'Propositions pour une modélisation des cadastres ruraux antiques', in M. Clavel-Leveque (ed.), *Cadastres et espace ruraux: approches et réalités antique* (1983), 51–135 (El Jem, 131–5); J. Peyras, 'Paysages agraires et centuriations dans le bassin de l'oued Tine', *Ant af* 19 (1983), 209–53; idem, 'Les campagnes de l'Afrique du nord antique d'après les anciens Gromatici', *CHAAN* 3 (1986), 257–72; J. Soyer, 'Les cadastres anciens de la région de Saint-Donat (Algérie)', *Ant af* 7 (1973), 275–92; idem, 'Les centuriations romaines en Algérie orientale', *Ant af* 10 (1976) 107–80; idem, 'Centuriations et cadastres antiques: études réalisées en France et en Afrique du Nord (état au 31 dec 1980)', in Clavel-Leveque, op. cit., 333–9 (North Africa, 336–9); P. Troussset, 'Nouvelles observations sur la centuriation romaine à l'est d'El Jem', *Ant af* 11 (1977), 175–207; idem, 'Les bornes du Bled Segui. Nouveaux aperçus sur la centuriation romaine du sud Tunisie', *Ant af* 12 (1978), 125–78. Cf. also P. N. Doukellis and L. G. Mendoni (eds), *Structures rurales et sociétés antiques* (1994).

¹⁴⁸ N. Ferchiou, *CHAAN* 3 (1986), 351–65.

¹⁴⁹ R. G. Goodchild, 'Roman roads in Libya and their milestones', in Gadallah, *Libya in Hist.*, 155–72. Traces of roads were frequently mentioned in the reports of early explorers and antiquarians, as well in the notebooks and maps prepared by the 'brigades topographiques'. However, this information has rarely found its way on to published maps of Roman Africa.

¹⁵⁰ J. Barbery, 'Précisions sur quelques itinéraires du réseau routier romain en Tunisie centrale et au Cap Bon',

CT 33 [131–132] (1985), 5–48; J. Barbery and J.-P. Delhoume, 'La voie romaine de piedmont Sufetula-Mascliana (Djebel Mrhila, Tunisie centrale)', *Ant af* 18 (1982), 27–43; A. M'Charek, 'Un itinéraire inédit dans la région de Maktar: tronçon de la voie Augustéenne Carthage-Ammaedara', *BCTH* ns 22 Afrique du Nord (1987–9) [1992], 153–67.

¹⁵¹ M. F. Squarciapino, *QAL* 11 (1980), 113–18. See also B. D. Shaw, *Bull de l'IFAN B* 41.4 (1979), 663–72: ancient seasonal tracks through the chotts of southern Tunisia.

¹⁵² P. Troussset, *Ant af* 18 (1982), 45–59.

¹⁵³ J. Marcillet-Jaubert, 'Bornes milliaires de Numidie', *Ant af* 16 (1980), 161–84.

¹⁵⁴ P. Salama, *Bornes milliaires d'Afrique proconsulaire. Un panorama historique du Bas-Empire romain* (1987). See also, idem, 'Les voies romaines de Sitifs à Igilgili: un exemple de politique routière approfondie', *Ant af* 16 (1980), 101–33; idem, 'L'apport des inscriptions routières à l'histoire politique de l'Afrique romaine', *Af Rom* 111 (1986), 219–31.

¹⁵⁵ J. Peyras and P. Troussset, 'Le "lac Tritonis" et les noms antiques du Chott el Jerid', *Ant af* 24 (1988), 149–204; V. Purcaro, 'Le rotte antiche tra la Grecia e la Cirenaica e gli itinerari marittimi e terrestri lungo le coste Cirenaiche e della Grande Sirte', *QAL* 8 (1976), 285–352.

¹⁵⁶ The UNESCO Save Carthage Campaign is the most noteworthy example of this policy.

¹⁵⁷ *Af Rom* x (1994), treated urbanization and urban studies as its major themes and contains many papers relevant to this section.

remains, generally speaking, conservative in both theoretical conceptualization and practice. There are many causes for this, some quite understandable, others less so. In our view, this is regrettable as urban archaeology in North Africa should be in the forefront of Old World archaeological research.

Carthage

These comments do not negate the achievements of African urban archaeology since 1970, the most notable advances being those at Carthage. The excavations carried out under the auspices of the UNESCO Save Carthage Campaign have within a relatively short period revolutionized our knowledge of one of the leading cities of the ancient Mediterranean and provided increasingly effective protection against development for the archaeology (Fig. 2).¹⁵⁸ There is now a plan in place for the creation of a massive archaeological park covering the entire zone.¹⁵⁹ The excavation of Punic period structures in particular has exposed a city whose evolution mirrored in many respects that of its great rival, Republican Rome.¹⁶⁰ Excavations conducted by American, British, French, and German teams have shown that the development of Punic Carthage can be subdivided into roughly three phases: an early or archaic period (ninth–sixth century B.C.) associated with the foundation and development of the settlement as a Phoenician colony, a middle period (fifth–third century), and a late (or Hellenistic) period (third century to 146 B.C.).¹⁶¹

The structures of the acropolis on the top of the Byrsa hill were all removed by Roman levelling, so our knowledge of the city throughout the Punic period is largely restricted to the modest mud-brick dwellings and artisanal quarters along the coast east and south of the Byrsa, the Hill of Juno, and heights of Douimes and Dermech.¹⁶² This lower city, which evidently did not extend to the ancient shore line or as far south as the site of the later harbours, was perhaps as large as 55 ha in extent by the later sixth century. The eastern limits of the settlement were demarcated as early as the seventh century by a series of cemeteries extending from the south slopes of the Byrsa round to Dermech.¹⁶³ Excavations in the Tophet have confirmed Harden's chronology for this cemetery/cult centre, and have shown that animal sacrifice was not, as is often asserted, gradually substituted for infant offerings. Indeed, there seems little reason to doubt that the burials in the 'enceinte de Tanit' constitute evidence of ritual infanticide practised throughout the Punic period as a 'mechanism of demographic regulation less hazardous than abortion'.¹⁶⁴

¹⁵⁸ Summaries of the work of the various missions and other projects is conveniently found in A. Ennabli, *Pour sauver Carthage. Exploration et conservation de la cité punique, romain et byzantine* (1992). See also J. H. Humphrey, 'Bibliography of the international campaign to save Carthage', in J. Pedley, *New Light on Ancient Carthage* (1980), 123–52. Some of the projects have set new standards for archaeological publication: J. H. Humphrey (ed.), *Excavations at Carthage 1975 conducted by the University of Michigan I* [= *Carthage I*] (1976), II [= *Carthage 2*] (1978); idem, *Excavations at Carthage 1976 conducted by the University of Michigan III* [= *Carthage 3*] (1977), IV [= *Carthage 4*] (1978); idem, *Excavations at Carthage 1977 conducted by the University of Michigan V* [= *Carthage 5*] (1980), VI [= *Carthage 6*] (1981); idem, *Excavations at Carthage 1978 conducted by the University of Michigan VII* [= *Carthage 7*] (1982); H. R. Hurst and S. P. Roskams, *Excavations at Carthage: the British Mission. The Avenue du Président Habib Bourgiba, Salammbô, 1.1. The Site and Finds other than Pottery* (1984); H. R. Hurst, *Excavations at Carthage. The British Mission. Volume II, 1. The Circular Harbour, North Side. The Site and Finds other than Pottery* (1994); M. G. Fulford and D. P. S. Peacock, *Excavations at Carthage: the British Mission. The Avenue du Président Habib Bourgiba, Salammbô, 1.2. The Pottery and other Ceramic Objects from the Site* (1984); idem, *Excavations at Carthage. The British Mission. Volume II, 2. The Circular Harbour, North Side. The Pottery* (1994); F. Rakob, *Karthago I* (1991); P. Senay (ed.), *Carthage I–Carthage V* (CEA VI (1976); IX (1978); X (1979); XII (1980); XIII (1981)) on the 'monument circulaire'.

¹⁵⁹ A. Ennabli in *BTINP* 6 (1991), 25–43.

¹⁶⁰ The excavations have stimulated some new historical studies of Punic Carthage: M. Fantar, 'Que savons nous

des institutions municipales dans le monde de Carthage', *Reppal* 4 (1988), 205–14; idem, *Carthage. Approche d'une civilisation*, 2 vols (1993); A. Ferjaoui, *Recherches sur les relations entre l'orient phénicien et Carthage* (1993); S. Moscati, *Carthage. Art et civilisation* (1983); S. E. Tlatli, *La Carthage Punique* (1978). We still lack, however, a new historical synthesis of Roman Carthage.

¹⁶¹ Ennabli, op. cit. (n. 158), 29–94 for a succinct summary of the major Punic excavations; S. Lancel (ed.), *Byrsa I, Rapports préliminaires sur les fouilles 1974–76* (1978) = *Byrsa I*; idem, *Byrsa II, Rapports préliminaires sur les fouilles 1977–78*, (1982) = *Byrsa II*; idem, *La colline de Byrsa à l'époque punique* (1983); idem, 'Problèmes d'urbanisme de la Carthage punique à la lumière des fouilles anciennes et récentes', *CHAAN* 4.1 (1990), 9–30; idem, *Carthage* (1992 French, 1994 English); S. Lancel et al., 'Town planning and domestic architecture of the early second century BC on the Byrsa, Carthage', in Pedley, op. cit. (n. 158), 13–27; E. Lipinski (ed.), *Studia Phoenicia VI, Carthago. Acta Colloqui Bruxellensis* (1988); H. G. Niemeyer, 'A la recherche de la Carthage archaïque: premiers résultats des fouilles de l'université de Hambourg en 1986 et 1987', *CHAAN* 4.1 (1990), 45–52; F. Rakob, 'La Carthage archaïque', *CHAAN* 4.1 (1990), 31–43; idem, *Karthago I. Die Deutschen Ausgrabungen in Karthago*, 2 vols (1991); L. Stager, 'The rise of child sacrifice at Carthage', in Pedley, op. cit. (n. 158), 1–11.

¹⁶² H. G. Niemeyer in Ennabli, op. cit. (n. 158), 38–41.

¹⁶³ H. Benichou-Safar, *Les tombes puniques de Carthage. Topographie, structures, inscriptions et rites funéraires* (1982).

¹⁶⁴ S. Brown, *Late Carthaginian Child Sacrifice and Sacrificial Monuments* (1991); H. Hurst, *JRA* 7 (1994), 325–8; Stager, op. cit. (n. 161); idem in Ennabli, op. cit. (n. 158), 72–8.

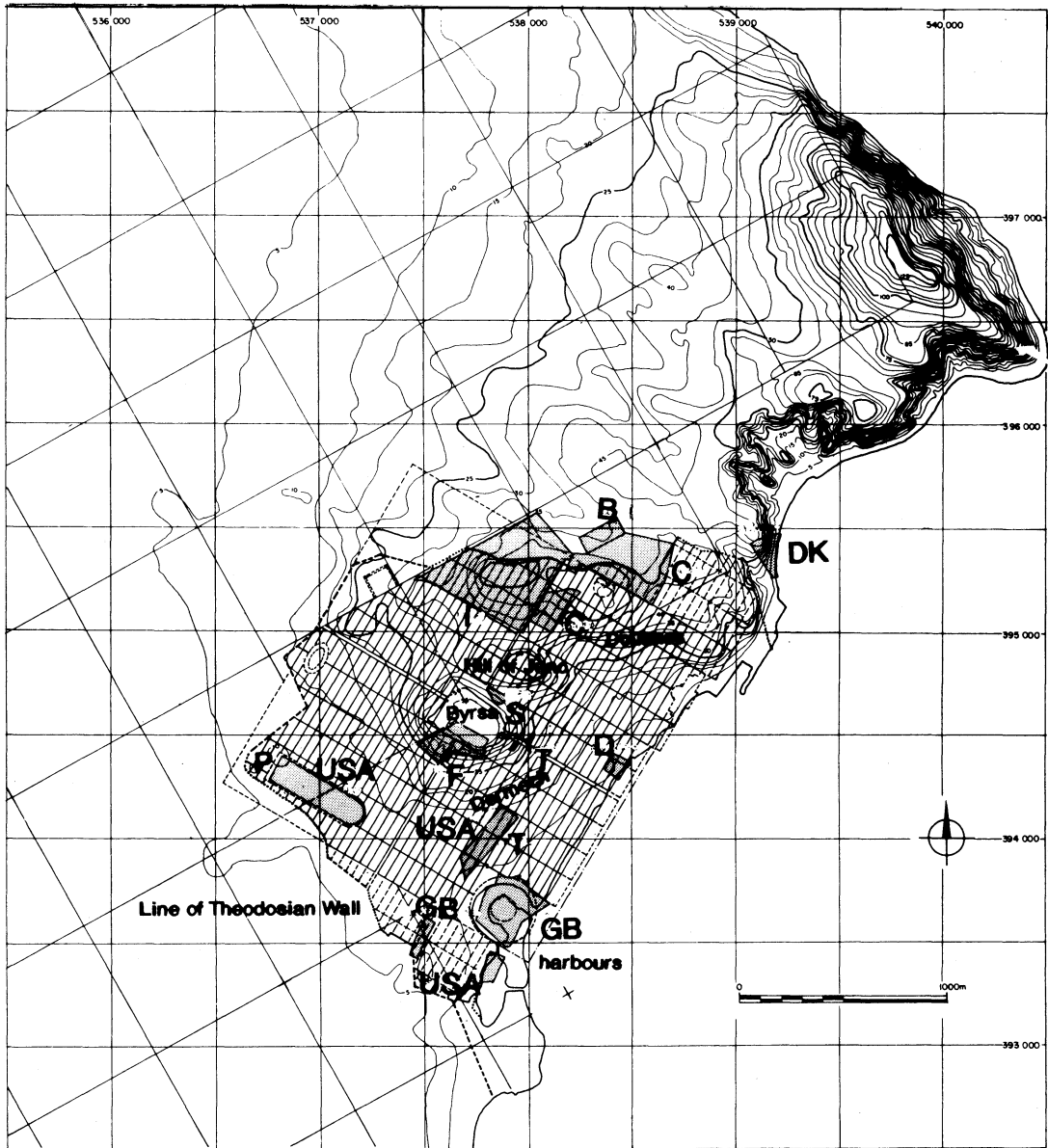


FIG. 2. PLAN OF ANCIENT CARTHAGE SHOWING GRIDDED LAYOUT OF THE ROMAN CITY AND LOCATION OF PRINCIPAL EXCAVATIONS OF INTERNATIONAL TEAMS: B = BULGARIA; C = CANADA; D = GERMANY; DK = DENMARK; F = FRANCE; GB = BRITAIN; I = ITALY; P = POLAND; T = TUNISIA; USA = AMERICA (ADAPTED FROM A. ENNABLI, *POUR SAUVER CARTHAGE*, WITH PERMISSION).

The middle period at Carthage (fifth–third century), is less well documented archaeologically. The German excavations along the coast have identified remnants and robber-trenches of an impressive city wall dating to the later fifth century.¹⁶⁵ Urbanization of the area between the wall and the lower slopes of the Byrsa in the same period is also indicated by the construction of housing units similar to insula blocks here and on the site of the earlier mud-brick dwellings in the Dermech area. These new dwellings show evidence of elaborate decoration, stuccoed walls, and terrazzo floors made of marble tesserae and white and polychrome mosaics.¹⁶⁶ Our knowledge of the area from Byrsa and Dermech southward in this period is very scanty. It has been plausibly suggested that the original primary harbour of Carthage was located in a now silted up area at the north-eastern edge of the Lake of Tunis near to the foot of the Byrsa.¹⁶⁷ American and British missions working in the rectangular and circular harbours respectively have recorded evidence of a north-south shipping channel some 15–20 m wide and 1–2 m deep constructed prior to the second half of the fourth century B.C.¹⁶⁸

The period between the late third century and 146 B.C. appears to have been one of remarkable development. To this period belongs the initial urbanization of the slopes of the Byrsa hill with the construction of impressive insula-like housing blocks on its south side,¹⁶⁹ the erection of a large temple in the agora in the lower city,¹⁷⁰ and perhaps most spectacularly the rebuilding of the walls and construction of the two fortified harbours.¹⁷¹ The latter events have now been plausibly linked on both archaeological and historical grounds to the years leading up to the Third Punic War.¹⁷²

The finds of the Roman period at Carthage made by the UNESCO excavations, while perhaps not as spectacular from the perspective of event-based history, have exhibited the scale and intended showcase quality of the new colony and African capital founded by Augustus on the rubble and backfill of the Punic city and magnified over a period of three centuries.¹⁷³ The excavations have also exposed a city whose economic importance to Rome, Africa, and the Empire from the second century onwards was unparalleled. Lastly, we can now trace with more clarity the complex evolution of Carthage in Late Antiquity (see below).

Virtually all of the *intra muros* missions at Carthage have provided new details or modifications to Saumagne's reconstruction of the urban plan of the Augustan colony (Fig. 2).¹⁷⁴ Among the more significant are indications that the *insulae* closest to the coast followed the orientation of the Punic city and evidence of an extension of the grid and continued growth at the northern end of the city in the third and fourth centuries.¹⁷⁵ Study of the late republican/early imperial Italian amphorae found at Carthage, particularly those found in the 'wall of amphorae' on the Byrsa, suggests that the preparation of the site of the colony began around 15 B.C.¹⁷⁶ Yet, many of the streets went without paving and drainage channels until the second century A.D.¹⁷⁷

French clearance and excavation of the Byrsa has revealed some truly astonishing changes to the configuration of the Punic citadel. The top of the hill was sliced off and massive dumps of material spread over the Punic quarters on the flanks of the hill to create a huge flat terrace, on top of which was constructed an enormous forum 336 by 223 m surrounded by a portico and dominated by a basilica at its east end.¹⁷⁸ While the extant remains belong mainly to the third quarter of the second century, the complex is clearly part of the original Augustan plan and is a vivid indication of the status and prestige

¹⁶⁵ F. Rakob, *Mitteilungen* 91 (1984), 1–22; idem, *Karthago* 1; H. Hurst, R. Paskoff and F. Rakob, *CRAS* 300.13 (1985), 613–18.

¹⁶⁶ F. Rakob, *CHAAN* 4.1 (1990), 31–43; idem in Ennabli, op. cit. (n. 158), 29–37.

¹⁶⁷ H. R. Hurst, *Excavations at Carthage. II.1*. We wish to thank Henry Hurst for making the monograph available to us prior to publication.

¹⁶⁸ For an updated discussion and bibliography on the channel see now Hurst, op. cit. (n. 167), 44–7.

¹⁶⁹ S. Lancel and J.-P. Morel in Ennabli, op. cit. (n. 158), 43–68.

¹⁷⁰ F. Rakob, *MDAI* 98 (1991), 33–80.

¹⁷¹ Hurst, op. cit. (n. 167), 39–48, the Circular Harbour is estimated to have had docks for up to 190 ships, a bit below the figure of Appian (*Libyca* xcvi), but close enough to be compensated for by other factors. For earlier discussions of the site see H. Hurst, *Ant J* 55 (1975), 11–40; 56 (1976), 177–97; 57 (1977), 232–61; 59 (1980), 19–49; idem, *Studi Fenici* 2 (1985), 603–10; idem in Ennabli, op. cit. (n. 158), 80–5.

¹⁷² This is an extraordinary observation, for if upheld by future work, it suggests that Rome condoned either through design or disinterest the rearmament and military renewal of her old enemy. The completion of such a scheme would undoubtedly have provided the Senate, Cato's rhetoric in support, with the necessary ammunition to justify a war of extermination against its African nemesis.

¹⁷³ The massive and widespread layer of Punic destruction debris (or 'PDD' as it has come to be euphemistically referred to) testifies to both the thoroughness of the city's destruction at the hands of the Romans and the subsequent levelling in the Augustan period. See also P. Gros, 'Le premier urbanisme de la colonia Julia Carthago. Mythes et réalités d'une fondation césaro-augustéenne', *Afrique Occ Romain* (1990), 547–73.

¹⁷⁴ The discussion that follows focuses on Roman remains, the work on Carthage in the Vandal and Byzantine periods is covered in the section, 'Late Antique Africa'.

¹⁷⁵ L. Anselmino in Ennabli, op. cit. (n. 158), 125–9; A. Carandini *et al.*, 'Gli scavi italiani a Cartagine: rapporto preliminare delle campagne 1973–1977', *QAL* 13 (1983), 7–61; C. M. Wells in Ennabli, op. cit., 115–23; M. Garrison and S. Stevens in Ennabli, op. cit., 131–4.

¹⁷⁶ S. Martin-Kilcher, 'Amphoren der Späten Republik und der Frühen Kaiserzeit in Karthago. Zu den Lebensmittelimporten der Colonia Iulia Concordia', *MDAI* 100 (1993), 269–320.

¹⁷⁷ F. Rakob in Ennabli, op. cit. (n. 158), 29–37.

¹⁷⁸ J. Deneauve, *CHAAN* 4.1 (1990), 143–55; P. Gros (ed.), *Byrsa III, Rapport sur les campagnes de fouille de 1977 à 1980. La basilique orientale et ses abords* (1987); idem, in Ennabli, op. cit. (n. 158), 99.

attached to the new capital of Roman Africa. Beyond the south end of the forum lay another large paved area with porticoes (12,000 sq m) with a central temple and a large quadrangular structure at its west end, closing off the *cardo maximus*. Gros has tentatively linked this ensemble to the imperial cult. Yet another terrace was constructed to the south of this, with a temple of the Antonine period at its west end. A lower civil forum and judicial basilica were also erected on the site of the Punic agora between *Cardines XII* and *XIII*E and the *Decumanus Maximus* and *Decumanus IS*.¹⁷⁹

In contrast to the massive transformation affected on the Byrsa, the Romans maintained the two late Punic harbours. Accretions were made to the quay of the rectangular harbour in the Augustan period and in the early second century the harbour was given a hexagonal shape resembling the Trajanic internal port of Ostia, but no major change to its topography was affected until the Byzantine period. The only change to the Circular Harbour prior to the second century, apart from robbing of the ship sheds and some dredging activity, was the construction of the so-called Temple I on the Ilot de l'Amiraute in the late first century. In the late second century the island in the Circular Harbour was refurbished. A second temple (Temple 2) was constructed in the centre of the isle within a colonnaded enclosure covering the whole of the island. The quaysides were rebuilt, the bridge to the island enlarged, and a four-way arch constructed which opened onto the quayside and enclosure. This programme is associated by Hurst with Commodus' reorganizing of the African *annona* fleet in 186, an hypothesis strengthened by fourth-century A.D. ostraca found in the excavation of the island earlier this century referring to an *annona* official (*mensor olei in foro Karthag.*).¹⁸⁰ The north side of the harbour, an area of modest structures devoted to craft activities throughout the Roman period, was perhaps part of the imperial *gynaecium* of Carthage, possibly as early as the late second century.¹⁸¹

It is increasingly apparent that many of the major monuments of the Roman city, most notably the theatre,¹⁸² Antonine baths, circus,¹⁸³ odeon,¹⁸⁴ aqueduct, and cisterns of La Malga,¹⁸⁵ were products of the second century, even if the placement (or antecedents) of some may have already featured in the Augustan urban plan. Still other structures, such as the enigmatic 'monument circulaire', were built in the fourth century.

Programmed and rescue excavations employing up-to-date field methods have provided new evidence on artisanal activity and on both high and lower status habitation at Carthage,¹⁸⁶ including indications that domestic building activity was an ever-expanding process within the city until halted by the construction of the Theodosian Wall in the early fifth century.¹⁸⁷

General

Outside Carthage, urban excavation has been far less concerted and only rarely has it achieved the methodological sophistication of the UNESCO teams; the outstanding triumphs in this respect being the exemplary rescue excavations at Cherchel, Sétif, and Benghazi.¹⁸⁸ What distinguished all three of these projects was their diachronic framework and the array of modern archaeological and scientific techniques employed. The days of huge area clearances, when an entire quarter of a town might be brought to light, are long gone and most current excavation work is small scale. There are a number of long-established missions at sites such as Mactar, Bulla Regia, Chemtou, Cyrene, but these are increasingly occupied with the backlog of publication rather than with fresh excavations, though a new Italo-Tunisian accord for the site of Uchi Maius has recently been announced. Work by the Antiquities Services alone has occasionally been on a larger scale, as in the current Tunisian excavations at

¹⁷⁹ Rakob, *MDAI* 97 (1991), 33–80; idem, *CEDAC* 12 (1991), 7–12; idem, *Antike Welt* 23 (1992), 159–74.

¹⁸⁰ Hurst, *op. cit.* (n. 167), 109–10.

¹⁸¹ idem, 64–70.

¹⁸² Z. B. Ben Abdullah, *CEDAC* 10 (1989), 29–33; G.-Ch. Picard and M. Baillon, 'Le theatre romain de Carthage', *CHAAN* 5 (1992), 13–14; D. L. Bomgardner, 'The Carthage amphitheatre: a reappraisal', *AJA* 93.1 (1989), 85–103.

¹⁸³ J. H. Humphrey (ed.), *The Circus and a Byzantine Cemetery at Carthage I* (1988); N. Norman, *CEA* 18 (1986), 80–100; idem in Ennabli, *op. cit.* (n. 158), 161–4.

¹⁸⁴ A new archaeological investigation of the odeon is being undertaken by C. M. Wells.

¹⁸⁵ J. Verité, *CEDAC* 10 (1989), 41–8.

¹⁸⁶ S. Ellis in Ennabli, *op. cit.* (n. 158), 191–3; Humphrey, *Carthage* 1–7 (1976–82); Hurst and Roskams, *Excavations at Carthage, I, I* (1984); Hurst, *Excavations at Carthage, II, I* (1994); C.-G. Styrenius and B. Sander in Ennabli, *op. cit.* (n. 158), 151–4. C. M.

Wells, 'Canadian excavations at Carthage', *Echos du Monde Classique* 21 (1977), 15–22; 22 (1978), 7–12; 25 (1981), 1–10; ns 1 (1982), 206–13; idem, 'Carthage the later Roman defences', *Limes* 12 (1980), 999–1004; C. M. Wells and E. Wightman, *Echos du Monde Classique* 23 (1979), 14–18; 24 (1980), 11–18; idem, *JFA* 7 (1980), 43–63.

¹⁸⁷ For evidence of a major extension of the inhabited area of Carthage in the third century, see L. Anselmino in Ennabli, *op. cit.* (n. 158), 125–9; L. Neuru, *ibid.*, 135–42; C. M. Wells, *ibid.*, 115–23; C. M. Wells *et al.*, *Echos du Monde Classique* 32 (1988), 195–210.

¹⁸⁸ N. Benseddik and T. W. Potter, *Fouilles du forum de Cherchel 1977–1981*, Supp. BAA 6, 2 vols (1993), a very important excavation and a model report, hereafter Benseddik and Potter, *Cherchel*; J. A. Lloyd (ed.), *Excavations at Sidi Khrebish, Benghazi (Berenice) I*, LA Supp. 5.1 (1977), hereafter, Lloyd, *Sidi Khrebish I*; A. Mohamedi *et al.*, *Fouilles de Sétif 1977–1984*, Supp. BAA 5 (1991), hereafter, Mohamedi *et al.*, *Sétif*.

Uthina.¹⁸⁹ Other approaches to urban archaeology, such as intensive survey, involving surface collection of artefacts and mapping, or the use of geophysical prospection are in the pioneering stage.¹⁹⁰

There has been no shortage of research on the major monuments of towns: forum/basilica complexes,¹⁹¹ baths,¹⁹² theatres and amphitheatres,¹⁹³ circuses,¹⁹⁴ temples,¹⁹⁵ élite houses,¹⁹⁶ building materials, architecture and decor,¹⁹⁷ mosaics,¹⁹⁸ defences,¹⁹⁹ and inscriptions.²⁰⁰

When the Roman province was established in the late second century B.C., the landscape of Africa was already dominated by towns and villages, many of them Punic or Libyphoenician communities, others relating to the Numidian kingdom.²⁰¹ Excavations at Kerkouane,²⁰² Uzitta,²⁰³ Lepcis Magna,²⁰⁴ and Sabratha²⁰⁵ have revealed the rich cosmopolitan character of Punic cities. To the east in Cyrenaica, excavations of domestic quarters at Berenice (Sidi Khrebish) have presented a detailed picture of social and economic conditions in a Hellenistic city whose contacts were chiefly with Egypt and the eastern Mediterranean.²⁰⁶

We still lack a good understanding of urban development in the North African interior in the late first millennium B.C. Excavations at Mactar²⁰⁷ have revealed substantial pre-Roman monumental development and a similar pattern is also suggested at Cirta and Bulla Regia.²⁰⁸ Urban development in Mauretania prior to the Roman occupation, though not widespread, was fairly advanced at Cherchel,²⁰⁹ Tipasa,²¹⁰ and Volubilis.²¹¹ The existence of a thriving African urban culture, nourished by Punic and

¹⁸⁹ H. Ben Hassen, 'Uthina, une colonie romaine oubliée', *Archéologia* 30.3 (1994), 22–9; P. Ruggeri and R. Zucca, *Af Rom* x (1994), 645–71 (Uchi Maius).

¹⁹⁰ Ben Lazreg and Mattingly, *Leptiminus*, 89–114 (survey); E. Lenoir presented a paper at 'L'Africa Romana' XI on a superb geophysical survey of the periphery of Banasa in Mauretania.

¹⁹¹ See below nn. 218–19.

¹⁹² H. Broise and Y. Thébert, *Recherches archéologiques franco-tunisiennes à Bulla Regia II.1, les architectures, les thermes memmiens: étude architecturale et histoire urbaine* (1993); Mohamedi et al., *Sétif* (1991); *Les Thermes romains. Actes de la Table Ronde organisée par l'Ecole Française de Rome* (1991).

¹⁹³ G. Caputo, *Il teatro augusteo di Leptis Magna* (1987); J.-C. Golvin, *L'Amphithéâtre romain. Essai sur la théorisation de sa forme et de ses fonctions* (1988); J.-Cl. Lachaux, *Théâtres et amphithéâtres d'Afrique Proconsulaire* (1979); R. Lequément, *Fouilles à l'amphithéâtre de Tebessa* (1979); O. Mahgiub et al., 'Nuove ricerche nell'anfiteatro di Leptis Magna', *LA* 13–14 (1977), 21–36; H. Slim, 'Recherches préliminaires sur les amphithéâtres romains en Tunisie', *Af Rom* 1 (1984), 129–65; idem, 'Les amphithéâtres d'el-Jem', *CRAI* 1986, 440–69; idem, 'La sauvegarde et la mise en valeur du grand amphithéâtre d'el-Jem', *Africa* x (1988), 325–58.

¹⁹⁴ J. H. Humphrey, *Roman Circuses. Arenas for Chariot Racing* (1986), found at provincial capitals, but also in smaller communities.

¹⁹⁵ See, *inter alia*, G. Caputo and F. Ghedini, *Il tempio d'Ercole di Sabratha* (1984); E. Joly and F. Tomasello, *Il tempio a divinità ignota di Sabratha* (1984); H. Morestin, *Le Temple B de Volubilis* (1980).

¹⁹⁶ M. Blanchard-Lemée, *Maisons à mosaïques du quartier central de Djemila-Cuicul* (1975); R. Daniels, 'The domestic architecture of Roman Volubilis (Morocco)', *OJA* 14.1 (1995), 79–95; M. Ennaifer, *La cité d'Althiburos et l'édifice des Asclepieia* (1976); R. Etienne, *Le quartier nord-est de Volubilis*, 2 vols (1960); J. Lassus, 'La salle à sept absides de Djemila-Cuicul', *Ant* 5 (1971), 193–207; R. Rebuffat, 'Maisons à péristyle d'Afrique du Nord, répertoire de plans publiés', *MEFR* 81 (1969), 659–87; 86 (1974), 445–99; Y. Thébert, 'Private life and domestic architecture in Roman Africa', in P. Veyne (ed.), *A History of Private Life I. From Pagan Rome to Byzantium* (1987), 313–409; J. B. Ward-Perkins et al., *Lib Studs* 17 (1986), 109–53. See also, nn. 198, 207, 418 below.

¹⁹⁷ F. Rakob, 'Römische Architektoren in Nordafrika. Bautechnik und Bautradition', *150 Jahr-Feier* (1982), 107–15; Ferchiou, op. cit. (n. 218 below); R. J. A. Wilson, 'Terracotta vaulting tubes (tubi fittili): on their origin and distribution', *JRA* 5 (1992), 97–129.

¹⁹⁸ Pride of place must go to *CMT* = *Corpus des Mosaïques de la Tunisie*, useful as much for its fine town and house plans as for the study of individual pavements. Volumes as follows: *CMT* 1.1 = M. A. Alexander et al.,

Utique, Insulae I–III (1973); *CMT* 1.2 = C. Dulière et al., *Utique, les mosaïques in situ en dehors des insulae I–II–II* (1974); *CMT* 1.3 = M. A. Alexander et al., *Utique, les mosaïques sans localisation précise et El Alia* (1976); *CMT* 11.1 = M. A. Alexander et al., *Thurburbo Maius, les mosaïques de la région du forum* (1980); *CMT* 11.2 = A. Ben Abed et al., *Thurburbo Maius, les mosaïques de la région des grands termes* (1985); *CMT* 11.3 = A. Ben Abed, *Thurburbo Maius, les mosaïques dans la région ouest* (1987).

¹⁹⁹ C. M. Daniels, 'Town defences in Roman Africa: a tentative historical survey', in J. Maloney and B. Hobley (eds), *Roman Urban Defences in the West* (1983), 5–19; G. Hallier, 'La fortification des villes de Tingitane au second siècle', *Limes* 13 (1986), 605–24; R. Rebuffat, 'Enceintes urbaines et insécurité en Maurétanie', *MEFR* 86 (1974), 501–22.

²⁰⁰ See in particular H. Jouffroy, *La construction publique en Italie et en Afrique romaine* (1986), 175–200.

²⁰¹ M. Fantar, *Af Rom* x (1994), 105–20 (map, 107).

²⁰² M. Fantar, *Kerkouane, cité punique du Cap Bon (Tunisie) I* (1984); *II Architecture domestique* (1985); *III Sanctuaires, cultes, société, économie* (1986); cf. also idem, *CRAI* 1988, 502–18.

²⁰³ J. H. Van der Werff, *Uzitta III* (1981).

²⁰⁴ A. Di Vita, 'Gli Emporia di Tripolitania dall'età di Massinissa a Diocleziano: un profilo storico-istituzionale', *ANRW* II, Principat 10.2 (1982), 515–95; idem, 'Architettura e società nelle città di Tripolitania fra Massinissa e Augusto: qualche nota', *Architettura e società de l'archaïsme grec à la fin de la république romaine* (1983), 355–76.

²⁰⁵ P. M. Kenrick in Buck and Mattingly, *Town and Country*, 1–12.

²⁰⁶ Lloyd, *Sidi Khrebish I* (1977).

²⁰⁷ G.-Ch. Picard, *BCTH* ns 18B (1982), 17–25; G.-Ch. and C. Picard and A. and C. Bourgeois, *Recherches archéologiques franco-tunisiennes à Mactar I, Maison de Venus* (1977).

²⁰⁸ Cirta: Berthier, op. cit. (n. 106), though his interpretation of the phenomenon is debatable; Bulla Regia: A. Beschtaouch et al., *Les ruines de Bulla Regia* (1977); idem, *Recherches archéologiques franco-tunisiennes à Bulla Regia I, Miscellanea* (1983).

²⁰⁹ Benseddik and Potter, *Cherchel* (1993); idem, *Fouilles du Forum de Cherchel. Rapport préliminaire*, Supp. BAA 4 (1986); T. W. Potter, *CHAAN* 2 (1985), 457–68; idem, *Towns in Late Antiquity. Iol Caesarea and its Context*, The Fourth Ian Sanders Memorial Lecture in Classical Archaeology (1995); Leveau, *Caesarea*, 13–24.

²¹⁰ M. Bouchenaki, *Tipasa. Site du patrimoine mondial* (1988); M. M. Morciano, *Af Rom* x (1994), 403–18; S. Lancel, 'Tipasa de Maurétanie', *ANRW* II, Principat 10.2 (1982), 739–816.

²¹¹ A. Jodin, *Volubilis Regia Iubae* (1987); cf. S. Girard, 'Banasa préromaine', *Ant* 20 (1984), 11–94.

even Hellenistic institutions and influences,²¹² retarded the assimilation of Roman cultural traits in all but a handful of towns until the second century A.D.²¹³ It is hardly surprising, therefore, that the late republican and early imperial period has left relatively few discernible traces in the archaeology and epigraphy of many African towns.²¹⁴ Indeed, with a few exceptions such as Lepcis Magna,²¹⁵ Romanized African élites are largely invisible in towns until the late first century A.D.

A number of epigraphic and archaeological studies have highlighted a boom in urban construction in African towns from the late first through early third centuries²¹⁶. While adopting many 'Roman' monuments, those responsible for public building programmes did not hesitate to make modifications in their design and scale.²¹⁷ Research on fora in Mauretania Tingitana, shows that the design of some may have been influenced, as in Britain and Germany, by military *principia*.²¹⁸ Evolution in the design and function of fora is also noticeable at several sites.²¹⁹ Study of both honorific/triumphal arches and capitolia shows that the former to a greater extent than the latter were connected with the promotion of towns,²²⁰ suggesting that Romanization was manifested in architectural monuments signifying loyalty to the emperor.

In sum, by the early third century the city in the African provinces had become a cultural hybrid,²²¹ the architectural manifestations of which were in tune with the political and economic achievements and aspirations of the African élites. The wealth of the curial class, notably the senatorial and equestrian families, was a significant factor in the monumentalization of many towns.²²² The group of buildings donated by Septimius Severus to his home town, Lepcis Magna, was the most lavish of such gestures, and, as a result of recent studies, they can now be appreciated fully as one of the most important early third-century architectural complexes anywhere in the Roman world.²²³

There is a notable decline in evidence for public construction later in the third century, particularly in Numidia and Mauretania, but it has recently been argued convincingly that civic euergetism and a generally high standard of living were maintained in African cities.²²⁴ There is some evidence that this continued into the fourth and early fifth centuries in contrast to other parts of the Empire, though there was clearly progressive mutation of urban infrastructures over time (see below).²²⁵ In seeking explanations for pre-Vandal era change in urban fortunes, the extent, dating, and severity of earthquake damage to African towns has been hotly debated in recent years, with increasing scepticism being voiced about the destructive potential of a single quake in A.D. 365 accounting for the very widespread archaeological evidence associated with it. None the less, North Africa seems to have been a highly active

²¹² S. Lancel, *Carthage* (1992), 325–77.

²¹³ Leveau, *Caesarea*, 13–24, on concept of showcase towns of littoral; A. Akerraz, 'Nouvelles observations sur l'urbanisme du quartier nord-est de Volubilis', *Af Rom* 14 (1987) 445–57; P.-A. Février, 'Urbanisation et urbanisme de l'Afrique romaine', *ANRW* II, Principat 10.2 (1982), 321–96; idem, *Approches II* (esp. 9–71); J. Gascou, *La politique municipale* (1972); idem, *ANRW* II, Principat 10.2 (1982), 136–320; G. D. B. Jones, *Lib Studs* 20 (1989), 91–106; A. Mahjoubi, 'L'urbanisme de l'Afrique antique à l'époque préromaine', *Af Rom* II (1985), 201–11; J. B. Ward-Perkins, 'Town planning in North Africa during the first two centuries of the empire', *150 Jahr-Feier* (1982), 29–49.

²¹⁴ H. Jouffroy, *La construction publique en Italie et en Afrique romaine* (1986), 175–200. Interestingly, imperial freedmen seem to have played a significant role in a number of cases of civic euergetism in Africa Proconsularis, and the province may have offered them opportunities for the achievement of political and social legitimacy, M. Le Glay, *MEFRA* 102.2 (1990), 621–38.

²¹⁵ A. Birley, *Lib Studs* 19 (1988) 1–19; Mattingly, *Tripolitania*, 58–9, 116–22.

²¹⁶ R. P. Duncan-Jones, 'Who paid for buildings in Roman cities?', in F. Grew and B. Hopley (eds), *Roman Urban Topography in Britain and the Western Empire* (1985), 28–33; Jouffroy, op. cit. (n. 214). The cost was borne by a combination of public financing (*pecunia publica*), sums paid by magistrates and priests (*summae honorariae*), and private donations.

²¹⁷ For the survival of 'Hellenistic' influences and incorporation of African preferences in the monumental architecture and decor in African towns, see N. Ferchiou, *Architecture romaine de Tunisie. L'ordre, rythmes et proportions dans le Tell* (1975); idem, *Décor architectonique d'Afrique Proconsulaire (IIIe s. avant J.C. – Ier s. après J.C.)*, 2 vols (1989).

²¹⁸ M. Euzennat and G. Hallier, *Ant af* 22 (1986), 73–103.

²¹⁹ S. Ben Baaziz, 'Les forum romains en Tunisie. Essai de bilan', in *Los foros romanos de las provincia occidentales. Actas de la Mesa Redonda celebrada en Valencia 1986* (1987), 221–36; P. Gros, 'Les forums de Cuicul et de Thamugadi: ordonnance et fonctionnement des espaces publics en milieu provincial au IIe siècle après J.C.', *BCTH* 23 (1994), 61–80; S. Ilhem Ammar, 'Reflexions comparatives... l'aménagement des fora', *Af Rom* x (1994), 445–62; M. Lenoir et al., 'Le forum de Volubilis', *ibid.*, 203–19; cf. P. Kenrick, *Excavations at Sabratha 1948–1951 I* (1986).

²²⁰ S. Aurigemma, *L'arco quadrifronte di M. Aurelio et di L. Vero in Tripoli*, *LA Supp.* 3 (1970); I. M. Barton, 'Capitoline temples in Italy and the provinces (especially Africa)', *ANRW* II, Principat 12.1 (1982), 259–342; Jouffroy, op. cit. (n. 214).

²²¹ M. Janon, 'Recherches à Lambèse III, essai sur le temple d'Esculape', *Ant af* 21 (1985), 35–102.

²²² Y. Allais, 'La quartier occidental de Djemila (Cuicul)', *Ant af* 5 (1971), 95–119; H. Slim, *Afrique Occ Romaine*, 175–200.

²²³ A. di Vita, *150 Jahr-Feier* (1982), 84–106; L. Bacchielli, *Af Rom* ix (1992), 763–70 (Severan arch); G. D. B. Jones and R. Kronenburg, *Lib Studs* 19 (1988), 43–53; C. Parisi Presicce, *Af Rom* x (1994), 703–17 (colonnaded street); S. Ensoli Vittozzi, *ibid.*, 719–51 (Severan forum); J. B. Ward-Perkins, *The Severan Buildings of Lepcis Magna* (ed. P. Kenrick) (1993).

²²⁴ X. Dupuis, 'Constructions publiques et vie municipale en Afrique de 244 à 276', *MEFR* 104 (1992), 233–80; cf. E. W. B. Fentress in A. King and M. Henig (eds), *The Roman West in the Third Century* (1981), 199–210; P.-A. Février, 'Le fait urbain dans le Maghreb du IIIe siècle. Les signes d'une crise', *150 Jahr-Feier* (1982), 50–76.

²²⁵ E. W. B. Fentress, 'Sétif, les thermes du Ve siècle', *Af Rom* vi (1989), 321–37; Lepellety, *Les cités I et II*.

seismic area in the fourth century and earthquake damage appears to have been relatively common.²²⁶ What remains to be explained, however, is why the urban communities were less able, or less interested, than they had been earlier to rebuild or repair the monuments so affected.

The absorption and modification of Roman cultural influences is also visible in burial rites where a transformation in traditional African burial practice in favour of cremation is detectable in the early imperial period, followed by a return to inhumation incorporating both Roman and African customs beginning in the late second century in some communities.²²⁷ There were also changes in cemetery location, organization and élite burial preferences (for example a transition from Punic hypogea to mausolea), but our understanding of the dynamics of these processes is at a primary stage. What is required now is more theoretical analysis of mortuary archaeology, along lines currently being developed elsewhere in archaeology and anthropology, but which takes account of specifically African factors (for instance, the survival of a strong indigenous tradition of ancestor worship).²²⁸

A weakness of most current archaeology in Africa is that it is driven by research goals that are too period- or monument-specific, impeding understanding of the *longue durée* of urban life in Africa. Archaeological phasing frequently does not coincide with conventional historical periodization and in compartmentalizing urban activity into periods (Punic, Roman, Vandal, Byzantine etc.), we are promoting historical over archaeological interpretation of the data. Urban life was a continuum in Africa from the first millennium B.C., in some cases evolving and developing after the Arab invasions of the seventh century. Greater attention thus needs to be devoted to the long-term sequence of activity rather than to the elucidation of a particular structure. Rescue archaeology has been more successful in this regard than purely research programmes at addressing the issue. Another problem with studies of particular monuments is that the presumption is commonly made that those of a single class reflect a uniform cultural transmission; whereas it is likely that evidence of Romanization in towns subsumes two distinct processes: the archaeology of Roman cultural penetration (including resistance to it) and the archaeology of Roman occupation and settlement.²²⁹

As we observed at the start of this section, African urban archaeology has not been at the forefront of innovation. The major reason for this, in our view, has been the failure of Africanists to identify and develop an archaeological mode of analysis which is both independent of the prevailing historical perspective derived from texts and epigraphy, and capable of producing its own interpretative models of urban development. A purely archaeological approach to African cities, for example, could substitute juridical status of cities (*colonia, municipium* etc.) with a typology based on function, as derived from the structural and material record. This approach yields, we suggest, an entirely different and significant categorization of cities in Roman Africa: provincial capitals,²³⁰ ports of trade,²³¹ new foundations,²³² indigenous towns,²³³ cult centres,²³⁴ military towns,²³⁵ industrial towns,²³⁶ other small towns (including sub-categories for agricultural towns/agglomerations, roadside settlements).²³⁷ We believe that this

²²⁶ N. N. Ambraseys in A. Brambati and D. Slejko (eds), *The O.G.S. Silver Anniversary Volume* (1984), 143–53; A. Di Vita, 'Evidenza dei terremoti del 306–310 e del 365 D.C. in Tunisia', *Ant af* 15 (1980), 303–7; idem, 'Sismi, urbanistica e cronologia assoluta', *Afrique Occ Romain* (1990), 425–94; F. Jacques and B. Bousquet, 'Le raz du marée du 21 juillet 365', *MEFR* 96 (1984), 423–61; C. Lepelley, 'L'Afrique du nord et le prétendu seeisme universel du 21 juillet 365', *ibid.*, 463–90; R. Rebuffat, *Ant af* 15 (1980), 309–28; *Tremblements de terre: histoire et archéologie. IVeme rencontres intern. d'archéologie et d'histoire d'Antibes* (1984).

²²⁷ This is particularly evident in the cemeteries at Setif and Cherchel. Since 1970, a number of important cemetery sites have been published: Ben Lazreg and Mattingly, *Leptiminus*, 177–266, 301–34; M. Bouchenaki, *Fouilles de la nécropole occidentale de Tipasa (Matarès) (1968–1972)* (1975); P.-A. Février and R. Guery, 'Les rites funéraires de la nécropole orientale de Sétif', *Ant af* 15 (1980), 91–124; R. Guery, *La nécropole orientale de Sétif (Sétif, Algérie). Fouilles de 1966–67* (1985); J. Humphrey, *Circus and Byzantine Cemetery at Carthage* (1988), 179–336; P. Leveau, 'Une area funéraire de la nécropole occidentale de Cherchel', *BAA* 5 (1974), 73–152; idem, 'Les hypogées de la rive gauche de l'oued Nsara et la nécropole occidentale de Caerea (Cherchel)', *Ant af* 11 (1977), 209–56; idem, *Caesarea*, 28–9; A. Mahjoubi et al., *La nécropole romaine de Raqqada*, 2 vols (1970/1973); L. Slim, 'A propos d'un cimetière d'enfants à Thyrsdrus', *Af Rom* 1 (1984), 167–77.

²²⁸ See I. Morris, *Death-Ritual and Social Structure in Classical Antiquity* (1992), for some new theoretical and historical approaches; cf. n. 419 below for African stele.

²²⁹ contra W. L. MacDonald in C. B. McClendon, *Rome and the Provinces. Studies in the Transformation of Art and Architecture in the Mediterranean World* (1986), 29–36.

²³⁰ Most applicable in the context of the long-term capitals, such as Caesarea and Carthage.

²³¹ Ben Lazreg and Mattingly, *Leptiminus*; Kenrick, *Excavations at Sabratha* (1986); A. Laronde, 'Le port de Lepcis Magna', *CRAI* 1988, 337–53; M. Longerstay, 'Nouvelles fouilles à Tabarka (antique Tabarca)', *Africa* x (1988), 220–53.

²³² See *inter alia*, N. Duval, 'Topographie et urbanisme d'Ammaedara', *ANRW* 11, Principat 10.2 (1982), 633–71; idem, 'L'urbanisme de Sbeitla', *ANRW* 11, Principat 10.2 (1982), 596–632; idem, 'Sufetula: l'histoire d'une ville romaine de la Haute Steppe à la lumière des études récentes', *Afrique Occ Romain*, 495–535.

²³³ P. Ørsted, *JRA* 5 (1992), 84–90 and L. Ladjimi Sebaï, *Africa* xi–xii (1993), 65–88 (Segermes); J. Peyras and J. Maurin, *Ureu municipium* (1974); idem, 'Uzalitana. La région de l'Ansarine dans l'antiquité', *CT* 19 [75–76] (1971), 11–103.

²³⁴ H. Jouffroy, 'Les aquae Africaines', *Caesarodunum* 26 (1992), 87–99.

²³⁵ M. Janon, 'Recherches à Lambèse', *Ant af* 7 (1973), 193–254; recent British work directed by Steve Roskams remains unpublished at present.

²³⁶ F. Rakob et al., *Simitthus I* (1994), here the association with the marble quarry appears stronger than the character of the site as a new foundation.

²³⁷ See below, n. 239; for a particular administrative category see, R. Rebuffat, 'Castellum', *Encyclopédie Berbère* 12 (1993), 1822–33.

restructuring of the evidence on African towns provides a useful model for deconstructing the process of cultural transmission, evolution, and synthesis. It is equally apparent to us that even before the Vandal conquest, new characteristics (and new categories) were starting to emerge as the classical city mutated into the late antique town (see below).

What other directions could urban archaeology take in the future? One approach remains site specific and will lead to further syntheses and to planning of surface features at some of the numerous sites which have never been properly surveyed. The origins of new urban foundations merit further investigation, both for signs of indigenous settlements and of Roman military activity prior to the layout of the site.²³⁸ Knowledge of the small town and village in Africa is also poor (the excavation of Belalis Maior being a prime example of what should be pursued).²³⁹ More generally, we need studies of industrial and economic activity, of non-élite dwellings, of suburbs,²⁴⁰ and of environmental and health conditions.

VIII. WATER

Climate, rainfall, and hydrology have been comparatively stable since the last major incident of climatic change in the sixth millennium B.C., but none the less conditions in many parts of the Maghreb have clearly been far from perfect for agricultural development and some indications of progressive environmental decline have been recognized.²⁴¹ Water was available in different forms: from a few perennial streams and rivers, from rainfall, from shallow springs and artesian sources (deep artesian reserves could not be tapped before modern times). Regional variations are critical, however, with 25 per cent of the land-mass of Tunisia, for instance, accounting for 80 per cent of surface water and 60 per cent of the total water resources of the country. The exploitation and management of the scant water resources of North Africa was thus critical to the economic and demographic growth of the region in the pre-Roman and Roman period. Mastery of water supplies and the exercise of political power have been closely linked.²⁴² The French and Italian colonial authorities, with an eye to the potential for reactivating them, invested considerable resources and manpower in the investigation of the abundant ancient hydraulic features.²⁴³ Many of these reports concluded that all such hydraulic works were of Roman date and that most were financed or built by the Roman state.²⁴⁴ Neither assumption can be sustained as there is plentiful evidence to suggest that the cisterns and water-control walls were built and maintained across a much broader time-span and that the majority represent purely local initiatives.²⁴⁵ Although the perennial water sources are very limited, it is interesting in the context of Roman technology in general to note that turbine water mills have been discovered near Caesarea and at two sites in the Medjerda valley.²⁴⁶

In recent years there has been revived interest in the management of water in the Roman Maghreb, with several important overviews.²⁴⁷ Two separate, but not unconnected, spheres of water use are suggested: first, the hydraulic works associated with towns (aqueducts, fountains, water pipes, drains and sewers, latrines, baths, public and private cisterns, wells); second, rural features for the collection, distribution, control, and storage of water (catchment systems, dams, wadi walls, terraces, sluices, spillways, canals or rural aqueducts, foggaras, cisterns and reservoirs, wells). There are in addition

²³⁸ Both processes are well-attested in Roman Britain for example, G. Webster (ed.), *Fortress into City* (1988).

²³⁹ A. Mahjoubi, *Recherches d'histoire et d'archéologie à Hr el-Fouar (Tunisie). La cité de Belalitati Maiores* (1978).

²⁴⁰ Ben Lazreg and Mattingly, *Leptiminus*, 89, 96–8; G.-Ch. Picard in *CHAAAN* 3 (1986), 143–8.

²⁴¹ M. Rouvillois-Brigol, *CHAAAN* 2 (1985), 215–24; idem, *CHAAAN* 3 (1986), 27–34; B. D. Shaw in T. M. L. Wigley et al. (eds), *Climate and History* (1981), 379–403; cf. also C. Vita-Finzi, *The Mediterranean Valleys* (1969).

²⁴² H. Slim, 'Maîtrise de l'eau en Tunisie', in G. Argoud et al., *L'eau et les hommes en Méditerranée et en Mer Noire dans l'antiquité de l'époque Mycénienne au règne de Justinien* (1992), 513–32; see also A. and P. Baduel, 'Le pouvoir de l'eau dans le sud-Tunisien', *R.O.M.M.* 30.2 (1980), 101–34; P. Troussel, 'De la montagne au désert: limes et maîtrise de l'eau', *R.O.M.M.* 41–42 (1987), 90–115.

²⁴³ J. Baradez, op. cit. (n. 47), part III; idem, *Actes du 79th Congrès National des Sociétés Savantes, Alger 1954* (1957), 273–5; L. Carton, *RT* 3 (1896) 373–85, 530–64; idem, *RT* 4 (1897), 27–85; P. Gauckler, *Enquête sur les installations hydrauliques romain en Tunisie* (1897–

1912); S. Gsell, *Enquête administrative sur les hydrauliques anciens en Algérie* (1903) = *NAMS* 3.10 (1903), 1–143; R. M. D. de La Blanchère, *NAMS* 3.7 (1897), 1–109; P. Romanelli in *La Rinascita della Tripolitania* (1926), 568–76; F. Stroppa, *Rivista coloniale* 16 (1919), 489–96; G. Wolfson, *De l'utilisation des travaux hydrauliques romains en Tunisie* (1901).

²⁴⁴ J. Birebent, *Aquae Romanae. Recherches d'hydraulique romaine dans l'est Algérien* (1962), for a late example of this thinking.

²⁴⁵ M. Fantar, 'Le problème de l'eau potable dans le monde phénicien et punique: les cisternes', *CT* 23 (1975), 9–18; idem, in Argoud et al., op. cit. (n. 242), (1992), 319–37.

²⁴⁶ P. Leveau in *Mélanges M. le Glay* (1994), 210; F. Rakob in *Antike Welt* 24.4 (1993), 286–7; F. Rakob et al., *Simitthus I* (1994), 95–102.

²⁴⁷ M. Euzennat, 'Grande et petite hydraulique dans l'Afrique romaine', in Argoud et al., op. cit. (n. 242), 75–94; B. D. Shaw, 'Water and society in the ancient Maghrib: technology, property and development', *Ant* 4 20 (1984), 121–73; idem in A. T. Hodge (ed.), *Future Currents in Aqueduct Studies* (1991), 63–91; Slim, op. cit. (n. 242).

different water regimes to be considered; from the exploitation of perennial springs and seasonal rainfall, to the runoff farming and water technology of the pre-desert, to the irrigated systems of the oases.

Despite the generally good preservation of aqueducts, studies of many of the North African examples remain rudimentary in the extreme. However, we have quality data on those of Carthage and Cherchel.²⁴⁸ These were classic and large-scale works (the former eventually being 132 km long, with 17 km being on above-ground piers, and a capacity now estimated at c. 25,000 m³ per day). Lambaesis was provided with four aqueducts, supplying the needs of the fortress and town.²⁴⁹ But these works for the capitals of Mauretania, Proconsularis, and Numidia may not be typical of the bulk of the African urban aqueducts, with above ground-bridges and arcades far less common in general²⁵⁰ and by no means all towns having aqueducts. The huge cisterns below the forum at Bararus (Rougga), with a capacity of 7,600 m³, were supplied by a well and run-off from the forum and its porticoes.²⁵¹ Some aqueducts were of unusual type, that for El Jem, for instance, tapping a large rainfall catchment area and a series of wells rather than a spring, and many were small-scale (Leptiminus appears to have had two aqueducts of rather slight dimensions).²⁵² None the less, there seems to be a reasonable correlation here as elsewhere in the Roman world between the provision of aqueduct supply and the construction of public baths, with water supply often the result of local euergetism (though sometimes with state assistance).²⁵³

Within towns little work has yet been done in detail on water distribution and drainage, the most detailed study still being that of Etienne for Volubilis.²⁵⁴ The fashion for private baths, ornamental fountains and fish tanks in wealthy private houses created novel uses of the precious resource.²⁵⁵ However, even in towns with aqueducts, public fountains, and piped supplies, it is clear that a large part of water consumption was still supplied by cisterns and wells. Most excavations and surveys of domestic quarters have revealed numbers of cisterns below the houses, fed by catchment from roofs and courts.²⁵⁶

Huge numbers of rural cisterns are still extant or are known from the early surveys, but most attempts at classification have been localized studies, in part a reflection on their extreme heterogeneity.²⁵⁷ These mundane structures are part of an altogether impressive network of minor hydraulic works which merit much more attention than they have hitherto received.²⁵⁸ They are the physical proof of what the literary and epigraphic sources clearly attest; Africa was brought to prosperity not because of its natural abundance, but through intensive and time-consuming investment in hydraulic systems.²⁵⁹ The sophistication of the irrigation arrangements is, of course, exemplified by the well-known Lamasha inscription, detailing water allocations in an area of spring-fed terraces of olives.²⁶⁰ There seem to have been significant variations in the systems adopted in different environmental milieux; for instance, in the coastal plain and mountainous hinterland of Mauretania Caesariensis,²⁶¹ in the Aures mountains where springs were relatively common,²⁶² in the Tunisian high steppe,²⁶³ in the more marginal lands of Tripolitania where run-off agriculture was overwhelmingly important,²⁶⁴ in the oases of both coastal zone and Sahara.²⁶⁵

²⁴⁸ J. P. Boucher (ed.), *Journées d'études sur les aqueducs romains. Tagung über römische Wasserversorgungsanlagen* (1983), esp. articles by Leveau, 231-4 and Rakob, 309-32; P. Leveau and J. Paillet, *L'alimentation en eau de Caesarea et l'aqueduc de Cherchel* (1976); F. Rakob, 'Le sanctuaire des eaux à Zagouan', *Africa* 111-14 (1970), 133-75; idem, *MDAI* 81 (1974), 41-89.

²⁴⁹ M. Janon, *Ant af* 7 (1973), 222-54.

²⁵⁰ Though Bizerte has an impressive bridge section, S. Ben Baaziz, *Afrique Occ Romaine*, 203-12.

²⁵¹ G. Hallier, *Ant af* 23 (1987), 129-48.

²⁵² Ben Lazreg and Mattingly, *Leptiminus*, 301-5; Slim, op. cit. (n. 242), 520-4; idem, *Afrique Occ Romaine*, 169-201.

²⁵³ A. Beschouch, *BTINAA* 1 (1988), 7-15; P.-A. Février in Boucher, op. cit. (n. 248), 133-40 (on army involvement); M. Corbier, *Af Rom* 111 (1987), 275-85.

²⁵⁴ R. Etienne, *PSAM* 10 (1954), 25-211; idem, *Le quartier nord-est de Volubilis* (1960).

²⁵⁵ A. Beschouch et al., *Les ruines de Bulla Regia* (1977); Slim, op. cit. (n. 242); J. B. Ward-Perkins et al., 'Town houses at Ptolemais', *Lib Studs* 17 (1986), 109-53.

²⁵⁶ Ben Lazreg and Mattingly, *Leptiminus*, 112-14; H. Jaidi, 'Sutunurca II: l'approvisionnement de la cité en eau', *Africa* 11-111 (1993), 208-41; Kenrick, *Sabratha* (1986), 236-41; Lloyd, *Sidi Khrebish I*, 199-209; Slim, op. cit. (n. 242), 520-4 (El Jem); R. L. Vann et al. in J. H. Humphrey, *Carthage* (1981), 1-54.

²⁵⁷ S. Bergaoui and A. Gammar, 'Typologie des citernes et barrages du secteur de Dar el Bey à Jebel Ouesslet (Dorsale Tunisienne)', *CT* 41-42 [151-54] (1990), 197-223.

²⁵⁸ Euzennat, op. cit. (n. 247), 83f.; Shaw, op. cit. (n. 247), (1991), 73-86.

²⁵⁹ H. Pavis d'Escurac, 'Irrigation et vie paysanne dans l'Afrique du nord antique', *Ktéma* 5 (1980), 177-91; J. Peyras, 'Les campagnes de l'Afrique du nord antique d'après les anciens gramatici', *CHAAN* 3 (1986), 257-71.

²⁶⁰ B. D. Shaw, *Ant af* 18 (1982), 61-103, a brilliant analysis, save in the calculation of plot sizes.

²⁶¹ Leveau, *Caesarea*, 419-27 on hydraulic works; idem in P. Louis, F. and J. Métal (eds), *L'homme et l'eau en Méditerranée et au Proche-orient IV, l'eau dans l'agriculture* (1987), 45-56.

²⁶² Shaw, op. cit. (n. 260), 75-8.

²⁶³ R. B. Hitchner, 'Irrigation, terraces, dams and aqueducts in the region of Cillium (modern Kasserine)', *CHAAN* 6, 345-53.

²⁶⁴ The issue of run-off agriculture is reviewed below, but see D. D. Gilbertson (ed.), *Runoff (Floodwater) Farming*, (theme volume) *Applied Geography* 6.1 (1986); D. D. Gilbertson et al., *Lib Studs* 15 (1984) 45-70; Vita Finzi, op. cit. (n. 241), 7-44.

²⁶⁵ P. Troussset, *Ant af* 22 (1986), 161-91; idem in A. De Reparaz (ed.), *L'eau et les hommes en Méditerranée* (1987), 25-41.

IX. RURAL SETTLEMENT

The landscapes of Roman Africa have for long been known to have been densely populated following reports of early travellers, the mapping work of the French 'brigades topographiques', and the initial studies of air-photographic evidence of vast areas of centuriation.²⁶⁶ Yet for many years landscape archaeology has been dormant, a slumbering giant of unexploited data.²⁶⁷ The high potential of study of the Romano-African countryside is due to several factors. First, there are significant texts and inscriptions bearing on its organization, its pattern of land allocation, and its products.²⁶⁸ Second, there is the level of preservation of rural sites that is unparalleled for its quality and extent in the western Mediterranean. While field surveys on the north side of the Mediterranean are struggling for the most part to interpret scatters of sherds and other debris, in North Africa surface examination can often recover a rudimentary, if unphased, plan of the site. Third, the preservation of many minor features of the ancient countryside (walls, terraces, cisterns, threshing-floors, huts etc.) offers enormous potential for detailed landscape reconstruction.²⁶⁹

Why then has field survey thus far played so minor a role in archaeological work in the Maghreb and why have so few rural sites been excavated to modern standards? The explanations may be found in colonial and post-colonial historiography, and with the accepted definitions of 'important' sites (towns, churches etc.) in the region. The study of the rural landscapes has undoubtedly been prejudiced by the colonial claim that they were the achievement of Roman (that is, 'outside') colonization and by deep-seated antipathies by Maghrebian scholars towards what are (incorrectly) presumed to have been for the most part slave estates.²⁷⁰ The emphasis of many studies on the luxurious rural retreats of the urban élite, often ornamented with spectacular mosaic pavements, has not excited the interest of ordinary people in the Maghreb as such sites would do in Europe.²⁷¹ Compared with other western Roman provinces the number of excavated rural sites is pathetically small, despite the fact that agriculture remains a fundamental part of the region's economy and thus of its cultural heritage as well. None the less, in recent years the mapping and exploration of rural sites has come to be recognized as vitally important to the national patrimony of the Maghreb states, and it is hoped that there will be a significant rise in the volume of rural archaeology in coming decades. The current archaeological mapping project for the whole of Tunisia provides an excellent model which could be applied elsewhere.²⁷² From this work, it is apparent that the density of rural sites varies considerably across the country, though it is hard to assess this quantitatively because of the lack of chronological depth in these mapping exercises. It is also clear that to answer all the questions posed by rural archaeology, different levels and intensities of survey are required. Another advantage of survey is its diachronic dimension, locating the Roman period sites within a much broader settlement context (prehistory to the present) and facilitating the integration of Romano-African archaeology within the broader frame of Maghrebian history.

Historians have traditionally pursued two main lines of enquiry on rural society. The imperial estates of North Africa are well-known on account of their informative epigraphy, but it is astonishing how little has been recorded archaeologically, though undoubtedly there is abundant evidence to be recovered on the ground.²⁷³ Current field survey being carried out in this area by M. de Vos of Trento

²⁶⁶ R. M. Haywood, 'Roman Africa', in T. Frank (ed.), *An Economic Survey of the Roman Empire* IV (1938), 3-119.

²⁶⁷ Lassère, *Ubique Populus*, esp. 295-363; Leveau et al., *Campagnes...*, 155-200.

²⁶⁸ C. Lepelley in *Les Lettres de Saint Augustin découverte par Johannes Divjak, Etudes Augustiniennes* (1983), 329-42; idem, *CHAAN* 1 (1984), 273-83; idem, *BCTH* 18B (1988), 192-3; idem, *Ant af* 25 (1989), 235-62; H. Pavis d'Escurac, *Ant af* 8 (1974), 89-101; Shaw, op. cit. (n. 260).

²⁶⁹ Leveau et al., *Campagnes...*, 162-85.

²⁷⁰ J. Carlsen, *Af Rom* IX (1992), 97-104; P.-A. Février, 'Le monde rural du Maghreb antique (approche de l'historiographie du XIXe siècle)', *CHAAN* 3 (1986), 87-106.

²⁷¹ J. M. Blazquez Martinez, *Af Rom* X (1994), 1171-87; N. Duval, *CHAAN* 3 (1986) 163-74; J. Kolendo, *ibid.*, 149-62; O. Mahjub, *LA* 15-16 (1978-79)[1988], 69-74; J. Percival, *The Roman Villa* (1976), 61-6 (poor on African villas); G.-Ch. Picard, *CRAI* 1985, 227-41; E. Salza Prina Ricotti, *Rendiconti/Atti della Pontificia Accademia Romana di Archeologia* 3.43 (1970-1971), 135-63.

²⁷² The Tunisian mapping project is described in detail by S. Ben Baaziz, *BTINP* 6 (1993), 1-16; idem in *Actes du Colloque Int. sur l'histoire de Sétif* (1993), 128-35;

Research for individual map sheets has been reported on as follows, M. K. Annabi, 'Prospection archéologique dans la région de Sousse', *BTINAA* 2 (1988), 17-31; idem, 'Archéologie du paysage à oued Cherita', *BTINAA* 4 (1989), 7-28; S. Ben Baaziz, 'L'occupation humaine dans le plaine de Rohia et le Sraa Ouertane dans l'Antiquité', *CNAAN* 3 (1986), 289-300; idem, 'Les sites antiques de la région de Sidi el Hani', *BTINAA* 2 (1988), 7-15; idem, 'Prospection archéologique de la région d'el Meknassi', *BTINAA* 4 (1989), 29-39; idem, 'Les sites archéologiques de la région de Gafsa', *CHAAN* 4.2 (1991), 535-48; T. Ghali, 'Approches du paysage antique de la vallée de l'oued Sejnane', *BTINP* 5 (1990), 33-57; L. Maurin and J. Peyras, 'Romanisation et traditions africaines dans la région de Bir Mcherga', *ACHCM* 5 (1991), 105-48.

²⁷³ D. Crawford, 'Imperial estates', in M. I. Finley (ed.), *Studies in Roman Property* (1976), 35-70; D. Flach, 'Inscriptionenuntersuchungen zum römischen Kolonat in Nordafrika', *Chiron* 8 (1978), 441-92; idem, 'Die Pachtbedingungen der Kolonen und die Verwaltung der Kaiserlichen Güter in Nordafrika', *ANRW* II, Principat 10.2 (1982), 427-73; D. P. Kehoe, *ZPE* 56 (1984), 193-219; idem, *Law and History Review* 2 (1984), 241-63; J. Kolendo, *Le colonat en Afrique sur le haut empire* (1976, revised edn 1992).

University and M. Khanoussi will surely provide information and answers; meanwhile, the discussions of the imperial estates' lease regulations remain hedged in with uncertainties about their size, spatial aspect, and social organization. In a challenging book, Kehoe has suggested that the African *coloni* were people of more substantial means than commonly assumed, a thesis that is currently much debated. This is an area where the archaeological traces of such estates ought to provide valuable complementary material.²⁷⁴ Similarly there has been some useful work done on the status and organization of rural labour in North Africa as a whole, but, with few exceptions, it has been almost entirely non-archaeological in orientation.²⁷⁵

So what can archaeology contribute? Field survey can reveal a great deal about the broad settlement trends and site morphology on a region by region basis (it is an error to presume a general homogeneity of settlement across the Maghreb). There is, however, also a need for much more excavation at rural sites, to clarify details about their phasing, function, productivity, cultural outlook and population.²⁷⁶ Furthermore, rural archaeology has dramatically improved our understanding of the exploitation of particular resources, such as olive production, yet at the same time there is an extraordinary dearth of excavated olive presses.²⁷⁷ Olive oil production can now be identified even more confidently than hitherto as one of the major contributors to the African economy, with the scale of the largest presses and their overall density well in excess of what is encountered in most other regions of the Roman world.²⁷⁸ On a lesser scale, viticulture has also been argued to have been of more importance than sometimes recognized.²⁷⁹ Our knowledge of cereal cultivation, for which Africa is most famous, currently remains anchored to the literary and epigraphic data for want of more archaeological work in the 'wheat belt' of northern Tunisia.²⁸⁰

Much of the fieldwork in recent decades has been carried out by individuals or by very small teams, though this does not detract from the importance of the results obtained.²⁸¹ Olwen Brogan, for instance, established many key new ideas about the archaeology of the Libyan pre-desert in the 1960s–1970s, and much of her reasoning has been confirmed by the subsequent Libyan Valleys survey (see below).²⁸² The best of this small-scale work has found many new sites to supplement those already mapped by the Atlases for Tunisia and Algeria, and has successfully blended archival and topographic information, literary and epigraphic commentary, and reflections on the visible archaeology.²⁸³ What is often lacking, however, is systematic collection of sherds and full classification and identification of the ceramic

²⁷⁴ D. P. Kehoe, *The Economics of Agriculture on the Roman Imperial Estates in North Africa* (1988); cf. Flach's review, *JRA* 2 (1989), 262–6; C. Howgego, *JRS* 82 (1992), 24–5; P. W. de Neeve, *Colonus. Private Farm Tenancy during the Republic and Early Principate* (1984); W. Scheidel, *Der colonus bei Columella: Image, sozialer Status und ökonomische Funktion* (1989). See also works by Vera in n. 275.

²⁷⁵ J. Carlsen, *Af Rom* VIII (1991), 625–37; Kolendo, op. cit. (n. 271); P. Ørsted in J. Carlsen et al. (eds), *Landuse in the Roman Empire* (1994), 115–25; G.-Ch. Picard, *ANRW* II.3 (1975), 98–111; D. Vera, *Af Rom* IV (1987), 267–93; idem, 'Terra e lavoro nell'Africa romana', *Studia Historica* 29 (1988), 967–92; idem in M. Christol et al. (eds), *Institutions, société et vie politique dans l'Empire romain au IVe siècle ap. J.-C. I* (1992), 465–90; C. R. Whittaker, *Klio* 2.60 (1978), 331–62; idem in P. Garnsey (ed.), *Non-slave Labour in the Greco-Roman World* (1980), 73–99. Cf. R. B. Hitchner, 'Historical text and archaeological context in Roman North Africa: the Albertini Tablets and Kasserine Survey', in D. B. Small (ed.), *Methods in the Mediterranean. Historical and Archaeological Views on Texts and Archaeology* (1995), 124–42.

²⁷⁶ Rare example of a published rural excavation, L. Anselmino et al., *Il castellum di Nador. Storia di una fattoria tra Tipasa e Caesarea (I–VI sec d.C.)* (1989), hereafter, Anselmino et al., *Nador*.

²⁷⁷ A. Akerraz and M. Lenoir, 'Les huileries de Volubilis', *BAM* 14 (1982), 69–120; G. W. W. Barker and G. D. B. Jones, *Lib Studs* 15 (1984), 13–18; cf. S. Ben Baaziz, 'Les huileries de la Tunisie antique', *ACHCM* 4 (1991), 39–64; J.-P. Brun, *L'oléiculture antique en Provence* (1987), 97–109; H. Camps-Fabrer in *L'huile d'olive en Méditerranée* (1985); M. Euzennat, *CHAAAN* 2 (1985), 161–71; J.-P. Laporte, 'Fermes, huileries et pressoirs de Grande Kabylie', *CHAAAN* 2 (1985), 127–46; P. Leveau, 'Pressoirs à huile autour de Caesarea de Maurétanie (Cherchel, Algérie)', in *Histoires des techniques et sources documentaires. Methodes d'approche et expérimentation*

en région Méditerranéenne (1985), 193–7; P. Morizot, 'L'Aures et l'olivier', *Ant af* 29 (1993), 177–240.

²⁷⁸ R. B. Hitchner and D. J. Mattingly, 'Fruits of Empire. The production of olive oil in Roman Africa', *National Geographic Research and Exploration* 7.1 (1991), 36–55; D. J. Mattingly in Buck and Mattingly, *Town and Country*, 27–46; idem, *OJA* 7.2 (1988), 177–95; idem, *JRA* 1 (1988), 33–56; idem, 'Maximum figures and maximizing strategies of oil production?', in M.-C. Amouretti and J.-P. Brun (eds), *La production du vin et de l'huile en Méditerranée* (1993), 483–98; idem, 'Regional variation in Roman oleoculture: some problems of comparability', in J. Carlsen et al. (eds), *Landuse in the Roman Empire*, Analecta Romana Instituti Danici Supplementum xxii (1994), 91–106; D. J. Mattingly and R. B. Hitchner, 'Technical specifications of some North African olive presses of Roman date', in Amouretti and Brun, op. cit., 439–62.

²⁷⁹ R. Lequement, *Ant af* 16 (1980), 185–93; R. Rebuffat and I. Gabard, *Caesardunum* 24 (1988), 219–36.

²⁸⁰ H. Jaïdi, *L'Afrique et le blé de Rome aux IVème et Vème siècles* (1990).

²⁸¹ P. Leveau, 'Paysanneries antiques du pays Beni-Menacer', *BCTH* ns 8B (1975), 3–26; idem, 'Une vallée agricole des Nemenchas dans l'antiquité romaine: l'Oued Hallail entre Djeurf et Ain Mdila', *BCTH* ns 10–11B (1977), 103–21; idem, 'Recherches sur une région montagnaise de Maurétanie Césarienne: des Tigava Castra à la mer', *MEFR* 89 (1977), 257–311; P. Morizot, 'Economie et société en Numidie méridionale: l'exemple de l'Aures', *Af Rom* VIII (1991), 429–46.

²⁸² O. Brogan in Gadallah, *Libya in Hist.*, 121–30; idem, *LA* 13–14 (1977) [1984] 93–129; O. Brogan and J. M. Reynolds in Buck and Mattingly, *Town and Country*, 13–23; O. Brogan and D. J. Smith, *Ghirza: a Romano-Libyan Settlement in Tripolitania* (1984).

²⁸³ J. Peyras, 'Le "fundus aufidianus": étude d'un grand domaine romain de la région de Mactar, (Tunisie du nord)', *Ant af* 9 (1975), 181–22 (though note criticism by P. Leveau, *CT* 26, [101–102] (1978), 7–13); idem, *Le Tell Nord-est Tunisien dans l'antiquité* (1991).

material, in the manner now standard in North Mediterranean survey. To this extent, Greene's review of sites near Carthage²⁸⁴ and Leveau's groundbreaking study of the city of Caesarea and its territory fall between the older antiquarian approach and the more recent systematic survey.²⁸⁵ The bulk of the 241 sites located between 1967–1972 in the hinterland of Caesarea fell within a semi-circular zone of c. 500 sq km, where the rural settlement hierarchy was dominated by c. sixty–seventy villas (out of thirty six villas investigated in detail, eight sites had an area of more than 2,400 sq m, the rest areas between 600 and 2,400). Many small villas had a roughly square plan, with central courtyard, while some of the largest sites had terraced façades. The use of ashlar masonry in the *opus africanum* tradition is a common trait. Leveau suggested that five of the thirty six villas were major estate centres, seventeen important villas, and fourteen more moderate establishments. However, these villas were essentially functional structures, not luxurious dwellings (the exception being three seaside villas). This is supported by the important evidence for olive presses (c. 100 recorded), which in at least four cases were arranged in banks in specialist oily buildings. Apart from the villas, Leveau found evidence for smaller rural sites built of less durable materials (representing tenant farms and farmsteads?), along with an important number of agglomerations (villages?), sometimes in association with villas, sometimes in isolation, and in one case covering c. 10 ha, though more normally 2–3 ha. At the fringes of the economic territory of the city (defined by the distribution of villas), such agglomerations appear to represent the top of the settlement hierarchy and may have been accorded the status of *castella*.²⁸⁶ Despite the acknowledged frailties of the dating evidence, based on collections of fineware diagnostics at a sample of sites only (1,063 sherds from thirty four sites), important chronological conclusions emerge. In the absence of a coarse pottery typology, little could be said about pre-Roman settlement, or indeed about villa development before the late first century A.D., with the heyday of the villa economy (judged purely on ceramic evidence) in the second–fourth centuries. The paucity of later finewares from the survey suggests significant decline of settlement (though subsequent excavation at one site has revealed a very active late antique phase).²⁸⁷ None the less, considering that it was a solo project, carried out at a time when survey methodology was in its infancy, and recognizing the quality of his analytical discussion of the data, Leveau's work is of rare importance and distinction.

In the rest of this section, we shall review the achievements of a number of larger-scale field projects that have established landscape archaeology on a new basis in the Maghreb (Fig. 1). Sadly current conditions in Algeria make work of this nature impossible and a promising project that commenced in 1990 has had to be abandoned for the time being.²⁸⁸

A Franco-Moroccan survey since 1982 of the Sebou basin and its tributaries constitutes a wide-ranging study of a major part of southern Mauretania Tingitana, covering much of the area looked at by Euzennat in his primarily military overview.²⁸⁹ In 1986 the total number of sites discovered was reported as 300, to which should be added some of the 155 sites mapped by Euzennat in the Volubilis region in 1962.²⁹⁰ The available reports on this work are still preliminary, but it is clear that surface sherding has been carried out systematically at many sites, with three main periods of activity noted, pre-Claudian (that is, pre-conquest), Roman provincial (mid-first to late third century), post A.D. 285 (post-abandonment of this southern part of the province). The pattern emerging is of the utmost interest, with the five main urban centres all revealing traces of pre-Roman settlement, though only a handful of the 200 plus rural sites have such early material. Most of the rural settlement appeared in the course of the first century A.D., with expansion in the second and possible stagnation in the third, while later the rural settlement again becomes invisible (perhaps because of a lack of datable coarsewares), though some of the urban centres, notably Volubilis, evidently had a long afterlife. Another interesting, though not entirely unexpected, aspect of the sherd collections is the light they shed on the prolonged close trade links between the region and Spain. With the exception of the early ARS forms, material originating from the other African provinces is rare. Little detail of the sites has been published as yet, though many rural settlements survived only as surface debris, rather than in plan form.

The Tuniso-Danish Africa Proconsularis project (1987–9) involved both survey and excavation at the Roman town of Segermes and in its territory. Within a zone of 600 sq km, intensive fieldwalking was

²⁸⁴ J. A. Greene, *Ager et 'Arosot: Rural Settlement and Agrarian History in the Carthaginian Countryside* (1990).

²⁸⁵ Leveau, *Caesarea*, 217–485; idem in P.-A. Février and P. Leveau, *Villes et campagnes dans l'Empire romain* (1982), 77–89; idem, 'L'organisation de l'espace agricole en Afrique à l'époque romaine', *Afrique Occ Romain*, 129–41; idem in *Mélanges le Glay* (1994), 204–19.

²⁸⁶ Leveau's work, with its emphasis on rural site morphology differs markedly from that of Peyras, op. cit. (n. 283), which maps the distributions of sites and inscriptions, but provides not a single site plan.

²⁸⁷ Leveau, *Caesarea*, 449–64 (dating); D. J. Mattingly and J. W. Hayes, *JRA* 6 (1992), 410–12 (Nador).

²⁸⁸ E. Fentress *et al.*, 'Prospection dans le Belezma:

rapport préliminaire', in *Actes du Colloque Int. sur l'histoire de Sétif* (1993), 107–27, where significant morphological distinctions had already emerged between the settlements of the plains and mountain areas surveyed.

²⁸⁹ A. Akerraz and E. Lenoir, *Afrique Occ Romain*, 213–29 (esp. 219–20); H. Limane and R. Rebuffat, *CHAAAN* 5 (1992), 459–80; R. Rebuffat, *CRAI* 1986, 633–61; R. Rebuffat *et al.*, *CHAAAN* 3 (1986), 219–55; cf. also R. Laporte, *RSA* 4 (1974), 171–221; R. Rebuffat, *Ant* 8 (1974), 25–49.

²⁹⁰ M. Euzennat, 'Intervention', (following Rebuffat, op. cit. (n. 289)), *CRAI* 1986, 652–61; idem, *Le limes de Tingitane* (1989), 176–99, 286–92.

carried out over a total of 26 sq km split between eleven sample sectors. All pottery observed by the field teams was counted (114,000 sherds) and its density across the landscape mapped, though only diagnostics were collected (c. 10,000 sherds). In an area with seventy previously known sites, a total of 193 is now reported. This dramatic rise in the number of sites (the majority comprising architectural remains) over those mapped on the *Atlas archéologique de la Tunisie* is a salutary lesson regarding both the thoroughness of the archaeological observations of the 'brigades topographiques' and the value of intensive methods. Ørsted has differentiated between villas (sites of large size, with evidence for baths) and olive farms, though most of the latter would count amongst the villas of Leveau's work. Many of the farms/villas comprise three ranges in a distinctive U-shaped layout around a court and olive presses are common, though never more than two have been found at a site, suggesting a lesser degree of olive specialization here than in some other areas. Some 'villages' have been identified, though no plans of these have as yet been published. The phasing of settlement is particularly important here, because of the comparatively large sample of pottery processed. Punico-Libyan settlement was certainly present, though possibly sparse, in the region, with a major intensification of sites and land-use in the first and second centuries A.D. The bulk of the ceramics seems to attest that the third and fourth centuries were flourishing times, though with some decline in site numbers following in the fifth and sixth centuries.²⁹¹

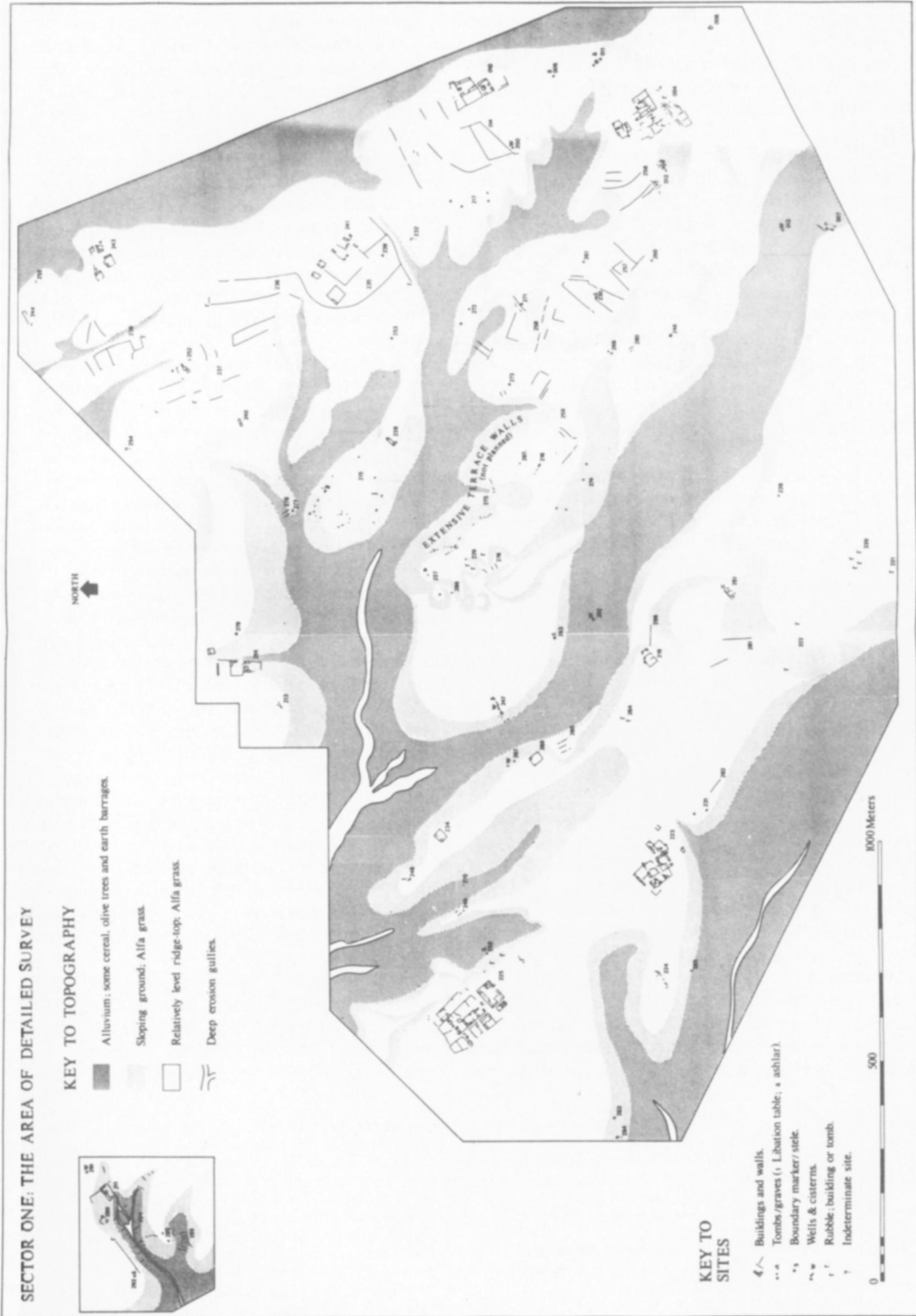
The Kasserine survey (1982–9) was designed to investigate changes in rural settlement and economy in the Tunisian high steppe during the Roman period. The survey focused initially on the investigation of previously recorded rural settlements around ancient Cillium and Thelepte. It quickly became apparent that, here too, high numbers of unrecorded sites existed in between those previously mapped, leading to changes in strategy, with greater priority given to obtaining a detailed record of a sample of the sites, rather than to extensively mapping ever more examples. In the final seasons of the work relatively small areas were subjected to extremely intensive survey, in an attempt to set the settlements in their full landscape context, providing one of the most microscopic examinations of the Roman period landscape so far achieved in North Africa. Work was carried out at varying levels of intensity in five main sectors (with some reconnaissance survey of a sixth). Over 200 sites were recorded (and mostly planned at standard scales) within the 75 sq km so defined, though it should be noted that in the most intensively surveyed area of Sector 1, there was a total of c. twenty settlement sites in an area of only c. 3.5 sq km (Fig. 3).²⁹² The morphology of settlement revealed by the published plans comprises a full hierarchy of farming sites from large villas and purpose-built oileries, through smaller villas and farms in *opus africanum* masonry, to minor farmsteads and isolated buildings built in rough, drystone techniques. There is also a hierarchy of nucleated sites with the three largest being described provisionally as 'agrovilles', since they possess some of the characteristics of urban centres, but reveal a profoundly rural function — that at Ksar el-Guellal covering 53 ha and containing over twenty olive presses. As in the Caesarea survey, there are many other rural 'agglomerations', some linked closely to villas, others more isolated from those presumed estates. Comparative data are urgently needed on these large nucleated rural sites in order that more nuanced interpretations of their status and function can be advanced.

Study of the regional records of the 'brigades topographiques' has provided a detailed picture of the role of oleoculture in this marginal zone, with over 300 presses recorded in an area of c. 1,000 sq km, and these occur in every class of site, though the many oileries, with four or more presses, are particularly striking. The Kasserine survey is noteworthy for the archive of detailed site plans from all levels of the settlement hierarchy (and from different ecological niches within the landscape), perhaps reflecting also varied forms of exploitation. The published plans of sites in Sector 3, for instance, are of interest, because they are morphologically very different from the rest of the material and appear to relate to montagnard communities living in small irregular farmsteads or hamlets comprising several such units. The chronology of Roman settlement in the Kasserine region based on 25,000 sherds ranged from the first century A.D., when large-scale sedentarization appears to have begun, to the sixth/seventh century A.D., with the peak period based on pottery supply being the third to fifth centuries A.D.

The total survey of a 3.5 sq km area of Sector 1 provides a dramatic picture of the spatial dynamics of settlement (Fig. 3). The shaded area represents the cultivable (and still cultivated) alluvium of seasonal rivers (wadis) bisecting the steppe-like plateau. Archaeological features have largely been obliterated here, though there are sufficient indications that this was once covered by field walls of run-off agricultural systems similar to those of the Libyan Valleys Survey (see below). The numerous traces of terrace walls and field-systems on the steppe between the wadis show that those soils were also exploited to some extent in antiquity. Within the area of the map, there are two major oileries, each with a bank of

²⁹¹ The final report is forthcoming, S. Dietz, L. Ladjimi Sebaï and B. Habib, *Africa Proconsularis — Regional Studies in a Roman Landscape*. See also J. Carlsen and H. Tvarnø, *Af Rom* VII (1990), 803–13; C. Gerner Hansen *et al.*, *BTINAA* 4 (1989) [1993], 71–114; P. Ørsted *et al.*, 'Town and countryside in Roman Tunisia', *JRA* 5 (1992), 69–96.

²⁹² R. B. Hitchner, *Ant af* 24 (1988), 7–41; *idem*, 'The organization of rural settlement in the Cillium-Thelepte region (Kasserine, central Tunisia)', *Af Rom* VI (1989), 387–402; *idem*, *Africa* XI–XII (1993), 158–98; R. B. Hitchner *et al.*, *Ant af* 26 (1990), 231–60.



four presses, five other substantial farms, seven or eight minor farmsteads or isolated structures, and thirty four isolated tombs and cemeteries. Stock enclosures are a feature of all types of settlement. Given the scale of olive oil production and pastoral activity attested by the major sites, it seems appropriate to interpret many of the minor sites as tenant or dependent farms within one or more large estates.²⁹³

The UNESCO Libyan Valleys Survey was launched at the behest of Colonel Ghaddafi to investigate the abundant traces of Roman period farming in the Libyan pre-desert. An Anglo-Libyan team investigated the wadi systems of the Sofeggin and Zem-Zem basins c. 100 km south of Tripoli (see below), while a Franco-Libyan team worked in the Bei el-Kebir wadi system and in Syrtica to the south. Although this latter work was curtailed after only two seasons (1979–80), valuable results were achieved.²⁹⁴ A total of fifty nine sites from the southern hinterland of the Syrtic gulf have been published in some detail, with preliminary notices on further explorations in the Bei el-Kebir system to the south-west. The numbers of sites discovered within a zone of many thousands of square km is of less importance than the detail obtained of site typology and dating. Settlement is classified on morphological grounds (particularly clear for farms and cisterns), with many plans and reconstruction drawings published.²⁹⁵ Ceramic analysis was incomplete and thus dating is a problem for many sites, but it appears that sedentary settlement began in the first century A.D., extending at least 20 km south of the coast along the pre-desert wadis, that there was a contraction towards the coastal plain after the third century, but that some sites did continue into Late Antiquity.

In the Sofeggin and Zem-Zem region (c. 50,000 sq km in extent) survey was carried out across five seasons (1979–81, 1984, 1989) and varying in intensity from reconnaissance work designed to achieve a sense of the broad distribution of the farming systems and the upper echelon sites, to mapping in detail small areas of the well-preserved archaeological landscape. The dossier of information generated by this project is vast, more than 2,500 sites recorded, over 55,000 sherds of pottery collected and processed, over thirty preliminary publications and the final report now forthcoming. The settlement hierarchy here was dominated by élite farms, initially undefended and often of *opus africanum* construction, later fortified. There were large numbers of less substantial farms and farmsteads, small settlements, huts and tent bases (occurring singly and in groups), along with a more restricted number of hilltop villages (which may represent an element of pre-Roman settlement continuing into the Roman period). Olive production played a significant part in the regional economy to judge from over sixty presses located, though mostly in single units and with no more than two presses known at any site. It is now abundantly clear that the wadi farmers were indigenous Libyans, Romanized and/or Punicized to a varying degree, and not settlers from outside the region (let alone from overseas). The economic success of a sizeable élite group amongst them, despite the harshness of the pre-desert climate, is indicated by more than seventy mausolea and by the architectural pretension of the major sites (exemplifying also the archaeological richness due to the fine preservation of all categories of site). It is presumed that many of the minor structures were held in some sort of dependency relationship by the upper echelon settlements.²⁹⁶

The earliest settlement in the pre-desert is hard to date, since no pre-first-century A.D. finewares have been identified. However, it is clear from the study of both fine and coarse pottery that there was a dramatic and sustained increase in sedentary settlement from the third quarter of the first into the second century A.D. In the third century, there was some relocation of settlement, perhaps partly a response to the emerging trend towards fortified sites (*gsur*), but settlement remained relatively strong in many parts of the zone into the fifth and sixth centuries, despite the collapse of central state control over the interior of Tripolitania by the mid-fifth century at latest. Wadi farming continued, though clearly on a diminishing scale, into the Islamic period.²⁹⁷

An innovative aspect of the ULVS work has been the integration of an array of scientific analyses in what can truly be described as an interdisciplinary project. The range of data now available on the geomorphology, sedimentology, erosion patterns, hydrology, palynology, and palaeoecology provides substantial support for the conventional archaeological information when it comes to evaluating the reasons for the rise and decline of the run-off farming systems. It is clear, for instance, that climatic

²⁹³ *idem*, *Af Rom* vi, 399–402; *idem*, *Ant af* 26, 244–55.

²⁹⁴ R. Rebuffat, 'Les fermiers du desert', *Af Rom* v (1988), 33–68; M. Reddé, *CHAAN* 2 (1985), 173–82; *idem*, *Prospections des vallées du nord de la libye (1979–1980). La région de Syrte à l'époque romaine* (1988).

²⁹⁵ Rebuffat, *op. cit.* (n. 289), for the reconstruction drawings.

²⁹⁶ G. W. W. Barker in Buck and Mattingly, *Town and Country*, 291–307; G. W. W. Barker and G. D. B. Jones, *Lib Studs* 12 (1981), 9–48; *idem*, *Lib Studs* 13 (1982), 1–34; *idem*, *Lib Studs* 15 (1984), 1–45; *idem* in S. Macready and F. H. Thompson (eds), *Archaeological Field Survey in Britain and Abroad* (1985), 225–41; G. W. W. Barker *et al.*, *Lib Studs* 22 (1991), 31–60; C.

Flower and D. J. Mattingly, *Lib Studs* 26 (1995), (on GIS analysis); C. O. Hunt *et al.*, *Lib Studs* 17 (1986), 7–47; G. D. B. Jones in Buck and Mattingly, *Town and Country*, 263–89; G. D. B. Jones and G. W. W. Barker, *Lib Studs* 11 (1980), 11–36; *idem*, *Lib Studs* 14 (1983), 39–68; D. A. Welsby, *Lib Studs* 22 (1991), 61–80; *idem*, *Lib Studs* 23 (1992), 73–99. The final report is forthcoming. G. W. W. Barker *et al.* (eds), *Farming the Desert. The UNESCO Libyan Valleys Archaeological Survey*.

²⁹⁷ Pottery: J. N. Dore in Buck and Mattingly, *Town and Country*, 107–25; *idem*, *Lib Studs* 19 (1988), 61–85; *idem*, *Lib Studs* 21 (1990), 9–17; C14: J. N. Dore and M. van der Veen, *Lib Studs* 17 (1986), 65–8.

change does not provide a unitary explanation for the demise of wadi farming, though environmental changes brought about by a range of human and natural factors can be seen to have contributed to a very complex equation.²⁹⁸

The technology of run-off farming is comparatively well-understood as a result of a number of recent archaeological and ethnographic studies.²⁹⁹ In the ULVS, the superb preservation of the catchment systems, cross-wadi and edge walls, the associated sluices and drop structures, and cisterns permits detailed reconstruction of these farming systems. In the best cases recorded, it is possible to link specific groups of fields with particular sites.³⁰⁰ This also allows a better appreciation of the Albertini Tablets, a set of late fifth-century estate records from another area of floodwater farming close to the Kasserine survey zone.³⁰¹

From such studies can new theories and insights into the ancient economy of Africa be built. At the heart of this revised interpretation is a recognition that the scale of the evidence now available cannot be explained in terms of the minimalist view of economic stagnation. What we very clearly have in Roman Africa is economic growth at a rate that must have far exceeded demographic increase both within the province as a whole and within its constituent farming regions. Olive cultivation and olive oil production for export markets are identified as archaeologically traceable indicators of this growth.³⁰² We surmise that a dynamic form of share tenancy (probably based on the Mancian tenure known from imperial estates or some similar system) was used to facilitate the agricultural development and tenorial arrangements of private estates, particularly in areas where we see evidence of dramatic expansion in the Roman period. The economic implications of this agricultural revolution are considered below.

The importance of pastoralism as a mainstream and well-integrated activity of farming in Roman Africa is now increasingly recognized. This is in marked contrast with the colonial belief that sedentary agriculture existed only within the province and that nomadic and unruly pastoralists were held back beyond its borders, closed off in mountainous reserves, or allowed into the agricultural region only under strict supervision. Indeed, both archaeological and historical data suggest that there was significant evolution towards more specialized forms of pastoral production during the Roman period.³⁰³

Fortified farms and their function within late Roman farming and military society have been another area of controversy, but the repeated occurrence of such structures in regions of the province close to the frontiers indicates that defence probably was one motivation behind their construction. However, the overwhelming majority of these fortified sites played no part in the formal defence or policing arrangements of the frontiers, rather they were civilian farms looking to their own security. Many farms that had earlier been unprotected were converted in whole or in part to defensible sites by the addition of ditches, new walls, towers etc.³⁰⁴ Although, there is less archaeological evidence for defensive features on rural sites in northern Tunisia, to judge from the Segermes data at least, the mosaic depictions of late Roman rural villas in this zone commonly show structures with prominent towers and high walls.³⁰⁵ The explanation for this must lie in the fact that the so-called fortified farms were not necessarily as functional as might at first sight appear. That at Nador in between Caesarea and Tipasa, for instance, had an impressive façade with corner towers and an ashlar main gate, but an utterly exposed rear entrance. The less immediate the danger, the more superficial will have been the defensive features that were worked into the architecture of élite sites. Even in the frontier regions proper, the prestige and status value of defensive structures undoubtedly played a part in the popularity and spread of such features.³⁰⁶

²⁹⁸ G. W. W. Barker *et al.*, *Lib Studs* 14 (1983), 69–85; D. D. Gilbertson and C. O. Hunt, *Lib Studs* 19 (1988), 95–121; *idem*, *Lib Studs* 21 (1990), 25–42; D. D. Gilbertson *et al.*, *Lib Studs* 18 (1987), 15–27; C. O. Hunt *et al.*, *Lib Studs* 16 (1985), 1–13; *idem*, *Lib Studs* 18 (1987), 1–13.

²⁹⁹ M. Evenari *et al.*, *The Negev. Challenge of a Desert* (1971); see above nn. 261, 263–4.

³⁰⁰ D. D. Gilbertson *et al.*, *Lib Studs* 15 (1984), 45–70.

³⁰¹ Hitchner, *op. cit.* (n. 275), 124–42; D. J. Mattingly, *Af Rom* vi (1989), 403–15; cf. B. D. Shaw, *Ant af* 18 (1982), 61–103, for a wadi farming regime fed also by spring; *idem*, *Ant af* 20 (1984), 121–73; *idem* in A. T. Hodge (ed.), *Future Currents in Aqueduct Studies* (1991), 63–91.

³⁰² R. B. Hitchner in M.-C. Amouretti and J.-P. Brun (eds), *La production du vin et de l'huile en Méditerranée*

(1993), 499–508; D. J. Mattingly, *R.O.M.M.* 41–2 (1987), 45–65; *idem*, *Lib Studs* 19 (1988), 21–41; *idem*, *Lib Studs* 20 (1989), 135–53.

³⁰³ R. B. Hitchner, 'Image and reality. Pastoralism in the Tunisian high steppe in the Roman and late antique period', in J. Carlsen *et al.* (eds), *Landuse in the Roman Empire* (1994), 27–43; P. Leveau, 'Le pastoralisme dans l'Afrique antique', in C. R. Whittaker (ed.), *Pastoral Economies in Classical Antiquity* (1988), 177–95.

³⁰⁴ N. Benseddik, *Limes* 12 (1980), 977–98; A. F. Elmayer, *Lib Studs* 16 (1985), 77–84; R. Guery, *Limes* 13 (1986), 600–4; D. J. Mattingly and J. W. Hayes, *JRA* 5 (1992), 408–18.

³⁰⁵ Ørsted *et al.*, *op. cit.* (n. 291); N. Duval, 'L'icôneographie des villas africaines et la vie rurale dans l'Afrique romaine de l'antiquité tardive', *CHAAAN* 3 (1986), 163–74.

³⁰⁶ Mattingly and Hayes, *op. cit.* (n. 287), 414–18.

Rural markets, especially the periodic *nundinae* for which we have important epigraphic evidence, have not been explored archaeologically.³⁰⁷ Once again, the value of fieldwork, to enrich our view of the texts and to relocate those data in their original settlement context, cannot be overemphasized. Some of the villas and *vici* that hosted such markets were clearly of very substantial size and may well coincide with the sort of sites described in the surveys as 'agglomerations', 'agrovilles' etc.³⁰⁸

X. PALAEOECONOMIC STUDIES

Pollen analysis is a crucial element in archaeological reconstruction of past landscapes and, in conjunction with faunal and botanical sampling, it is a prime tool for elucidating ancient subsistence patterns. Disappointingly little work of this kind has been done, despite its potential in an area of clear environmental change and the fact that pollen preservation appears to be reasonable and initial results highly promising.³⁰⁹

Identification and analyses of faunal material from excavations have thus far been relatively uncommon, though Carthage has been a particular focus for this type of work³¹⁰ and a number of other modern stratigraphic excavations (for example at Benghazi, Cherchel, and Sétif) provide comparable samples (Table 1).³¹¹

Even from these limited samples it is clear that there was considerable regional and chronological difference. The dominance of sheep and goat in most of the samples is clear-cut, as is the fact that consumption of pork seems to have been highest in the late Roman period. Cattle appear to be comparatively uncommon, even making allowance for the far higher meat yield of a single bullock over a sheep or goat. The exceptions are Cherchel (apart from in Late Antiquity) and Sidi Khrebish (Benghazi) in Hellenistic and late Roman times. Although urban faunal samples may be biased in favour of meat consumption (partly serving the market for sacrificial animals), it is interesting to note that the pattern from a small group of rural sites seems to reflect the same general trends — favouring meat production over primary exploitation for dairy products and wool.

For botanical remains, once again some of the best data come from Carthage,³¹² with evidence of varying quality from a number of other sites.³¹³ The results are more difficult to compare one with another, since in general samples have been small, non-standardized, and disappointingly limited in range. This is not entirely surprising of urban sites; what is needed is much more botanical sampling on rural production sites. None the less, there are important conclusions to be drawn already about the development and success of agriculture, particularly in the desert and pre-desert margins. In the Garamantian heartlands of Fezzan (annual average rainfall, 9 mm), it is now clear that whilst the weed samples show a similar climate to the present, irrigated cultivation of cereals (including bread wheat), vines, and date palms was underway in the early first millennium B.C. (perhaps as early as the

³⁰⁷ N. Charbonnel and S. Demougin, 'Une marché en Numidie au IIIe siècle après J.-C.', *Revue historique de droit français et étranger* (1976), 559–68; J. Desanges, *Af Rom* vi (1989), 283–91; B. D. Shaw, *Research in Economic Anthropology* 2 (1979), 91–117; idem, 'Rural markets in North Africa and the political economy of the Roman Empire', *Ant* af 17 (1981), 37–83; L. de Light, *Roman Fairs and Markets in the Roman Empire. Economic and Social Aspects of Periodic Trade in a Pre-industrial Society* (1993).

³⁰⁸ R. B. Hitchner, *Af Rom* vi (1989), 391, 401–2; Leveau *et al.*, *Campagnes...*, 169–72.

³⁰⁹ A. Brun and M. Rouvillois-Brigol, 'Apport de la palynologie à l'histoire de peuplement en Tunisie', in J. Renault-Miskovsky *et al.* (eds), *Palynologie archéologique* (1985), 213–24; C. O. Hunt *et al.*, 'ULVS XVII: palaeoecology and agriculture of an abandonment phase at gasr Mm 10, Wadi Mimoun, Tripolitania', *Lib Studs* 18 (1987), 1–13; M. Rouvillois-Brigol, 'La steppisation en Tunisie depuis l'époque punique: déterminisme humain ou climatique?', *CHAAN* 2 (1985), 215–24.

³¹⁰ S. Payne, 'The mammal bones', in G. Vitelli, *Islamic Carthage, An Assessment of the Evidence* (1981), 52; D. S. Reese, 'Faunal remains (osteological and marine forms) 1975–76', in Humphrey, *Carthage* 3 (1977), 131–66; idem, 'Faunal remains from three cisterns (1971.1–3)', in Humphrey, *Carthage* 6 (1981), 191–258; J. H. Schwartz, 'The (primarily) mammalian fauna', in Hurst and Roskams, *Excavations at Carthage 1.1* (1984), 229–50. M. A. Levine, 'Mammal and bird remains', in Hurst, *Excavations at Carthage II.1* (1994), 314–19.

³¹¹ G. W. W. Barker, 'Economic life at Berenice: the animal and fish bones, marine molluscs and plant remains', in J. A. Lloyd, *Excavations at Sidi Khrebish Benghazi (Berenice) II* (1983), 1–49; G. Clarke, 'ULVS XIV: Archaeozoological evidence for stock-raising and stock-management in the pre-desert', *Lib Studs* 17 (1986), 49–64; idem, 'The faunal remains from Cherchel', in Benseddik and Potter, *Cherchel*, 159–95; A. Grant, forthcoming ULVS bone report; A. King, 'Animal bones', in Mohamedi *et al.*, *Sétif*, 248–59; G. Siracusano, 'The fauna of Leptis Magna from the IVth to the Xth century AD', *Archaeozoologia* 6.2 (1994), 111–30.

³¹² S. Bottema and W. Van Zeist, 'Palaeobotanical studies of Carthage', *CEDAC* 2 (1979), 17–22; *ibid.*, 5 (1983), 18; R. I. Ford and N. Miller, 'Palaeoethnobotany I', in Humphrey, *Carthage* 4 (1978), 181–7; E. S. Hoffman, 'Palaeoethnobotany II: plant remains from Vandal and Byzantine deposits in cisterns 1977.1–3', in Humphrey, *Carthage* 6 (1981), 259–68; idem, 'Palaeoethnobotany III: charcoal analysis from Vandal and Byzantine deposits in two cisterns', in Humphrey, *Carthage* 7 (1982), 193–200; R. Stewart, 'Carbonized seeds', in Hurst and Roskams, *Excavations at Carthage 1.1* (1984), 257; M. van der Veen and W. van Zeist, 'Analyses Palaeobotaniques', *Byrsa II* (1982), 389; W. van Zeist in Hurst, *Excavations at Carthage II.1* (1994), 325.

³¹³ Barker, *op. cit.* (n. 311), 31; J. M. Bond in Benseddik and Potter, *Cherchel*, 196–9; C. Palmer in Mohamedi *et al.*, *Sétif*, 260–6.

TABLE 1. FAUNAL SAMPLES FROM NORTH AFRICAN SITES, SHOWING RELATIVE PERCENTAGES OF MAIN LIVESTOCK RAISED. OX% = BOVIDS; S/G% = OVICAPRIDS; PIG% = PIG, EXPRESSED AS PERCENTAGES OF THE TOTAL NUMBER OF IDENTIFIABLE BONES OF THESE THREE MAIN GROUPS. DATES ARE GIVEN WITHIN CENTURY BANDS (5 A.D. = FIFTH CENTURY A.D. ETC.), WITH NO ATTEMPT HERE TO DISTINGUISH EARLY/MID/LATE DIVISIONS WITHIN THE DATA (AFTER KING IN MOHAMEDI *ET AL.*, 253 WITH ADDITIONS AND CORRECTIONS).

Site	Reference	Date (C)	Ox%	S/G%	Pig%	Total No.
Urban						
Cherchel 2	Benseddik & Potter 1993	1 B.C./1 A.D.	32	42.5	25.5	730
Cherchel 3	Benseddik & Potter 1993	3-4 A.D.	35.7	45.6	18.7	171
Cherchel 4	Benseddik & Potter 1993	5 A.D.	3.3	87.2	9.5	273
Cherchel (Islamic)	Benseddik & Potter 1993	7 A.D. f.	27.3	64.8	7.9	139
Carthage (Gk Chariot.)	Humphrey 1977	2-4 A.D.	17.0	52.7	30.3	294
Carthage (Gk Chariot.)	Humphrey 1977	5-6 A.D.	1.7	58.3	40.0	60
Carthage (Gk Chariot.)	Humphrey 1977	6-7 A.D.	6.3	65.2	28.6	112
Carthage (Cistern 1)	Humphrey 1981	5 A.D.	2.1	54.2	43.7	2142
Carthage (Cistern 3)	Humphrey 1981	5-6 A.D.	6.7	51.7	41.5	489
Carthage (Cistern 2)	Humphrey 1981	6-7 A.D.	0.5	55.8	43.8	1234
Carthage Ave B. I	Hurst and Roskams 1984	5-6 A.D.	1.7	62.7	35.5	2304
Carthage Ave B. II	Hurst and Roskams 1984	6 A.D.	1.1	63.3	35.6	469
Carthage Ave B. III	Hurst and Roskams 1984	7 A.D.	1.3	66.1	32.6	874
Carthage Ave B. IV	Hurst and Roskams 1984	6-7 A.D.	0.6	75.1	24.3	2067
Carthage Circular Harbour	Hurst 1995	1 B.C.-1 A.D.	24.5	9.4	66	53
Carthage Circular Harbour	Hurst 1995	1-4 A.D.	17.6	50	32.4	102
Carthage Circular Harbour	Hurst 1995	5-6 A.D.	16.3	31.9	51.8	166
Carthage Circular Harbour	Hurst 1995	6-7 A.D.	3.6	66.1	30.3	221
Carthage Eccl. I-IV	Humphrey 1977	7 A.D.	2.0	64.0	34.1	1066
Carthage Eccl. V	Humphrey 1977	10-11 A.D.	1.8	73.1	25.1	227
Carthage Byrsa	Vitelli 1981	11 A.D.	8.9	91.1	0	56
Lepcis Magna (Flav Temp)	Siracusano 1994	4-7 A.D.	5.8	87.9	6.3	1356
Lepcis Magna (Flav Temp)	Siracusano 1994	9-10 A.D.	9	91	0	377
Sétif I	Mohamedi <i>et al.</i> 1991	5 A.D.	6.1	45.0	48.9	231
Sétif II	Mohamedi <i>et al.</i> 1991	10-11 A.D.	13.7	85.5	0.8	380
Sétif III	Mohamedi <i>et al.</i> 1991	11-12 A.D.	19.0	81.0	0	195
Sidi Khrebish (SK 1)	Lloyd 1983	2 B.C.-1 A.D.	36.0	41.0	23.0	222
Sidi Khrebish (CC 9/11)	Lloyd 1983	2 B.C.	46.2	52.0	2.0	52
Sidi Khrebish (CC 7.2)	Lloyd 1983	1 B.C.	8.3	88.1	3.6	84
Sidi Khrebish (CC 7.1)	Lloyd 1983	1 A.D.	4.9	87.6	7.5	225
Sidi Khrebish (CC 2/4)	Lloyd 1983	1 A.D.	6.3	89.9	3.8	79
Sidi Khrebish (SK 2)	Lloyd 1983	1-3 A.D.	22.1	55.8	22.1	1151
Sidi Khrebish (H 2)	Lloyd 1983	3 A.D.	15.6	29.4	54.8	482
Sidi Khrebish (SK 3)	Lloyd 1983	3 A.D.	54.5	30.1	15.4	209
Sidi Khrebish (SK 4)	Lloyd 1983	4-7 A.D.	20.0	57.9	22.1	190
Rural Sites (ULVS)						
Lm 4	<i>Lib Studs</i> 17 (1986), 53	1-3 A.D.	2.4	91.6	6.0	368
Mm 10	<i>Lib Studs</i> 17 (1986), 53	3-5 A.D.	8.2	87.1	4.7	170
Kh 1001	Barker <i>et al.</i> forthcoming	5-7 A.D.	2.1	85.1	12.8	94
Abu Telis	<i>Lib Studs</i> 17 (1986), 53	15 A.D.	1.8	98.2	0	112

ninth–eighth centuries).³¹⁴ Similarly, following the excavations at Ghirza and the Libyan Valleys survey in the pre-desert zone of eastern Tripolitania it has been established that a Mediterranean range of crops (cereals, olives, vines, figs, almonds, pulses), was cultivated through the techniques of run-off farming. Here also the background natural vegetation, suggested by weed species, was that of an arid zone similar to the present-day landscape, with the samples from the first–third century A.D. and from late antique times being broadly comparable, suggesting a relatively stable regime of cultivation across a long period.³¹⁵

A prime desideratum is more information from additional sites to confirm, contradict, or enrich these preliminary observations. A number of questions can be answered with this sort of data which cannot be resolved satisfactorily by other means. The most important issue concerns the development of farming in pre-Roman Africa and the extent to which the Roman take-over made an appreciable difference on the pattern of cultivation and stock-raising. If more early samples are obtained, such as those from the Garamantian hill-fort at Zincheera, it may also be possible to elucidate the nature of early cultivars and trace their evolution through progressive propagation. For instance, the location and nature of early vine and olive cultivation in the Maghreb is presently unclear. A second aspect concerns the use of animals and plants in society. Analysis of mortality rates for stock can indicate the sort of regime being followed (most of the samples thus far from urban and rural contexts indicate that animals were being slaughtered predominantly for meat production at two years age or less, rather than being maintained for longer-term dairy and wool production). On the other hand, North African society and the military garrison must have had a large requirement of leather and wool, though the currently available data give no real clue as to where that need was supplied from. The archaeological context from which samples come can also provide technological or social insights; at Leptiminus, olive pits were used as a solid fuel in kilns and baths, and food offerings of olives, grapes, and figs seem to have been placed in many graves.³¹⁶ A third area, of relevance to many modern problems confronting the region, is when, where, why, and at what rate did production decline (as a variety of evidence suggests it had done during Late Antiquity)? Was it a consequence of the political, military and economic breakdowns?³¹⁷ Or of soil exhaustion through over-intensive agriculture,³¹⁸ climatic change,³¹⁹ or because of the depredations of herders?³²⁰ The late antique and Islamic samples cited above are of great relevance here in that they do not suggest cataclysmic decline and change, rather a continuation of Roman period trends (with the exception of the virtual disappearance of the pig from faunal samples) in the context of a diminishing economic system.

XI. ECONOMY AND TRADE

No area of study of Roman Africa has witnessed such dramatic advance in recent decades as that of the economy.³²¹ In 1969, Zevi and Tchernia published the first detailed account with illustrations of amphorae originating from Africa, to be followed by the revelations in the early 1970s of their importance at Ostia.³²² Carandini's highly perceptive overview of fine pottery production and its link with trade and agriculture, published in 1970, marked another watershed, being followed soon after by the fundamental study by Hayes of African Red Slip ware (and other later Roman pottery).³²³ With these tools, and a massively augmented body of data as a result of the Carthage excavations, the study of

³¹⁴ M. van der Veen, *Lib Studs* 23 (1992), 7–39.

³¹⁵ idem, 'Botanical remains', in O. Brogan and D. J. Smith, *Ghirza: a Romano-Libyan Settlement in Tripolitania* (1984), 308–11; idem, 'The UNESCO Libyan Valleys Survey X: botanical evidence for ancient farming in the pre-desert', *Lib Studs* 16 (1985) 15–28; idem, forthcoming, final report on the ULVS material.

³¹⁶ K. S. Smith, forthcoming, Leptiminus palaeobotanical report.

³¹⁷ M. Reddé, *Prospections des vallées du nord de la Libye* (1988), 80.

³¹⁸ B. A. and L. Chatterton, 'A hypothetical answer to the decline of the granary of Rome', *Lib Studs* 16 (1985), 95–9.

³¹⁹ J. R. Burns and B. Denness, 'Climate and social dynamics: the Tripolitanian example, 300 BC–AD 300', in Buck and Mattingly, *Town and Country*, 201–25.

³²⁰ P. Salama in Mokhtar, op. cit. (n. 2), 530.

³²¹ This resumé owes much to the detailed and perceptive survey by C. Panella, 'Merci e scambi nel Mediterraneo tardoantico', in A. Carandini et al. (eds), *Storia di Roma* III.2 (1993), 613–97, with very full bibliography. See also A. Giardina (ed.), *Società romana e impero tardoantico III: le merci gli insediamenti* (1986); K. Greene, *The Archaeology of the Roman Economy* (1986).

³²² D. Manacorda, 'Anfore', *Ostia* 4 (= *Studi Miscellanei* 23) (1977), 117–254; C. Panella in *Recherches sur les amphores romaines* (1972), 69–106; idem, 'Anfore', in *Ostia* 3 (= *Studi Miscellanei* 21) (1973), 460–606; F. Zevi and A. Tchernia, *Ant* af 3 (1969), 173–214.

³²³ A. Carandini, 'Produzione agricola e produzione ceramica nell'Africa di età imperiale', *Studi Misc* 15 (1970), 95–121; J. W. Hayes, *Late Roman Pottery* (1972), with idem, *A Supplement to Late Roman Pottery* (1980).

ceramic products from the African provinces has burgeoned.³²⁴ In particular, the publication of several major site assemblages of stratified pottery from Carthage,³²⁵ Sabratha,³²⁶ Berenice (Benghazi),³²⁷ Sétif,³²⁸ and Caesarea³²⁹ offer new possibilities for analysis. Although the handling of such data is not easy for historians, there is enormous potential for the integration of this evidence into wider debates about the nature of the Roman economy. While the predominant trend among British ancient historians has been to minimize the potential for growth in the Roman economy,³³⁰ Africa seems to offer important evidence for just such a phenomenon, continuing over several centuries and leading to a shift in the balance of economic (and political power) towards the Mediterranean's southern shore. This view has been put forcefully by a group of Italian specialists working on ceramics, but is supported by much of the rural settlement evidence discussed already.³³¹

The Punic trade, and especially the amphora-borne products of Africa are now more securely identified archaeologically, as are the signs of pre-Roman rural development.³³² There is little doubt, however, that under Rome there was significant growth in the volume of trade and improvements in the facilities available at the main harbour sites.³³³ In part this may reflect the way that the state's redistributive mechanisms helped to shape and to stimulate the African economy. The role of Africa in the supply system for the city of Rome (the *annona*) has been brought into sharper focus by a number of important historical studies, though the archaeological component of these works is disappointingly small.³³⁴ Grain produced in northern Tunisia, where there were major imperial estates, was vital to Rome and a substantial administrative hierarchy evolved to cope with it. By the early third century, there was a state grain fleet and major remodelling of the harbour facilities at Carthage.³³⁵ The extent of *annona* involvement in products other than cereals prior to the third century is still unclear, but it was in all probability already a contributory factor in the growth of oil production by the second century A.D.³³⁶ At any rate, direct exploitation of African producers by the *annona* was clearly moderated by the economic opportunities that resulted from Roman policies aimed at underwriting or subsidizing the transport costs of both state goods (tax grain etc.) and other commodities required in the markets of Rome (such as olive oil). There is ample evidence in North Africa for local initiative in trade and

³²⁴ Of particular importance are *Atlante delle forme ceramiche I, Ceramica fine romano nel bacino mediterraneo (medio e tardo imperio). Enciclopedia dell'Arte antica, classica e orientale* (1981); S. Tortorella, 'La ceramica africana: una riesame della problematica', in P. Leveque and J. P. Morel, *Céramique hellénistiques et romaines I* (1987), 279–327; note also *Amphores = Amphores romaines et histoire économique. Dix ans de recherches* (1989); *Colloque sur la céramique antique* (CEDAC Dossier 1, 1982); *Les lampes de terre cuite en Méditerranée des origines à Justinien* (1987); *Produccion I = Produccion y Comercio del aceite en la Antigüedad. Primer Congreso Internacional* (1980); *Produccion II = Produccion y Comercio del aceite en la Antigüedad. Segundo Congreso Internacional* (1983).

³²⁵ Notably, M. G. Fulford and D. P. S. Peacock, *Excavations at Carthage: the British Mission. The Avenue du President Bourgiba, Salammbô 1.2. The Pottery and other Ceramic Objects* (1984); idem, *Excavations at Carthage: the British Mission. The Circular Harbour II.2. The Pottery and other Ceramic Objects* (1994); J. W. Hayes in Humphrey, *Carthage I* (1975), 47–123 (and J. Riley, 124–56); idem in Humphrey, *Carthage 2* (1978), 113–18; idem in Humphrey, *Carthage 4* (1978), 23–98; J. Riley in Humphrey, *Carthage 6* (1981), 85–124; R. Tomber in Humphrey, *The Circus and a Byzantine Cemetery at Carthage I* (1980), 437–528. Note also F. Beaulieu *et al.*, *Carthage III = CEA x* (1979), 59–251; idem, *Carthage v = CEA XIII* (1981), 73–154.

³²⁶ J. N. Dore, 'Pottery and the history of Roman Tripolitania: evidence from Sabratha and the Unesco Libyan Valleys Survey', *Lib Studs* 19 (1988), 61–85; J. N. Dore and N. Keay, *Excavations at Sabratha 1948–1951, II, The Finds part 1* (1989); M. G. Fulford and R. Tomber, *Excavations at Sabratha 1948–1951, II, The Finds part 2. The Fine Wares* (1994); P. M. Kenrick, *Excavations at Sabratha 1948–1951, I* (1986), 169–235.

³²⁷ D. Bailey, *Excavations at Sidi Khrebish, Benghazi (Berenice) III.2. The Lamps*, LA Supp. 5.3 (1985); P. M. Kenrick, *Excavations at Sidi Khrebish, Benghazi (Berenice) III.1. The Fine Pottery* (LA Supp. 5.3) (1985); J. Riley, 'Coarse pottery', in J. A. Lloyd (ed.), *Excavations at Sidi Khrebish Benghazi (Berenice)*, LA Supp. 5.2 (1983), 91–467.

³²⁸ Mohamedi *et al.*, *Sétif*, 181–229

³²⁹ Benseddik and Potter, *Cherchel*, 273–360.

³³⁰ M. I. Finley, *The Ancient Economy* (2nd edn, 1985); B. D. Shaw, *Ant of 17* (1981), 37–83; C. R. Whittaker, *Klio* 2.60 (1978), 331–62; idem, 'Trade and aristocracy', *Opus* 5 (1985), 49–75. For views of modest growth, R. P. Duncan-Jones, *Structure and Scale in the Roman Economy* (1990); K. Hopkins, *JRS* 70 (1980), 101–25; idem in P. Garnsey and C. R. Whittaker, *Trade and Famine in Classical Antiquity* (1983).

³³¹ A. Carandini, 'Pottery and the African economy', in P. Garnsey *et al.*, *Trade and the Ancient Economy* (1983), 145–62 (a reprise of his 1970 arguments); C. Panella, 'Le merci: produzioni, itinerari e destini', in Giardina, *op. cit.* (n. 321), 431–59; idem, *op. cit.* (n. 321), 624–41; cf also D. J. Mattingly, 'The olive boom. Oil surpluses, wealth and power in Roman Tripolitania', *Lib Studs* 19 (1988), 21–41.

³³² N. Keay in Dore and Keay, *op. cit.* (n. 326), 12–36; J.-P. Morel, 'Nouvelles données sur le commerce de Carthage punique entre le VIIe siècle et le IIe siècle avant J.C.', *CHAA* 4.1 (1990), 67–100; J. H. Van der Werff, 'Amphores de tradition punique à Uzitta', *BABesch* 52–3 (1978), 171–200; idem, *Uzitta III* (1981).

³³³ Ben Lazreg and Mattingly, *Leptiminius*, 162–75; Hurst, *Excavations at Carthage II.1*.

³³⁴ P. Garnsey in P. Garnsey *et al.*, *Trade in the Ancient Economy* (1983), 118–30; idem, *Famine and Food Supply in the Graeco-Roman World* (1988), 167–277; H. Jaïdi, *L'Afrique et le blé de Rome aux IVe et Vème siècles* (1990); H. Pavis-d'Escurac, *La préfecture de l'annone, service administratif impérial d'Auguste à Constantine* (1976); B. Sirks, *Food for Rome: The Legal Structure of the Transport and Processing of Supplies for the Imperial Distributions in Rome and Constantinople* (1991); E. Tengstrom, *Bread for the People. Studies in the Corn Supply of Rome during the Late Empire* (1974).

³³⁵ Hurst, *Excavations at Carthage II.1* (1994), 109–17; H. Pavis-d'Escurac, 'Réflexions sur la classis Commodiana', in *Mélanges W. Seston* (1974), 397–408.

³³⁶ D. J. Mattingly, 'Oil for export: a comparative study of Roman olive oil production in Libya, Spain and Tunisia', *JRA* 1 (1988), 33–56

manufacture and in the taking and spending of profits from the trade.³³⁷ Although the best evidence at present for the destination of African trade comes from Rome and Ostia, it is apparent that other markets were developed, particularly in the western Mediterranean, and that the African economy was by no means totally reliant on the supply of Rome. Despite evidence for some short-term set-backs in Africa, such as the crushing of the revolt of the Gordians, the third century is starting to emerge as a period of general stability and growth, rather than economic crisis.³³⁸ Nor does the Vandal conquest of Africa seem to have precipitated a collapse of African overseas trade following the cessation of the *annona* at Rome, although this remains a controversial issue — related in part to differing British and Italian dating of fifth-century fineware forms.³³⁹ The continuing export of African finewares, lamps, and amphorae through the seventh century to numerous destinations is in plain contrast to evidence for the premature economic decline of other parts of the western Mediterranean.³⁴⁰

The most valuable commodities of trade were grain, olive oil, wine, fish products, wild beasts, perhaps slaves, with many pottery artefacts probably carried as secondary cargo alongside (lamps, fineware, cooking-ware etc.). Grain is, of course, notoriously difficult to trace archaeologically, but olive oil, wine, and fish products, together with conserved olives (and other fruits?) were carried in amphorae manufactured both near the coast and further inland.³⁴¹ There is considerable debate about the association between these products and particular amphora forms, with perhaps a too-ready assumption that olive oil (with its highly visible production sites) was overwhelmingly the dominant item of commerce. In comparison with the dramatic evidence for fish-processing plants on either side of the Straits of Gibraltar, the Tunisian and Libyan evidence has until recently seemed extremely meagre.³⁴² However, a Tuniso-French project has recently published data requiring a complete reassessment of the potential scale and importance of the marine products industry in Africa: about fifty sites are now known with evidence for fish ponds, fish-salting tanks, and deposits of murex shells.³⁴³

The amphorae in large pottery assemblages from urban excavations are increasingly being used for quantified studies of shifting patterns of production and trade.³⁴⁴ The main Roman imperial amphora types, *Africana I* (or 'Africano Piccolo'), *Africana II* (or 'Africano Grande'), both have a similar date-range from second to fourth century and were commonly produced at the same production sites.³⁴⁵ It was argued initially (and continues to be by some scholars)³⁴⁶ that the Grande series were for oil and the Piccolo type for fish sauce or wine, but finds of fish bones in examples of the Grande type from three shipwrecks suggests that some at least of that production was for fish sauces or other marine products.³⁴⁷ Furthermore, large numbers of African amphorae of various types, including examples of the Grande, but never the Piccolo, have been excluded from consideration as oil transporters on account of the identification of a pitch lining, supposedly oil soluble.³⁴⁸ A division of these pitch-lined specimens between wine, fish products, and other commodities such as olives in brine or *mulsum* cannot be made at present. But it now appears increasingly likely that the initial characterization of the *Africana* types reversed their contents, with the *Africana I*, in fact, being the oil container, and the *Africana II* perhaps

³³⁷ As is clear from R. P. Duncan-Jones, *The Economy of the Roman Empire. Quantitative Studies* (2nd edn, 1982).

³³⁸ X. Dupuis, 'Constructions publiques et vie municipale en Afrique de 244 à 276', *MEFR* 104 (1992), 233–80.

³³⁹ See, *inter alia*, A. Carignani, 'La distribuzione delle anfore africano tra III e VII secolo', in Giardina, *op. cit.* (n. 321), 273–7; M. R. Cataudella, 'L'economia africana del basso impero — realtà di una crisi', *Af Rom* vi (1989), 373–85; T. Clay, 'Carthage et son commerce maritime dans l'antiquité tardive', *CHAAV* 5 (1992), 349–60; M. G. Fulford, 'Carthage: overseas trade and the political economy c. AD 400–700', *Reading Medieval Studies* 6 (1980), 68–80; S. Tortorella, 'Produzione e circolazione della ceramica africana di Cartagine (V–VII sec)', *Opus* 2 (1983), 15–30.

³⁴⁰ Panella, *op. cit.* (n. 321), 657–80.

³⁴¹ C. Lavoie, 'Les traces d'ateliers de poterie à Sullethum', *CEA* 22 (1989), 93–109; Ben Lazreg and Mattingly, *Leptimimus*, 105, 112–14; C. Panella, 'Le anfore di Cartagine: nuovi elementi per la ricostruzione dei flussi commerciali del mediterraneo in età imperiale romana', *Opus* 2 (1983), 53; D. P. S. Peacock *et al.*, 'Roman amphora production in the Sahel region of Tunisia', *Amphores* (1989), 179–222; *idem*, 'Roman pottery production in central Tunisia', *JRA* 3 (1990), 59–84.

³⁴² M. Ponsich, *Aceite de oliva y salazones de pescado. Factores geo-económicos de Bética y Tingitana* (1988); cf. L. Foucher, 'Note sur l'industrie et le commerce des salsamenta et du garum', *Actes du 93e Congrès national de sociétés savantes* (1970), 17–21.

³⁴³ N. Ben Lazreg, P. Troussset *et al.*, 'Production et

commercialisation des salsamenta de l'Afrique du nord', *CHAAV* 6 (forthcoming); R. Paskoff *et al.*, 'Le littoral de la Tunisie dans l'antiquité: cinq ans de recherches géo-archéologiques', *CRAI* 1991, 515–46; P. Troussset, 'La vie littorale et les ports dans la petite Syrie à l'époque romaine', *CHAAV* 5 (1992), 317–32. Scientific studies are needed at the production sites to determine the nature of the products, cf. D. S. Reese, 'Industrial exploitation of murex shells: purple dye and lime production at Sidi-Khrebish, Benghazi (Berenice)', *Lib Studs* 11 (1980), 79–93.

³⁴⁴ M. Beltrán Lloris, 'El aceite en Hispania a través de las anforas: la concurrencia del aceite itálico y africano', *Produccion* 11 (1983), 515–49; M. G. Fulford, 'The long distance trade and communications of Carthage AD 400–650', in Fulford and Peacock, *op. cit.* (n. 325), (1984), 255–62; C. Panella, 'I contenitori oleari presenti ad Ostia in età antonina: analisi tipologica, epigrafica, quantitativa', *Produccion* 11 (1983), 226–61; R. Tomber, 'Quantitative approaches to the investigation of long-distance exchange', *JRA* 6 (1993), 142–66.

³⁴⁵ cf. n. 341, above; D. P. S. Peacock and D. F. Williams, *Amphorae and the Roman Economy. An Introductory Guide* (1986), 153–57.

³⁴⁶ Zevi and Tchernia, *op. cit.* (n. 322); Panella, *op. cit.* (n. 321), 631–2; Peacock and Williams, *op. cit.* (n. 345), 82.

³⁴⁷ J.-P. Bost *et al.*, *L'épave Cabrera III (Majorque)* (1992), 137–44, for the *Africana Grande* being used for fish products and for pickled olives.

³⁴⁸ Ben Lazreg, Troussset *et al.*, *op. cit.* (n. 343); Bost *et al.*, *op. cit.* (n. 347).

used for a larger number of products, including fish sauces, conserved olives, and, possibly, wine.³⁴⁹ Little organic residue analysis has as yet been carried out on African products, though an unpublished study commissioned by Tchernaia³⁵⁰ apparently confirmed the association of the Piccolo type with oil, but with a complete absence of oleaginous traces on the sherds of the Grande amphorae sampled, some of which were also pitch-coated. On the other hand a group of seventh-century Tunisian cylindricals from the Schola Praeconum site in Rome were almost all oil containers.³⁵¹ One possible explanation of the evidence at present is that the African amphorae were not product-specific (in contrast with those of Spain, Gaul, and Italy) and that the contents varied and must have been signalled to the purchaser, trader, or shipper in some other way, such as by the use of painted inscriptions (*tituli picti*) or lead tags.³⁵² On the other hand, studies at Africana production sites are suggesting that the division into African I and IIA-D may be rather too oversimplified, with a wider range of forms (which could have subtly conveyed information about contents) being subsumed under this limited type series.³⁵³ In the Vandal and Byzantine period there was certainly a greater range of forms overall, though a restricted group of types predominated, such as the Keay LXII and Keay XXV.2 (the 'spatheion' type).³⁵⁴

Tripolitania was another region exporting amphorae, with three main types identified for the first to third centuries A.D. Types I and III are generally accepted as oil containers, partly on the basis of *tituli picti* at Pompeii and on the likely association between the stamped Type III form and the olive oil donation made by Lepcis Magna to Rome under Septimius Severus.³⁵⁵ The Type II, less commonly exported, may have been for wine (though an export in fish products is also likely, especially from western Tripolitania, in the region of Gigthis and Gerba). The Mauretian amphorae from the region of Tubusuctu were probably for wine, to judge by the shape (imitative of Gallic wine amphorae) and the fact that some pitch-coated examples are known, although, in view of the evidence for olive presses in this region and the occurrence of this type on Monte Testaccio in Rome, it is not impossible that some of the amphorae may also have been for oil.³⁵⁶

Given what is now known of its Mediterranean distribution and dominant position in many fineware assemblages of Roman imperial date, the evidence for the organization of production of African Red Slip pottery (and associated cook-wares) is thin. It was manufactured in several distinct areas of Tunisia, in the North near Carthage and Cap Bon,³⁵⁷ in the Sahel,³⁵⁸ and on the high steppe near Sbeitla.³⁵⁹ Future studies will undoubtedly turn up more production centres. Despite the great interest in ARS, some forms remain rather imprecisely dated, notably those of the later second and early third century and those of the fifth century.³⁶⁰ Lamp production started much later than the other ARS products, perhaps a reflection of the earlier dominance of Italian ateliers and their branch workshops set up near Carthage.³⁶¹ By the fourth century ARS lamp production was on a very substantial scale.³⁶² Quantification of ARS has led in interesting directions, in one case to a study of field-survey data suggesting periodic rise and fall in the volume of production (with a curve that seems to mirror that of expenditure on public building in the province), in others to an analysis of the changing balance of

³⁴⁹ R. Lequeument, 'Le vin africain à l'époque impériale', *Ant. af* 16 (1980), 185-93.

³⁵⁰ Referred to by D. Gibbins and A. Parker in *JNA* 15.4 (1986), 289-90.

³⁵¹ D. Whitehouse *et al.*, 'The Schola Praeconum II', *PBSR* 53 (1985), 200-5.

³⁵² R. Lequeument, 'Étiquettes de plomb sur les amphores d'Afrique', *MEFR* 87 (1975), 667-80.

³⁵³ J. Dore and R. Schinke, in Ben Lazreg and Mattingly, *Leptiminius*, 120-37; cf. Bost *et al.*, *op. cit.* (n. 347), for an extremely heterogeneous cargo of Africana IIs.

³⁵⁴ J. Freed, 'The late Roman series of Tunisian cylindrical amphoras at Carthage', *JRA* 8 (forthcoming, 1995); S. Keay, *Late Roman Amphorae in the Western Mediterranean. A Typology and Economic Study: The Catalan Evidence* (1984); C. Panella, 'Le anfore tardoantiche: centri di produzione e mercati preferenziali', in Giardina, *op. cit.* (n. 321), 251-84.

³⁵⁵ A. M. Bisi, 'A proposito di alcune iscrizioni puniche su anfore di Pompei', in A. Carandini (ed.), *Instrumentum Domesticum di Ercolano e Pompei nella prima età imperiale* (1977), 151-3; G. Di Vita-Evrard, 'Note sur quelques timbres d'amphores de Tripolitaine', *CHAAN* 2 (1985), 147-59; D. Manacorda, 'Testimonianze sulla produzione e il consumo dell'olio tripolitano nell'III secolo', *Dialoghi di Archeologia* 9-10.1-2 (1977), 542-601; *idem*,

'Prosopografia e anfore Tripolitane: nuove osservazioni', *Produccion* 11 (1983), 483-500; Mattingly, *Tripolitania*, 153-5; C. Panella, 'Anfore Tripolitane a Pompei', in Carandini, *op. cit.*, 135-49.

³⁵⁶ J.-P. Laporte, 'Fermes, huileries et pressoirs de Grande Kabylie', *CHAAN* 2 (1985), 127-46; Peacock and Williams, *op. cit.* (n. 345), 171.

³⁵⁷ M. Mackensen, 'Prospektion einer spätantiken Sigillatöpferei in El Mahrine, Nortunisien', *CEDAC* 6 (1985), 29-39; *idem*, *Die spätantiken Sigillata und Lampentöpfereien von El Mahrine (Nordtunesien): Studien zur nordafrikanischen Feinkeramik des 4. bis 7. Jahrhunderts* (1993).

³⁵⁸ J. N. Dore in Ben Lazreg and Mattingly, *Leptiminius*, 120; Peacock *et al.*, *op. cit.* (n. 341), (1990), 61-6.

³⁵⁹ L. Neuru, 'Red slipped wares of south-western central Tunisia: new evidence', *Rei Cretorum Romanum Fautorum Acta* 25-26 (1987), 175-88; Peacock *et al.*, *op. cit.* (n. 341), (1990), 66-82.

³⁶⁰ Kenrick, *Sabratha*, 201-4, 218-21; Leveau, *Caesarea*, 452-8; S. Tortorella, *Opus* 2 (1983), 15-30.

³⁶¹ J. Deneauve, 'Note sur quelques lampes africaines du IIIe siècle', *Ant. af* 22 (1986), 144-61.

³⁶² A. Ennabli, *Lampes chrétiennes de Tunisie* (1975); *Les lampes de terre cuite en Méditerranée des origines à Justinien* (1987).

imports at African sites.³⁶³ African products are extremely well represented on coastal sites in Sardinia,³⁶⁴ Italy,³⁶⁵ southern Gaul³⁶⁶ and Spain.³⁶⁷

Underwater archaeology has provided valuable additional information on African trade in amphorae and fine pottery.³⁶⁸ The number of African wrecks published in detail is still small,³⁶⁹ in part a reflection on the bias inherent in diving activity along the European Riviera coast, which has tended to overemphasize the importance of shipping between Spain-France-Italy. However, new techniques have allowed investigation for the first time of a deep-water wreck off the Sicilian coast (evidently a late Roman vessel out of Carthage), opening up new possibilities for the examination of the shipping lanes between Africa and Rome.³⁷⁰ Cargo composition appears to be varied, though amphorae of different types are frequently carried in mixed cargoes along with fine pottery. Some wrecks have also contained iron ingots, though the point of origin of this material is unclear.³⁷¹ Perishable commodities must have been carried in quantity but leave no archaeological trace (for example, cereals and foodstuffs, woollen goods, esparto products, slaves, wild animals, exotic wood).

Other commodities moved along these trade routes to Rome, most notably perhaps wild animals for the arena and Numidian marble. The trade in animals is known primarily from epigraphic evidence and iconographic representations (especially in mosaics).³⁷² The marble quarry at Chemtou has been examined in detail in recent years, with the excavation of its military controlled work-camp being of particular importance for our understanding of the organization of production.³⁷³ Additional African sources of marble (or allied types of decorative stone) have been identified, though more work is needed to assess fully the export role of these.³⁷⁴ Marble imports and marble use in Africa has also come under fresh scrutiny as a result of studies of trade in particular sculptural pieces (such as statues or sarcophagi),³⁷⁵ with the new technique of isotopic analysis of marble allowing much greater certainty than before of the quarry of origin of even white marbles.³⁷⁶

Studies of the monetary economy of the North African provinces have been severely hampered by a lack of numismatic data. The number of published hoards is small;³⁷⁷ the same holds true for coin finds

³⁶³ E. W. B. Fentress and P. Perkins, 'Counting African Red Slip ware', *Af Rom* v (1988), 205-14; M. G. Fulford, 'Pottery and the economy of Carthage', *Opus* 2 (1983), 1-14; idem, 'To east and west: the Mediterranean trade of Cyrenaica and Tripolitania', *Lib Studs* 20 (1989), 169-91; P. M. Kenrick, 'Patterns of trade in fine pottery at Berenice', in G. Barker et al., *Cyrenaica in Antiquity* (1985), 249-57.

³⁶⁴ F. Villedieu, *Fouilles d'un site romain tardif a Porto Torres, Sardaigne* (1984).

³⁶⁵ For example, A. Martin, *Af Rom* vi (1989), 475-83; F. Pacetti and S. Sfrecola, *ibid.*, 485-500.

³⁶⁶ J. Deneauve, 'Ceramique et lampes africaines sur la cote de Provence', *Ant* 6 (1972), 219-39; R. B. Hitchner, 'Meridional Gaul, trade and the Mediterranean economy in Late Antiquity', in J. Drinkwater and H. Elton (eds), *Fifth-Century Gaul: A Crisis of Identity?* (1992), 122-31; S. Loseby, 'Marseille, a late antique success story?', *JRS* 82 (1992), 165-85.

³⁶⁷ Keay, *op. cit.* (n. 354).

³⁶⁸ A. J. Parker, *Ancient Shipwrecks of the Mediterranean and Roman Provinces* (1992); S. Tortorella, 'Ceramica di produzione africana e rinvenimenti archeologici sottomarini delle media e tarda età imperiale: analisi dei dati e dei contributi scientifici', *MEFR* 93 (1981), 355-80.

³⁶⁹ A. Dell'Amico et al., *Archaeologia Viva* 10.23 (1991), 34-40 (Grado); D. Gibbins, *IJNA* 18.1 (1988), 1-25; D. Gibbins and A. J. Parker, *ibid.*, 15.4, 267-301 (Plemmirio); R. Lequément, *Rev Arch Narb* 9 (1976), 177-88 (Pampolone); L. Pontacolone and M. Incitti, 'Un relitto con carico di merci africane di età imperiale alle Trincere (Tarquinia)', *Af Rom* viii (1991), 543-70 (Trincere).

³⁷⁰ A. M. McCann and J. Freed, *Deep Water Archaeology: a Late Roman Ship from Carthage and an Ancient Trade Route near Sherki Bank off Northwest Sicily*, *JRA Supp.* 13 (1994).

³⁷¹ Parker, *op. cit.* (n. 368); Gibbins and Parker, *op. cit.* (n. 369); Tortorella, *op. cit.* (n. 368).

³⁷² F. Bertrandy, 'Remarques sur le commerce des bêtes sauvages entre l'Afrique du nord et l'Italie', *MEFR* 99 (1987), 211-41.

³⁷³ F. Rakob et al., *Simitthus I* (1994), 17-64 (with magnificent plans showing the evolution of the quarry,

22-4); Horn and Ruger, *Die Numider*, 173-80. For imports of Numidian marble to Rome, see M. Gaggioti, 'L'importazione del marmo numidico a Roma in epoca tardo repubblicana', *Af Rom* iv (1987), 201-13.

³⁷⁴ Benseddik and Potter, *Cherchel*, 42-54; F. Braemer, 'Répertoire des gisements de pierres ayant exporté leur production à l'époque romaine', in *Les ressources minérales et l'histoire de leur export. 108e Congrès national des sociétés savants* (1986), 287-328.

³⁷⁵ F. Braemer, 'Les relations commerciales et culturelles de Carthage avec l'Orient romain à partir de documents scultes', *CHAAN* 4.1 (1990), 175-98; M. Fulford, *Lib Studs* 20 (1989), 187-9.

³⁷⁶ Potential demonstrated for Lepcis Magna and Caesarea, Benseddik and Potter, *Cherchel*, 42-54 and figs 127-8; H. Walda and S. Walker, *Lib Studs* 15 (1984), 81-92; idem, *Lib Studs* 19 (1988), 55-9.

³⁷⁷ Many hoards have been broken up or have simply disappeared without a trace. A catalogue of fourth-century hoards is found in R. Bland, *Numismatic Chronicle* 149 (1989), 173-96. See also A. Burnett, 'Africa', in A. M. Burnett and M. H. Crawford (eds), *The Coinage of the Roman World in the Late Republic* (1987), 175-9; A. Carradice and J. LaNiece, 'The Libyans and coinage: A new hoard and the evidence of metal analysis', *Numismatic Chronicle* 148 (1988), 33-52; R. Guery et al., *Recherches archéologiques franco-tunisiennes à Rougga III. Le trésor de monnaies d'or byzantines* (1982); J. P. C. Kent, 'Coinage and Currency', in C. H. V. Sutherland and R. A. G. Carson, *Roman Imperial Coinage: the Family of Constantine I* (1981), who cites three hoards from Tunisia and four from Algeria; idem in *Studia Felocnik* (1988), 185-94; C. Morrisson, 'La Trouvailla d'Ain Kelbia', *Mélanges de numismatique offerts à J. Lafaurie* (1980), 239-48; H. Mostecky, 'Ein Münzhort von Karthago aus der Zeit vor dem Vandalensturm', *Mittelungen der Oesterreichischen Numismatischen Gesellschaft* 25 (1985), 69-73; P. Salama, 'Monnaies rares de l'empereur Maxence dans les trésors de Tripolitaine', *Proceedings of the 9th International Congress of Numismatics. Bern 1979. I. Ancient Numismatics* (1982), 512-34. S. Deloume promises a report on a hoard of 14,827 coins from M'Sila in Algeria in the *Proceedings of the 1986 International Numismatic Congress*.

from excavations, apart from Carthage³⁷⁸ and a handful of other sites.³⁷⁹ The large numbers of coins yielded by the excavations at Carthage indicate what can be achieved in terms of raw numismatic data through careful stratigraphic excavation and sieving. There is scope for work on all aspects of coinage and coin circulation, particularly on the question of Africa's integration into the Roman economy. State distribution of both precious and base metal coinage into Africa to cover taxes, military payments and the monetized economies of Carthage³⁸⁰ and other cities may be presumed, but we can hardly begin to address the question of whether coin circulation in Africa was regional or homogeneous.³⁸¹ If African rents and taxes were collected mainly in agricultural produce, a regional pattern may have prevailed, but this cannot be assumed until primary research is conducted on the relationship between trade and coin circulation and other modes of currency distribution.³⁸² However, even if the flow of coinage in Africa was less than homogeneous,³⁸³ it is out of the question to argue that the region was not integrated into the Roman economy. Ultimately we need much more archaeological evidence — not just hoards — from the imperial period from both urban and rural sites outside of Carthage to address this issue.

If fourth-century bronze coinage was sent to the provinces to repurchase gold,³⁸⁴ the volume of bronze from Carthage and African hoards implies that there may have been a fair amount of gold also circulating there.³⁸⁵ The Roman state does not appear to have supplied currency to Vandal Africa, to judge from the insignificant numbers of fifth-century finds at Carthage and elsewhere.³⁸⁶ The lack of official Roman coinage elicited two responses: the introduction of a specifically Vandal coinage (at a still uncertain date),³⁸⁷ including countermarked sestertii and asses of the Principate, and, secondly, the continued circulation of fourth-century bronze. Both developments are instructive, for when combined with evidence for extensive Vandal trade in the Mediterranean, they imply a negligible linkage between coin circulation and trade on the one hand and regionalized circulation in Africa on the other.³⁸⁸ The Byzantine establishment of a mint at Carthage, producing both base and precious metal coinage, was

³⁷⁸ T. V. Buttrey in Humphrey, *Carthage* 1 (1976), 157–97; T. V. Buttrey and R. B. Hitchner in Humphrey, *Carthage* 4 (1978), 99–163; L. Guimond, *Carthage* III = *CEA* x (1979), 25–50; idem, *Carthage* v = *CEA* XII (1980), 55–71; R. B. Hitchner in Humphrey, *Carthage* 5 (1980), 263–70; W. E. Metcalf in Humphrey, *Carthage* 7 (1982), 63–168; idem in Humphrey, *Circus and Byzantine Cemetery* (1988), 337–81; W. E. Metcalf and R. B. Hitchner in Humphrey, *Carthage* 5 (1980), 185–261; R. Reece in Hurst and Roskams, *Excavations at Carthage. I.1* (1984), 171–81; idem in Hurst, *Excavations at Carthage. II.1* (1994), 249–56; P. Visona, 'Punic and Greek bronze coins from Carthage', *AJA* 89 (1985), 621–3; idem, in Humphrey, *Circus and Byzantine Cemetery* (1988), 383–422; idem, 'A numismatic bibliography of Carthage', in *Studi di Egittologia e di Antichità Puniche* 13 (1993), 117–231.

³⁷⁹ Benseddik and Potter, *Cherchel*, 103–21; A. Burnett and K. Jenkins in Kenrick, *Excavations at Sabratha* I, 246–74; S. Deloum in Mohamedi *et al.*, *Sétif*, 230–45; W. E. Metcalf in Ben Lazreg and Mattingly, *Leptimimus*, 264–6; R. Reece in Lloyd, *Sidi Khrebish I*, 229–32; P. Salama in L. Anselmino *et al.*, *Nador* (1989), 94–100.

³⁸⁰ The finds from Carthage suggest that the Roman colony had a monetized economy as early as the first century A.D., see n. 378 above, especially Visona, *op. cit.* (1988), 385; see also D. Bateson *et al.*, 'The early nineteenth century Jackson collection of coins from Carthage', *Numismatic Chronicle* 150 (1990), 145–77; Burnett, *op. cit.* (n. 377), 175–9; J. Alexandropoulos, *REA* 84 (1982), 96–8; M. H. Crawford, *Coinage and Money under the Roman Republic. Italy and the Mediterranean Economy* (1985), 68–76; Table Ronde, 'Les monnayages Africains et la circulation monétaire en Afrique du Nord des origines puniques à la conquête arabe', *Bulletin de la société française de numismatique* 444.2 (1989).

³⁸¹ C. Howgego, 'Supply and use of money in the Roman world', *JRS* 82 (1992), 1–31; idem, 'Coin circulation and the integration of the Roman economy', *JRA* 7 (1994), 5–21. Cf. also R. P. Duncan-Jones, *Structure and Scale in the Roman Economy* (1990), 30–47; idem, *Money and Government in the Roman Empire* (1994).

³⁸² On the distribution of coinage from the Carthaginian mint under Diocletian, J. Ermatinger, 'The circulation patterns of Diocletian's nummus', *American Journal of Numismatics* 2.2 (1990), 107–17.

³⁸³ Burnett, *op. cit.* (n. 377), 175–76, 179, n. 62; W. M. Metcalf, *ANSNM* 32 (1987), 61–84, esp. 75 (for Punic bronze coins possibly circulating in Roman Carthage).

³⁸⁴ R. Reece, *Bulletin of the Institute of Archaeology* 14 (1977), 167–78; idem, *Proceedings of the 9th International Congress of Numismatics. Bern 1979. I. Ancient Numismatics* (1982), 495–502.

³⁸⁵ C. Brenot and C. Morrisson, 'Le circulation du bronze en Césarienne occidentale', *QT* 12 (1983), 191–211; W. E. Metcalf, 'The Michigan Finds at Carthage 1975–79: An Analysis', *ANSMN* 32 (1987), 61–84; C. Morrisson, 'La circulation de la monnaie d'or en Afrique à l'époque Vandale. Bilan des trouvailles locales', in H. Huvelin *et al.* (eds), *Mélanges de numismatique offerts à P. Bastien à l'occasion de son 75e anniversaire* (1987), 325–44; idem, 'Coins finds in Vandal and Byzantine Carthage: A provisional assessment', in J. Humphrey, *Circus and Byzantine Cemetery* (1988), 423–36; idem, 'Carthage, production et circulation du bronze à l'époque byzantine d'après les trouvailles et fouilles', *BSAF* (1988), 239–53; P. Salama, 'Économie monétaire de l'Afrique du nord dans l'antiquité tardive', *CHAAN* 2 (1985), 183–202; idem, 'L'empereur Magnence et les provinces africaines', *Mélanges de numismatique offerts à P. Bastien* (1987), 203–16. The hoards noted in Bland, *op. cit.* (n. 377), are consistent with the Carthage finds in this regard. The absence of gold from hoards and excavation finds does not, in our view, militate against Reece's argument, contra Metcalf, *op. cit.* (n. 378), 340.

³⁸⁶ Note the 1,131 coins from the rural site of Nador include only thirteen Roman issues attributable to the fifth century and of these at least five are imitations, P. Salama, in L. Anselmino *et al.*, *Nador* (1989), 95–6.

³⁸⁷ F. M. Clover, 'L'année de Carthage et les débuts du monnayage vandale', in F. M. Clover, *The Late Roman West and the Vandals* (1993), 215–20; C. Morrisson in J. Humphrey, *Circus and Byzantine Cemetery* (1988), 423–36; C. Morrisson and J. H. Schwartz, 'Vandal silver coinage in the name of Honorius', *ANSMN* 27 (1982), 149–79; Reece in Hurst, *op. cit.* (n. 378), 253; P. Salama and J.-P. Callu, *Afrique Occ Romain*, 92–115. The monogram *nummus* of Genserici points to at least a mid-fifth-century date for the first Vandal issues.

³⁸⁸ On the reuse of Imperial bronzes, see C. Morrisson in C. N. L. Brooke *et al.*, *Studies in Numismatic Method Presented to Philip Grierson* (1983), 95–111.

partly intended to displace the Vandal monetary system and furthered the trend towards regional circulation.³⁸⁹

If high coin-loss rates following a period of steady, low-level losses in archaeological sites are to be read as an indication of a failing monetary economy, again an argument of Reece, then the period after 550 at Carthage witnessed either high inflation³⁹⁰ or perhaps worse, a collapse of the coin-based economy.³⁹¹ The discovery of a gold hoard at Rougga dated to the first Arab invasion of Africa in 646–647 does not diminish this argument as gold is likely to have been the only secure monetary medium in late Byzantine Africa.³⁹²

What sort of economy existed in Roman Africa? It is clear that the export potential of agriculture and exploitation of primary resources, such as marine products, was considerable. The evidence for growth in the rural economy is clear-cut, for instance, with the spread of immense olive oil production and collection facilities well into the interior of the country. The main coastal harbour cities undoubtedly expanded in size and wealth during the boom years of export production (especially the second to fourth centuries A.D.). The ring of kiln production sites in the suburbs of Leptiminus, for instance, is as graphic an example as one could wish for of the scale of manufacturing at some of these sites.³⁹³ That the market towns of the interior did not all perform on the same scale should be no surprise, though the consumer city model may not be the best one to characterize them.³⁹⁴ The evidence for monumentalization and for luxury adornments to private houses suggests that elite wealth rose sharply, especially at sites such as Sbeitla and El Jem in the heart of olive production areas.³⁹⁵

Overall, a case can be made for *intensive* economic growth in the core provinces of Proconsularis and Numidia between the second and fourth centuries as virtually all the elements generally associated with this phenomenon were present.³⁹⁶ These included, among others, agricultural growth, a rise in primary product exports in response to external demand, higher levels of import substitution, an increase in the scale of productive units (oileries, amphora and ARS producers), the emergence of a literate elite capable of disseminating knowledge, and, more generally, a society whose material record is replete with evidence of economic calculation, risk-taking, innovation, and other 'rational' economic activities.³⁹⁷

XII. CULTURE AND RELIGION

As one of the most densely urbanized areas of the Empire, Africa has left behind many physical traces of its civilization. The issue is how to read this evidence. Was this a simple case of Roman colonists importing and subject people assimilating the superior culture of the dominant power (as it tended to be read in the colonial era)? Or does the post-colonial vision of repeated acts of cultural resistance to Rome offer a better explanation of the strong undercurrent of African and Punic traditions?³⁹⁸ The dismissive treatment of Benabou's ideas on acculturation and cultural resistance is unfortunate in that it has tended to polarize the argument between those in the post-colonial camp, increasingly unable to see any good in the Classical culture, and those at risk of being accused of neo-colonialism by arguing for the importance of Roman civilization in Africa.³⁹⁹ Both approaches seem to be based on flawed perspective which, in seeking to identify cultural markers (whether from pre-Roman times or from Roman lands outside Africa), tends to obscure the degree to which the significance of these traits was changed in the social

³⁸⁹ P. Grierson, *Byzantine Coins* (1982), 54, 57, 122–3 (coins from other mints are rare in Byzantine Carthage).

³⁹⁰ Metcalf, *ANSMN* 32 (1987), 61–84; Morrisson in Huvelin *et al.*, *op. cit.* (n. 385).

³⁹¹ Reece in Hurst, *op. cit.* (n. 378), 255.

³⁹² Guery *et al.*, *op. cit.* (n. 377).

³⁹³ Ben Lazreg and Mattingly, *Leptiminus*, 301–5, for a preliminary analysis of this rich harbour town, where work is continued by Lea Stirling, David Stone, and Sebastian Heath with Nejib Ben Lazreg, John Humphrey, and Hedi Slim.

³⁹⁴ E. Fentress, 'The economy of an inland city: Sétif', *Afrique Occ Romaine*, 117–28; Ørsted *et al.*, *JRA* 5 (1992), 84–92, 95–6.

³⁹⁵ N. Duval, 'Sufetula: l'histoire d'une ville romaine de la Haute Steppe à la lumière des études récentes', *Afrique Occ Romaine*, 495–535; H. Slim, 'La vie économique à Thysdrus', *CHAA* 2 (1985), 63–85.

³⁹⁶ On the evidence for intensive growth in pre-modern societies, see E. L. Jones, *Growth Recurring. Economic Change in World History* (1988); see also L. G. Reynolds, *Economic Growth in the Third World (1850–1980)* (1985);

cf. also R. B. Hitchner, 'Olive oil production and the Roman economy: the case for intensive growth', in Amouretti and Brun (eds), *op. cit.* (n. 302), (1993), 499–508.

³⁹⁷ See now, W. V. Harris, 'Between archaic and modern. Some current problems in the history of the Roman economy', in W. V. Harris (ed.), *The Inscribed Economy* (1993), 11–29; D. Rathbone, *Economic Rationalism and Rural Society in Third Century AD Egypt. The Heronimos Archive and the Appianus Estate* (1991).

³⁹⁸ Benabou, *Résistance*; cf. the debate between M. Benabou, 'Les Romains ont-ils conquis l'Afrique?' *AESC* 33 (1978), 83–8; P. Leveau, 'La situation coloniale de l'Afrique romaine', *ibid.*, 89–92; Y. Thébert, 'Romanisation et déromanisation. Histoire décolonisée ou histoire inversée', *ibid.*, 64–82.

³⁹⁹ Picard, *Civilization* (1990); cf. the different standards applied to the study of Roman Gaul by French scholars, *idem*, 'La romanisation de la Gaule. Problèmes et perspectives', *Rev Arch* 1993.2, 353–85. See also H. G. Pflaum, 'La romanisation de l'Afrique', *Vestigia* 17 (1973), 55–72; above, nn. 54–6.

frame of Roman Africa. Ultimately, it seems to us that Romano-African society was a new world, different from what had gone before and equally distinct from other parts of the Empire. The outward symbols of civilization (art, architecture, iconography, literature, dedications etc.) exhibit, each in their own way, a search for accommodation and common meaning between the Roman state and African society.⁴⁰⁰ To give but one example, the four seasons is a very popular motif in Roman art and occurs very frequently in African mosaics; yet it is clear from the existence of similar iconography on Punic stele to Tanit and Baal-Hammon that there was also a specific set of religious references implied by the use of the image in Roman times.⁴⁰¹ This is a very complex process of multi-directional cultural fusion and change, for which there is no adequate name. The term Romanization is a loaded one in this context (implying a more one-way process) and we retain it, with some reluctance, simply to draw out the links between the cultural package that emerged in Africa and that of other areas of the Roman world.⁴⁰² Roman Africa developed an extraordinary cosmopolitan veneer, especially in its major towns, but whilst people from all parts of the Roman world might have experienced a basic level of recognition of the public face of urbanized life, there was much about Africa that was unique at both the general and the regional level. The Africaness of Roman Africa was viewed as a sign of failure by some colonial period scholars, but that is surely to overestimate what the Roman state was interested in (or capable of) achieving at the cultural level in the provinces.⁴⁰³

Reference has already been made to the linguistic and ethnic diversity of people in Roman Africa. This undoubtedly reinforced regional traits in some areas, such as those that distinguished Punic- and Libyan-speaking Tripolitania from the rest of Proconsularis.⁴⁰⁴ But many communities evolved a very cosmopolitan and polyglot nature, as already emphasized in discussing onomastic studies.⁴⁰⁵ Limited immigration from overseas was complemented by internal migration and long-established local populations.⁴⁰⁶ Changes in names, notably with the acquisition of Roman citizenship and/or manumission,⁴⁰⁷ tend to conceal these differences in ancestry and background from us. On the other hand, language, customs, and social values (so much less clear to us in the partial archaeological record) would have communicated a wealth of messages to contemporaries.

The achievements and models of Punic urban civilization are now far better documented⁴⁰⁸ and it is possible to appreciate the significant spread of Hellenistic Punic culture into indigenous African groups. The construction of huge funerary monuments and the growth of towns in the interior in the latter centuries B.C. helps to explain the rapid further expansion of the urban network under Rome.⁴⁰⁹ The Classical architecture and town planning in Africa followed many norms of Roman society elsewhere. Generally, the best planned towns were those founded by the state as *coloniae* (Timgad) or *municipia*, with many of the native *civitates* revealing an altogether more haphazard plan (Dougga).⁴¹⁰ The construction of fora, basilicas, Romanized temples, baths, theatres, amphitheatres, circuses, and aqueducts was a major concern of towns of all sorts, with most local schemes limited more by the scale of resources than by resistance.⁴¹¹ Yet it is facile in the extreme to label towns as Romanized simply on the grounds that Roman-style buildings were being erected, and architectural studies are now beginning to recognize the important local variations (notably from the Punic heritage) introduced into the classical

⁴⁰⁰ For example, Groupe de recherches sur l'Afrique antique, *Les Flavii de Cillium. Etude architecturale, épigraphique, historique et littéraire du mausolée de Kassérine*, *CIL VIII.211-216* (1993).

⁴⁰¹ D. Parrish, *Season Mosaics of Roman North Africa* (1988); G.-Ch. Picard, 'La sculpture dans l'Afrique romaine', in *150-Jahr-Feier* (1982), 180-96.

⁴⁰² Recent general works on Romanization in the western provinces include, T. Blagg and M. Millett, *The Early Roman Empire in the West* (1990); M. Millett, *The Romanization of Britain. An Essay in Archaeological Interpretation* (1990); M. Wood and F. Queiroga (eds), *Current Research on the Romanization of the Western Provinces* (1992).

⁴⁰³ As clearly shown by P. D. A. Garnsey in P. D. A. Garnsey and C. R. Whittaker (eds), *Imperialism in the Ancient World* (1978), 223-54.

⁴⁰⁴ J. N. Adams, *JRS* 84 (1994), 111-12; M. G. Amadasi Guzzo, 'Stato degli studi sulle iscrizioni latino-puniche della Tripolitania', *AfRom* VII (1990), 101-8; Mattingly, *Tripolitania*, 160-70.

⁴⁰⁵ J. M. Lassère, 'Onomastique et acculturation dans le monde romain', in *Sens et pouvoir de la nomination dans les cultures hellénistique et romaine* (1988), 87-102; idem, *Ubique Populus*, 365-466. See above, n. 84.

⁴⁰⁶ Lassère, *Ubique Populus*, 597-644.

⁴⁰⁷ M. Le Glay, 'La place des affranchis dans la vie municipale et dans la vie religieuse', *MEFR* 102 (1990), 621-38.

⁴⁰⁸ Kerkouane and Carthage etc., see above nn. 161, 201-2.

⁴⁰⁹ F. Coarelli and Y. Thébert, 'Architecture funéraire et pouvoir: réflexions sur l'hellénisme numide', *MEFR* 100 (1988), 761-818; A. Di Vita, 'Les Emporia de Tripolitaine dans le rayonnement de Carthage et d'Alexandrie: les mausolées punico-hellénistiques de Sabratha', in Gadallah, *Libya in Hist* (1971), 173-80; idem, 'Il mausoleo punico-ellenistico B di Sabratha', *Rom. Mitt.* 83 (1976), 273-83; G.-Ch. Picard, 'La conception du mausolée chez les puniques et les numides', *Riv Studi Fenici* 1 (1973), 31-5; S. Stucchi, 'L'architettura funeraria suburbana Cirenaica in rapporto a quella della chora viciniera ed a quella libya ulteriore, con speciale riguardo all'età ellenistica', *QAL* 12 (1987), 249-377. Funerary structures continued to blend the Punic/Libyan traditions with the Roman, N. Ferchiou, 'Les mausolées augustéens d'Assuras', *MEFR* 99 (1987), 767-821; idem, 'Le mausolée de Q. Apuleus Maximus à El Amrouni', *PBSR* 57 (1989), 47-76.

⁴¹⁰ N. Ferchiou, 'Remarques sur la politique impériale de colonisation en proconsulaire au cours du Ier siècle après J.C.', *CT* 28 [113-114] (1980), 9-55.

⁴¹¹ R. P. Duncan-Jones, *Structure and Scale in the Roman Economy* (1990), 174-84; Mattingly, *Tripolitania*, 116-32.

repertoire to suit African traditions and local tastes.⁴¹² An interesting development has been the recognition that Punic metrology may have underlain the cardinal measurements of many public buildings.⁴¹³

Definitions of *Romanitas* tend to be framed in a hierarchical way, emphasizing Latin literacy above material culture (with the assumption that the latter will follow the former). An exchange of views between Shaw and Fentress on the impact of the army in central Numidia, raised important questions about the extent to which regional development might depend on outsiders. Morizot, working in two districts of this same area has now revealed that the apparently less Romanized of the two (that with no trace of veterans and far fewer Latin inscriptions) appears to have undergone the more dramatic development, with bigger oileries, larger-scale irrigation works, and impressive mausolea. Similarly, in Libya, the dramatic development of the pre-desert wadis was achieved by native Libyans, whose culture was only partly Punicized/Romanized.⁴¹⁴

Mosaic art in Africa has become a major subject in its own right, though sometimes this process has tended to extract the mosaics from their social context and make them simply art-works to be compared stylistically with other products of the Roman world.⁴¹⁵ Most figured mosaics undoubtedly featured images that had a cultural resonance for the patron or within Romano-African society in general.⁴¹⁶ Imagery can thus often be read on two levels, within the canon of Roman art in general and, secondly, as illustrative of local tastes, beliefs, and predilections.⁴¹⁷ A good deal of the current work on mosaics is still of necessity at the level of cataloguing the pavements and of locating them within the architectural frame of the buildings they decorated, though there is increasing interest in the social content and context.⁴¹⁸ One theme that has emerged very strongly in recent studies is the fascination for arena games and circus racing in African mosaic art. Patronage of these most Roman of public entertainments was sometimes commemorated by such pavements (particularly vivid in the Smirat mosaic) and the African evidence contributes much to wider debates about the organization and procedures of such shows.⁴¹⁹

Sculpture is a prime example of the process of cultural integration and change that occurred in Africa in the Roman period.⁴²⁰ High quality works of Classical sculpture can be found at many sites in Africa and recent publications have shown that these stand comparison with the best of the Roman provinces.⁴²¹ It is equally apparent that the Punico-African tradition of votive and funerary stele was sustained and infused with classical influences while some Roman official sculpture was transformed into an indigenous ('anticlassical') official sculpture. The integration of Classical and African traditions in architectonic sculpture contributed to the development in the late Antique period of a taste for abstract symbolism unique to Africa.⁴²² But there exists another level of sculptural work in North Africa far less discussed and far more difficult to place in the framework of Classical civilization as a whole. The

⁴¹² N. Ferchiou, *Décor architectonique d'Afrique Proconsulaire (IIIe s. avant J.C. – Ier s. après J.C.)*, 2 vols (1989); P. Pensabene, 'Il tempio di Saturno a Dougga e tradizioni architettoniche d'origine punica', *Af Rom* vii (1990), 251–93.

⁴¹³ P. Barresi, 'Sopravvivenze dell'unità di misura punica e suoi rapporti con il piede romano nell'Africa di età imperiale', *Af Rom* viii (1991), 479–502; idem, *Af Rom* ix (1992), 831–42.

⁴¹⁴ E. Fentress, 'Forever Berber?' *Opus* 2 (1983), 161–75; B. D. Shaw, 'Soldiers and society: the army in Numidia', *Opus* 2 (1983), 133–60; P. Morizot, 'Economie et société en Numidie méridionale: l'exemple de l'Aures', *Af Rom* viii (1991), 429–46; Mattingly, *Tripolitania*, 162–7, 202–9.

⁴¹⁵ See nn. 80 and 196 above.

⁴¹⁶ K. M. D. Dunbabin, *The Mosaics of Roman North Africa* (1978).

⁴¹⁷ P.-A. Février, 'Colonisation romaine et forme artistique dans les provinces de la Méditerranée occidentale', in Galley, op. cit. (n. 54), 49–102.

⁴¹⁸ A. Ben Abed and M. Enanifer, *BTINP* 6 (1991), 17–23; J. M. Blasquez Martínez et al., [Various articles on African/Spanish mosaics] *Af Rom* ix (1992), 935–1037; J.-P. Darmont, *Nymfarum Domus. Les pavements de la maison des Nymphes a Neapolis (Nabeul, Tunisie) et leur lecture* (1980); S. Gozlan, *La maison du triomphe de Neptune à Acholla (Botria-Tunisie)*, I, *Les mosaïques* (1992); R. Hanoune, *Recherches archéologiques franco-tunisiennes à Bulla Regia IV, les mosaïques* (1980); G.-Ch. Picard, 'Mosaïques et société dans l'Afrique romaine, les mosaïques de l'Alia (Tunisie)', *Afrique Occidentale*, 3–14; M.-H. Quet, 'De l'iconographie à l'iconologie: approche méthodologique. Le symbolisme du décor des pavements de la "maison des nymphes" de Nabeul',

RA 1 (1984), 79–104; *Recherches franco-tunisienne sur la mosaïque de l'Afrique antique I: Xenia* (1989); R. J. A. Wilson, 'Roman mosaics in Sicily: the African connection', *AJA* 86 (1982), 413–28. Note also conference papers in volumes listed in n. 28.

⁴¹⁹ A. Beschtaouch, 'A propos de la mosaïque de Smirat', *Af Rom* iv (1987), 677–80; J. M. Blasquez Martínez, *Af Rom* ix (1992), 953–64 (with G. Lopez Monteaguado, ibid, 965–1001); J. Carlsen, 'Gli spettacoli gladiatorii negli spazi urbani', *Af Rom* x (1994), 139–51; Dunbabin, op. cit. (n. 416), 65–87; M. Khanoussi, 'Compte rendu d'un spectacle de jeux athlétiques et de pugilat sur une mosaïque de la région de Gafsa', *BTINAA* 2 (1988), 33–54; idem, 'Spectaculum pugilum et gymnasium', *CRAI* 1988, 543–61; O. Mahjub, 'I mosaici della villa Romana di Silin', *III Colloquio Internazionale sul mosaico antico, Ravenna 1980* (1984), 299–306; idem, 'I mosaici della villa Romana di Silin', *LA* 15–16 (1978–79) [1988], 69–74; D. Parrish, 'The date of the mosaics from Zliten', *Ant af* 21 (1985), 137–58 (now confirmed as Severan in date).

⁴²⁰ Picard in *150-Jahr-Feier* (1982), 180–96.

⁴²¹ N. de Chaisemartin, *Les sculptures romaines de Sousse et des sites environnants. Corpus Signorum Imp. Rom. Tunisia, Proconsularis II (Byzacium)* (1987); C. Landwehr, *Die römischen Skulpturen von Caesarea Mauretaniae* (1993); F. Queyrel, 'De Paris à Ziane: identification d'un groupe julio-claudien', *Ant af* 29 (1993), 71–119; M. F. Squarciapino, *Sculture del foro Severiano di Leptis Magna* (1974); H. Walda and S. Walker, 'Ancient art and architecture in Tripolitania and Cyrenaica: new publications 1969–89', *Lib Studs* 20 (1989), 107–10.

⁴²² N. Duval, *BA* n.s. 8 (1972), 53–146; P.-A. Février, *Corsi Ravenni* 19 (1972), 171–86.

open-air Libyan sanctuary at Slonta or the mausolea at Ghirza are examples of a rich and long-lived indigenous tradition of sculpture, to which increasing numbers of examples can be added.⁴²³ Sculpted tombstones and religious stele in African styles exist in abundance, but many of them await proper analysis precisely because their iconography cannot be easily understood in terms of Roman sources.

The debate about the nature of Romano-African religion is of the utmost importance to this conception of a duality or multiplicity of culture.⁴²⁴ The state religion of Rome was widely diffused, though predictably best represented in military contexts and in the main *coloniae*. The imperial cult is well-attested, with Africa providing a valuable dossier of information on its origins, organization, and spread.⁴²⁵ Many towns showed a marked preference for a range of Classical deities that were clearly being conflated with pre-existing Punic or African cults.⁴²⁶ This practice of syncretism, of course, is extremely widespread in the Roman world, but its significance remains controversial. Should it be seen as a 'happy marriage' between the Roman and the native traditions? Or does it mask a basic and continuing difference of approach in society between the Romans (and the most Romanized) and a passive majority who resisted by continuing to worship in highly traditional ways?⁴²⁷ Syncretism had, of course, begun in pre-Roman times with the interaction of Punic and Libyan cults, but it was undoubtedly applied on a far larger scale thereafter.⁴²⁸ The transition from the Punico-African Baal-Hammon to the Romanized Saturn cult, superbly documented by Le Glay, remains the outstanding case-study.⁴²⁹

Recent work has also focused on other cults of Libyphoenician origin, such as Melqart (Hercules) and Shadrappa (Liber Pater/Dionysus). More work is required on the religious and ritual iconography of the ancient Maghreb, particularly on pre-Roman inspirations.⁴³⁰ What is needed now is many more regional studies, such as Brouquier-Reddé's survey of Tripolitania, to document more fully the heterogeneity of religious preferences.⁴³¹ What comes across most strongly in her work is the divergence between the towns (very cosmopolitan, with many syncretized cults, plus a good representation of Greek and Oriental religions), the countryside (almost entirely given over to Libyan cults such as Ammon, with some limited signs of syncretism only), and the army (where a different range of deities were worshipped, including some martial Libyan deities in syncretized form).⁴³² The minimal evidence for Baal-Hammon (Saturn) and Tanit (Caelestis) in Tripolitania is suggestive of the relative degree of autonomy from Carthage that the region enjoyed. Temple architecture in the towns of Tripolitania was divided between a group of standard Classical temples and a more Semitic type with side 'chapels'.⁴³³ The largest rural temple, at Ghirza, was of the latter type also and is notable for the lack of any Latin dedications among a number of altars and other cult offerings inscribed in Libyan.⁴³⁴

The cult worshipped at Ghirza may have been Gurzil, bull-headed progeny of Ammon, but the nature of many of the other Libyan cults attested across the Maghreb is generally less secure, once the

⁴²³ A. M. Bisi, *Ant af* 12 (1978), 21–88; O. Brogan and D. J. Smith, *Ghirza: a Romano-Libyan Settlement in Tripolitania* (1984); P.-A. Février, *AHCM* 1 (1979), 152–69; M. Khanoussi, *Africa* XI–XII (1993), 112–39; J.-P. Laporte, *AfRom* IX (1992), 389–437; M. Luni, *QAL* 12 (1987), 415–58 (Slonta); A. M'Charek, *MEFRA* 100, 731–60; F. Rakob, *Simitthus I* (1993), 71–92.

⁴²⁴ Though the standard works are now somewhat outdated, G.-Ch. Picard, *Les religions de l'Afrique romaine* (1954); J. Toutain, *Les cultes païens dans l'empire romain*, 3 vols (1905/1917). See now, J. B. Rives, *Religion and Authority in Roman Carthage from Augustus to Constantine* (1995).

⁴²⁵ D. Fishwick, *The Imperial Cult in the Latin West. Studies in the Ruler Cult of the Western Provinces of the Roman Empire*, 2 vols (1987, 2nd edn, 1992); T. Kotula, 'Les Augustaes d'Afrique', *CHAAN* 1 (1984), 345–58; P. Pensabene, *AfRom* X (1994), 153–68; E. Smadja, 'Remarques sur les débuts du culte imperial en Afrique sous le regne d'Auguste', in *Religions, pouvoirs, rapports sociaux. Annales Litt. Univ. Besançon (Hist. Anc. 32)* (1980), 151–69; idem, *DHA* 11 (1985), 541–56.

⁴²⁶ S. Bullo, *AfRom* X (1994), 515–58, goes to great lengths to show that Vitruvius' directions for the citing of cults did not apply in Africa; M. Le Glay, 'La vie religieuse à Lambèse d'après de nouveaux documents', *Ant af* 5 (1971), 125–53; idem, 'Les religions de l'Afrique romaine d'après Apulée et les inscriptions', *AfRom* 1 (1984), 47–61; idem, 'Evergétisme et vie religieuse dans l'Afrique romaine', *Africa Occ Romain*, 77–88.

⁴²⁷ P.-A. Février, 'Religion et domination dans l'Afrique romaine', *Dial. d'histoire ancienne* 2 (1976), 305–36; M. Le Glay, 'Les syncrétismes dans l'Afrique ancienne', in F. Dunand and P. Lévêque (eds), *Les syncrétismes dans les*

religions de l'antiquité (1975), 123–51; idem, 'Un centre de syncrétisme en Afrique: Thamugadi de Numidie', *AfRom* VIII (1991), 67–78.

⁴²⁸ M. Benabou, 'Le syncrétisme religieux en Afrique romaine', *Intercambi culturali* 1 (1986), 321–32.

⁴²⁹ M. Le Glay, *Saturne Africain, monuments*, 2 vols (1961/1966); idem, *Saturne Africain, histoire* (1966); idem, 'Nouveaux documents, nouveaux points de vue sur Saturne africaine', *Studia Phoenicia VI, Carthago* (1988), 187–237.

⁴³⁰ J. B. Ahlem, 'La culte de Liber Pater en Afrique à la lumière de l'épigraphie', *AfRom* IX (1992), 1049–55; M. G. Amadasi Guzzo, 'Les divinités dans les inscriptions de Tripolitaine: essai de mise au point', *CHAAN* 1 (1984), 189–96; C. Bonnet, *Melqart. Cultes et mythes de l'Héraclès tyrien en Méditerranée* (1988); V. Brouquier-Reddé, 'La place de la Tripolitaine dans la géographie religieuse de l'Afrique du nord', *CHAAN* 5 (1992), 117–23; G. Camps, 'Le coque et la coquille', *BCTH* 22 (1992), 35–61; G. Caputo, 'Sincretismo religioso ed espressione figurativa in Tripolitania (testimonianze e problemi)', *QAL* 9 (1977), 119–24.

⁴³¹ V. Brouquier-Reddé, *Temples et cultes de Tripolitaine* (1992).

⁴³² Brouquier-Reddé in *CHAAN* 5 (1992), 117–23; cf. also R. Rebuffat, 'Divinités de l'oued Kebir', *AfRom* VII (1990), 119–59.

⁴³³ Brouquier-Reddé, *Temples et cultes*; E. Joly and F. Tomasello, *Il tempio a divinità ignota di Sabratha* (1984); M. Pisanu, 'La vita religiosa a Gigthis: testimonianze epigrafiche e monumentali', *AfRom* VIII (1990), 223–31.

⁴³⁴ Brogan and Smith, *Ghirza*, 80–92.

iconography falls outside the Classical, syncretizing tradition. Dedications to Dii Mauri are emblematic of the widespread existence of highly regionalized cults that were never subject to formal syncretism.⁴³⁵ Archaeology could shed further light on many aspects of these African religions, but as long as epigraphy remains the key tool of research on religion in Roman Africa, the importance of such anepigraphic cults will be minimized. We also need more attention to be focused on the apparent divergence of beliefs and on the intense regionalism in the Maghreb. The culture and religion of Roman Africa comprised a highly variable package, elaborated at the local level rather than imported wholesale from outside the province.

Christianity had penetrated Africa Proconsularis, Numidia, and the coastal cities of Mauretania by the second century; by the mid-third century bishops were established in some seventy towns.⁴³⁶ Although there was genuine hostility towards adherents of the new religion and occasional persecution of them,⁴³⁷ African Christians thought that they could live as Romans. The persecutions of Decius and Maximian shattered this belief, but more serious still were the differing attitudes within the Church concerning subsequent reconciliation of lapsed or compromised Christians and future accommodation with the state. These issues split the Church into two camps,⁴³⁸ giving rise to separate Christian communities in Africa, the 'Donatists' and Catholics by the early fourth century. The 'Donatist' movement has generated an enormous literature, not least because it has been seen as a manifestation of African *resistance* to Roman rule. This perspective, however, exaggerates the differences between the two communities, and denies the 'Africaness' of the Catholics. It is now clear that Donatism was not a movement restricted to the lower orders of society (as the existence of Donatist senators reveals), nor primarily rural based.⁴³⁹

The debate on Donatism has tended to overshadow until recently the deep attachment of African Christians to the cult of the martyrs, and its impact on the architecture, funerary rites, and liturgical installations of the African Church.⁴⁴⁰ However, it seems that the significance of this phenomenon to the cultural history of Roman Africa has not been sufficiently appreciated. Much of the emphasis so far has been directed, quite understandably, towards establishing a typology of martyrs' tombs and reliquaries, descriptions of their archaeological context, and especially to the study of the inscribed or mosaic-ornamented permanent grave-markers and cenotaphs.⁴⁴¹ What is required now is a higher level of mortuary analysis that interprets not only African Christian burial practice *per se*, but also offers a fuller explanation of the profound changes in social strategies and negotiation implied by the widespread abandonment of many (though not all) aspects of pagan funerary practice. Such an analysis must incorporate the growing body of mortuary data from North African archaeology with the full recognition that the information it provides has the potential to explain social change in terms independent of (and not subordinate) to the textual record.⁴⁴² Integrated study of pagan and Christian burial practices in North Africa could also shed further light on the nature of Romano-African cultural syncretism.

⁴³⁵ E. Fentress, 'Dii Mauri and Dii Patrii', *Latomus* 37 (1978), 507–16; cf. Ben Abed and D. Soren, *Carthage: a Mosaic of Ancient Tunisia* (1987), 139–40.

⁴³⁶ Y. Duval, *MEFRA* 96.1 (1984), 268–95; W. Eck, *Historische Zeitschrift* 236 (1983), 268–95; S. Lancel, *Afrique Occ Romain*, 273–290; J.-L. Maier, *L'épiscopat de l'Afrique romaine, vandale, et byzantine* (1973), important, but note N. Duval's critique, *REA* (1974), 313–22. On the role of the *seniores* in Christian communities, L. Pietri, *Colloque en l'honneur d'A. Chastagnol* (1989). There is a large and expanding literature on African Christianity. See in particular Duval, *REA* (1990), (1993) and bibliography in the 'Chronique augustinienne' in *Revue des Etudes Augustiniennes*.

⁴³⁷ On martyrs and persecutions, A. R. Birley, *Institute of Archaeology Bulletin* 29 (1992), 37–68; C. Mertens, *Revue d'Histoire Ecclesiastique* 81 (1986), 5–46; V. Saxer, *Morts, martyrs, reliques en Afrique chrétienne aux premiers siècles. Les témoignages de Tertullien, Cyprien et Augustin à la lumière de l'archéologie africaine* (1980); B. D. Shaw, *Past and Present* 139 (1993), 3–45.

⁴³⁸ J. P. Burns, *Journal of Early Christian Studies* 1.4 (1993), 367–403.

⁴³⁹ Benabou, *Résistance*; A. R. Birley, *Lib Studs* 18 (1987), 29–41; P. Brown in idem (ed.), *Religion and Society in the Age of Saint Augustine* (1972), 237–59; W. H. C. Frend, *The Donatist Church* (2nd edn, 1971), an influential, but ultimately misleading book; idem in Fage, op. cit. (n. 2), 410–90; C. Lepelley, *BSAF* 1990, 45–56 (contra Frend); J.-L. Maier, *Le dossier du donatisme I–II* (1987/1989); A. Mandouze, 'Le donatisme représente-t'il la résistance à Rome de l'Afrique tardive?', in *Assimilation et résistance à Rome et à la culture*

Greco-Romaine dans le monde ancien. Travaux de VIe congrès internationale d'études Classiques (1976), 357–66; B. D. Shaw in M. R. Greenshields and T. A. Robinson (eds.) *Orthodoxy and Heresy in Religious Movements* (1992), 4–34 (for a perceptive analysis of the historiographical residue of Catholic bias toward 'Donatists').

⁴⁴⁰ Y. Duval, *Loca sanctorum Africae. Le culte des martyrs en Afrique du IVe au VIIIe siècle* (1982); idem, *Aupres des Saints, corps et ames* (1989); Saxer, op. cit. (n. 437). Funerary rites: N. Duval, *Actes de la Table ronde, L'inhumation privilégiée du IV au VIIIe siècle en Occident, Creteil 1984* (1986), 25–42; P.-A. Février, *ibid.*, 12–23.

⁴⁴¹ F. Bejaoui, *Af Rom* 1x (1992), 329–36; N. Duval, *Af Rom* vi (1988), 265–82; idem in *Colloque la terza età dell'epigrafia 1986* (1988), 165–214; N. Duval et al., *Recherches archéologiques à Haidra* (1981); L. Ennabli, *Les inscriptions funéraires chrétiennes de la basilique dite de Sainte-Monique à Carthage* (1975); idem, *Les inscriptions funéraires chrétiennes de Carthage II. La basilique de Mcidfa* (1982); idem, *Africa* 1x (1985), 217–50; idem, *Af Rom* v (1988), 189–203; idem, *Africa* x (1988), 135–73; idem, *Actes du colloque international du centenaire de l'Année Epigraphique 1988* (1990), 33–51; idem, *Les inscriptions funéraires chrétiennes de Carthage III. Carthage intra et extra muros* (1991); K. F. Kadra, *Ant af* 17 (1981), 241–2; F. Prevot, *Les inscriptions funéraires chrétiennes de Carthage I* (1984).

⁴⁴² D. B. Small, 'Monuments, laws, and analysis: combining archaeology and text in ancient Athens', in idem (ed.), *Methods in the Mediterranean* (1995), 143–74.

Christian archaeology in the Maghreb has been dominated since the turn of the century by the study and excavation of basilicas and associated structures, most notably baptisteries.⁴⁴³ A coherent relationship has been established between the historical and archaeological study of African Christianity and a detailed typology of basilical churches now exists. At present, however, this branch of North African archaeology seems to have reached a conceptual plateau. Under such circumstances, the excavation of non-threatened Christian basilicas would seem a low priority, when other aspects of Christian archaeology remain little explored.

XIII. AFRICA IN LATE ANTIQUITY

Africa in the Vandal and Byzantine periods, with all its dubious implications for the longevity of colonial rule, remained an underdeveloped field of study in the pre-Independence era. Indeed until the 1970s, mastery of 'l'Afrique tardive' arguably could be obtained through the reading of only four works, none written after the mid-1950s.⁴⁴⁴ Since the 1970s, studies of late antique Africa have proliferated.⁴⁴⁵ The catalysts for this development were the blossoming of Late Antiquity as a field of study and the Carthage UNESCO excavations;⁴⁴⁶ the one providing new perspectives and approaches, the other a mass of new information on the later history of ancient Africa's leading city.

The discovery of new letters and sermons of Saint Augustine in the last decades has also stimulated a wave of new research on his life and oeuvre. These writings shed light on the geography, conditions, and social life of late Roman Africa.⁴⁴⁷ Other rediscovered texts concern land disputes and the state of tenancy in Late Antiquity.⁴⁴⁸ The value of these sources in combination with relevant archaeological data cannot be over-stressed.

New thinking on the history of the tribes, *Mauri* 'kingdoms', and Berbers of the late antique Maghreb has likewise emerged from the cross-fertilization of resistance ideology with approaches and perspectives from North African prehistory, and studies of sub-Roman societies in Europe and the Mediterranean. Finally, field-survey has provided tantalizing new evidence on late antique rural settlement and economy. The message emanating from this profusion of new work is nothing if not ambiguous. Many would see the history of late antique Africa as a continuum of earlier Romano-African events, structures and institutions.⁴⁴⁹ Yet, both the archaeological and historical record provide indications of some degree of discontinuity and rupture in late antique society.

The evidence for continuity comes predominantly from texts and inscriptions relating to municipal life.⁴⁵⁰ African urban political and administrative structures including the curial class survived well into the Byzantine period. So too did élite euergetism, though the role of governors and emperor in this practice was now foremost. Even new offices such as the *defensor civitatis*, introduced in 368 by Valentinian I to deal with growing corruption, were rapidly absorbed into the conservative municipal system.⁴⁵¹ Changes in urban life are, however, visible on a number of fronts particularly as we advance into the fifth century. The role of the bishop in civic life becomes more visible, though it is not until the

⁴⁴³ F. Bejaoui, *BTINAA* 1 (1988) 7-15; idem, *Africa* x (1988), 98-104; N. Duval, *Les églises africaines à deux absides. I. Les basiliques de Sbeitla à deux sanctuaires opposés. II. Inventaire des monuments-interprétation* (1971/1973); idem, *REAug* 33.2 (1987), 269-301; idem, *Actes du XIe congrès Int. d'arch. chrétienne* (1989), 345-403 (on cathedrals); P. Gauckler, *Basiliques chrétiennes de Tunisie* (1912); S. Gsell, *Monuments antiques de l'Algérie* (1901); I. Gui, N. Duval, and J.-P. Caillet, *Basiliques chrétiennes d'Afrique du nord. Inventaire de l'Algérie I.1 Text. I.2 Illustrations* (1992). See also Duval, *REA* 92 (1990), 367-71; idem, *REA* 95 (1993), 591-3.

⁴⁴⁴ C. Courtois, *Les Vandales et l'Afrique* (1955), C. Diehl, *L'Afrique byzantine* (1896); W. H. C. Frend, *The Donatist Church* (1952, 2nd edn, 1971); B. H. Warmington, *The North African Provinces from Diocletian to the Vandal Conquest* (1954).

⁴⁴⁵ Note the fundamental review of Late Antiquity in North Africa, N. Duval, *REA* 92 (1990), 349-87; idem, *REA* 95 (1993), 583-640.

⁴⁴⁶ L. Ennabli, 'Results of the International Save Carthage Campaign: the Christian monuments', *World Archaeology* 18.3 (1987), 291-311; J. Humphrey, 'Vandal

and Byzantine Carthage: some archaeological evidence', in J. Pedley, *New Light on Ancient Carthage* (1980), 85-120.

⁴⁴⁷ Letters: J. Divjak, *Sancti Aureli Augustini opera, Epistulae ex duobus codicibus nuper in lucem protatae* (1981); *Les lettres de Saint Augustin découvertes par Johannes Divjak, Etudes Augustiniennes* (1983); *Oeuvres de Saint Augustin 46B. Lettres 1-29 Traduction et commentaire par divers auteurs, Etudes Augustiniennes* (1987); C. Lepelley in *CHAAN* 2 (1985), 273-85; idem, *CRAI* 1981, 445-63. Sermons published by F. Dolbeau, see *inter alia*, *REAug* 36 (1990), 353-9; *ibid.*, 37 (1991), 261-306; *ibid.*, 38 (1992), 50-79; idem, *Recherches Aug xxvi* (1992), 49-141; idem, *Rev Bénédictine* 101 (1991), 240-56; *ibid.*, 102 (1992), 44-74, 267-82.

⁴⁴⁸ C. Lepelley, *BCTH* 18B (1988), 192-3; idem, *Ant af* 25 (1989), 235-62.

⁴⁴⁹ J. Durliat, *CHAAN* 2 (1985), 377-86; C. Lepelley, *Les cités I* (1979); idem, *Ktéma* 6 (1981), 333-7.

⁴⁵⁰ Lepelley, *Les cités III* (1979/1981).

⁴⁵¹ C. Lepelley, *CRAI* 1982, 447-63. Augustine's claim (Letter 10*) that there was growing corruption and poverty is at least an indication of the visibility of such problems.

Byzantine period evidently that we find bishops, as the most influential of the *principales*, taking primary responsibility for municipal affairs.⁴⁵²

The most obvious evidence of a break with the past is in urban topography. From the end of the fourth century, fora in a number of towns either no longer functioned or played a limited role as the traditional focus of urban life. They were replaced in this function by ecclesiastical complexes, which in some cases impinged on the public spaces of the earlier fora.⁴⁵³ Many other public buildings, especially temples and baths, can be shown to have fallen into disrepair or to have been converted to more utilitarian purposes. Large peristyle houses of the early Empire were broken down increasingly into multiple dwellings and workshops; street frontages were encroached on by shops and booths.⁴⁵⁴ The appearance of these new urban quarters was radically different to that which had gone before, but it would be inaccurate and unwise to characterize the redevelopment as 'squatter activity', nor should we underestimate their economic vitality.

The construction of Christian basilicas, many dedicated to martyrs, also increased in the last quarter of the fourth century, sometimes involving the conversion of pagan monuments, and along with it the beginning of intra-mural burial.⁴⁵⁵ It is only at Carthage and Sétif⁴⁵⁶ (both provincial capitals) among recently excavated Late Roman sites, that the maintenance of the traditional public/pagan monuments appears to have competed with the growth in Church-related building activity.⁴⁵⁷ Another new development in the period is the addition at some cities of defensive walls.⁴⁵⁸

Although Courtois' *Les Vandales* remains the starting-point for study of the Vandal kingdom, it has been challenged or superseded on a number of fronts by recent scholarship and archaeology. It is no longer appropriate, generally speaking, to see the period of Vandal rule as one of universal decline. Municipal administration and finances were maintained. As one scholar has succinctly noted, the Vandals were content to make Roman institutions work to their own advantage.⁴⁵⁹ Excavations at Carthage have shown that while certain monuments, (odeon, circular monument, and theatre) may have been partly destroyed and others allowed to fall into disrepair (Theodosian Wall, circular harbour, circus) during the Vandal period, the city and suburbs seem to have been largely unaffected by the change in political authority.⁴⁶⁰ At Carthage, the construction of the Theodosian Wall in the early fifth century seems to have arrested the expansion of the city, and through its creation of a certain dead space (initially for defensive purposes), spawned the growth of cemeteries and refuse areas against it.⁴⁶¹ That the royal residence of the Vandals was centred on the Byrsa, seems certain, but the identification of the great basilica with the *mandracium* cited by Procopius is not convincing.⁴⁶² The circular and rectangular harbours were overhauled, and there is considerable evidence of continued habitation and

⁴⁵² The Vandals actively discouraged the political development of non-Arian bishops in African towns, see J. Durliat, in 16. *Internationaler Byzantinischer-kongress, Akten II*, 2, Jahrbuch des osterreichischen Byzantinistik 32 (1983), 75-6; idem, *CHAAN* 2 (1985), 377-86.

⁴⁵³ Mahjoubi, op. cit. (n. 239), Belalis Maior; T. W. Potter, *Towns in Late Antiquity. Iol Caesarea and its Context* (1995). This process was furthered in the Byzantine period as a result of the fortification programme. For the implantation of a martyr's basilica in a military *principia*, see M. Lenoir, *MEFR* 98.2 (1986), 643-64.

⁴⁵⁴ Public building: G. Caputo, *Il Teatro Augusteo di Leptis Magna* (1987); E. Fiandra, *LA* 11-12 (1975), 147-63 (Flavian temple, Leptis Magna); R. Guery, *CHAAN* 2 (1985), 399-407 (Rougga); E. Joly and F. Tomasello, *Il tempio a divinità ignota di Sabratha* (1984); L. Ladjimi Sebai, *BTINAA* 1 (1988), 59-77 (Agger); similarly, a major suburban baths complex at Leptiminus was converted for industrial use. Private houses: G. D. B. Jones, in G. Barker et al., *Cyrenaica in Antiquity* (1985), 27-41 (Tocra); J. B. Ward-Perkins et al., *Lib Studs* 17 (1986), 109-53 (Ptolemais).

⁴⁵⁵ V. Saxer, *Morts, martyrs, reliques en Afrique chrétienne aux premiers siècles* (1980); Y. Duval, *Loca Sanctorum*. On the cult of the martyrs and burial practices see the bibliography in Duval, op. cit. (n. 443), (1990), 363-4. See also for the history of Christianity in North Africa the 'Chronique augustinienne', in *Revue des Etudes Augustiniennes*.

⁴⁵⁶ H. Jouffroy, *La construction publique en Italie et en Afrique romaine* (1986), 13-18; Lepellet, *Les cités II*, 462; Mohamedi et al., *Sétif* (1991).

⁴⁵⁷ Y. Thebert, *Opus* 2 (1983), 99-122, esp. 102. See also N. Duval, 'Eglise et temple en Afrique du nord. Note sur les installations chrétiennes dans les temples à cour', *BCTH* 7 (1971), 265-96; idem, 'Eglise et thermes en Afrique du nord. Note sur les installations chrétiennes dans les constructions thermales', *ibid.*, 297-317.

⁴⁵⁸ C. M. Daniels in J. Maloney and B. Hobley (eds), *Roman Urban Defences in the West* (1981), 5-19.

⁴⁵⁹ See Durliat, op. cit. (n. 452); also F. M. Clover, 'Carthage and the Vandals', in Humphrey, *Carthage* 7 (1982), 1-22; Y. Thébert, 'L'évolution urbaine dans les provinces orientales de l'Afrique romaine tardive', *Opus* 2 (1983), 99-131.

⁴⁶⁰ C. Bourgeois, 'Les vandales, le vandalisme et l'Afrique', *Ant af* 16 (1980), 213-28; Clover, op. cit. (n. 459), 1-22; Ennabli, op. cit. (n. 158), 115-87; Humphrey in Pedley, op. cit. (n. 446), 85-120; J. J. Rossiter, 'Villas vandales: le suburbium de la Carthage au début du VI^e siècle de notre ère', *CHAAN* 4.1 (1990), 221-8. The *Latin Anthology* attests to euergetic activity (the so-far unidentified baths of Alianas) by the last Vandal kings, M. Chalou et al., 'Memorable Factum. Une célébration des rois Vandales dans l'Anthologie Latine', *Ant af* 21 (1985), 207-62.

⁴⁶¹ On the Theodosian Wall at Carthage see L. Anselmino in Ennabli, op. cit. (n. 158), 125-9; J. H. Humphrey, *Circus and Byzantine Cemetery* (1989); Hurst, *Excavations at Carthage I, 1* (1984); L. Neuru in Ennabli, op. cit. (n. 158), 135-42; C. M. Wells, *ibid.*, 115-23.

⁴⁶² Procopius, *De Aed.* vi.5.11; P. Gros in Ennabli, op. cit. (n. 158), 99-103; contra Duval, op. cit. (n. 443), (1993), 598; P.-A. Février, *Af Rom* iv (1987), 175.

development in the lower part of the city from the Byrsa southward to the ports.⁴⁶³ While the overall volume of African exports in the fifth century declined from the late Roman peak, the African share of the export market remained as high, if not higher, than previously. The decline of Roman Africa was correspondingly less pronounced than that of the rest of the Western Empire. Due to dating difficulties with fifth-century material, there are problems tracing the profile of this export activity during the Vandal period or assessing rural settlement and economy in Vandal Africa. Vandal coinage (bronze and silver) circulated throughout the Maghreb irrespective of political frontiers, though prices, following an historic trend in Africa, appear to have been low.⁴⁶⁴ Recent studies of the late fifth-century Albertini Tablets affirm the continuity of Roman period land-tenure arrangements and agriculture in southern Numidia,⁴⁶⁵ but whether production was actually declining cannot be extracted from the limited time-frame covered by these sale records. Survey evidence from Tunisia and Tripolitania suggests perhaps a slight decline in rural settlement during the fifth century, though work in Mauretania demonstrates the dangers of assuming too much on the basis of survey data alone. Leveau had found little evidence for fifth-century activity in his survey, but the fortified farm at Nador proved on excavation to have attained its highest productivity level (doubling of olive/wine presses) and population in a Vandal period remodelling of the internal space.⁴⁶⁶

The political relationship of the Vandal kingdom *vis-à-vis* the Roman state has been explored in the light of inscriptions attesting to the survival of the imperial cult and from the perspective of coinage.⁴⁶⁷ That the Vandal court evolved by the late fifth century into a centre of élite Roman-African culture with links to Constantinople is clear. The main difficulty for the Vandals was not primarily legitimacy, but one of cultural-ethnic survival (the basis of their political legitimacy) within a dominant culture.

A series of articles by Camps and others offers what amounts to a reassessment of the various Mauri 'kingdoms' of late antique Africa.⁴⁶⁸ They have shown, among other things, that these were not ephemeral tribal formulations, as Courtois argued, but territorially large sub-Roman (and in Mauretania, Christian) entities, comprising both Romanized and non-Romanized populations (Mauri). The value of Corippus' *Iohannidos* as an important source of information on the nomenclature, customs, religion, and politics of tribes of Tripolitania, Byzacena, and Numidia in the sixth century has also been highlighted.⁴⁶⁹ Regrettably, apart from the well-known monumental burial tumuli, the archaeology of these kingdoms, particularly of the less-Romanized communities is non-existent.⁴⁷⁰

After a virtual hiatus of more than eighty years in Byzantine African studies, two major monographs on the Byzantine defence system and another on the fortress at Timgad were published.⁴⁷¹ Pringle's study provides a detailed gazetteer of Byzantine fortifications, while Durliat offers a full discussion of the epigraphic evidence pertaining to the administration and financing of the towns and fortification system. Among subsequent articles, Troussset's are particularly valuable for their precisions on Byzantine coastal and Saharan frontier fortifications.⁴⁷² These new studies make clear the limitations of the Byzantine military achievement in Africa, but there remains considerable room for fresh thinking on all aspects of Byzantine defensive strategy. Regrettably only two Byzantine forts have been excavated so far (Timgad

⁴⁶³ Z. Ben Abdallah and H. Ben Hassen, 'Rapport préliminaire sur la fouille du port marchand de Carthage', *CEDAC* 12 (1991), 6; S. Ellis, *CEDAC* 10 (1989), 12-13; F. Rakob, *Karthago I* (1991), 131-2; L. Stager in Ennabli, op. cit. (n. 158), 73-8.

⁴⁶⁴ Benseddik and Potter, *Cherchel*, 118; C. Courtois et al., *Les Tablettes Albertini : actes privées de l'époque Vandale* (1952); Hitchner, op. cit. (n. 275), (1995), 136; P. Salama, *CHAAN* 2 (1985), 183-202; idem in L. Anselmino et al., *Nador* (1989), 94-110.

⁴⁶⁵ See above, n. 301.

⁴⁶⁶ Leveau, *Caesarea*, 455-8; cf. L. Anselmino et al., *Nador* (1989), 76-88.

⁴⁶⁷ F. M. Clover, *The Late Roman West and the Vandals* (1993); N. Duval, 'La culte monarchique de l'Afrique vandale: culte des rois ou culte des empereurs', *REAug* 30 (1984), 269-93; Salama, op. cit. (n. 464), 183-202.

⁴⁶⁸ G. Camps, 'Rex gentium et Maurorum et Romanorum. Recherches sur les royaumes de Maurétanie de VIe et VIIe siècles', *Ant af* 20 (1984), 183-218; idem, 'De Masuna à Kocela. Les destinées de la Maurétanie aux VIe et VIIe siècles', *CHAAN* 2 (1985), 307-325; idem, 'Nouvelles observations sur l'inscription du roi Masuna à Altava', *BCTH* n.s. 18 B (1988), 153-7; M. Fantar, 'La Kahina, reine des Berbères', *Reppal* 3 (1987) 169-84.

⁴⁶⁹ J. Diggle and F. R. D. Goodyear, *Flavii Cresconii Corippi Iohannidos seu de bellis Libycis Lib. VIII* (1970); P.-A. Février, 'Le maure ambigu ou les pièges du dis-

cours', *CHAAN* 2 (1985), 291-306; J. Kotula, *Af Rom* 1v ((1987), 229-34; Y. Modéran, 'Corippe et l'occupation byzantine de l'Afrique', *Ant af* 22 (1986), 195-212; idem, 'Les premières raids des tribus sahariennes en Afrique et la Johannide de Corippus', *CHAAN* 4.2 (1991), 479-90; idem, 'Le découverte des Maures. Réflexions sur la reconquête Byzantine de l'Afrique en 533', *ACHCM* 5 (1991), 211-33.

⁴⁷⁰ G. Camps, 'Le Gour, mausolée berbère du VIIe siècle', *Ant af* 8 (1974), 191-208; F. Kadra, *Les Djeddar, monuments funéraires berbères de la région de Frenda (Wilaya de Tiaret)* (1985).

⁴⁷¹ J. Durliat, *Les dédicaces d'ouvrages de défense dans l'Afrique Byzantine* (1981); J. Lassus, *La forteresse byzantine de Thamugadi, fouilles à Timgad 1938-56*, I (1981); D. Pringle, *The Defence of Byzantine Africa from Justinian to the Arab Conquest* (1981).

⁴⁷² N. Duval, 'L'état actuel des recherches sur les fortifications de Justinien en Afrique', *Corsi di cultura sull'arte ravennate e bizantina* 30 (1983), 149-204; P.-A. Février, 'Approches récentes de l'Afrique byzantine', *R.O.M.M.* 35 (1983), 25-53; P. Troussset, 'Les "fines Antiquae" et la reconquête Byzantine en Afrique', *CHAAN* 2 (1985), 361-76; idem, 'Les défenses côtières Byzantines de Byzacène', in *Limes* 15 (1991), 347-53. See also Y. Duval, *Ant af* 5 (1971), 209-14; M. Janon, *Ant af* 15 (1980), 345-51; A. H. M. Jones in Gadallah, *Libya in Hist* (1971), 289-98.

and Ksar Lemsa),⁴⁷³ ruling out for the foreseeable future, further advances in our knowledge of the forts, their garrisons, supply, and subsistence.

As already noted, a semblance of municipal life continued into the Byzantine period,⁴⁷⁴ though once again most of the evidence for this is derived from texts and inscriptions.⁴⁷⁵ Towns retained and defended their *territoria*. The curial class survived, though mention of them becomes more rare. Euergetism was now directed toward the founding of hospices, churches, monasteries. The maintenance of the fortifications was part of the civic responsibility of the cities, as were other public monuments (baths, aqueducts). The cities of Byzantine Africa evidently had two distinct budgets; one ecclesiastical, one municipal (the latter dealing with tax collection, *annona*, maintenance of soldiers, imperial post, public buildings, walls). There was thus some continuity of civic finances from Roman and Vandal times, with the exception that the fiscal power of the bishops now grew significantly.

Carthage experienced a brief *renovatio* following the Byzantine reconquest. The Theodosian Wall was refurbished and provided with a ditch.⁴⁷⁶ The civil basilica on the Byrsa was perhaps converted into a church.⁴⁷⁷ The Circular Harbour, was provided with a new internal colonnade and back wall, giving it a stoa-like appearance. The bridge connecting the Ilot de L'Amirauté to the north side of the harbour and the monumental entrance arch were also rebuilt. The two second-century buildings at the centre of the island were demolished and replaced by buildings of an indeterminate nature.⁴⁷⁸ The refurbished harbour was perhaps Procopius' Maritime Agora, though Hurst's suggestion that it again served as a commercial and administrative centre seems plausible. There is also scattered evidence for continued habitation and remodelling of élite housing⁴⁷⁹ as well as repair and maintenance of city streets.⁴⁸⁰

Carthage contained a large number of basilicas, reflecting both its substantial population and the religious divisions within the city's Christian community. Most Christian basilicas that have been studied in recent years show evidence of renovation and use throughout the Byzantine period.⁴⁸¹ By the later sixth century, however, there are indications that Carthage was also experiencing the mutations in its urban topography found in other African cities. Major Roman monuments such as the theatre and circus were converted into dwellings, while informal intra-mural burial became a widespread phenomenon.

Outside Carthage, the metamorphosis of the Romano-African classical city continued. Sabratha is an instructive example of the sort of urban transformation that occurred.⁴⁸² It has been shown that the city was severely damaged by an earthquake in the A.D. 360s, after which the forum was repaved with reused material, the curia rebuilt (also with reused material), and the basilica converted into a church in the late fourth or early fifth centuries, and refurbished by Justinian. The forum seems to have survived into the fifth century as a piazza adjoining a major ecclesiastical complex and was eventually turned into a cemetery in either the fifth or (more likely) sixth century. The adjacent temple of the Unknown Divinity was overlain with dense housing and workshops.

At Rougga, structures were built against the south entrance of the forum after A.D. 525, followed by wooden dwellings, dated to the mid-sixth to early seventh century and subsequently burnt around 647 (on the evidence of a hoard of 268 solidi). Burials followed in the eighth century and lamps continuing the Byzantine tradition from these levels signal the continued use of oil.⁴⁸³ Close by, the heart of the city of Leptiminus was deprived of part of its water-supply by the diversion of one of the aqueducts (limiting that aqueduct's supply solely to an industrial area in the shell of the old suburban baths), an event that can be dated by coin evidence to the mid-640s or later.⁴⁸⁴ At Sufetula in the Tunisian steppe there are indications that urban life was concentrated around a series of fortified houses and the basilical complexes, with the rest of the town apparently abandoned.⁴⁸⁵ The transformation of the small town of Belalis Maior that had begun in the fifth century continued into the Byzantine period. In the late sixth or early seventh centuries, the large basilica was entirely reconstructed after a phase of destruction and extended abandonment. The streets of the town and the flagstone surface of the forum disappeared under a layer of silt and the forum baths were invaded by ephemeral structures. The large basilica was resurfaced in cement covering the badly damaged mosaic pavement in the mid-seventh century.⁴⁸⁶

⁴⁷³ K. Belkhodj, 'Ksar Lemsa', *Africa* 11 (1968), 313-48 (a full report on the site was never published); Lassus, *op. cit.* (n. 471), Timgad.

⁴⁷⁴ Durliat, *op. cit.* (n. 471); idem, *CHAAAN* 2 (1985), 377-86.

⁴⁷⁵ A. Cameron, 'Byzantine Africa — the literary evidence', in Humphrey, *Carthage* 7 (1982), 29-62.

⁴⁷⁶ See above, n. 436.

⁴⁷⁷ P. Gros in Ennabli, *Carthage*, 99-103 and n. 437.

⁴⁷⁸ Hurst, *Excavations at Carthage II*, 1, 114-16.

⁴⁷⁹ Humphrey, *Carthage* 1 (1975); C. G. Styrenius and B. Sander in Ennabli, *op. cit.* (n. 158), 151-4.

⁴⁸⁰ Rakob, *Karthago I*, 131-2, 249-51.

⁴⁸¹ Duval, *REA* 92 (1990), 383-7; idem, *REA* 95 (1993), 595-603; L. Ennabli, *Cahiers des Etudes* 17 (1984), 44-63; idem, *World Archaeology* 18 (1987), 297-304; S.

Stevens, *Bir el Knissia at Carthage: A Rediscovered Extramural Church* (1993).

⁴⁸² P. M. Kenrick, *Excavations at Sabratha I* (1986), 315-18; Mattingly, *Tripolitania*, 181-5.

⁴⁸³ R. Guery, 'L'occupation de Rougga (Bararus) d'après la stratigraphie du forum', *CHAAAN* 1 (1984), 91-100; idem, 'Survivances de la vie sédentaire pendant les invasions arabes en Tunisie centrale: l'exemple de Rougga', *CHAAAN* 2 (1985), 399-407; Guery *et al.*, *op. cit.* (n. 377).

⁴⁸⁴ Ben Lazreg and Mattingly, *Leptiminus*, 301-4.

⁴⁸⁵ N. Duval, *CT* 12 (1964), 87-112; idem, *Afrique Occ Romaine*, 495-535. Plans of the forum produced by Saladin in the late nineteenth century indicate the existence of post-Roman structures on the paving.

⁴⁸⁶ See above, n. 239.

The suburbs of Sétif were vacated by the late fifth century, and the enclosures of the principal temples were now occupied by rudimentary domestic dwellings. Although the fifth-century baths were still in use in the late sixth century, they were subsequently used for inhumations.⁴⁸⁷ At Cherchel, there was a major change in the forum in the early fifth century, including repairs to the paving and column bases, the ambulatory was resurfaced, a new mosaic floor was laid in the basilica, a new building (possibly a church — coins and pottery suggest a date *c.* 410) was constructed to the north of the forum ambulatory. Wooden stalls were built around the edges of the forum, with a large number of fourth-century and small fifth-century coins being found in the area. Pottery and amphora show that Cherchel was still in contact with the outside world until at least the early decades of the sixth century. The forum, basilica, and church went out of use *c.* 520–530, an event accompanied by systematic demolition of most of site, perhaps coinciding with the Byzantine reconquest and the possible movement of the nucleus of the site elsewhere (closer to the harbour?). Rubble containing sixth-century material was spread over part of the site and four buildings, two of timber, were constructed on top, probably at a post-Byzantine date.⁴⁸⁸

At Volubilis, outside the Empire from the later third century A.D., archaeology has revealed late burials in houses in the eastern part of the city, but not in the smaller enceinte to the west bordering the wadi. The late antique city thus appears to have developed in the western sector of the Roman town, with its late sixth-century walls, and the abandoned eastern half being used as a necropolis.⁴⁸⁹

The changes in urban life are also mirrored in the countryside. Survey evidence is consistent in suggesting a decline in rural settlement in the sixth and seventh centuries, though precisely when this process began in the period cannot be determined. There is some indication of a greater concentration of the rural population in fortified villas and villages.⁴⁹⁰ Ecclesiastical sources indicate that the papacy had become a major owner of estates in Africa.⁴⁹¹ Despite the decline in settlement, there is evidence for the continued export of North African goods to other parts of the Mediterranean well into the seventh century, albeit at a lower volume.

There is growing evidence for continuity of activity at some sites and within some sectors of Romano-African society following the Arab invasions of the seventh century.⁴⁹² Urban life carried on in some late antique cities, and, to judge from the Arabic sources, the rural economy was for the most part unchanged. However, it is incorrect to imagine that what remained was immutable. The site of Carthage was reduced to a village of ruins, abandoned by the new conquerors in favour of the more secure Tunis.⁴⁹³ Kairouan, a new foundation, replaced Carthage as the leading city of North Africa. Roman Africa was becoming Muslim Ifriqiya.

XIV. CONCLUSION

If a story is always improved in the telling, there is some justification for a charge that we have privileged certain recent achievements of Roman archaeology in North Africa over others. In limiting our scope to archaeology we have also had to pass over a vast amount of recent historical literature and in so doing perhaps produced a slightly misleading picture of the state of the field. This is regrettable, but we have made our choices in the belief that, despite many advances since 1970, Romano-African studies remain in some respects a critically underdeveloped subject. That said, it is our hope that this essay will stimulate archaeologists and historians alike (both within and outside the Maghreb) to expand the horizons of their research and to re-evaluate the potential scope and nature of the archaeology of Africa in the Roman period. North Africa under the Roman Empire was a vast theatre of cultural accommodation, innovation, growth, and change. It is only through the combination of historical/epigraphical evidence and archaeology that we may hope to comprehend the varied nature and scale of these processes.

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⁴⁸⁷ Mohamedi *et al.*, *Sétif*, 268–73.

⁴⁸⁸ Benseddik and Potter, *Cherchel*, 391–4.

⁴⁸⁹ A. Akerraz, *CHAAN* 2 (1985), 429–38; E. Lenoir, *CHAAN* 2 (1985), 425–8.

⁴⁹⁰ W. H. C. Frend, 'The end of Byzantine North Africa: some evidence of transitions', *CHAAN* 2 (1985), 387–97; R. B. Hitchner, *Ant af* 24 (1988), Site 022, Henchir-el-Guellali, a villa-village south of Cillium showing occupation well into the seventh century is an example of this phenomenon.

⁴⁹¹ R. A. Markus, 'Country Bishops in Byzantine Africa', in *The Church in Town and Countryside*, Studies in Church History xvi (1979), 1–15. Papacy owned estates (*regio*) in southern Numidia near Nicivibus (N'gaous), bishops were in charge of villa/villages.

⁴⁹² G. Camps, 'De Masuna à Kocéila. Les destinées de la

Maurétanie aux VI^e et VII^e siècles', *CHAAN* 2 (1985), 307–24; H. Djait, 'L'Afrique arabe au VIII^e siècle', *AESC* 28 (1973), 601–21; see also n. 493.

⁴⁹³ S. P. Ellis, *AJA* 92 (1993), 965–70; R. Guery, *CHAAN* 2 (1985), 399–407 (Rougga); L. Ladjimi Sebâi, *BTINAA* 1 (1988), 59–77 (Agger); A. Mahjoubi, *CHAAN* 3 (1986), 377–90; A. Mohamedi and E. Fentress, *CHAAN* 2 (1985), 469–78; I. Sjöström, *Tripolitania in Transition: Late Roman to Early Islamic Settlement* (1993); Y. Thébert, 'Permanences et mutations des espaces urbaines dans les villes d'Afrique de nord orientale: de la cité antique à la cité médiévale', *ACHCM* 4 (1986), 31–46; Y. Thébert and J. L. Biget, *Afrique Occ Romaine*, 575–602; G. Vitelli, *Islamic Carthage* (1981); C. M. Wells, *Vanier*, 87–105.