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# The Lowland Patayan in the southern U.S. Southwest: Tracking vessel movement through ceramic compositional analyses



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#### ABSTRACT

We evaluate possible source areas for the ancestral Yuman (Lowland Patayan) ceramics at Las Colinas (AZ T:12:10 [ASM]) in Arizona's Phoenix Basin approximately 1000–1200 CE, using neutron activation analysis and other compositional data from southern California, the eastern Papaguería in Arizona, and Las Colinas. Our study finds no evidence of ceramic vessels moving long distances between these different regions occupied by the Lowland Patayan, although vessels may have been moved over shorter distances. The Patayan ceramics at Las Colinas were not made there, but could have been made within a several-days walk of Las Colinas using an undocumented source of phyllite for temper.

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#### 1. Introduction

During late prehistory, Native Americans throughout the U.S. Southwest engaged in widespread interactions, exchanges, conflicts, and population movements (Hill et al., 2004; Mills et al., 2013; Mills et al., 2015). These regional alliances, economies, and demographic shifts are perhaps best known from the archaeological record of village farmers, but smaller groups of mobile horticulturalists and foragers also participated. Here we address movement and exchange among ancestral Yuman (Lowland Patavan) groups in the southern Southwest using ceramic compositional data from southern California, the Gila Bend, Arizona area of the eastern Papaguería, and the site of Las Colinas (AZ T:12:10 [ASM]) north of the Salt River in Arizona's Phoenix Basin. Although other evidence suggests that Lowland Patayan people moved eastward across the Papaguería into the Phoenix Basin some time after 1000 CE, our study finds no evidence of ceramic vessels moving long distances between different regions occupied by the Lowland Patayan. Some vessels moved shorter distances, such as the phyllite-tempered Patayan ceramics recovered from Las Colinas.

#### 1.1. Background

This research is set in and around the Papaguería (Fig. 1)—a portion of the Sonoran Desert in southwestern Arizona and northwestern Sonora lacking substantial water sources except those along its borders (the Gila River to the north, the Gulf of California to the south, the Colorado River to the west, and the Santa Cruz River to the east). Between 600–1300 CE, villages of Uto-Aztecan (Hohokam) farmers dominated the Lower Gila River, along the northern border of the Papaguería, to the east of Gila Bend, Arizona.

The Hohokam villages along the Lower Gila were similar to those along the Middle Gila in many respects, with ball courts, canal irrigation of agricultural fields, and production of Hohokam Buff Ware ceramics during the Colonial and Sedentary periods, approximately 750–1150 CE (Abbott, 2000a; Doyel, 2000; Lindauer, 1988; Shaul and Andresen, 1989; Shaul and Hill, 1998; Teague, 1981; Wasley and Johnson, 1965). After 700 CE, nearby ancestral Yuman (Lowland Patayan) groups interacted with the Hohokam, with the Patayan making ceramics using the same riverine clays as Hohokam potters and transporting vessels at least 50 km into the desert interior (Beck and Neff, 2007; Beck et al., 2012). After 1000–1100 CE, the Patayan may have moved into traditional Hohokam territory to the east, living within or between Hohokam communities along the Middle Gila, Salt, and Santa Cruz Rivers.

These ancestral Yuman neighbors were considerably less sedentary and less reliant on agriculture than were the Hohokam. Recognized

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Fig. 1. Location of the study area within the southern U.S. Southwest. The Hieroglyphic Mountains phyllite source is mapped following Abbott and Watts (2010).

archaeologically in part by Lower Colorado Buff Ware ceramics, Lowland Patayan groups are best documented along the Colorado River and elsewhere in southwestern California (Hildebrand et al., 2002; Rogers, 1945; Schaefer, 1994; Waters, 1982a). Along the Colorado River, Lowland Patayan groups occupied pithouses or more ephemeral structures in seasonal settlements (Schaefer, 1994). Patayan habitation sites have been tentatively identified along the Lower Gila west of Gila Bend (Vivian, 1965), although none have been excavated (McGuire, 1982), and people probably moved seasonally away from riverine areas into the desert interior (Rogers, 1945; Schaefer, 1994). Their settlement patterns are less well understood in the areas closest to the Hohokam, as the Hohokam settlements dominated the riverine habitat around Gila Bend and to the east. Some Patayan apparently engaged in seasonal non-riverine agricultural activities as documented at the Mobak site (AZ Z:1:29 [ASM]), on an alluvial fan within 15 km of the Gila River (Hill and Bruder, 2000; Hill et al., 2008). More mobile foraging groups may have occupied other sites dominated by Patayan ceramics, such as Lago Seco (AZ Y:8:3 [ASM]), over 40 km south of the Gila River (Huckell, 1979).

The Gila Bend area was the eastern frontier of the Lowland Patayan before 1000 CE (Waters, 1982a). After 1000-1100 CE, the distribution of Lower Colorado Buff Ware expanded eastward (Waters, 1982a), along with the frequent use of materials from and adjacent to the Papaguería. These include the production of ornaments from Gulf of California shell (Howard, 1985;McGuire and Howard, 1987; Slaughter and Lascaux, 2000) and the use of Sauceda obsidian, collected from the Sauceda Mountains south of Gila Bend and nearby Sauceda Wash (Bayman, 1994; Doyel, 1996; Mitchell and Shackley, 1995; Shackley, 1988, 1995). Lower Colorado Buff Ware ceramics became more common in the eastern Papaguería (Goodyear, 1975; Masse, 1980; Severson, 1978; Yablon, 1978). They also appeared by 1000 CE or later in sites in the Lower Santa Cruz River Valley to the northeast (Deaver et al., 1990) and along the Lower Salt River (Beck, 2005). The easternmost appearance of Lowland Patayan ceramics occurred after 1150 CE at the Hohokam site of Las Fosas (AZ U:15:19 [ASM]) along the Gila River (Crown, 1984: Table 2.7.2, 2.7.3). Sherd temper, which is common in Lower Colorado Buff Ware (Waters, 1982a, 1982b) and Hohokam ceramics from the Lower Gila area (Abbott, 2000a; Teague, 1981), appeared in plain ware from Lower Salt River Hohokam sites after 1150 CE (Mitchell et al., 1989:80). Aspects of the Patayan ceramic tradition eventually became part of the broader protohistoric ceramic tradition in the southern U.S. Southwest, including Patayan vessel forms and manufacturing techniques (Deaver et al., 1990).

The changing distribution of Patayan ceramics and ceramic traits probably reflects the movement of ancestral Yuman potters and other people as well as shifting exchange networks. Such a notion is supported by modern linguistic evidence for a prehistoric "multi-ethnic system" in the southern U.S. Southwest (Shaul and Hill, 1998:388) that included an "areal speech community" with many bilingual speakers of ancestral Piman and River Yuman languages some time before 1000 CE (Shaul and Hill, 1998:380). Given the apparently peaceful co-existence and interaction of ancestral Yuman and Uto-Aztecan groups in the Gila Bend area after 700 CE (Beck and Neff, 2007) and continuing into the historical period (Ezell, 1963), it is plausible that some ancestral Yuman people joined existing Hohokam communities as they moved eastward into Uto-Aztecan territory after 1000 CE (Beck and Neff, 2007).

The best evidence for a resident Patayan group in a Hohokam site is between 1000-1200 CE at Las Colinas (AZ T:12:10 [ASM]) north of the Salt River. On the western end of two major Hohokam canal systems in the Lower Salt River valley, Las Colinas is located among the sites at the end of Canal System 2 on the west side of Cave Creek (Abbott, 2000b:Fig. 1.1, 25). An ancestral Yuman group may have occupied House Group XVII, where a relatively large Lower Colorado Buff Ware collection (4066 sherds and 12 reconstructible vessels) was recovered from contexts dating to approximately 1000–1200 CE (Beckwith et al., 1988). After 1150 CE, the proportion of obsidian coming from southern desert sources such as Sauceda increased enormously (Fertelmes et al., 2012). Las Colinas apparently continued to be a multi-ethnic community in the Classic period (Hill et al., 2004) with markers of Kayenta/ Tusayan identity such as perforated plates (Crown, 1981; Lyons, 2003) and local manufacture of Phoenix Red recurved-rim bowls (Abbott et al., 1988; Crown, 1981; Crown et al., 1988).

#### 1.2. Research questions

In her original analysis of the Las Colinas ceramics, Beckwith (1988:216) suggested that the Lower Colorado Buff Ware vessels "originated somewhere along the Colorado River in the area between Yuma and Parker" or perhaps "in the vicinity of the Colorado River Indian Reservation," based on previously reported type distributions. These source areas are located at least 140 miles (225 km) from Las Colinas. In contrast, Beck and Neff (2007) argued that a resident Yuman population within Hohokam territory, at Las Colinas and elsewhere, would have made at least some of their Lower Colorado Buff Ware vessels locally from nearby riverine clays. The buff-firing Lower Gila River clays used for Lower Colorado Buff Ware in the Gila Bend area are similar to Middle Gila River clays in their timing and manner of deposition, color after firing, and chemical composition (Beck, 2006; Beck and Neff, 2007; Beck et al., 2012). Given that Hohokam potters substituted Lower Gila River clays for Middle Gila River clays to produce Hohokam Buff Ware (Abbott, 2000a; Lindauer, 1988; Teague, 1981), ancestral Yuman potters

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