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## Journal of Archaeological Science

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# Empires and resources: Central Anatolian obsidian at Urkesh (Tell Mozan, Syria) during the Akkadian period

Ellery Frahm a,\*, Joshua M. Feinberg b,c

- <sup>a</sup> Department of Archaeology, The University of Sheffield, Northgate House, West Street, Sheffield S1 4ET, United Kingdom
- b Institute for Rock Magnetism, University of Minnesota, 310 Pillsbury Drive SE, Minneapolis, MN 55455, United States
- <sup>c</sup> Department of Earth Sciences, University of Minnesota, 310 Pillsbury Drive SE, Minneapolis, MN 55455, United States

#### ARTICLE INFO

Article history: Received 20 May 2012 Received in revised form 25 July 2012 Accepted 31 July 2012

Keywords:
Northern Mesopotamia
Khabur Triangle
Bronze Age
Akkadian empire
Tell Mozan
Urkesh
Exchange networks
Geochemical obsidian sourcing
Magnetic obsidian sourcing

#### ABSTRACT

Almost all of the obsidian used to craft stone tools in the Near East from the Palaeolithic onward originated from volcanoes in two geographic regions: Central Anatolia and Eastern Anatolia. Five decades of obsidian sourcing has led to the view that Central Anatolian obsidians largely followed the Mediterranean coast and rarely reached farther east than the Middle Euphrates, whereas Eastern Anatolian sources almost exclusively supplied sites east of the Euphrates. This paper discusses the identification of Central Anatolian obsidian artefacts at the Bronze-Age site of Tell Mozan (Urkesh) in northeastern Syria, Most of the obsidians at Tell Mozan (97%) came from the Eastern Anatolian sources, as expected from established distribution models. Artefacts of Central Anatolian obsidian, however, were excavated from one wellconstrained context: the deposits on a palace courtyard that date to the height of the Akkadian empire's influence at this third-millennium Hurrian religious and political centre. In particular, the obsidian came from the Kömürcü source of Göllü Dağ. Potential explanations for this exotic obsidian are discussed. This obsidian might have "piggybacked" on the distribution of Central Anatolian metals or arrived at this city as royal gifts or prestige items. Other discussed mechanisms include Akkadian-linked changes in either territoriality involving pastoral nomads responsible for the arrival of Eastern Anatolian obsidians or identity construction of elites based on involvement in Central Anatolian economic and political networks.

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#### 1. Introduction

Across Mesopotamia and the Levant, nearly all of the obsidian used to craft stone tools from the Palaeolithic onward originated from volcanoes in Anatolia (i.e., modern Turkey; Fig. 1). The Anatolian obsidian sources occur in two geographic regions: the Central Anatolian sources (Acıgöl, Göllü Dağ, Nenezi Dağ, and Hasan Dağ) and Eastern Anatolian sources (the Bingöl sources, Muş, Nemrut Dağ, Meydan Dağ, and Tendürek Dağ, among others). Five decades of sourcing Near East obsidian artefacts has led to the view that, outside of Anatolia, use of Central Anatolian obsidians is a principally Levantine phenomenon. These obsidians primarily followed the Mediterranean coast and rarely reached farther east than Middle Euphrates sites, whereas the Eastern Anatolian sources almost exclusively supplied sites east of the Euphrates. This trend was first recognised by Renfrew and colleagues (Cann and Renfrew,

1964; Renfrew et al., 1966, 1968). They showed, by the start of the Bronze Age, the Eastern Anatolian obsidian "interaction zone" was Mesopotamian, whereas the Central Anatolian zone was Levantine and Anatolian. Later regional studies reinforce these trends (e.g., Cauvin and Chataigner, 1998; Chataigner, 1998, Chataigner et al., 1998). Simply put, Central Anatolian obsidians are extremely rare in Mesopotamia. Out of about 1000 sourced and published Mesopotamian obsidian artefacts, the number with Central Anatolian origins can be counted on one hand, and most of them have no spatiotemporal context.

Here we discuss the discovery of Central Anatolian obsidian at the Bronze-Age site of Tell Mozan (ancient Urkesh). Located in the northeastern corner of Syria, this early Hurrian political and religious centre lies within the proposed "supply zone" for Eastern Anatolian obsidians (Dixon et al., 1968). This site also lies near the mouth of the Mardin Pass between the Anatolian highlands and Mesopotamian lowlands, permitting ready access to Eastern Anatolia and its resources (Fig. 2). Indeed most of the obsidians at Tell Mozan (97%) came from the Eastern Anatolian sources, as anticipated from the established regional distribution patterns (Fig. 1; Renfrew and Dixon, 1976; Chataigner et al., 1998). We identified,

<sup>\*</sup> Corresponding author. Tel.: +44 74 0299 0202. *E-mail addresses*: e.frahm@sheffield.ac.uk, elleryfrahm@gmail.com (E. Frahm), feinberg@umn.edu (J.M. Feinberg).

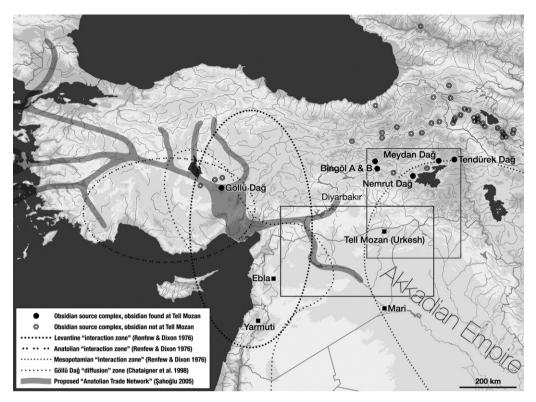


Fig. 1. Near Eastern obsidian sources, their established distribution patterns, and locations mentioned in the text. Sources of obsidian artefacts at Tell Mozan are marked by full black circles and labelled. The insets correspond to Figs. 2 and 10.

however, three Central Anatolian obsidian artefacts from a well-constrained context: deposits on a palace courtyard that date to the known height of Akkadian influence at this city. The presence of *any* such obsidian in this assemblage represents an anomaly in the accepted patterns. Tell Mozan and Göllü Dağ are 600 km apart (linearly), three times farther than the nearest obsidian sources: Nemrut Dağ and the Bingöl sources (200 km to the north; Fig. 1). This is a rare, if not unique, discovery in Northern Mesopotamia that enables new insights into changing Bronze-Age economics and/or geopolitics.

We identified not only the Central Anatolian volcano where these artefacts originated (Göllü Dağ) but also the particular obsidian-bearing lava flow of the volcano: the "Kömürcü" source on its northeastern flanks. Binder et al. (2011) identified this specific source as the remnants of the Paleo-Kabak Tepe lava dome. High-quality obsidians are accessible near Kömürcü village, where streams and erosion have cut into the obsidian-bearing layers of the dome. Balkan-Atlı et al. (1999) refer to this location as "the most spectacular and the best known of the obsidian sources of Göllü Dağ with its abundant outcrops and several workshops or knapping

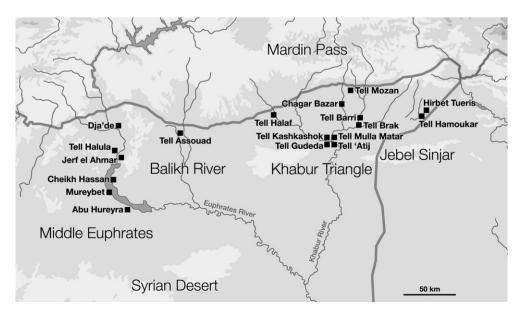


Fig. 2. The Middle Euphrates, Balikh River, and Khabur Triangle archaeological sites with prior obsidian sourcing results; also listed in Table 1.

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