

Pre-desert Tripolitania: a new archaeological and archaeometrical examination of Red Slip Ware from the Ghirza excavations and the Libyan Valleys Survey

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Victoria Leitch, Michel Bonifay, Claudio Capelli & David Mattingly

PRE-DESERT *TRIPOLITANIA*: A NEW ARCHAEOLOGICAL AND ARCHAEOMETRICAL EXAMINATION OF RED SLIP WARE FROM THE GHIRZA EXCAVATIONS AND THE LIBYAN VALLEYS SURVEY

The First Libyan Pottery Workshop, held in July 2014 in the Society for Libyan Studies archives at the University of Leicester, set out to review the pottery samples from the Ghirza excavations and the Libyan Valleys Survey. A new archaeological and archaeometrical (petrographical) examination of these sherds (some of them previously published by John W. Hayes and John Dore in 1984 and 1996) allowed us to better characterise the Red Slip ware production of the pre-desert region of Tripolitania between the end of the 2nd and the 7th century.

This short, preliminary study is based on a pottery workshop carried out in July 2014 at the University of Leicester, in collaboration with the Centre Camille Jullian (Aix-en-Provence).[1] The aim of the project was to examine and scientifically analyse a selection of pottery sherds from the Society for Libyan Studies archives, to improve our understanding of trade routes and supply channels across the Libyan pre-desert and beyond.

The Roman pottery studied here comes from Ghirza and the Libyan Valleys (**fig. 1**), and is dated between the 2nd to 7th century AD. Ghirza is a pre-desert settlement investigated in 1955–57. A selection of the pottery was published by J. W. Hayes.[2] The Libyan Valleys survey was carried out in 1979–89 and the pottery studied by J. N. Dore.[3]

1. Ghirza

The Ghirza sherds formed three groups.

The main group (A) was composed of 5th century Tripolitanian Red Slip Ware (TRS) forms: samples **1, 2, 3** (Hayes 4C); 4 (Hayes 8B); **5, 6, 7** (Hayes 10); and a lamp (**8**). The fabrics displayed a very similar petrographic signature across all samples in that group and are directly comparable with *Lepcis Magna* examples.[4] They are characterised by fine-grained (<0.2 mm) angular inclusions (abundant quartz, accessory mica) and several Fe-rich clay nodules. Forms Hayes 8B and 10 have clearly been influenced by Central Tunisian workshops (ARS C5 Hayes 82–85) as well as the lamp which is an imitation of Tunisian lamp Atlante X (with two nozzles), group C2.

The second group (B) is probably (Central?) Tunisian (late ARS), composed of 7th century Hayes 105B dish forms (**9–10**), characterised by a pure clay matrix and abundant, relatively coarse (<0.4 mm) inclusions (angular to rounded/aeolian quartz, rare limestones and microfossils).

The final sherd (**11**) is a fineware dish of unknown (Tripolitanian?) provenance and is characterised by moderately abundant, well-sorted, fine-grained (<0.1 mm) quartz and occasional quartz-siltstone nodules.

Catalogue* (figs. 2; 4*):

1. Tripolitanian Red Slip Ware, form Hayes 4C. Orange fabric, very thin, pale orange slip. Drawing after J.W. Hayes (Hayes 1972 fig. 60, form 4C, eponymous type = Hayes 1984 fig. 69,5). Inv. GH/M1/2.9.
2. Tripolitanian Red Slip Ware, form Hayes 4C. Hard orange-red fabric, either unslipped or very thin, red-orange mat slip. Drawing after J. W. Hayes (Hayes 1984 fig. 69,6). Inv. GH/M1/1.6.
3. Tripolitanian Red Slip Ware, form Hayes 4C. Hard orange-brownish fabric, thin and smooth red slip. Inv. GH/M1/without no.
4. Tripolitanian Red Slip Ware, form Hayes 8B. Hard orange-red fabric, red slip. Drawing after J.W. Hayes (Hayes 1984 fig. 69,18). Inv. GH/M1/4-5.13.
5. Tripolitanian Red Slip Ware, form Hayes 10. Orange fabric, red slip. Drawing after J. W. Hayes (Hayes 1972 fig. 62 form 10 [rim], eponymous type = Hayes 1984 fig. 69,36). Inv. GH/M4/without no.
6. Tripolitanian Red Slip Ware, form Hayes 10. Very fine, orange fabric, pale orange slip. Drawing after J. W. Hayes (Hayes 1984 fig. 69,22). Inv. GH/M1/10.
7. Tripolitanian Red Slip Ware, form Hayes 10. Orange fabric, red slip. Drawing after J. W. Hayes (Hayes 1972

[1] For the University of Leicester: V. Leitch (The Society for Libyan Studies, London, UK, and Associate Collaborator to the Centre Camille Jullian); D. Mattingly (Professor, University of Leicester, UK). For the Centre Camille Jullian: M. Bonifay (Aix Marseille Univ, CNRS, MCC, CCJ, Aix-en-Provence, France); C. Capelli (DISTAV, Università degli Studi di Genova, Italy, and Associate Collaborator to the Centre Camille Jullian).

[2] Hayes 1984.

[3] Dore 1996.

[4] Bonifay/Capelli 2013, 123–124.

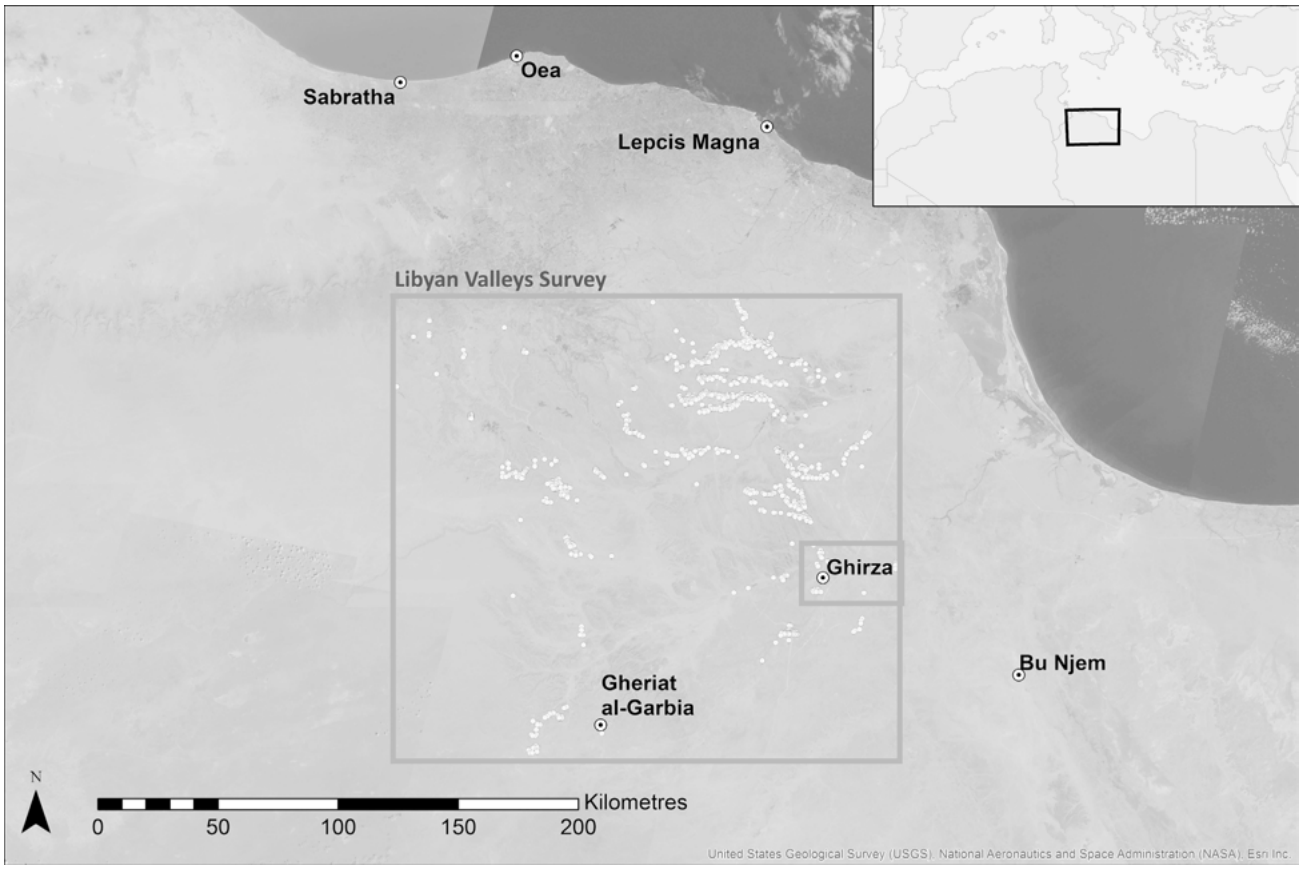


Fig. 1. Map of Tripolitania and location of the Ghirza excavation and the Libyan Valleys Survey (after M. Sterry, University of Leicester).

fig. 62 form 10 [base], eponymous type = Hayes 1984 fig. 69,23). Inv. GH/M1?/7.

8. Lamp, imitation of African Red Slip lamp Atlante X. Very fine orange buff fabric, unslipped or very thin, orange buff slip. Decoration of hares(?) on the shoulder; unreadable motif on the discus. Inv. GH/127.
9. African Red Slip Ware, form Hayes 105B. Coarse, orange fabric, orange slip on inside. Drawing after J. W. Hayes (Hayes 1984 fig. 69,4). Inv. GH/M1/without no.
10. African Red Slip Ware, form Hayes 105B. Coarse, orange fabric, orange slip. Drawing after J.W. Hayes (Hayes 1984 fig. 69,3). Inv. GH/M1/without no.
11. Unknown fine ware, bowl. Very fine orange buff fabric, red slip. Drawing after J. W. Hayes (Hayes 1984 fig. 69.21). Inv. GH/M1/without no.

2. Libyan Valleys Survey

There is far greater variability in the Libyan Valleys samples.

Nos 12 and 13 are clearly Tunisian imports of ARS A (Hayes 3C) and A/D (Hayes 31), 2nd and first half of 3rd century productions with typical fabrics (coarse [<0.6 mm] rounded/aeolian quartz, associated with shales in the ARS A).

The remaining finewares are Tripolitanian but there are no direct links with the Ghirza TRS samples or reference material from *Lepcis Magna*. Nos 14 (Hayes 2) and 15 (Hayes 4/5) are the closest to a classic 4th to 5th century TRS fabric (abundant, well-sorted, angular, fine-grained [<0.1 mm] quartz with rare coarser aeolian quartz). Nos 16 and 17 show more abundant inclusions than the typical TRS and share some characteristics with Tripolitanian cooking ware CT1. They could be early variants of TRS (Hayes 2) as it has been demonstrated that TRS originated from Tripolitanian cooking ware of the second half of the 3rd century AD,[5] or late variants of local ARS A/D (Hayes 32).

No. 18 (jug) is an example of a strange Tripolitanian white fineware linked with TRS and known from *Lepcis Magna* (John Hayes' work and recent surveys)[6] characterised by a calcareous and/or kaolinitic clay matrix and scarce, well-sorted, fine-grained (<0.1 mm) quartz inclusions with rare quartz-siltstone.

*Catalogue (***figs. 3–4***)*

12. African Red Slip Ware A, form Hayes 3C. Normal orange fabric and slip. Inv. Nf 00039.[7]
13. African Red Slip Ware A/D, form Hayes 31. Coarse, light orange fabric, thick orange slip, light blackening on the external lip. Inv. Nf 00039.[8]

[5] Bonifay/Capelli 2013, 125 and note 229.
[6] Bonifay/Capelli 2013, 124 fig. 33.
[7] Dore 1996, 330.
[8] Probably Dore 1996, 340, interpreted as Hayes 50.

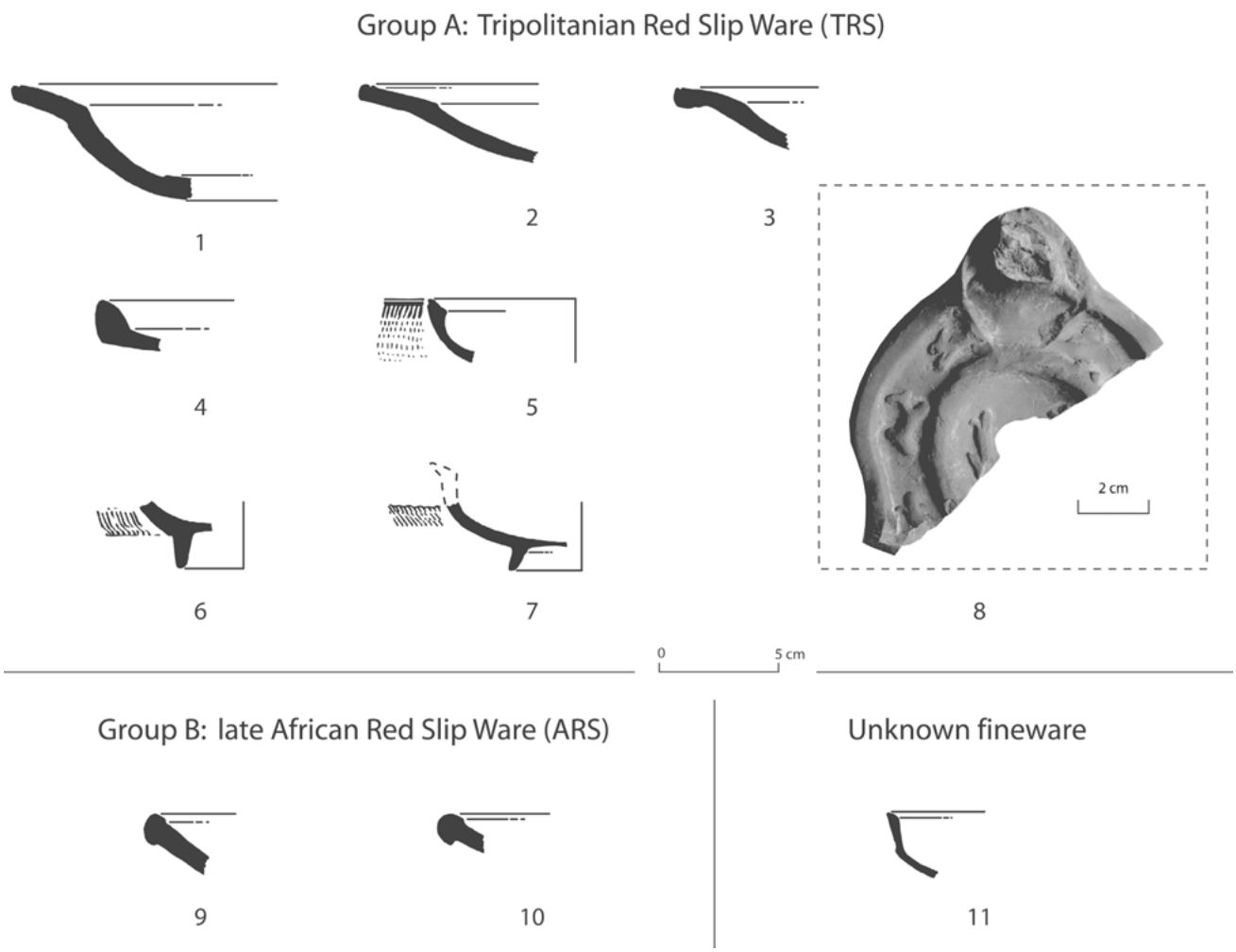


Fig. 2. Ghirza. Fine wares and lamp analysed in thin-section. (M. Bonifay, mainly after J. W. Hayes).

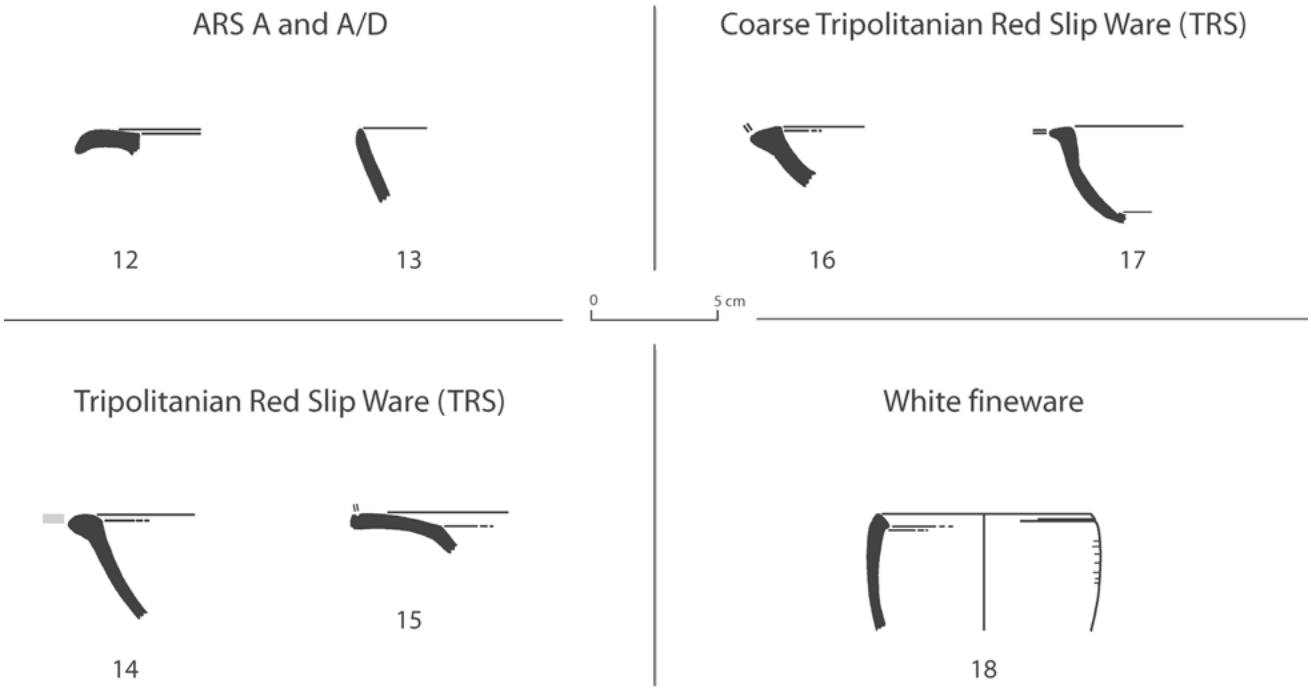


Fig. 3. Libyan Valleys Survey. Fine wares analysed in thin-section. (M. Bonifay).

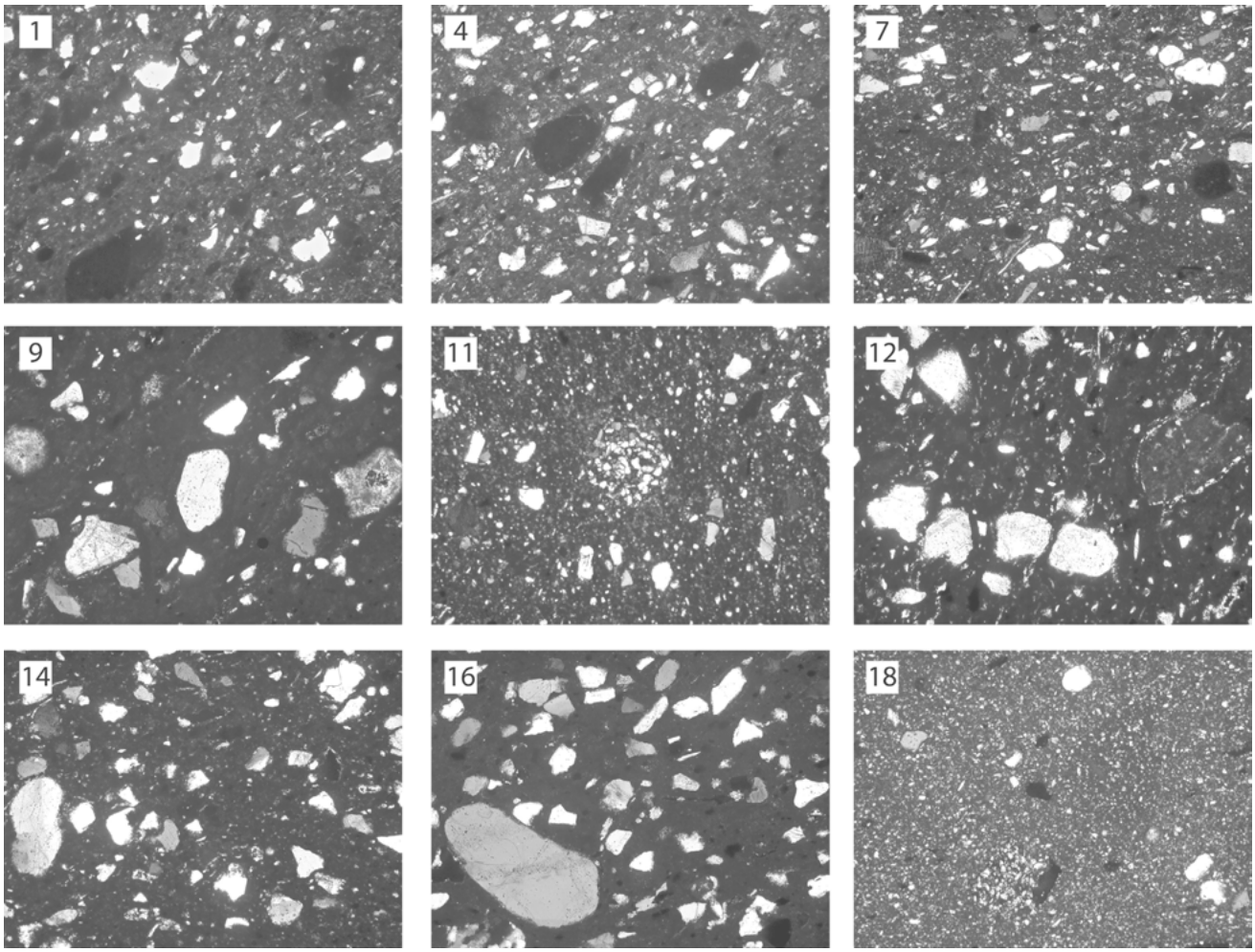


Fig. 4. Microphotographs of the fabrics of selected samples; crossed polars, actual dimensions 1.3×1 mm (C. Capelli).

14. Tripolitanian Red Slip Ware, form Hayes 2. Orange brownish fabric, exterior burnt. Inv. Kn 00103.
15. Tripolitanian Red Slip Ware, form Hayes 4/5. Orange buff fabric, red slip. Inv. Nf 00014.
16. Tripolitanian Red Slip Ware?, form Hayes 2?. Coarse fabric. Inv. Nf 00014.
17. Tripolitanian Red Slip Ware?, form Hayes 2, variant? Coarse fabric, no slip. Inv. Mm 00010.
18. Tripolitanian white fineware, jug. Whitish fabric. Inv. Kn 00009.

3. Conclusion

This preliminary investigation has confirmed that the inland regions of *Tripolitania* were still partially supplied with Tunisian products (ARS) during the 2nd century and the first half of the 3rd century, and then again in the 7th century. From the second half of the 3rd century to the end of the 5th century/mid(?) 6th century, local production of TRS became an import replacement,[9] widely distributed in towns and rural settlements.

In the Libyan Valleys, current thinking suggests that farms there supplied agricultural products to the forts, to the north, and to Fazzan in the south. Amongst the various sites, there is a great deal of variety within the Tripolitanian pottery, from different production centres, suggesting lively trade and relationships with different workshops or merchants. At Ghirza, the situation is similar, though the group more homogenous, possibly even from the same production centre. Perhaps individual sites took goods from particular merchants, explaining the homogeneity. These two areas may have been supplied by the close-by forts of Bu Njem and Gheriat al-Gharbia (which later developed into agricultural settlements with gsur).

Importantly, these results have shown us the potential for further experimentation on the rich resources at the University of Leicester, and with more work we may be able to answer further questions about supply and demand, the links between the different settlements and their rise and decline, the evolution of trade routes and the impact of historical events on the area, including Fazzan.

mbonifay@mmsh.univ-aix.fr
vl46@le.ac.uk
capelli@dipteris.unige.it
djm7@le.ac.uk

[9] See Bonifay 2017 (with previous bibliography).

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