



Article

Cultivating subjects in the Neo-Assyrian empire

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Abstract

This article, which centers upon the Neo-Assyrian empire of the early first millennium BCE, presents agriculture as a field of political intervention and transformation in the creation of imperial subjectivities. As part of the expansion process into territories of Upper Mesopotamia, Neo-Assyrian rulers (ca. 900–600 BCE) relied on settled agriculture to produce and promote imperial subjects bound to the authorities for whom they tilled and toiled. However, archaeobotanical data from Tušhan, a provincial capital of the empire, reveals that people under Neo-Assyria's control did not fully conform to the idealized agrarian lifeways construed by officials to uphold Assyrian power and dictate subject conduct. Evidence for semi-nomadic pastoralism at Tušhan exposes the slippage between ideal agrarian subject and actual agrarian practice in the Neo-Assyrian empire, wherein lies the contestation over politically oriented subjectivities and their instantiation through land-use.

Keywords

Political subjectivity, imperialism, agriculture, Neo-Assyria, Ziyaret Tepe/Tušhan

Introduction

Standard treatments of ancient agriculture provide information on subsistence and economy, but archaeologies of agriculture can also engage with politics in the past. This approach requires theorizing the role that environmental practices play in constituting political associations, and appreciating land-use as a ubiquitous and therefore integral social locus for the negotiation of political relationships.

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In the argument to follow, I present agriculture as a field of political intervention and transformation in the production of imperial subject identities. I claim that rulers of the Neo-Assyrian empire (ca. 900–600 BCE) manipulated the environmental politics of settled agriculture in the provinces of Upper Mesopotamia to disseminate a normative concept of Assyrian subjectivity that fomented political allegiance to the empire. In particular, Neo-Assyrian kings invested in large-scale programs of deportation, resettlement, and “agricultural colonization” (Parker, 2001: 82) to discipline newly absorbed locals and deportees into political subjects, “people who recognize authority and recognize themselves as subjects to authority” (Kosiba, 2015). I assert that, in northern Mesopotamia, agriculturists tied to the empire through sedentarized farming embodied ideal subjects of Neo-Assyrian imperialism.

Alongside intensive agrarian ventures in the empire’s provinces, Neo-Assyrian officials also fixated on and valorized settled crop agriculture in their discursive practices. Assyrian administrators’ veneration of sedentary cultivation deprecated the legitimacy of other socio-political identities and land-use lifestyles in the region. With a broad brush, Neo-Assyrian authorities painted those resistant to Assyrian rule as mobile non-agriculturists, and therefore as disreputable neighbors who threatened imperial order and control in Upper Mesopotamia. I link the empire’s declarative disregard for itinerant lifestyles and non-intensive forms of crop agriculture with an imperial desire to command lands and people historically affiliated with defiant, semi-nomadic pastoralists, exemplified by the Aramaeans of the Late Bronze Age (ca. 13th–10th centuries BCE). Even though by the eighth century BCE Aramaeans had become significantly sedentarized agro-pastoralists (Liverani, 1997; Schwartz and Nichols, 2006; Szuchman, 2007) and integrated members of Assyrian society (D’Agostino, 2009; Kühne, 2009; Tadmor, 1982), Neo-Assyrian officials took pains to maintain the menace of incivility lurking in transhumant, non-agrarian lifeways. Minimally, the effects of this political stance were twofold. In the first place, the repudiation of peripatetic land-use practices helped extoll settled agriculture as the productive realization of subject fealty. Second, the empire’s attempt to legitimate only certain kinds of agricultural regimes fed into a larger political endeavor to distinguish and advance only certain kinds of political actors. In this case, by wielding agriculture as an instrument of statecraft, Neo-Assyrian authorities not only maligned regional rivals, they also further indoctrinated imperial agriculturists, Aramaean or otherwise, as Assyrian subjects.

To recuperate land-use lifeways elided by Assyrian officials, and unveil the political force of their project, I examine archaeobotanical data from the Neo-Assyrian provincial capital of Tušhan in Upper Mesopotamia (the present-day site of Ziyaret Tepe in southeastern Turkey, Figure 1(a)). Plant remains from ancient Tušhan index a range of productive practices besides intensive crop cultivation, including mobile forms of livestock grazing and pasturing. These findings betray the empire’s dedication to semi-nomadic pastoralism, and destabilize Neo-Assyrian representations of an ideal agrarian subject and an essential non-agrarian enemy. Such contradictions reveal the political stakes of this land-use

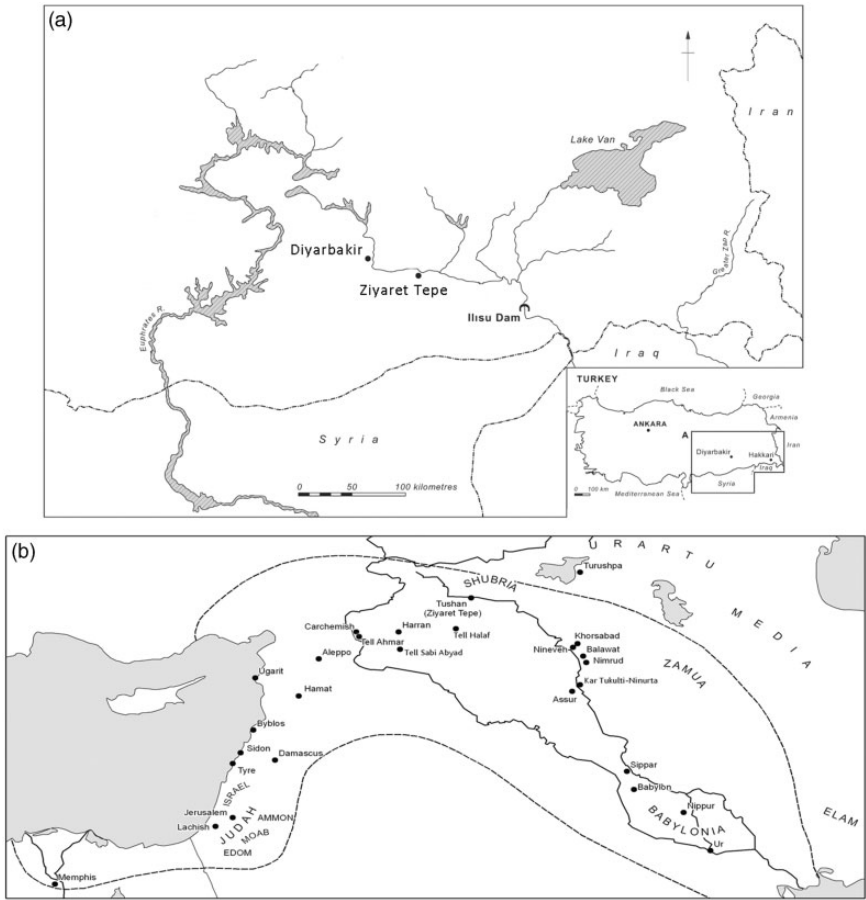


Figure 1. (a) Map of Ziyaret Tepe in its modern geographical context (after Ronayne, 2005). (b) Map of Ziyaret Tepe's location within the Neo-Assyrian empire (after MacGinnis, 2013).

project: agriculture was a charged domain of human–environment interaction through which Neo-Assyrian authorities attempted to forge particular political positions and orders. Settled permanent agriculture was not the only means by which Assyrian monarchs realized their imperial aims, but it was an important apparatus of empire that is worthy of critical archaeological scrutiny.

Neo-Assyrian agricultural colonization

In the first millennium BCE, Assyria became an expansionary empire of unprecedented proportions. While rulers of Middle Assyria (ca. 1300–900 BCE) had contented themselves with new holdings in northern Mesopotamia and southern Anatolia, the ambitious kings of Neo-Assyria proceeded to lead major campaigns

into Iran, Anatolia, Syria, the Levant, and Egypt (see Figure 1(b)). Agricultural colonization, “the founding of new rural villages and the settling of people deported from various parts of the empire for the purpose of agricultural production” (Parker, 2001: 82), typified imperial occupation in Upper Mesopotamia. In archaeological surveys, this resettlement and land-use program appears as an increase in nearly 300 new small sites in northern Mesopotamian countryside in the Neo-Assyrian period (Rosenzweig, forthcoming). These findings complement the empire’s own census records on resettlement in the region (Fales, 2014). While earlier Near Eastern powers had practiced deportation (Oded, 1979: 2), the imposition of settled agriculture signaled a change in the formation of political landscapes. No previous Near Eastern polity had systematically set out to dictate the agricultural contours of its territories or inhabitants with such bureaucratic vigor or expense.

Archaeological and historical studies have largely approached Neo-Assyrian agricultural colonization as an economic necessity of empire, required to meet the growing food supply demands of the heartland’s burgeoning urban centers¹ (Liverani, 1988; Oded, 1979: 67–74; Parker, 2001, 1997; Postgate, 1974; Wilkinson et al., 2005). While agricultural colonization certainly accommodated the infrastructural needs of imperialism, Neo-Assyria’s agrarian resettlement projects also imposed new relations of production and interdependence that entwined agriculturalist and empire. In addition to heralding environmental and economic innovations in centralized governance (Altaweel, 2008; Bagg, 2000; Barbanes, 2003; Fales, 1990a; Kühne, 2010; Morandi Bonacossi, 1996; Parker, 2001, 2003; Ur, 2005; Wilkinson, 1994), Neo-Assyria’s agricultural campaigns introduced new opportunities for aggrandizing political platforms and structuring subject-state relationships (Liverani, 1979; Postgate, 1992). Viewed as a project of social re-engineering (*sensu* Scott, 1998), agricultural colonization reformulated deportees’ affective ties to place (Harmanşah, 2012), established new-found reliances upon Assyrian land-use techniques and practices (Rosenzweig, 2016; Wilkinson and Rayne, 2010), and thrust agriculturists into surplus economies of taxation and conscription (Parker, 2001; Postgate, 1974). Relocated people found themselves physically ensconced in an agrarian system scaffolded by inequality and relations of dependence generated by geographical dislocation, provincial production, and imperial consumption. Thus, in material, symbolic, and embodied ways, agricultural colonization contributed to the emergence of new relationships between rulers and the ruled.

The ideal agrarian subject

Agricultural colonization had the ability to mask social disparities as acceptable elements of participation in the empire by fostering a sense of inclusion. By most textual accounts, imperial officials counted deportees among the “citizens” of Neo-Assyria (Galil, 2007; Miller, 2009; Oded, 1979; Parpola, 2004). With this designation and a stretch of land to cultivate, conquered people may have accepted

resettlement as a facet of benevolent imperial rule capable of distributing shared rights of personhood and property to its constituents (Gallagher, 1994; Masetti-Rouault, 2010: 131). But this political membership conferred onerous obligations upon its titleholders, not the least of which included displacement and taxation. Consequently, Neo-Assyrian administrators sought strategies for coaxing subjects into framing their socio-political values and identities around empire, even though those choices took place in contexts of coercion, constraint, and disparity. One provincial officer of the empire called upon expressions of kinship to suggest the salubrious effects of forced agriculture:

The city Turmuna where the king [Tiglath-pileser III] appointed me is well. The land has been subjugated. They are cultivating the fields and plastering roofs. We are standing in the city like one family. (Luukko, 2012: 24; SAA 19, no. 21)

Significantly, in this letter settled crop agriculture mediates the realignment of subject loyalties. Turmuna's Assyrian overseer claims that the communal cooperation necessitated by large-scale farming and permanent co-residence encourages its conquered inhabitants to organize "like one family" under imperial control. The author intentionally signals a shift in subjects' attachments from lineage-based families to corporate, political affiliations, wrought not by brutality or bribery, but by land-use practice.

Another epistle demonstrates how Neo-Assyrian administrators construed forced resettlement and agriculture as a form of civic duty that molded subjugated people into exemplary subjects:

[I said]: "Do your work, each in [his house and] field, and be glad; you are now subjects of the king [Sargon II]." They are peaceful and do their work. (Radner, 2000: 238; SAA 5, no. 210)

Again, sedentism and cultivation appear to have the ability to bend persons and personhood toward imperial authority, to provide a means "by which subjects come to embody their own subjectivization" (Smith, 2015: 70). The imperial appropriation and consumption of agricultural resources injected relationships of power and inequality into agriculturalists' lifeways, while resettlement constituted a form of imperial violence that uprooted deportees from their prior ties to land, people, and polity. Furthermore, these transformative acts and shifting policies all took place under the shade of everyday agricultural practices, obscuring through banal land-use peoples' absorption into the empire's ambit.

Consequently, coerced cultivation provided Neo-Assyrian officials with opportunities to engender attitudinal changes toward authority through participation in centrally organized land-use and management. Rather than an epiphenomenon of empire, permanent agriculture was in fact an implement of Neo-Assyrian expansion, a "soft hammer of self-regulation" that capitalized on crop production's prosaic qualities to infiltrate and alter peoples' subject-state relationships

(Agrawal, 2005: 15). Alongside other imperial methods that included bodily force (e.g. mandatory resettlement) and blunt inequities (e.g. taxation), large-scale, compulsory farming was a ubiquitous and mundane apparatus of political control that normalized obedience to the empire. Put another way, the program of agricultural colonization attempted to sow subject conformity as assuredly as it sought to reap agrarian harvests. By using particular modes of agrarian production to naturalize and incentivize the reconfiguration of socio-political relationships along asymmetrical axes of control and access, Neo-Assyrian administrators devised a system for cultivating political subjects through cultivation itself.

The essential non-agrarian enemy

The inclination to fashion an archetypal Assyrian subject out of agrarian lifeways was neither arbitrary nor wholly economic. Historical rivalries with semi-nomadic and agro-pastoral peoples in Upper Mesopotamia, exemplified by the Aramaeans, undergirded Neo-Assyrian officials' promotion of settled crop husbandry, and their concomitant devaluation of non-agrarian practices, be they forms of transhumance or livestock rearing. During the period in which Middle Assyria attempted to assert itself in territories between the Tigris and Euphrates Rivers, ca. 1300–900 BCE, Aramaeans living in northern Syria had begun assailing Assyrian settlements in Upper Mesopotamia and the Assyrian heartland (Lipiński, 2000: 36). The Aramaeans resisted Assyrian incursion and staged attacks that successfully dislodged Middle Assyrian land holdings. By the time of Aššur-dan II's reign around 930 BCE, Assyria had lost most of its outlying territories to Aramaean forces (Roaf, 2001: 358). The kings of Neo-Assyria dedicated themselves to recapturing these forfeited lands.

The Aramaeans first appear in the annals of the Middle Assyrian king Tiglath-pileser I (r. 1114–1076 BCE) as pastoral nomads and enemies of Assyria, and in this form they largely remain throughout the Neo-Assyrian corpus:

I took my chariots and warriors and set off for the steppe. I marched against the *Ahlamû* Aramaeans, enemies of the god Aššur, my lord. (Grayson, 1991: 23; A.0.87.1: 44–49)

Assyrian royal inscriptions did not present Aramaeans as legitimate political rivals defending their lands from Assyrian takeover. Instead, these people populate Assyrian texts as agents of destruction, sabotaging the empire's quest to establish order and rule in the region (Bunnens, 1999; Sader, 2000; Schwartz, 1989). They are often connected with the *Ahlamû*, people described by the Assyrians as roving, piractic bands of semi-nomadic pastoralists (Lipiński, 2000: 36). The Aramaeans are also a “treacherous [and] plundering race” of people (Sargon II, r. 721–705 BCE; Gadd, 1954: 193), “who do not recognize authority” and roam about the mountains “like deer and wild goats” (Tiglath-pileser III, r. 744–727 BCE; Tadmor and Yamada, 2011: 91; no. 37: 16–22). In this ignoble role, the Aramaeans constituted “the ‘Enemy’ *par excellence*” of the Neo-Assyrian empire

(Masetti-Rouault, 2009: 142) and Assyrian royals intentionally depicted the Aramaeans' peripatetic lifestyle "as a deviation from the normal, i.e. correct, way of life in Assyria" (Zaccagnini, 1987: 143). Assyrian claims to the territories of northern Mesopotamia motivated this casting, which emulated a common contempt for non-Assyrian peoples and a characterization of non-agrarian lifestyles as turbulent, uncivilized, and meager. This portrayal amplified the contrast with orderly, settled, and bountiful agrarianism that Neo-Assyrian imperialism promised. In other words, the essential non-agrarian enemy justified the ideal agrarian subject of Neo-Assyria.

In truth, however, the essential non-agrarian enemy was as much a political creation as the ideal agrarian subject. Research has shown that by the Neo-Assyrian period, Aramaeans in Upper Mesopotamia had become settled agro-pastoralists engaged a range of social practices that Assyrians would have found familiar (Szuchman, 2007). For example, the Neo-Assyrians' emphasis upon the Aramaeans' itinerant ways misrepresented their opponents' significant sedentary presence. The Aramaean state included capitals and large cities in Syro-Anatolia at Zincirli, Tell Halaf, Tell Ta'yinat, Arslan Tash, and Tell Ahmar (Mazzoni, 1995: 181). In addition to living in urban centers (Kepinski, 2009; Morandi Bonacossi, 2009; Soldi, 2009), Aramaeans conducted sedentary agriculture (Liverani, 1997; Schwartz and Nichols, 2006) and coalesced into organized polities (Rouault, 2009; Szuchman, 2009). Culturally, the Aramaeans and Assyrians shared mythological traditions (D'Agostino, 2009), common artistic styles (Kühne, 2009), and the use of Aramaic (Kwasman, 2000; Tadmor, 1982). Demographically and politically, people of Aramaean descent were present throughout Neo-Assyria, including in its heartland (Postgate, 1989a), and we know that Assyrians promoted Aramaeans to positions of authority in the empire (Bunnens, 2009: 81; Kühne, 2009: 54; Tadmor, 1982).

In addition, the Assyrians themselves emerged from pastoral-nomadic traditions that undermine their denunciations of such people and practices. The Amorite Shamshi-Adad, a semi-nomadic "tent-dweller," founded the Assyrian state in the early 18th century BCE (Murphy, 2004: 76; Postgate, 1989a). Leichty (2007) posits that the Neo-Assyrian king Sargon II and his successors were Aramaean. And Neo-Assyrian rulers commonly used the ancient Near Eastern epithet "king as shepherd" in their programmatic inscriptions and decrees (Karlsson, 2016: 183–184). Clearly, at times, Assyrian officials acknowledged ties to a history both Aramaean and non-agrarian.

There are a number of reasons why Neo-Assyrian rulers regularly redacted these mutual genealogies, interests, and interactions from their representations of, and dealings with, the Aramaeans. To begin with, positional discrepancies reflect the nature of idiosyncratic rulership. Inconsistencies in royal rhetoric and policy should be expected within the roughly 300 years of Aramaean and Neo-Assyrian interactions. Historiography's hindsight has the tendency to presume and impose congruity upon the textual record and its authors, but within the broader patterns and mechanisms of Assyrian imperialism, it should not surprise us to find diverse

and contradictory positions among the empire's various monarchies and their statements. After all, Assyrian imperialism was a process, not an event, and it took place in a variety of contexts with differing exigencies. Assyrian royals utilized a range of tropes to underscore their authority and appeal to their audiences (Porter, 2000: 148), even if the political propaganda they disseminated conveyed conflicting messages. Consequently, we have rulers like Aššurnasirpal II (r. 883–859 BCE), who regularly employed the title and regalia of the shepherd-king (Karlsson, 2016: 183–184) *and* attempted to convert pastoral nomads into settled farmers by force (Grayson, 1991: 189–393).

Granting these inconsistencies, confrontations with the Aramaeans nonetheless spurred Assyrian imperialism and informed the overall character of the empire's responses to resistant polities and communities in the northern provinces. Whatever histories and traditions the Assyrians and Aramaeans shared, Middle Assyria's encroachment into Upper Mesopotamia marked a shift toward antagonistic relations. Seeking new strategies for effectively countering Aramaean sovereignty, Tukulti-Ninurta I (r. 1243–1206 BCE) and his successors began a process of "landscape infilling" (Wilkinson et al., 2005: 25), pumping settlers and settlements into territories outside the Assyrian heartland, especially in the Upper Khabur region of northern Syria, to lay permanent claim to the land through agricultural investment. During this period of incipient agricultural colonization, the ideological concept of "The Land of Aššur" emerged, and at the provincial capitals established throughout the frontier, Assyrian officials from the heartland were installed at the expense of local leaders (Postgate, 1992: 251–252). The effect was one of physical emplacement and replacement, whereby the boundaries of Assyria were proclaimed by the presence of Assyrian themselves as occupants and managers of the land. This was a significant change from preceding periods, when tribute and allegiance from local rulers marked the conquest and annexation of foreign lands (Liverani, 2001).

The politics of agricultural subjectivity

The Neo-Assyrian kings coupled their expansionary programs against the Aramaeans with a recasting of Assyrian cultural norms and their attendant deviations. Imperial dynamics, predicated as they were upon deportation, necessitated a re-conceptualization of Assyrian identity. Officials could no longer construe non-Assyrians as people from outside Assyria² since, after all, a great deal of Neo-Assyria's subject-citizens now came from provinces beyond the heartland (Oded, 1979; Parpola, 2004). Rather, under empire, non-Assyrian identities materialized as the refusal to conform to newly consecrated understandings of the Neo-Assyrian subject—and farming the land was a central component of this emergent socio-political identity. As Matney (2014: 159) points out, Neo-Assyrian imperialists "required an Other, with a capital O," in order to fashion an empire of their own making (see also Zaccagnini, 1987). Under the rubric of empire, discourses of Othering pivoted around an agricultural idiom, and non-agrarian

lifestyles became antithetical to Neo-Assyrian subjectivity (cf. Van Driel, 2000: 280).

Assyrian royals vying for legitimate rule over Upper Mesopotamia found that demarcating this practice-based division, between agriculturists and non-agriculturalists, could be a powerful semantic device for authority-building. In the early first millennium, when Assyria competed with Aramaeans for control of northern Mesopotamia, Assyrian rulers promulgated biases that distinguished the urban from the rural, the settled from the mobile, the agricultural from the pastoral (Karlsson, 2016: 200). Throughout the Assyrian archive, officials represented the Aramaeans and other non-Assyrians as lawless marauders contemptuous of sedentary agriculture and the authorities who promoted it (Masetti-Rouault, 2009; Zaccagnini, 1987: 412–414).

From this perspective, the ingenuity of Neo-Assyria's agrarian program was its ability to transform and redeem these adversaries into members of the empire. Through agricultural practice, disobedient non-agriculturalists could become loyal subjects of Assyria; Aramaeans could become imperial citizens. The forced implementation of crop husbandry could establish political ties to the empire that transhumant pastoralism could not support, and intensive, surplus farming could facilitate economic attachments that locals and deportees could not escape. Pastoral nomads' construed disdain for urbanization, cultivation, and political oversight stood in direct opposition to the Assyrian imperial project. But as agricultural subjects, these same dissidents could be incorporated into the empire through the re-organization of communities, labor, and allegiances that agricultural colonization enabled.

The diminution of non-agriculturists in imperial narratives represents a discursive elision, engaged for political purposes, to be countered and contextualized by material sources. Agricultural colonization was part and parcel of a larger imperial initiative to orient conquered peoples 'to Assyria' (Postgate, 1992: 251) by coercively seeding Upper Mesopotamia with farmers and farmsteads. Analyzed through the optic of political subjectivity, agricultural production in the Neo-Assyrian provinces becomes a significant unit of analysis in the archaeological and historical study of imperial processes and relations.

The Assyrian royal annals depict a sharp restructuring of the political and environmental landscapes of northern Mesopotamia to solidify Neo-Assyrian hegemony. In particular, Assyrian officials strove to imply that non-agricultural lifeways, such as mobile animal husbandry, reached their nadir when Neo-Assyria took over Upper Mesopotamia. Neo-Assyrian rulers held this land-use change up as proof of the power of the empire to impose its will and create devoted, agricultural subjects. The following archaeobotanical analysis from Ziyaret Tepe, the ancient Neo-Assyrian provincial capital of Tušhan in the Upper Tigris River Valley, critically evaluates these assertions by bringing attention to evidence for semi-nomadic pastoralism in Neo-Assyria's agriculturally colonized provinces. Nestled in the archaeobotanical data from Tušhan, we find testament to the ways in which people under Neo-Assyrian empire defied the ideals of agrarian

subjecthood and expressed their own, alternative and non-agricultural versions of imperial subjectivity. In the exposition of the model agricultural subject as a political fiction, we also find corroboration for agriculture's political value in Neo-Assyrian imperialism.

Tuṣhan, a Neo-Assyrian provincial capital

In the early ninth century BCE, Aramaean and Assyrian rulers jockeyed for control of the Upper Tigris River Valley, and the fortified site of Tuṣhan (Ziyaret Tepe) served as an important foothold for Assyria's military campaigns in the region (Figure 1). In the middle of the 11th century BCE, Middle Assyrian armies marched northward, advancing as far as the Upper Tigris River in their attempts to stifle Aramaean command of the area (Szuchman, 2009: 56). But Assyrian authority in the region proved fleeting, and the Aramaean kingdom of Bit-Zamani survived and grew to preside over the Upper Tigris River Valley from its capital at Amedi (present-day Diyarbakır). It was not until the reign of Aššurnasirpal II (883–859 BCE) that Neo-Assyria was able to pry loose the Aramaeans' hold over the area. In 882 BCE, Aššurnasirpal II consecrated Tuṣhan as an Assyrian provincial capital, and two years later, he boasted that, in his 880 BCE campaign into the Upper Tigris River Valley, he reclaimed fortresses along the river and captured troops fighting for Bit-Zamani (Szuchman, 2009: 57). In one inscription, Aššurnasirpal II tied these military exploits to a larger quest for agricultural security:

I resettled in their [the Aramaeans'] abandoned cities and houses Assyrians who had held fortresses of Assyria in the lands [of] Nairi and whom the Aramaeans had subdued. I placed them in a peaceful abode. I uprooted 1,500 of the *Ahlamû*-Arameans belonging to Amme-ba'li, a man of Bit-Zamani, and brought them to Assyria. I reaped the harvest of the lands [of] Nairi and stored it for the sustenance of my land in the cities of Tuṣha[n], Damdammusa, Šinabu, and Tidu. (Grayson, 1991: 261; A.O.101.19: 95–96)

This proclamation contains several elements of the Aramaean “enemy” *topos* that suggest this claim was, at least in part, conceptual rather than factual: (a) a return to peace brought by permanent settlement; (b) a resumption of crop agriculture in the land; and (c) the assimilation of Aramaeans into the Neo-Assyrian empire as political subjects. All of these pronouncements should be re-evaluated in light of the political manipulation of meaning that informed Neo-Assyrian statements and policies on emplaced agriculture. By interrogating the realities of agricultural practice at Tuṣhan, we are also seeking a greater understanding of imperial subject production and orientation, as manifested through land-use activities.

Agriculture at Tuṣhan

Ziyaret Tepe is a 32 hectare tell standing nearly 30 meters tall in the southern floodplain of the Upper Tigris River that runs east–west in southeastern Turkey.

Situated within the Diyarbakır Basin, approximately 500–550 meters above sea level, the site is and has been part of a semi-arid environment supporting agriculture and pastoralism for thousands of years (Van Zeist and Woldring, 1978; Yakar, 2000: 446–449). For the residents of ancient Tušhan, over 400 mm of yearly rainfall, coming primarily in the winter months, would have supported dry farming, while the rich alluvial soils surrounding the settlement were ideal for permanent cultivation (Matney et al., 2003: 176–177). At the same time, hot and dry summers, with temperatures exceeding 100° F on a regular basis, would have exposed their crops to extreme heat and water evaporation (Erinç, 1950), and inclined the land managers of Tušhan to build irrigation canals. Just beyond the floodplain, herders could take their livestock into the terraced foothills that rise another 150 meters and border the river valley. Steppe vegetation suitable for grazing animals cover these limestone bluffs, which run alongside the course of the Upper Tigris River before giving way to the Tur Abdin Plateau roughly 25 kilometers to the south and the Southeastern Taurus Mountains that begin their rise 100 kilometers to the northeast.

Settlement at Ziyaret Tepe began in the Early Bronze Age (ca. 2600 BCE) and stretched into the Ottoman period (Matney et al., 2009), but the site reached its zenith in the Neo-Assyrian period as the imperial provincial capital Tušhan (ca. 900–600 BCE). Features of this frontier center (see Figure 2) included a fortified city wall, large administrative buildings on the acropolis (Operation L), a governor's palace overlooking the river valley (Operation A/N), and a treasury for collecting and redistributing agricultural tithes to state personnel (Operation G/R) (MacGinnis and Matney, 2009; Parpola, 2008). Cuneiform texts found at the site also confirm that military units, agrarian goods, and resettled deportees moved in and out of Tušhan as they circulated through the empire (MacGinnis, 2013; Parpola, 2008).

South of the treasury lies one of Tušhan's city gates, referred to by excavators as the “Khabur Gate” (Operation Q, Figure 2; Figure 3(a)). This guarded entryway into the settlement served as a major corridor between the provincial center and the lands lying south of the city, which included farmsteads situated along the Tigris floodplain and pasturelands in the foothills beyond (Schachner, 2003). These fields and pastures were the primary loci for agricultural production of the supplies to Tušhan's treasury. Four phases of gate construction (Figure 3(b)) indicate that inhabitants used the Khabur Gate for the duration of Neo-Assyrian occupation (Matney et al., 2009: 61), up until residents abandoned the city in the face of potential attack by Babylonian and Median armies around 611 BCE (Grayson, 1975: 95, 53–55).

In an effort to reconstruct land-use practices at Tušhan, a total of 31 soil samples from all four Neo-Assyrian phases of the Khabur Gate were analyzed for archaeobotanical remains by the author (Figure 3(b)). Altogether, 926 identifiable plant items were recovered from the city gate samples, representing 47 different plant taxa (Table 1). Cereal grains make up 31% of the overall crop composition, followed by cereal chaff (7%), pulses (1%), and fruits (<1%) (Figure 3(c)). But it is

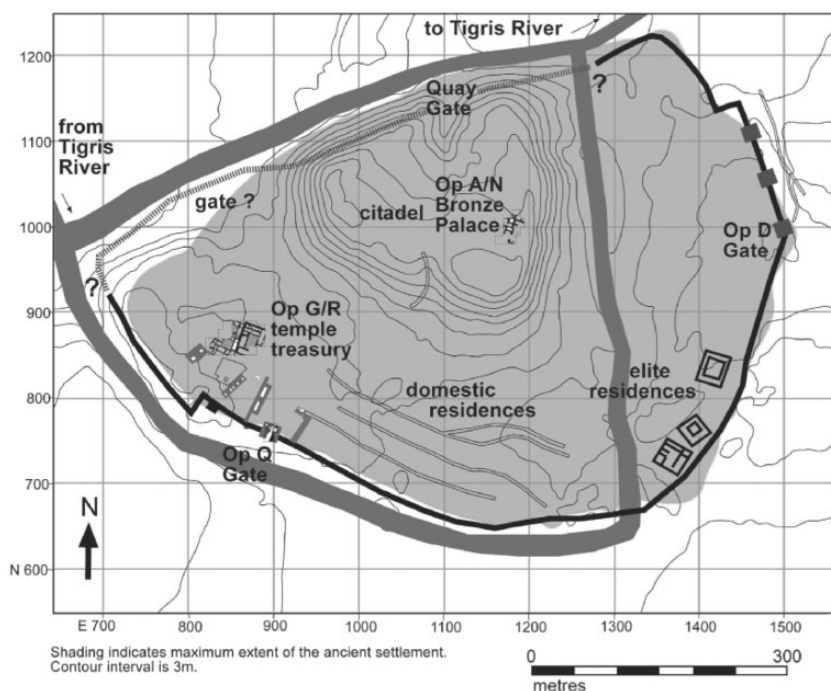


Figure 2. Map of Ziyaret Tepe's Neo-Assyrian occupation, indicating the location of the Khabor Gate in Operation Q (image courtesy of the Ziyaret Tepe Project).

weedy taxa, non-cultigens, that dominate the assemblage, comprising 61% of all the archaeobotanical material identified.

The Khabor Gate plant assemblage largely consists of the debris of dung fuel burned in the gate's chambers by its occupants for heat, light, and food preparation. The small, enclosed guard rooms would not have been practical locations for crop processing, and low percentages of chaff and field weeds, even in the hearth samples (12.5% and 6.7%, respectively), support this claim (Table 2). None of the city gate phases contained storage vessels (Matney et al., 2009: 61–62), and lacking large deposits of clean grain, the city gate does not appear to have been a site of cereal storage. Instead, across all phases of the city gate, the samples display low charcoal densities and low cultigen to non-cultigen ratios, both indicators of dung fuel burning practices (Miller and Smart, 1984). Densities of wood charcoal, which signal episodes of wood fire burning, have a low average of 0.067 g/L, with no sample exceeding 0.133 g/L, even among the hearth samples where wood burning would be most evident. Collectively, the spread of plant material across time and space in the city gate indexes the regular sweeping and diffusion of dung fuel waste from the indoor hearths onto the surrounding floor surfaces. As the detritus of dung fuel burning, the plant remains from the Khabor Gate represent a composite accumulation of forage and fodder resources for grazing livestock, represented by

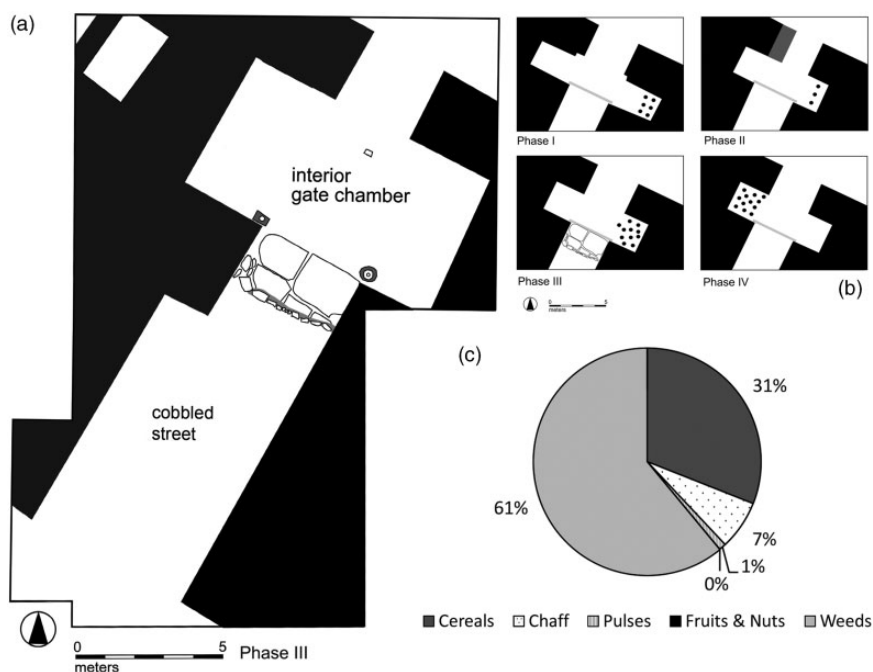


Figure 3. (a) Plan of the Phase III Khabur Gate in Operation Q. (b) Plans of the four phases of the Khabur Gate in Operation Q, with black dots marking the locations of the soil samples taken. (c) Pie chart illustrating the relative abundance of plant groups within the composite gate assemblage. (Gate images courtesy of the Ziyaret Tepe Archaeological Project.)

zooarchaeological evidence of domestic sheep (*Ovis* sp.), goat (*Capra* sp.), and cattle (*Bos taurus*) (Greenfield, 2014). Therefore, the archaeobotanical assemblage from the city gate provides important information on land-use and management practices during the Neo-Assyrian period at Tušhan, especially as seen through the lens of animal consumption.

The cereal finds in the Khabur Gate register the significance of fodder production in an agrarian system supporting both human and animal members of the empire. Most (38%) of the cultivated plants recovered from the Khabur Gate consist of grains and chaff of barley (*Hordeum* sp.) and wheat (*Triticum* sp.). Generally, the remains of such cereals are understood as elements of crop husbandry for human sustenance. But, as explained above, the taphonomy of the Khabur Gate assemblage points to an archaeobotanical collection generated primarily by *animal* consumption. Consequently, the cereals found in the gate assemblage designate fodder reserves that would have provisioned pack animals in the frontier capital. In the gate, barley grains and chaff outweigh wheat remains 2.5 to 1, delineating barley's important role as feed for livestock. A salt- and drought-tolerant crop, barley would have been both a reliable human staple as well as a practical silage to cultivate in and around the semi-arid river valley

Table 1. Absolute counts of archaeobotanical remains from the Khabur Gate (Operation Q), along with their ecological contexts.

	Species	Common name	Ecology	Total count	Species	Common name	Ecology	Total count
Cereals	Cereal grain indet.		Fields	239	<i>Acinos</i> sp.	Basil thyme	Steppe	1
	<i>Hordeum</i> sp.	Barley	Fields	44	<i>Aegilops</i> sp.	Goat grass	Fields	4
	<i>Triticum</i> sp.	Wheat	Fields	2	<i>Anthemis</i> sp.	Chamomile	Steppe	5
	<i>Triticum monococcum</i>	Einkorn	Fields	1	<i>Artemisia</i> sp.	Sagebrush	Steppe	1
	Cereal culm		Fields	12	<i>Asperula/Galium</i> spp.		Non-diagnostic	17
Chaff	Cereal embryo indet.		Fields	1	<i>Asperula</i> sp.	Woodruff	Steppe	1
	Cereal glume indet.		Fields	3	Asteraceae capitula	Daisy family flower head	Steppe	4
	Cereal rachis indet.		Fields	1	<i>Astragalus</i> sp.	Milkvetch	Steppe	3
	<i>Hordeum</i> sp. rachis		Fields	25	<i>Brassica</i> sp.	Wild mustard	Non-diagnostic	2
	<i>Triticum</i> sp. glume base		Fields	16	<i>Buglossoides</i> sp.	Corn gromwell	Non-diagnostic	30
Pulses	<i>Triticum</i> sp. rachis		Fields	5	<i>Carex</i> sp.	type Sedge	Wetlands	7
	<i>Triticum</i> sp. spikelet fork		Fields	3	<i>Centaurea</i> sp.	Star thistle	Steppe	1
	Large legume indet.		Fields	1	<i>Chenopodium</i> sp.	Goosefoot	Non-diagnostic	16
	<i>Lens culinaris</i>	Lentil	Fields	7	<i>Coronilla</i> sp.	Crown vetch	Non-diagnostic	2
	<i>Pisum sativum</i>	Field pea	Fields	2	<i>Cyperus</i> sp.	Nutgrass	Wetlands	3
Fruits	<i>Ficus</i> sp.	Fig	Non-diagnostic	2	<i>Descurainia</i> sp.	Flix weed	Non-diagnostic	1
	Nut shell indet.		Non-diagnostic	2	<i>Eragrostis</i> sp.	Love grass	Wetlands	4
					<i>Fumaria</i> sp.	Fumitory	Fields	1
Weeds	<i>Acinos</i> sp.	Basil thyme	Steppe	1	<i>Galium</i> sp.	Bedstraw	Fields	4

(continued)

Table 1. Continued

Species	Common name	Ecology	Total count	Species	Common name	Ecology	Total count
Grass 001		Non-diagnostic	16	Small grass seed indet.		Non-diagnostic	87
<i>Helianthemum</i> sp.	Rock rose	Steppe	1	Small legume indet.		Steppe	22
<i>Heliotropium</i> sp.	Heliotrope	Fields	2	<i>Stipa</i> sp.	Needle grass	Steppe	7
<i>Hordeum</i> sp. wild	Wild barley	Non-diagnostic	3	<i>Teucrium</i> sp.	Germander	Steppe	2
<i>Hypericum</i> sp.	St. John's wort	Steppe	1	<i>Teucrium parviflora</i>	Germander	Steppe	1
<i>Malva parviflora</i>	Mallow	Steppe	1	<i>Thymelaea</i> sp.	Thymelaea	Steppe	1
<i>Medicago</i> sp.	Burclover	Steppe	1	<i>Trigonella</i> sp.	Fenugreek	Steppe	2
<i>Mentha</i> sp.	Wild mint	Wetlands	1	<i>Trigonella astroites</i>	Fenugreek	Steppe	8
<i>Papaver</i> sp.	Poppy	Fields	1	<i>Vaccaria</i> sp.	Cow cockle	Fields	5
<i>Phleum exaratum</i>	Timothy grass	Steppe	229	<i>Verbascum</i> sp.	Mullein	Steppe	3
<i>Polygonum</i> sp.	Knotweed	Wetlands	16	Indeterminate plant part			2
<i>Portulaca</i> sp.	Purslane	Wetlands	32	Indeterminate seed			1497
<i>Reseda</i> sp.	Mignonette	Non-diagnostic	1	To be identified			140
<i>Scleranthus uncinatus</i>	Knawel	Woodlands	1	Total sorted remains			2565
<i>Silene</i> sp.	Campion	Fields	9				

Table 2. Statistical comparisons of the floor and hearth samples from the Khabur Gate.

	Floors (n = 27)	Hearths (n = 4)	All samples (n = 31)
Crop average count	9.56	4.75	8.65
Crop relative abundance	34.58%	18.27%	32.00%
Chaff average count	1.01	3.25	1.84
Chaff relative abundance	3.75%	12.50%	7.00%
Wood charcoal density (g of charcoal/L of soil)	0.069	0.039	0.067
Sample density (no. of items/L of soil)	32.53	33.27	29.35
Cultigen to non-cultigen ratio	0.130	0.085	0.161

(Riehl, 2009). Meanwhile, wheat varieties, with their greater water requirements, would have been reserved principally for human diets.

Counting fodder cropping among the cultivation strategies at Tušhan nuances the picture of agricultural colonization in the provinces by demonstrating just how greatly Neo-Assyria's agrarian economy incorporated and depended upon animal husbandry, a practice that Assyrians had come to pejoratively associate with the Aramaeans. The size and scale of the livestock economy in fact necessitated careful management of agrarian supplies, an ironic indicator of the impact stockbreeding had on the empire's agricultural pretensions. In Neo-Assyrian texts, administrators distinguished between "fodder for pack animals" and "stored grain for men," and collected barley for both (Fales, 1990b: 25; Postgate, 1974: 189). And within another inscription commemorating the founding of Tušhan, Aššurnasirpal II dedicated the city to the storage of barley *and* straw:

I brought back the enfeebled Assyrians, who, because of hunger and famine, had gone to other lands, to the land Šubru. I settled them in the city of Tušha[n]. I took over this city for myself and stored therein barley and straw from the land Nirbu. (Grayson, 1991: 243; A.O.101.17: ii25–ii29)

Indeed, a great deal of agricultural resources went into sustaining four-legged creatures, not just two-legged ones, and the Neo-Assyrian empire constantly had to balance the allocation of foodstuffs to both its denizens and their animals (Charles, 1996: 211). The empire was not only feeding growing Assyrian communities, it was also supplying an ever-increasing infrastructure of animals for traction, primary consumption, and secondary products. Livestock provided the empire with woolen textiles, horse-drawn chariots, dietary and sacrificial meats, ox-drawn plows, hides and skins, and dairy products (Postgate and Powell, 1993, 1995). Based on the evidence for foddering at Tušhan, animals were no less important in the empire's

peripheries, where agricultural colonization dictated imperial land-use (see also Greenfield, 2014).

Animal husbandry at Tušhan, however, does not in and of itself contradict the political aspirations of Neo-Assyrian agrarianism. After all, Assyrian officials located misanthropic tendencies not in people who handled animals or enjoyed their benefits, but rather, more specifically, in regional pastoralists who presumably repudiated settlement in arable lands for a life of mobility in environments off the grid of imperial control. Moreover, foddering, as an agrarian technique associated with stabling and on-site provisioning, circumscribes livestock and their keepers, and thus stands alongside other components of agricultural colonization intended to tether and socialize Assyrian subjects. Therefore, it remains to elucidate practices at Tušhan specific to animal husbandry against which the Neo-Assyrian regime railed; namely, mobile pastoralism.

Pastoralism at Tušhan

Neo-Assyrian administrators had a limited capacity to alter or reduce semi-nomadic pastoralism as an agricultural strategy for the empire. Even with the advent of large-scale foddering, pastures and grazing lands remained critical components of the imperial provincial landscape. A calendar based on the flowering periods of plant species found in the Khabur Gate demonstrates the integrated scheduling of foddering and pasturing that would have been necessary to provision Tušhan's animals throughout the year (Figure 4). In addition to cereals that could serve as silage, the Khabur Gate contained a variety of weedy plants that would have been available as graze from late spring through early fall (i.e. April–September). As the remnants of animal dung fuel, this vegetation must have been consumed by livestock entering and leaving Tušhan during these months. Neo-Assyrian officials would have counted upon pastoralists to take herds out to pasture for these six months of the year to relieve Tušhan's treasury of demands on its grain supplies, especially in the winter months when stores grew low, and to keep maturing harvests in the floodplain safe from browsing animals.

The presence of spring-summer weeds in the city gate attests to the Neo-Assyrians' dependence upon pastoralism to complement and buttress foddering practices, which alone could not produce enough feed to sustain Assyria's livestock. In fact, provincial outposts of the empire suffered numerous shortages in animal feed supplies, making state authorities keenly aware of the need to maintain grazing lands. Letters appear throughout the Neo-Assyrian corpus from anxious officials decrying the lack of provisions for pack animals. For example, a worried provincial governor writes to Tiglath-pileser III:

Surely the king, my lord, is planning to send me pack animals but I am not able to take care of the pack animals. All the available food and grain is for the people the king gave me. (Luukko, 2012: 56; SAA 19, no. 51)

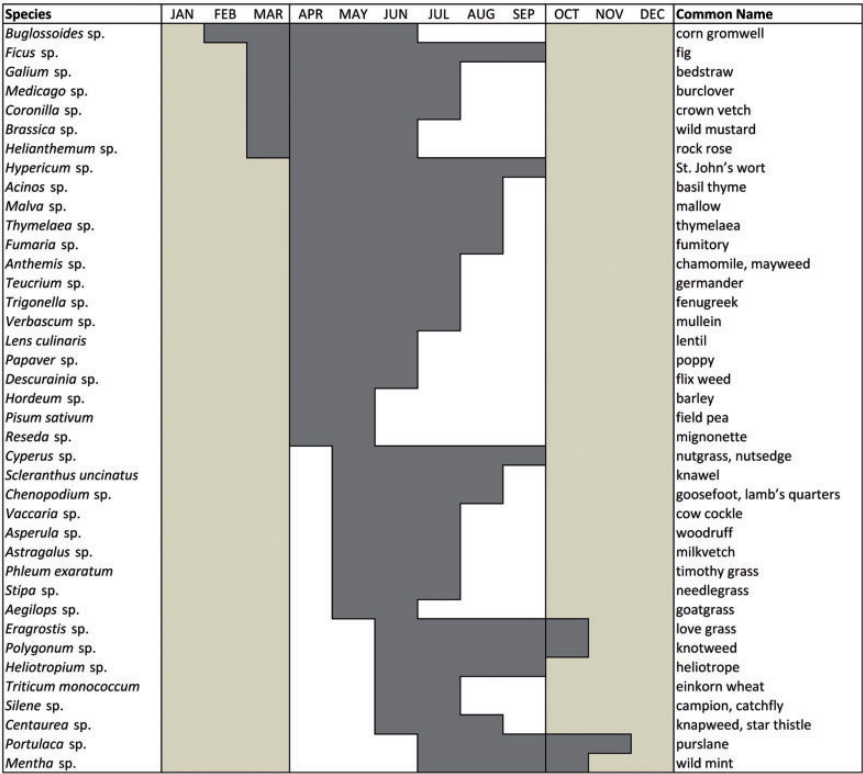


Figure 4. Foddering calendar for Tušhan based on the presence of identified plant taxa from the Khabur Gate. The dark gray shading indicates the flowering period for each species represented. The light gray shading indicates months of foddering.

Another governor expresses a similar concern to Sargon II:

The king, my lord, gave pack animals into my care but I am not able to take care of them; they will die of hunger. I have used up the grain rations that the king, my lord, gave me, having given them to the local people, the specialists in the service of the treasurer, and the quartermaster corps of the Palace. (Luukko, 2012: 169; SAA 19, no. 167)

These correspondences are telling examples of the difficulties the empire faced in trying to provide both humans and animals with sufficient supplies of grain. Although Neo-Assyrian officials prioritized the feeding of provincial residents, they were also clearly invested in maintaining their non-agricultural, stockbreeding economy.

Because the empire could not accumulate the necessary fodder, administrators had to turn to grazing and pasturing, and these practices are further intimated

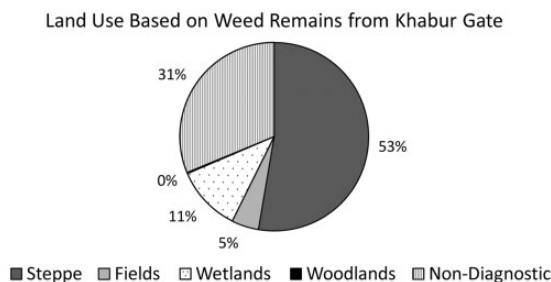


Figure 5. Pie chart illustrating land-use based on the representational abundance of different plant ecologies from the Khabur Gate's assemblage of weedy plants.

in a land-use profile derived from the weedy plants found in the Khabur Gate (Figure 5). Herds moving through Tušhan supplemented their diet with field weeds by grazing on the stubble and fallow from harvested fields and consuming additional seeds retained in the coarsely sieved straw they received as silage. These weeds include plants ecologically associated with grain fields, such as bed-straw (*Galium* sp.) and goat grass (*Aegilops* sp.), as well as vegetation that grows in a variety of habitats but flourish on arable land, like cow cockle (*Vaccaria* sp.) and campion (*Silene* sp.). The presence of field weeds in the Khabur Gate (5%) are a reminder of the fallow system used by Tušhan's agriculturists (Postgate, 1989b: 144), and the symbiosis that agro-pastoralism promoted: livestock benefitted from grazing harvested and dormant fields, while farmers profited from tilling the animal manure into their cultivated soils.

Small herds also would have fed off plants growing along the Tigris River's edge and in the seepage zones of irrigation canals. These grazing resources are represented by wetland species in the Khabur Gate (11%), which include purslane (*Portulaca* sp.), knotweed (*Polygonum* sp.), wild mint (*Mentha* sp.), and nutgrass (*Cyperus* sp.). To date, archaeological excavation and survey have not uncovered any ancient water conduit systems in or around Ziyaret Tepe, but on the basis of previous research into the extensive canal-building activities of the Neo-Assyrians (Bagg, 2000; Dalley, 2002; Ur, 2005; Wilkinson et al., 2005; Wilkinson and Rayne, 2010), it is reasonable to suspect that irrigation was part of large-scale agricultural production at Tušhan. Purslane, in particular, is a plant found alongside irrigation canals in Near Eastern agricultural contexts (Zohary, 1966: 78), and so its abundance ($n = 32$) in the city gate assemblage is quite conspicuous as a signal of Neo-Assyrian irrigation. The annual succulent can still be found around Ziyaret Tepe today, in fields that now rely upon artificial water systems for cultivation.

Most importantly for the argument at hand, the archaeobotanical record from the city gate also indicates that, despite disparaging Assyrian remarks about ruminant pastoralists, Tušhan's herders continued to move outside the settled floodplain and utilize steppe lands containing grasses, shrubs, and herbs as vital grazing and foraging resources for animals. After cereal fodder, plants of the steppe make up the penultimate resource (53%) used to sustain Tušhan's livestock. Steppe land

taxa from the Khabur Gate include small legumes like milkvetch (*Astragalus* sp.), burclover (*Medicago* sp.), and fenugreek (*Trigonella* sp.). These are herbs and shrubs resilient in dry and sometimes saline environments that would have been dependable forage for livestock in the hot, summer months. Additional graze consist of mayweed (*Anthemis* sp.), sagebrush (*Artemisia* sp.), mallow (*Malva* sp.), and germander (*Teucrium* sp.). Mullein (*Verbascum* sp.) is also present in the Khabur Gate assemblage, and this plant, which thrives in over-grazed pastures, alludes to the Assyrians' sustained use of pastoralism.

It is also worth noting that southeastern Anatolian varieties of all these steppe plants are capable of growing at altitudes higher than 700 meters above sea level, and therefore beyond the floodplain, into the foothills, and even within the Tur Abdin and Taurus Mountains. Consequently, the steppe weed profile argues for the continuation of semi-nomadic practices by Tušhan's pastoralists. Matney (2011) suspects that with winter's end, non-Assyrian pastoralists traveled with their herds from the Syrian Jazirah in the south through the steppe lands of the Upper Tigris River Valley, all the way to the Taurus Mountains further north for summer pasturing. Based on the archaeobotanical data from the Khabur Gate, there is no reason to preclude the shepherds of Tušhan from engaging in similar forms of seasonal transhumance, and thus preserving nomadic practices that so typified the enemies of Neo-Assyria.

From the steppe plant assemblage, it also emerges that the maintenance or expansion of endemic grasslands might have been a key element of agricultural administration among Tušhan's land managers. Timothy grass (*Phleum exaratum*) makes up 77.9% of the steppic taxa ($n = 229$) from the gate. Timothy grass is a popular forage among livestock, especially for horses (Figure 6).³ The preponderance of this grass may be the result of its small size (<1 mm), and therefore its ability to avoid breakage and destruction in archaeological contexts. However, it is also plausible to see a connection between this abundant graze and the Neo-Assyrians' dependence upon horses (and other pack animals) in the frontier. Although excavations at Ziyaret Tepe did not unearth archaeological evidence for stabling, the historic record from Tušhan refers to horses as a critical component of the province's administration in the Upper Tigris River Valley. In particular, a cuneiform letter was recovered from the treasury at Ziyaret Tepe, wherein an official dramatically pleads with the treasurer for more horses, troops, and support, otherwise, "Death will come of it!" (Parpola, 2008: 86–95). Additional cuneiform tablets from Tušhan speak of provisioning horses, horse-trainers, chariot corps, and charioteers (Parpola, 2008). Rather than unconditionally colonizing the steppe with farmsteads and relying solely on fodder, as royal inscriptions suggest, the Neo-Assyrians might have reserved some lands for dedicated, managed pasturing, in order to sustain their prized cavalries and crucial livestock resources.

Neo-Assyrian agriculture, reconsidered

In sum, the archaeobotanical assemblage from the Khabur Gate at Tušhan alludes to a complex system of semi-nomadic pastoralism that, integrated with crop

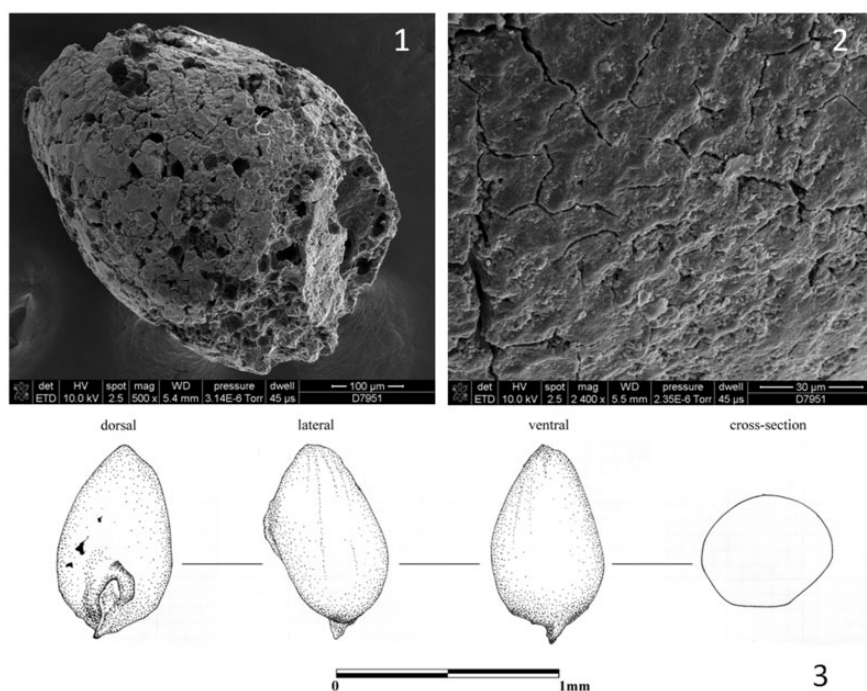


Figure 6. Images of timothy grass (*Phleum exaratum*) seeds recovered from the Khabur Gate. (1) Dorsal-lateral view of the seed using SEM. (2) SEM magnification of the seed coat patterning. (3) Drawings of the seed, by Hayley Monroe.

cultivation, underpinned the material conditions of Neo-Assyrian empire in the Upper Tigris River Valley. These findings fly in the face of Neo-Assyrian rulers' own material and discursive campaigns to exalt agriculturists as true embodiments of Assyrian subjectivity, and castigate pastoralists as saboteurs of the imperial project. The environmental data from Tušhan complicate the stability and sharp edges of the ethno-political identities found in Neo-Assyrian historical sources, especially as they relate to land-use. Rather than advocating for the ability of subjects to achieve Neo-Assyrian ideals of proper, agrarian socio-political life, the archaeobotanical analysis presented underscores the empire's reliance on semi-nomadic pastoralism—the ways in which Neo-Assyrians were themselves non-Assyrian. In making this claim, it should be evident that the categories of "Assyrian" and "Aramaean" derive from a historically situated accounting of subjectivity that is intricately tied to environmental practice and intimately related to the political. Consequently, in order to understand why Neo-Assyrian monarchs went through so much trouble to proselytize agrarian lifestyles, we have to recognize how integral agricultural practices were to Neo-Assyrian political subjectivity, conformist, or otherwise.

On the one hand, agricultural colonization provided the Neo-Assyrian empire with numerous opportunities to condition the suitable imperial subject through agrarian discourse and practice. The aims and propaganda of this project are readily apparent in the Neo-Assyrian texts, and these sources help explain how cultivation aided in aligning subjecthood with Neo-Assyrian allegiance. On the other hand, though, the very constructedness of this political positionality emerges in the disjuncture between imperial discourse and provincial practice. Despite, or precisely because, the concept of an Assyrian agrarian subject was a political fiction, Neo-Assyria never truly abandoned pastoralism or the integration of people who remained non-Assyrian by virtue of their land-use lifestyles. This fissure might elucidate why some resettled subjects ran away or rebelled (Postgate, 1974; 195–196): nested in an agrarian regime that Neo-Assyrian officials framed as reformatory, communal, and prosperous was a political violence that sought to naturalize inequalities and silence alternative subject positions. Even though agricultural colonization offered Neo-Assyrian imperialists a novel strategy for proliferating power, the agrarian program could not completely adhere to its own environmental alibi.

Conclusion

In this article, the celebration and implementation of settled crop husbandry in the Neo-Assyrian empire is disclosed as a political project of subject inculcation and regulation. When the Neo-Assyrian textual accounts of agricultural colonization are compared with archaeobotanical data on agriculture in and around Tušhan, a provincial capital in Upper Mesopotamia, the agrarian resettlement project emerges as an imperial tactic to manage both the environment and the people who inhabited it. The intersections of land-use and political subjectivity appear most clearly in the material and discursive disenfranchisement of non-agriculturalists like the Aramaeans, who epitomize the negation of both legitimate authority and model subjectivity in the empire. Rather than treating agricultural colonization as an inevitable phenomenon of imperial power and growth, this study of Neo-Assyrian cultivation underscores the critical role that environmental practice and rhetoric played in creating and sustaining subject-empire relationships.

Elsewhere (Rosenzweig, forthcoming), I address more specifically a crucial element of the study of Neo-Assyrian agricultural politics—the expression of subversive agrarian practices and subjectivities. With a tighter grasp on Neo-Assyria's imperial agenda, it is important that archaeologists recover what could be considered seditious forms of land-use and environmental subjectivity within the empire, and this requires case studies that contrast subject lifeways with imperial expectations. It also remains a topic of future scholarship to determine whether or not the manipulation of settled agriculture described here for Upper Mesopotamia and Aramaean populations applies equally well to other provinces and peoples of the empire, or includes the subjectification of vast numbers of deportees living in

the Assyrian heartland. This research will require further exploration into the environmental tropes resonant in Assyrian sources, as well as a re-examination of the agricultural data retrieved and currently coming from Neo-Assyrian sites. If cultivation is inextricably drawn into the politics of Neo-Assyrian empire, as claimed here, then archaeology is capable of elucidating these ties.

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Notes

1. While the empire expanded outwards, within the Assyrian core several large, densely packed cities emerged. These Assyrian centers grew to exceptional sizes: Khorsabad (300 ha.), Nimrud (360 ha.), and Nineveh (750 ha.) (Wilkinson et al., 2005: 26).
2. For example, xenophobia is an evident rhetorical device in an inscription by Puzur-Aššur III, a 15th-century king of Assyria: “I, Puzur-Aššur [III], defeated [... name broken ...], the descendant of Shamshi-Adad, a man of foreign extraction, not of Assyrian blood... and I destroyed the palace of Shamshi-Adad his grandfather, a man of foreign extraction, not of Assyrian blood, who had torn down the temples of the City of Aššur to build his palace” (Postgate, 1989a: 2).
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References

- Agrawal A (2005) *Environmentality: Technologies of Government and the Making of Subjects*. Durham, NC: Duke University Press.
- Altaweel M (2008) *The Imperial Landscape of Ashur: Settlement and Land Use in the Assyrian Heartland*. Heidelberg: Heidelberger Orientverlag.
- Bagg AM (2000) Irrigation in northern Mesopotamia: Water for the Assyrian capitals (12th – 7th centuries BC). *Irrigation and Drainage Systems* 14(4): 301–324.
- Barbanes E (2003) Planning an empire: City and settlement in the Neo-Assyrian period. *Bulletin of the Canadian Society of Mesopotamian Studies* 38: 15–22.
- Bunnens G (1999) Aramaeans, Hittites and Assyrians in the upper Euphrates valley. In: del Olmo Lete G and Montero Fenollós JL (eds) *Archaeology of the Upper Syrian Euphrates, the Tishrin Dam Area*. Barcelona: Institut del Pròxim Orient Antic, Universitat de Barcelona, pp. 605–624.
- Bunnens G (2009) Assyrian empire building and Aramization of culture as seen from Tell Ahmar/Til Barsib. *Syria* 86: 67–82.
- Charles MP (1996) Fodder from dung: The recognition and interpretation of dung-derived plant material from archaeological sites. *Environmental Archaeology* 1: 111–122.
- D'Agostino A (2009) The Assyrian-Aramaean interaction in the upper Khabor: The archaeological evidence from Tell Barri Iron Age layers. *Syria* 86: 17–41.
- Dalley S (2002) Water management in Assyria from the ninth to the second centuries BC. *ARAM* 13(14): 443–460.
- Erinç S (1950) Climatic types and variation in moisture regions in Turkey. *Geographical Review* 40(2): 224–235.
- Fales FM (1990a) The rural landscape of the Neo-Assyrian empire: A survey. *State Archives of Assyria Bulletin* 4(2): 81–142.
- Fales FM (1990b) Grain reserves, daily rations, and the size of the Assyrian army: A quantitative study. *State Archives of Assyria Bulletin* 4(1): 23–35.
- Fales FM (2014) Hamlets and farmsteads in the Balih River Valley: The Middle Assyrian and the Neo-Assyrian evidence. In: Morandi Bonacossi D (ed.) *Settlement Dynamics and Human-Landscape Interaction in the Dry Steppes of Syria*. Wiesbaden: Harrassowitz Verlag, pp. 227–241.
- Gadd CJ (1954) Inscribed prisms of Sargon II from Nimrud. *Iraq* 16(2): 73–201.
- Galil G (2007) *The Lower Stratum Families in the Neo-Assyrian Period*. Boston: Brill.
- Gallagher WR (1994) Assyrian deportation propaganda. *State Archives of Assyria Bulletin* 8(2): 57–66.
- Grayson AK (1975) *Assyrian and Babylonian Chronicles*. New York: JJ Augustin.
- Grayson AK (1991) *Assyrian Rulers of the Early First Millennium BC, I (1114-859 BC)*. Toronto: University of Toronto Press.
- Greenfield TL (2014) *Feeding Empires: The Political Economy of a Neo-Assyrian Provincial Capital through the Analysis of Zooarchaeological Remains*. PhD Thesis, University of Cambridge, UK.
- Harmansah Ö (2012) Beyond Aššur: New cities and the Assyrian politics of landscape. *Bulletin of the American Schools of Oriental Research* 365: 53–77.
- Karlsson M (2016) *Relations of Power in Early Neo-Assyrian State Ideology*. Boston: De Gruyter.
- Kepinski C (2009) Conflict, territory and culture: The case of Haradu, a fortress on the Iraqi middle Euphrates (11th – 7th centuries BC). *Syria* 86: 149–158.

- Kosiba S (2015) Killing time, becoming Inca: Subject creation and monument construction in ancient Cuzco. In: *80th annual meeting of the society for American archaeology*, San Francisco, CA, 15–19 April 2015.
- Kühne H (2009) Interaction of Aramaeans and Assyrians on the lower Khabur. *Syria* 86: 43–54.
- Kühne H (2010) The rural hinterland of Dūr Katlimmu. In: Kühne H (ed.) *Dūr Katlimmu 2008 and Beyond*. Wiesbaden: Harrassowitz Verlag, pp. 115–128.
- Kwasman T (2000) Two Aramaic legal documents. *Bulletin of the School of Oriental and African Studies* 63(2): 274–283.
- Leichty E (2007) Esarhaddon's exile: Some speculative history. In: Roth M, Farber W, Stolper MW, et al. (eds) *From the Workshop of the Chicago Assyrian Dictionary Volume 2: Studies Presented to Robert D. Biggs*. Chicago, IL: Oriental Institute, pp. 189–191.
- Lipiński E (2000) *The Aramaeans: Their Ancient History, Culture, Religion*. Leuven: Peeters Press.
- Liverani M (1979) The ideology of the Assyrian empire. In: Larsen MT (ed.) *Power and Propaganda*. Copenhagen: Akademisk Forlag, pp. 297–317.
- Liverani M (1988) The growth of the Assyrian empire in the Habur/Middle Euphrates area: A new paradigm. *State Archives of Assyria Bulletin* 2(2): 81–98.
- Liverani M (1997) 'Half-Nomads' on the middle Euphrates and the concept of dimorphic society. *Altorientalische Forschungen* 24(1): 44–48.
- Liverani M (2001) *International Relations in the Ancient Near East, 1660-1100 B.C.* New York: Palgrave.
- Luukko M (2012) *The Correspondence of Tiglath-pileser III and Sargon II from Calah/Nimrud*. Helsinki: The Neo-Assyrian Text Corpus Project.
- MacGinnis J (2013) Population and identity in the Assyrian empire: A case study. In: Cetrez OA, Donabed SG and Makko A (eds) *The Assyrian Heritage: Threads of Continuity and Influence*. Uppsala: Uppsala Universitet, pp. 131–153.
- MacGinnis J and Matney T (2009) Ziyaret Tepe: Digging the frontier of the Assyrian empire. *Current World Archaeology* 37: 30–40.
- Masetti-Rouault MG (2009) Cultures in contact in the Syrian lower middle Euphrates valley: Aspects of the local cults in the Iron Age II. *Syria* 86: 141–147.
- Masetti-Rouault MG (2010) Rural economy and steppe management in an Assyrian colony in the west. In: Kühne H (ed.) *Dūr Katlimmu 2008 and Beyond*. Wiesbaden: Harrassowitz, pp. 129–149.
- Matney T (2014) Early Iron Age town and village life in the Upper Tigris River Valley of southeastern Turkey. In: Bieliński P, Gawlikowski M, Koliński R, et al. (eds) *Proceedings of the 8th International Congress on Archaeology of the Ancient Near East* 31 April–4 May 2012, University of Warsaw, volume 1. Wiesbaden: Harrassowitz Verlag, pp. 155–164.
- Matney T, et al. (2003) Archaeological investigations at Ziyaret Tepe – 2002. *Anatolica* 29: 175–221.
- Matney T, et al. (2009) Excavations at Ziyaret Tepe 2007–2008. *Anatolica* 35: 37–84.
- Mazzoni S (1995) Settlement pattern and new urbanization in Syria at the time of the Assyrian conquest. In: Liverani M (ed.) *Neo-Assyrian Geography*. Rome: Università di Roma, pp. 181–191.
- Miller DR (2009) Objectives and consequences of the Neo-Assyrian imperial exercise. *Religion and Theology* 16(3/4): 124–149.

- Miller NF and Smart TL (1984) Intentional burning of dung as fuel: A mechanism for the incorporation of charred seeds into the archaeological record. *Journal of Ethnobiology* 4(1): 15–28.
- Morandi Bonacossi D (1996) ‘Landscapes of power’: The political organization of space in the lower Habur valley in the Neo-Assyrian period. *State Archives of Assyria Bulletin* 10(2): 15–49.
- Morandi Bonacossi D (2009) Continuity and change in the town planning and material culture of Iron Age I and II Mishrifeh, central Syria. *Syria* 86: 119–132.
- Murphy SB (2004) Frontier as an interpretive key of the relationship between nomads and sedentaries in ancient Mesopotamia. In: Nicolle C (ed.) *Amurru 3: Nomads et Sédentaires dans le Proche-Orient Ancien* [Nomads and Sedentaries in the Ancient Near East]. Paris: Éditions Recherche sur les Civilisations, pp. 75–80.
- Oded B (1979) *Mass Deportations and Deportees in the Neo-Assyrian Empire*. Wiesbaden: Dr. Ludwig Reichert Verlag.
- Parker BJ (2001) *The Mechanics of Empire*. Helsinki: The Neo-Assyrian Text Corpus Project.
- Parpola S (2004) National and ethnic identity in the Neo-Assyrian empire and Assyrian identity in post-empire times. *Journal of Assyrian Academic Studies* 18(2): 5–22.
- Parpola S (2008) Cuneiform texts from Ziyaret Tepe (Tušhan), 2002–2003. *State Archives of Assyria Bulletin* 17: 1–113.
- Porter BN (2000) Assyrian propaganda for the west: Esarhaddon’s stela for Til Barsip and Sam’al. In: Bunnens G (ed.) *Essays on Syria in the Iron Age*. Sterling, VA: Peeters Press, pp. 143–176.
- Postgate JN (1974) *Taxation and Conscription in the Assyrian Empire*. Rome: Biblical Institute Press.
- Postgate JN (1989a) Ancient Assyria – A multi-racial state. *ARAM* 1(1): 1–10.
- Postgate JN (1989b) Ownership and exploitation of land in Assyria in the 1st millennium B.C. In: Lebeau M and Talon P (eds) *Reflets des deux fleuves: Volume de mélanges offerts à André Finet* [Reflections of Two Rivers: Essays Offered to André Finet]. Leuven: Peeters, pp. 141–152.
- Postgate JN (1992) The land of Assur and the yoke of Assur. *World Archaeology* 23(3): 247–263.
- Postgate JN and Powell MA (1993) Domestic animals of Mesopotamia, part I. *Bulletin on Sumerian Agriculture* 7: 1–258.
- Postgate JN and Powell MA (1995) Domestic animals of Mesopotamia, part II. *Bulletin on Sumerian Agriculture* 8: 1–213.
- Radner K (2000) How did the Neo-Assyrian king perceive his land and its resources? In: Jas RM (ed.) *Rainfall and Agriculture in Northern Mesopotamia*. Leiden: Nederlands Historisch-Archaeologisch Instituut Te Istanbul, pp. 233–246.
- Riehl S (2009) Archaeobotanical evidence for the interrelationship of agricultural decision-making and climate change in the ancient Near East. *Quaternary International* 197: 93–114.
- Roaf M (2001) Continuity and change from the middle to the late Assyrian period. In: Eichmann R and Parzinger H (eds) *Migration und Kulturtransfer* [Migration and Culture Transfer]. Bonn: Dr. Rudolf Habelt GmbH, pp. 357–369.
- Ronayne M (2005) *The Cultural and Environmental Impact of Large Dams in Southeast Turkey*. London: National University of Ireland, Galway and Kurdish Human Rights Project.

- Rosenzweig MS (2016) Ordering the chaotic periphery: The environmental impact of the Neo-Assyrian empire on its provinces. In: MacGinnis J, Wicke D and Greenfield T (eds) *Provincial Archaeology of the Assyrian Empire*. Oxford: Oxbow, pp. 49–58.
- Rosenzweig MS (forthcoming) Assessing the politics of Neo-Assyrian agriculture. *Archaeological Papers of the American Anthropological Association*.
- Rouault O (2009) Assyrians, Aramaeans and Babylonians: The Syrian lower middle Euphrates valley at the end of the Bronze Age. *Syria* 86: 133–139.
- Sader H (2000) The Aramaean kingdoms of Syria: Origin and formation processes. In: Bunnens G (ed.) *Essays on Syria in the Iron Age*. Sterling, VA: Peeters Press, pp. 61–76.
- Schachner A (2003) From the bronze to the iron age: Identifying changes in the upper Tigris region, the case of Giricano. In: Fischer B, Genz H, JeanÉ, et al. (eds) *Identifying Changes: The Transition from Bronze to Iron Ages in Anatolia and its Neighbouring Regions*. Istanbul: Türk Eskiçağ Bilimleri Enstitüsü, pp. 151–166.
- Schwartz GM (1989) The origins of the Aramaeans in Syria and northern Mesopotamia: Research problems and potential strategies. In: Haex OM, Curvers HH and Akkermans PM (eds) *To the Euphrates and Beyond: Archaeological Studies in Honour of Maurits N. Van Loon*. Rotterdam: A.A. Balkema, pp. 201–227.
- Schwartz GM and Nichols JJ (2006) *After Collapse: The Regeneration of Complex Societies*. Tucson: University of Arizona Press.
- Scott JC (1998) *Seeing Like a State: How Certain Schemes to Improve the Human Condition have Failed*. New Haven, CT: Yale University Press.
- Smith AT (2015) *The Political Machine: Assembling Sovereignty in the Bronze Age Caucasus*. Princeton: Princeton University Press.
- Soldi S (2009) Aramaeans and Assyrians in north-western Syria: Material evidence from Tell Afis. *Syria* 86: 97–118.
- Szuchman JJ (2007) *Prelude to empire: Middle Assyrian Hanigalbat and the rise of the Aramaeans*. PhD Thesis, University of California, Los Angeles.
- Szuchman JJ (2009) Bit Zamani and Assyria. *Syria* 86: 55–65.
- Tadmor H (1982) The Aramaization of Assyria: Aspects of western impact. In: Nissen HJ and Renger J (eds) *Mesopotamien und seine Nachbarn* [Mesopotamia and Its Neighbors]. Berlin: Dietrich Reimer Verlag, pp. 449–469.
- Tadmor H and Yamada S (2011) *The Royal Inscriptions of Tiglath-pileser III (744-727 BC) and Shalmaneser V (726-722 BC), Kings of Assyria*. Winona Lake, IN: Eisenbrauns.
- Ur J (2005) Sennacherib's northern Assyrian canals: New insights from satellite imagery and aerial photography. *Iraq* 67(1): 317–345.
- Van Driel G (2000) The Mesopotamian north: Land use, an attempt. In: Jas RM (ed.) *Rainfall and Agriculture in Northern Mesopotamia*. Leiden: Nederlands Historisch-Archaeologisch Instituut Te Istanbul, pp. 265–299.
- Van Zeist W and Woldring H (1978) A postglacial pollen diagram from Lake Van in East Anatolia. *Review of Palaeobotany and Palynology* 26: 249–276.
- Wilkinson TJ (1994) The structure and dynamics of dry-farming states in Upper Mesopotamia. *Current Anthropology* 35(5): 483–505.
- Wilkinson TJ and Rayne L (2010) Hydraulic landscapes and imperial power in the Near East. *Water History* 2: 115–144.
- Wilkinson TJ, Ur J, Barbanes Wilkinson E, et al. (2005) Landscape and settlement in the Neo-Assyrian empire. *Bulletin of the American Schools of Oriental Research* 340: 23–56.

- Yakar J (2000) *Ethnoarchaeology of Anatolia: Rural Socio-Economy in the Bronze and Iron Ages*. Tel Aviv: Emery and Claire Yass Publications in Archaeology.
- Zaccagnini C (1987) The enemy in the Neo-Assyrian royal inscriptions: The “ethnographic” description. In: Nissen HJ and Renger J (eds) *Mesopotamien und Seine Nachbarn* [Mesopotamia and Its Neighbors]. Berlin: Dietrich Reimer Verlag, pp. 409–424.
- Zohary M (1966) *Flora Palaestina. Part One, Text*. Jerusalem: Israel Academy of Sciences and Humanities.

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