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ON THE LOCATION OF IRISAĠRIG ONCE AGAIN

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1. Introduction

The location of Irisaġrig has long been the focus of scholarly interest; ever the more so in the wake of the publication by David I. Owen (2013b, 2013c) of a large number of Ur III texts that originated there but were illegally excavated and therefore had no established provenance.

¹ Textual references to Irisaġrig date from the Early Dynastic to the Old Babylonian periods.² During the Ur III period, Irisaġrig was a provincial capital with important economic and cultic roles, as attested by frequent visits to the city by the king and members of the royal family.³

The first attempt to locate Irisaġrig was made by Wilcke (1972: 55–59) on the basis of information available at that time. More recently, relying on the publication of new Ur III sources, Steinkeller (2001) and particularly Molina (2013) proposed as the most plausible location for Irisaġrig either of two sites surveyed by Adams (1981), no. 1032 or 1056. Both sites are located on the ancient course of the Tigris.

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1. See the review in Ozaki 2015.
2. A survey of textual sources on Irisaġrig is provided by Frayne 2013.
3. Owen 2013b: 48–59; on the Ur III provinces see Sharlach 2004: 6–8.

2. Irišaĝrig and Keš

All available sources place Irišaĝrig and Keš in the same area.⁴ Keš was a religious center, the seat of the main temple of Ninhursaĝ, and has been regarded as the sacred precinct of Irišaĝrig. This association is strengthened by the numerous occurrences of Keš in the texts from Irišaĝrig: out of twenty-two texts mentioning the city of Keš listed in BDTNS, nineteen originate from Irišaĝrig.⁵ According to these texts, Keš was a separate settlement located near Irišaĝrig (see Owen 2013b: 36; Frayne 2013: 183).

A brief survey of textual sources from Irišaĝrig is in order. Although no Ur III document mentions both Keš and Irišaĝrig, in *NISABA* 15/2, 727, which lists beer and bread rations as ša₃ iri^{ki} and as ša₃ Keš₃^{ki}, iri perhaps refers to Irišaĝrig.⁶ Several texts document cultic activities associated with Keš. *NISABA* 15/2, 433 refers various festival offerings for the temple of Ninhursaĝ of Keš.⁷ *NISABA* 15/2, 518 lists materials and workers for the erection of a statue at Keš (alan Keš^{ki}-ke₄) and canopy or bench for the throne of Ninhursaĝ (ĝeš^{es}hum gu-za^dNin-hur-saĝ). In *NISABA* 15/2, 1034, offerings were made to Ninhursaĝ of Keš under the authority of Laqipu, who bears the title sagi, “cupbearer.”⁸ A certain Laqipu is mentioned in thirty-six other documents from Irišaĝrig in which he appears with the titles sagi and lu₂-kiĝ₂-gi₄-a, “messenger.”⁹ There can be little doubt that he is identical with the Laqipu mentioned in *NISABA* 15/2, 1034. Offerings for Ninhursaĝ of Keš are also mentioned in *NISABA* 15/2, 660 (sa₂-du₁₁ ku₅-ra₂^dNin-hur-saĝ Keš₃^{ki}) and perhaps in *NISABA* 15/2, 425.¹⁰ In *NISABA* 15/2, 828, several doors and door parts are placed in Keš for public buildings, including one related to the governor (e₂ gi-na-ab-tum ensi₂) and perhaps a secondary palace of Šulgi (e₂-gal us₂-sa^dŠul-gi).¹¹ Another hint of the cultic relation between Keš and Irišaĝrig is that during the Ur III period the only known temple of Ninhursaĝ’s husband Šulpae was located at Irišaĝrig (Owen 2013b: 77 n. 185).

The proximity of the two towns was also stressed by Heimpel, who noted that, according to *NISABA* 15/2, 489, Keš was the herding center of Irišaĝrig (see Owen 2013b: 396 n. 712), and evidence for herding can also be found in *NISABA* 15/2, 462 (ur^{uda}si-im-da udu Keš₃^{ki} sumun), *NISABA* 15/2, 643,¹² and *NISABA* 15/2, 913 (2 ur^{uda}si-im-da udu Keš₃), where si-im-da refers to branding. In addition to herding, Keš was also an agricultural center as shown by *NISABA* 15/2, 669 (a-ša₃ Keš₃^{ki} mah).

Textual sources show that Keš was located on a watercourse that perhaps connected it with Irišaĝrig: *NISABA* 15/2, 275 records fish brought from Keš,¹³ and the aforementioned *NISABA* 15/2, 489, mentions

4. Owen 2013b: 36, 77; see, however, reservations of Steinkeller 2015: 285 n. 34.

5. Personal names that include Keš as an element are not included here.

6. *NISABA* 15/2, 727: 1-2: [0.1.1 k]aš 0.1.1 ninda ša₃ iri^{ki}, [0.0.3 k]aš 0.0.3 ninda ša₃ Keš₃^{ki}.

7. *NISABA* 15/2, 433: 1-2: sa₂-du₁₁ šu-a-ge-na, u₃ niĝ₂-ezem e₂^dNin-hur-saĝ Keš₃^{ki}.

8. *NISABA* 15/2, 1034 II 7'-11': sa₂-du₁₁ šu-a-ge-na, u₃ niĝ₂-keš₂-ra₂^dNin-hur-saĝ Keš₃^{ki}, u₃ diĝir-re-ne, iti-12-kam, 0.0.3 5 1/2 sila₃ i₃-nun, 0.0.1 3 1/2 sila₃ ga gazi, ĝiri₃ La-qi₃-pu-um sagi.

9. Texts where Laqipu bears both titles: *NISABA* 15/2, 520, 742, 743, 744, 745, 746, 747, 806, 807, 816, 817, 820, 821, 822, 823, 824, 832, 833, 834, 837, 838, 839, 840, 842, 843 (<sagi> lu₂-kiĝ₂-gi₄-a), 850 (<sagi> lu₂-kiĝ₂-gi₄-a), 851, 852, 853, 854, 855, 866, 888, 1020, 1159, Subastas Durán 629651; all texts are dated to IS 2 apart from *NISABA* 15/2, 50 which is dated to SS 9. In addition, in *NISABA* 15/2, 756 and Subastas Durán 630917, Laqipu bears only the title of royal messenger.

10. The text mentions^dNin-hur-saĝ Keš₃^{ki} u₃ diĝir-re-ne but the preceding lines are broken.

11. 2 ĝeš^{es}ig mi-sir₂ u₃-suh₅ esir₂ su-ba si-ga, 2 gid₂-bi 5 1/2 kuš₃-ta, dagal-bi 2 1/3 kuš₃-ta, 1 ĝeš^{es}saĝ-gul gal e₂-ba-an, 2 ĝeš^{es}saĝ-gul e₂-ba-an, 1 kuš^{si}-ĝar, 2 ĝeš^{es}š^u-si-sa₂, 2 ĝeš^{es}nu-kuš₂ / Keš₃^{ki} ba-a-ĝar, 1 ĝeš^{es}ig m[i-si]r₂ u₃-suh₅ esir₂ su-ba, gid₂-bi 5 1/2 kuš₃, dagal-bi 2 kuš₃, 1 ĝeš^{es}saĝ-gul e₂-ba-an, 1 ĝeš^{es}š^u-si-sa₂, 1 ĝeš^{es}nu-kuš₂, e₂ gi-na-tum ensi₂ ba-a-ĝar, ša₃ Keš₃^{ki}, 1 ĝeš^{es}ig mi-sir₂ u₃-suh₅ esir₂ su-ba, gid₂-bi 5 2/3 kuš₃, dagal-bi 2 kuš₃, 1 ĝeš^{es}nu-kuš₂, e₂-gal us₂-sa^dŠul-gi ba-a-ĝar, esir₂ e₂-a-bi 0.0.5 4 sila₃, kuš₃ gu₄ babbar-bi 11, a₂ lu₂ hun-ĝa₂-bi 16 u₄ 1-še₃, a₂ ad-KID-e-ne-bi 3 u₄ 1-še₃.

12. *NISABA* 15/2, 643: 1-5: 0.1.0 še E-la-ag-nu-id dumu Da-da na-gada ba-uš₂, 0.1.0 I-šar-pa₂-dan dumu I₃-li₂-TAB.BA, gab₂-us₂ Da-da na-gada, ĝiri₃-se₃-ga^dNin-hur-saĝ Keš₃^{ki}-ta, lu₂ udu-a u₈ ba-an-zuh-ša-a-me.

13. 8.4.0 ku₆ šeg₆/gur, Keš₃^{ki}-ta, Šu-Eš₁₈-tar₂ agrig, šu ba-ti, ĝiri₃ Ur-^dŠul-pa-e₃.

a watering place (*mu-uš-ki-tum*) in the city.¹⁴ Further important evidence that places Keš in the area of Irisağrig is contained in three documents, *NISABA* 15/2, 78, 248, and 295, listing rations for blind workers in the orchards of Keš, of Šulpae, and the Tabbi-Mama canal.¹⁵ As discussed below (§3), the Tabbi-Mama canal likely connected the Tigris with Irisağrig.¹⁶ Finally, personal names with the element Keš are attested in texts from Irisağrig: Puzur₄-Keš₃ (*NISABA* 15/2, 400, 1104, Fs Milano 16) and Ur-sağ-keš₃ (*NISABA* 15/2, 1011).

An earlier attestation of the close connection between Keš and Irisağrig is found in *RIME* 2.8.1.2001, a dedicatory inscription of the late Sargonic-Gutian period. This is a limestone plaque dedicated by Nidu-pa'e, scribe and archivist of Irisağrig, to the deity Nin-EZEN×KUR for the life of his lord (lugal) Šaratigubišin. As we know from another inscription, *CUSAS* 17: 14 (MS 3267), Šaratigubišin was chief administrator of Keš (sağğa Keš₃^{ki}).¹⁷ Another document relevant here is the Old Akkadian exercise text *CUSAS* 23: 211, which mention both cities.

The recovery of a few Ur III royal inscriptions at Tūlūl al-Baqarat (Viano 2016) by the archeological mission of CRAFT (Centro Ricerche Archeologiche e Scavi di Torino), led by Carlo Lippolis (2016), have led to the conclusion that this was most probably the location of the ancient city of Keš (Lippolis and Viano 2016). The main evidence for the identification of Tūlūl al-Baqarat with Keš is a brick from the site stamped with an inscription celebrating Ur-Namma's building of the temple of Ninhursağ (TTB 8),¹⁸ which is nearly identical to another inscription of Ur-Namma of unknown provenance (*RIME* 3/2.1.1.36) save for the fact that the latter indicates that the temple was actually located in Keš.¹⁹ The site of Tūlūl al-Baqarat (32°20'14.86''N, 45°43'17.48''E), first excavated by an Iraqi mission in 2008–2010 and since 2013 by an Italian expedition, is located south of the modern city of Kut at a point nearly 40 km east of the ancient course of the Tigris (Lippolis 2016: 67–73), an area only briefly surveyed by Adams (1981: 37). The site has third and first millennia deposits, including a Neo-Babylonian temple on the top of the main mound where several bricks stamped with a standard inscription of Nebuchadnezzar II were found (see Devecchi 2016: 136–41). Although the Neo-Babylonian temple cannot be associated with any deity, it may be suggested that it was the reason for Nabonidus's visit to Keš mentioned in his Babylon Stele.²⁰

In virtue of the close relation between Irisağrig and Keš and the proposed identification of Keš with Tūlūl al-Baqarat, it is reasonable to search for the city of Irisağrig in the proximity of the latter. The best candidate by far is Tell al-Wilaya, which is the largest site in the area and lies about 6 km southwest of Tūlūl al-Baqarat. The site has been identified with Keš by Postgate (1976: 78–82), recently followed by

14. For this term see *CAD* M/1, 382 sub *mašqītu* A.

15. The blind worker(s) of the orchard of Šulpae (si₁₂-a^{es}kir₆^dŠul-gi-pa-e₃) are not mentioned in *NISABA* 15/2, 248; *NISABA* 15/2, 78 mentions an orchard at the Tabbi-Mama canal (si₁₂-a^{es}kir₆ bara₂ ka₁ i₇ Ta₂-bi₂-Ma-ma) unlike *NISABA* 15/2, 295 (si₁₂-a^{es} ka₁ i₇ Ta-bi₂-Ma-ma).

16. Because the orchard of the Tabbi-Mama canal was situated at its inlet—which, it is argued below, was on the Tigris—the area mentioned in these three documents extended between Keš and the Tigris. Note that these three documents are the only ones with envelopes; see Owen 2013c: 173 n. 168. As shown by Tsouparopoulou for Puzriš-Dagan, documents were encased when they needed to be transferred. Typically encased were zi-ga expenditures, such as the three documents relevant here; see Tsouparopoulou 2015: 60, 70.

17. *CUSAS* 17: 14 as well as another inscription, *RIME* 2.8.1.2002, refers to Šaratigubišin as dumu-lugal; according to Steinkeller 2015: 284, Šaratigubišin was the son of a Gutian king ruling over both Irisağrig and Keš.

18. Viano 2016: 129, (1) ^[d]Nin¹-[h]ur-sağ (2) [n]in-^ra¹-ni (3) ^rUr^{1-rd}Namma (4) nita ka[1]a-ga (5) lugal Uri₅^{ki}-r^{ma} (6) lugal Ki-en-gi Ki-uri-ke₄ (7) e₂-a-ni (8) mu-na-du₃, “For Ninhursağ, his lady, Ur-Namma, mighty man, king of Ur, king of Sumer and Akkad, built her temple.”

19. (1) ^dNin-hur-sağ (2) nin-a-ni (3) Ur-^dNamma (4) nita kala-ga (5) lugal Uri₅^{ki}-ma (6) lugal Ki-en-gi Ki-uri-ke₄ (7) [e₂-K]eš₃^{ki} (8) [e₂]-ki-ağ₂-ğ₂-ni (9) mu-na-du₃, “For Ninhursağ, his lady, Ur-Namma, mighty man, king of Ur, king of Sumer and Akkad, built the Keš temple, her beloved temple.”

20. Schaudig 2001: 521: 3.3a, IX 56: *ina* KEŠ₃^{ki} IRI.DIĞIR.MAH (57) *ina i-te-et-tu-qi₂-ia*, “When I passed (in procession) through Keš, the city of Bēlet-ili.”

Saadoon (2006, 2014), but the epigraphic evidence from Tūlul al-Baqarat summarized above renders this identification untenable.

3. The Location of Irisaḡrig: Previous Research and a New Hypothesis

The research for the present study was undertaken in the framework of a research project on the topography of the area of Tūlul al-Baqarat carried out by the members of the archeological mission from the University of Torino and CRAST.²¹ The hypothesis advanced in this paper, namely, that the town of Irisaḡrig was probably located at the site of Tell al-Wilaya,²² was previously considered and rejected by Molina (2013: 63) and Owen (2013b: 30 n. 33, 36, 64–66) on the grounds that Tell al-Wilaya was too distant from Nippur, since scholars have unanimously placed Irisaḡrig on the Tigris close to Nippur.²³ This assumption rests mainly on two pieces of evidence: an Early Dynastic year name mentioning the siege of Irisaḡrig by the *ensi*₂ of Nippur,²⁴ and the Ur III text YOS 4, 56. However, as admitted by Westenholz, who regarded Irisaḡrig as part of the administrative area of Nippur in the Early Dynastic period, “it is somewhat difficult to see why the *ensi* should start besieging one of his own towns” (Westenholz 1974: 155). The ED year name, rather than placing Irisaḡrig in the vicinity of Nippur, seems to demonstrate that the city was just far enough outside of Nippur’s usual sphere of influence to be a plausible object of military ambitions.

The text YOS 4, 56, discussed by Heimpel,²⁵ lists expenditures of beer, bread, and other commodities by governors and temple administrators of several cities, including Irisaḡrig, on the occasion of festivities celebrating the installation of a statue of Šulgi.²⁶ The text states that the expenditures were sent to the banks of the Euphrates and of the Tigris, where the celebration took place.²⁷ But this does not imply that Irisaḡrig or any of the other cities mentioned in the text lay directly on either river; Umma, for example, was situated about 10 km from the Tigris on the Umma canal. The document simply indicates that each city sent its goods to the nearest river.

Another oft-cited piece of evidence for the location of Irisaḡrig in the neighborhood of Nippur is the *Early Dynastic List of Geographical Names* (LGN), but in that list Nippur (LGN 176) occurs ten entries after Irisaḡrig (LGN 167).²⁸ This suggests that Irisaḡrig was sufficiently near to Nippur and the Tigris to maintain contacts, but not necessarily in their immediate vicinity, and this is certainly true of Tell

21. This study was accomplished within the framework of the PRIN 2015 (20154X49JT-SH6) research project “Archaeological Landscapes of Ancient Iraq between Prehistory and the Islamic Period: Formation, Transformation, Protection and Management” funded by MIUR (Ministero dell’Istruzione dell’Università e della Ricerca).

22. This hypothesis was mentioned previously in Lippolis and Viano 2016. Already van de Mierop (1986: 5–6) suggested that the texts of the Tūram-ili archive, later identified as stemming from Irisaḡrig, came from Tell al-Wilaya.

23. Lambert 1953: 13; Goetze 1963: 20; Sauren 1966: 9; Westenholz 1974: 155 and n. 5; Steinkeller 2001: 73; Frayne 2013: 183.

24. *TMHF* 5, 211 = *ECTJ* 211 ii 1–3: <mu> *ensi*₂ Nibru^{ki} Iri-saḡ-rig₇ i₃-da-tuš, “The year: the *ensi* of Nippur besieged Irisaḡrig,” see Westenholz 1974: 155 and Frayne 2013: 187.

25. Heimpel 1990: 207–11, see also Steinkeller 2001: 28.

26. [120]+140.0.0 kaš ninda gur, *ensi*₂ Umma^{ki}, 208.0.0 *ensi*₂ Adab^{ki}, 1768.0.0 *ensi*₂ Iri-saḡ-rig^{ki}, 33.4.0 šabra ^dAl-la-tum, 52.0.0 I-mi-id-DIḠIR, 39.0.0 šabra ^dUtu Larsam^{ki}, 169.0.0 *ensi*₂ Šuruppag^{ki}, 78.0.0 šabra ^dNa-na-a, 1866.4.0 šabra ^rUri⁵^{ki}-ma, 52.0.0 šabra Ri-ba-a, 56.0.0 šabra ^dInanna, 13.0.0 Ur-^dBa-u₂, 23.2.0 ^dŠul-gi-i₃-li₂, šu-nigin₂ 1 guru₇, 1127.0.0 kaš ninda gur, maš₂-da-ri-a ku₃-sig₁₇ ku₃-babbar gu₄ udu, u₄ alan ^dŠul-gi-e, in-gub-ba-gen₇-am₃ tum₃-dam, ezem-mah-še₃ tum₃-dam, gu₂ i₇-Idigna gu₂ i₇-Buranun-na¹-še₃.

27. See the translation provided by Heimpel himself (1990: 207): “Insgesamt 1 gur₇ 1127 gur Bier (und) Brot (und) mašdaria (a type of payment), Gold, Silber, Rinder, Schafe sind gleichzeitig mit dem Tag, an dem die Statue des (Gottes) Sulgi aufgestellt wird, zu bringen. Für das Großfest ist es zu bringen (und zwar) zum Tigrisufer (und) Euphratufer.”

28. Frayne 1992: 29, 38; 2013: 184–85; see reservations on the usefulness of LGN expressed by Molina 2013: 60–61, with previous bibliography.

al-Wilaya, which lies at a linear distance of about 45 km from Nippur and about 32 km from the ancient course of the Tigris.

The size of Tell al-Wilaya further supports the identification of the site with an important city such as Irisaĝrig, which was a provincial capital. With an area of 64 ha,²⁹ the site is around three times as large as the sites proposed by Steinkeller and Molina as the best candidates for Irisaĝrig, namely, H1032 (ca. 23 ha) and H1056 (ca. 21 ha).³⁰ A comparison with other seats of provincial governorates suggests that Irisaĝrig occupied a site of considerable size.³¹

Besides the proximity of Tūlūl al-Baqarat (Keš) and Tell al-Wilaya, textual evidence argues for a close connection between the two sites. An inscription of Šulgi stamped on series of bricks recovered at Tūlūl al-Baqarat (TTB 1-6) is otherwise known only from bricks discovered at Tell al-Wilaya (Viano 2016: 127). The same holds true for other two badly preserved inscriptions of Šū-Suen found at Tūlūl al-Baqarat (TTB 11–12, Viano 2016: 129–31). In addition to textual sources, archaeological evidence points to a close association of the two sites (Lippolis 2016). Hence, there is sufficient reason to postulate the identification of Tell al-Wilaya with Irisaĝrig. This working hypothesis will be tested further utilizing both textual and archaeological evidence.

Molina's (2013) reconstruction of a round trip by water between Umma and Irisaĝrig is the most recent discussion of the location of Irisaĝrig, and his favorably received account represents the starting point of this contribution. I will first summarize Molina's reconstruction, underlining the critical points, and then I will suggest a different interpretation. On the basis of five documents (fig. 1), Molina determined that a round trip between Umma and Irisaĝrig lasted twenty-three days (fig. 2). The document *TCL* 5, 5676 is an annual account of Ur-Ninsu, a chief cattle overseer from Umma. The other texts are individual receipts recording the operations of four work-gangs each supervised by a foreman (*ugula*): Ur-mes (UTI 4, 2896), Lugal-emahe (SNAT 459), Adumu (UTI 5, 3455), and Išarru'a (BM 106562). All five texts describe the same trip, which included seven stages and several operations that are summarized by Molina (2013: 64) as follows:

- | | |
|-------------------|---|
| Stage 1 | <ul style="list-style-type: none">• Four days towing the boats upstream from Umma to Irisaĝrig;• One day transferring and loading barley into the boats at Irisaĝrig; |
| Stages 2–3 | <ul style="list-style-type: none">• Two days towing the boats upstream from Irisaĝrig to the weir of Kiri-ĝeštin, and then floating the boats downstream from there to Eduru-urin-du'a;• One day transferring barley at Eduru-urin-du'a; |
| Stage 4 | <ul style="list-style-type: none">• Seven days carrying barley from Eduru-urin-du'a to the weir of the Amar-Suenitum canal; |
| Stage 5 | <ul style="list-style-type: none">• Two days towing the boats upstream from the weir of the Amar-Suenitum canal to Irisaĝrig and moving the boats over; |
| Stage 6 | <ul style="list-style-type: none">• Two days towing the boats upstream from Irisaĝrig to the inlet of Tabbi-Mama; |

29. This figure refers to the main mound while a second mound measures 4.5 ha, see Hussein, Altaweel, and Rejeb 2009: 4–6.

30. The surface area has been calculated on the basis of measurements provided in Adams 1981. The relative sizes of these three sites are also visible in Adams 1981: 161–63, fig. 29–31, 172–73, tbl. 14.

31. Umma has an area of 262 ha (Ur 2014–2016: 328); in the third millennium Uruk expanded to 5.3 km² within the city wall (van Ess 2014–2016: 486); the site of Adab measures 1695 × 840 m, i.e., about 112 ha (Wilson 2012: 31); the tell of Nippur covers an area of about 150 ha (Gibson, Hansen, and Zettler 1998–2001: 546).

Stage	TCL 5 5676	UTI 4 2896	SNAT 459	UTI 5 3455	BM 106562
1	Rev. iv 11 4 ġuruš u ₄ 4-še ₃ 12 kar Umma ^{ki} -ta Iri-sağ-rig ^{ki} -še ₃ ma ₂ gid ₂ -da 13 u ₄ 1-še ₃ Iri-sağ-rig ^{ki} -ga še ma ₂ -a si-ga	Obv. 1 [X] ġuruš u ₄ 4-še ₃ 2 kar Umma ^{ki} -ta Iri-sağ-rig ^{ki} -še ₃ ma ₂ gid ₂ -da 3 u ₄ 1-še ₃ še ma ₂ -a si-ga	Obv. 1 [X] ġuruš u ₄ 4-še ₃ 2 [kar Umma] ^{ki} -ta 3 Iri-sağ-rig ^{ki} -še ₃ ma ₂ gid ₂ -da 4 [u ₄] 1-še ₃ še bala-a u ₃ še / ma ₂ -a si-ga	Obv. 1 1 ġuruš u ₄ 4-še ₃ 2 kar Umma ^{ki} -ta 3 Iri-sağ-rig ^{ki} -še ₃ 4 ma ₂ gid ₂ -da 5 u ₄ 1-še ₃ še ma ₂ -a si-ga	Obv. 1 8 ġuruš u ₄ 4-še ₃ 2 kar Umma ^{ki} -ta 3 Iri-sağ-rig ^{ki} -še ₃ 4 ma ₂ gid ₂ -da 5 u ₄ 1-še ₃ še ma ₂ -a si-ga
2-3	4 Iri-sağ-rig ^{ki} -ta 5 u ₄ 2-še ₃ kun-zi-da ^{6es} Kiri ₆ -ġeštin-še ₃ ma ₂ gid ₂ -da 14 u ₄ 1-še ₃ Iri-sağ-rig ^{ki} -ta Urin-du ₃ -a-aš ma ₂ diri-ga 15 u ₄ 1-še ₃ še bala-a	4 Iri-sağ-rig ^{ki} -ta 5 u ₄ 2-še ₃ kun-zi-da ^{6es} Kiri ₆ -ġeštin-še ₃ ma ₂ gid ₂ -da	5 [Iri]i-sağ-rig ^{ki} -ta 6 u ₄ 2-še ₃ kun-zi-da 7 ^{6es} Kiri ₆ -ġeštin-še ₃ ma ₂ gid ₂ -da 8 u ₄ 1-še ₃ E ₂ -duru ₅ -urin-du ₃ -a /ka še bala-a	6 Iri-sağ-rig ^{ki} -ta 7 u ₄ 2-še ₃ kun-zi-da ^{6es} Kiri ₆ -ġeštin-še ₃ ma ₂ gid ₂ -da 8 ^{6es} Kiri ₆ -ġeštin-še ₃ ma ₂ gid ₂ -da diri-ga	6 Iri-sağ-rig ^{ki} -ta 7 u ₄ 2-še ₃ kun-zi-da ^{6es} Kiri ₆ -ġeštin-še ₃ ma ₂ gid ₂ -da
4	16 u ₄ 8-še ₃ še ga ₆ -ġa ₂	6 u ₄ 4+[4]-še ₃ E ₂ -duru ₅ -urin-du ₃ -<du ₃ >-a še bala-a 7 'kun-zi'-da i ₇ - ^d Amar- / ^[d] 'Suen'-ni-tum-še ₃ še ga ₆ -ġa ₂	9 u ₄ 7-še ₃ E ₂ -duru ₅ -urin-du ₃ -a /ta 10 a-ta kun-zi-da i ₇ 11 ^d Amar-'Suen-ni-tum-še ₃	9 u ₄ 8-še ₃ E ₂ -duru ₅ -urin-du ₃ -a-ta 10 kun-zi-da i ₇ - ^d Amar-'Suen-ni-tum-še ₃ 11 -ni-tum-še ₃ še ga ₆ -ġa ₂ / še bala-a	9 u ₄ 8-še ₃ E ₂ -duru ₅ -urin-du ₃ -a-ta 10 kun-zi-da i ₇ - ^d Amar-'Suen-ni-tum-še ₃ 11 -ni-tum-še ₃ še ga ₆ -ġa ₂ / še bala-a
5	17 u ₄ 2-še ₃ kun-zi-da ^d Amar-'Suen-ni-tum-ma-ta Iri-sağ-rig ^{ki} -še ₃ ma ₂ gid ₂ -da ma ₂ bala ak	8 kun-zi'-da i ₇ 9 ^d [Amar-'Suen-ni-tum-ta Rev. 1 'u ₄ ' 2-še ₃ 'Iri-sağ-rig ^{ki} -še ₃] ma ₂ gid ₂ -da u ₃ ma ₂ bala ak	2 kun-zi-da i ₇ - ^d Amar-'Suen-ni-tum-ta 4 u ₄ 2-še ₃ Iri-sağ-rig ^{ki} -še ₃ ma ₂ gid ₂ -da u ₃ bala ak	12 kun-zi-da [i ₇] ^d Amar-'Suen-ni-tum- ma-/ta Rev. 1 u ₄ 2-še ₃ Iri-sağ-rig ^{ki} -še ₃ ma ₂ gid ₂ -da u ₃ 3 ma ₂ bala ak	Rev. 1 kun-zi-da i ₇ - ^d Amar-'Suen-ni-tum-ma-/ta 3 u ₄ 2-še ₃ Iri-sağ-rig ^{ki} -še ₃ ma ₂ gid ₂ -da ma ₂ 5 bala ak
6	18 u ₄ 2-še ₃ Iri-sağ-rig ^{ki} -ta ka Tab-ni-Ma- ma-še ₃ ma ₂ gid ₂ -da	2 [u ₄ 2]-še ₃ Iri-sağ-rig ^{ki} -ta ka Da-mi-/[Ma]-ma-še ₃ ma ₂ gid ₂ -da	6 u ₄ 2-še ₃ Iri-sağ-rig ^{ki} -ta 7 ka Da-mi-Ma-ma-še ₃ / ma ₂ gid ₂ -da	4 u ₄ 2-še ₃ Iri-sağ-rig ^{ki} -ta 5 ta ka Da-mi-Ma-ma-še ₃ ma ₂ gid ₂ -da	6 u ₄ 2-še ₃ Iri-sağ-rig ^{ki} -ta 7 ta ka Da-mi-Ma-ma-še ₃ ma ₂ gid ₂ -da
7	19 u ₄ 2-še ₃ ma ₂ diri-ga 20 u ₄ 2-še ₃ ma ₂ ba-al-ta še bala-a	3 'u ₄ ' 2-še ₃ Umma ^{ki} -še ₃ ma ₂ diri-ga 4 u ₄ 1-še ₃ ma ₂ ba-al-ta 5 u ₄ 1-še ₃ še bala-a	8 u ₄ 2-še ₃ Umma ^{ki} -še ₃ / [ma ₂] diri-[g]a' 9 u ₄ 1-še ₃ ma ₂ ba-al-[la] 10 u ₄ 1-še ₃ še bala-[a]	6 u ₄ 2-še ₃ Umma ^{ki} -še ₃ / ma ₂ diri-ga 7 u ₄ 1-še ₃ ma ₂ ba-al-la 8 u ₄ 1-še ₃ še bala-[a]	9 u ₄ 2-še ₃ Umma ^{ki} -še ₃ ma ₂ diri-ga 10 u ₄ 1-še ₃ ma ₂ ba-al-la 11 u ₄ 1-še ₃ še bala-a

Fig. 1. Texts concerning round trips from Umma to Iri-sağrig.

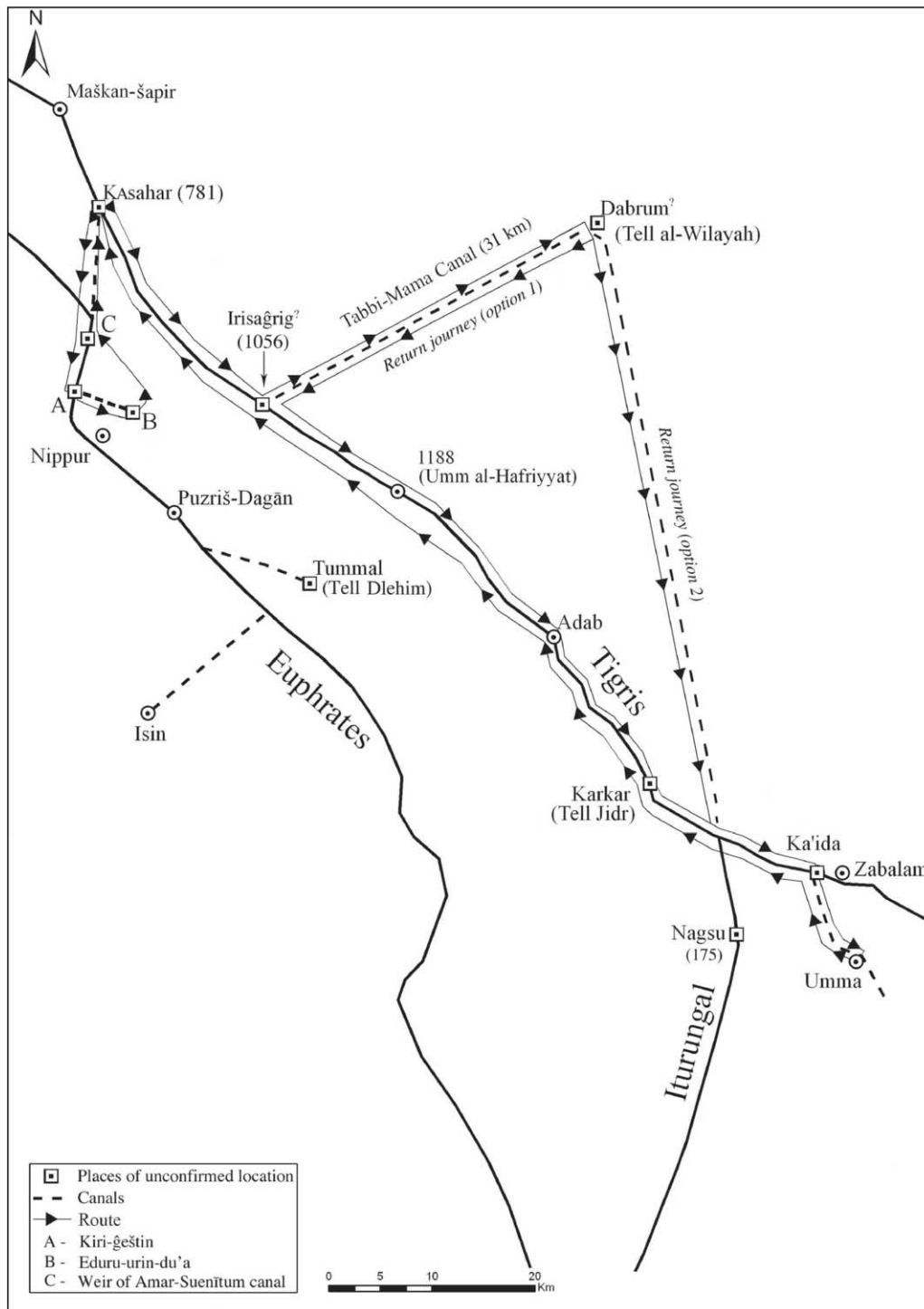


Fig. 2. Molina's reconstruction of the round trip from Umma to Irišaḡrig (Molina 2013: 69, fig. 2).

Stage 7

- Two days floating the boats downstream to Umma;
- One day unloading the boats (at Umma);
- One day transferring barley (at Umma).

Here follows a discussion of the critical points of Molina's reconstruction:

Stage 4. According to Molina the villages of Kiri-ġeštīn (A) and Eduru-urin-du'a (B) were situated in the vicinity of Nippur, and the weir of the Amar-suenītum canal (C) was located on the Euphrates north of Kiri-ġeštīn. From Eduru-urin-du'a the work-gangs proceeded by land, carrying the barley to the weir of the Amar-suenītum canal. This operation lasted seven days.

If we assume that Molina's localization of Eduru-urin-du'a is correct, in my opinion it would make little sense to make a land trip from Eduru-urin-du'a to the weir of the Amar-Suenītum canal. Towing the boat upstream from Eduru-urin-du'a to Kiri-ġeštīn and from there again upstream to the weir of the Amar-Suenītum canal would have been easier and would have taken only one or two days. A land trip would only have been required if Eduru-urin-du'a was located far from the Euphrates and not connected to the river by a waterway. Molina (2013: 68) admits that his route "runs into the difficulty of the short distance between the presumed locations of the weir of the Amar-Suenītum canal and Eduru-urin-du'a; such a short distance does not fit well with seven days needed to transport the cargo and the boats from one place to the other, unless a very large cargo of cereals was involved." Considering that the average distance covered by caravans was approximately 25 km per day (Algaze 2008: 55–56), seven full days of travel would correspond to about 175 km which, to give an example, is almost the linear distance between Ur and Maškan-Šapir. It is therefore clear that during the fourth stage, the work-gangs did not travel for the entire seven days, but they certainly traveled further than Molina assumed. The period of seven days would have included, in addition to travel, operations such as unloading the boats at Eduru-urin-du'a, transferring the cargo to the caravan, and reloading the boats at the weir of the Amar-Suenītum canal.

Stage 6. In the sixth stage the boats were towed upstream from Irisaġrig to the inlet of the Tabbi-Mama canal. Based on *NISABA* 15/2, 1036, which gives the distance between Irisaġrig and the inlet of the Tabbi-Mama canal,³² Molina (2013) established that the Tabbi-Mama was a 31 km long canal connecting the Tigris with Tell al-Wilaya, and his conclusion is accepted here.

Because the boat travelled upstream, Molina places the inlet of the Tabbi-Mama canal in the area of Tell al-Wilaya. But the inlet of a canal (ka) is the place where the canal branches off from the main river/canal. A boat traveling eastward along the Tabbi-Mama canal from the Tigris would in fact be heading downstream towards the outlet (kun) of the canal. Molina (2013: 71), however, does not directly address the question of the direction of water flow, but assumes that "a Tigris branch passed through Tell al-Wilayah, connecting this city with the southern area of Karkar, and with Irisaġrig through the Tabbi-Mama canal." According to my understanding of Molina's argument, he claimed that the Tabbi-Mama canal would have split off from an eastern branch of the Tigris, flowing into the main branch of the river. In my opinion, however, it is more likely that the Tabbi-Mama canal branched off from the Tigris and flowed northeastward towards Tell al-Wilaya. The fact that the Tigris has shifted eastward from its ancient location implies that the center of the alluvial plain was at a higher elevation than the area to the east of the ancient river, and so the canal would have flowed from southwest to northeast.³³ Although caution must be used when using modern data to evaluate the ancient situation, the elevation profile (fig. 3) displayed by Google Earth

32. [i]š-tu 'Iri¹-saġ-'rig⁷ ^{ki}, 2 da-na 1200+360 nindan us₂, a-na ka i₇ Ta-bi₂-Ma-ma, iš-tu ka i₇ Ta-bi₂-Ma-ma, 5 da-na 600+240 nindan us₂, a-na 'ka' 'i₇ 'En-lil², iš-tu ka i₇ 'En-lil², 2 da-na 1200+480 nindan, a-na ^{es}kiri₆ Lu₂-šu-ki-na, šu-nigin₂ 10+1 da-na 480 nindan us₂, iš-tu Iri-saġ-rig⁷ ki, a-na ^{es}kiri₆ Lu₂-šu-ki-na.

33. For the eastward shifting of the Tigris, see Adams 1981: 158–59; Heimpel 1990: 212–13; Steinkeller 2001: 23–41; Hritz 2010: 187–88.



Fig. 3. Elevation profile of reconstructed Tabbi-Mama canal ©Google.

following a straight line between H1056, that is, the site on the Tigris where Molina places the offtake of the Tabbi-Mama canal and Tell al-Wilaya shows a higher elevation in the center of the alluvial plain.³⁴

4. The Mama-šarrat Canal

The preceding arguments have demonstrated that a convincing reconstruction of the round-trip route between Umma and Irisağrig must provide a plausible explanation for the seven-day length of the fourth stage of the journey; also, if the reconstructed route includes the Tabbi-Mama canal, it must take into account that this watercourse plausibly flowed downstream to Tell al-Wilaya.

Before I propose an alternative reconstruction of the round-trip route between Umma and Irisağrig, a discussion of the Mama-šarrat canal is in order. The location of this canal, which is mentioned in Ur III sources from the time of Ibbi-Suen, is presently unknown. Apart from a single text (Ontario 141) stemming from Umma, all Ur III references to this watercourse are found in documents from Garšana and Irisağrig. These sources account for works undertaken at the canal, suggesting that the two cities were situated near the Mama-šarrat canal.³⁵ The watercourse also occurs together with the Tabbi-Mama in lexical lists (see Frayne 2013: 190), suggesting that the two canals flowed in the same general area.³⁶ The theonym Mama (one of the Akkadian names of the mother goddess, Krebernik 1993–1995: 502–7) well fits the context of

34. The position of the Tigris adopted here is that provided by Olof Pedersén for the “ANE Placemarks for Google Earth” project, <https://www.lingfil.uu.se/research/assyriology/earth/>.

35. Sources attest to workers sent from Irisağrig and Garšana to the canal, see Owen 2013b: 37–41.

36. A Rim-Sîn royal inscription (*RIME* 4.2.14.15) mentions the Mami-šarrat canal; Frayne 2013: 189–90, assumes that the Ur III Mama-šarrat and the OB Mami-šarrat were the same canal but this remains unclear because the Mami-šarrat in the Rim-Sîn inscription flowed into the sea: “the Mami-šarrat canal, the canal of abundance of the nation, whose water was (from) the Tigris and Euphrates rivers, took half of it and poured it into the sea.” According to an unpublished tablet from Uruk, the canal flowed in the area of Uruk but it is unlikely that this was the same canal; see Owen 2013b: 38 n. 83.



Fig. 4. CORONA image of Tell al-Wilaya area.

Irisaġrig and Keš, both cultic centers of Ninhursaġ. Mama-šarrat appears to have been a long canal, perhaps branching off from the Tigris south of Maškan-Šapir (see Frayne 2013: 189–91; Owen 2013b: 38 n. 84) flowing south to the area of Garšana.³⁷ The latter city has not yet been identified with certainty, but it was evidently located in the region of Umma. If one assumes that Irisaġrig was directly on the Tigris, it follows that the Mama-šarrat canal flowed nearly parallel to the river, whether to its east or west. But due to the natural tendency of the Tigris to create loops and meanders (Hritz 2010: 188), it seems unlikely that a major watercourse flowed parallel to the main river for any great length.

Is there any geophysical evidence for the location of the Mama-šarrat canal? Our working hypothesis that Tell al-Wilaya was the ancient Irisaġrig may help to reconcile the textual and archaeological evidence. Indeed, CORONA images³⁸ clearly show a large riverbed west of Tell al-Wilaya running northwest–southeast and turning south a few kilometers northwest of Tell al-Wilaya (fig. 4). Although it is presently impossible to know whether the watercourse existed during Ur III times, we tentatively suggest that this was the bed of ancient Mama-šarrat. According to our hypothesis, this canal would have branched off from the Tigris in the area of Kasahar, where Adams placed the inlet of a watercourse running eastwards towards Tell al-Wilaya in the limited surveyed area (see fig. 5).³⁹ The presence of a branch of the Tigris in the area was already suggested by Postgate (1976: 80), later accepted by Adams (1981: 158–59), and more recently

37. The town of Garšana has been differently localized by Heimpel 2009: 7–9; 2011; Steinkeller 2007, 2011, 2013; Molina and Steinkeller 2017.

38. <http://corona.cast.uark.edu/>.

39. Adams 1981: 163, fig. 31; Steinkeller 2001: 60 identifies the site H781 with Kasahar.

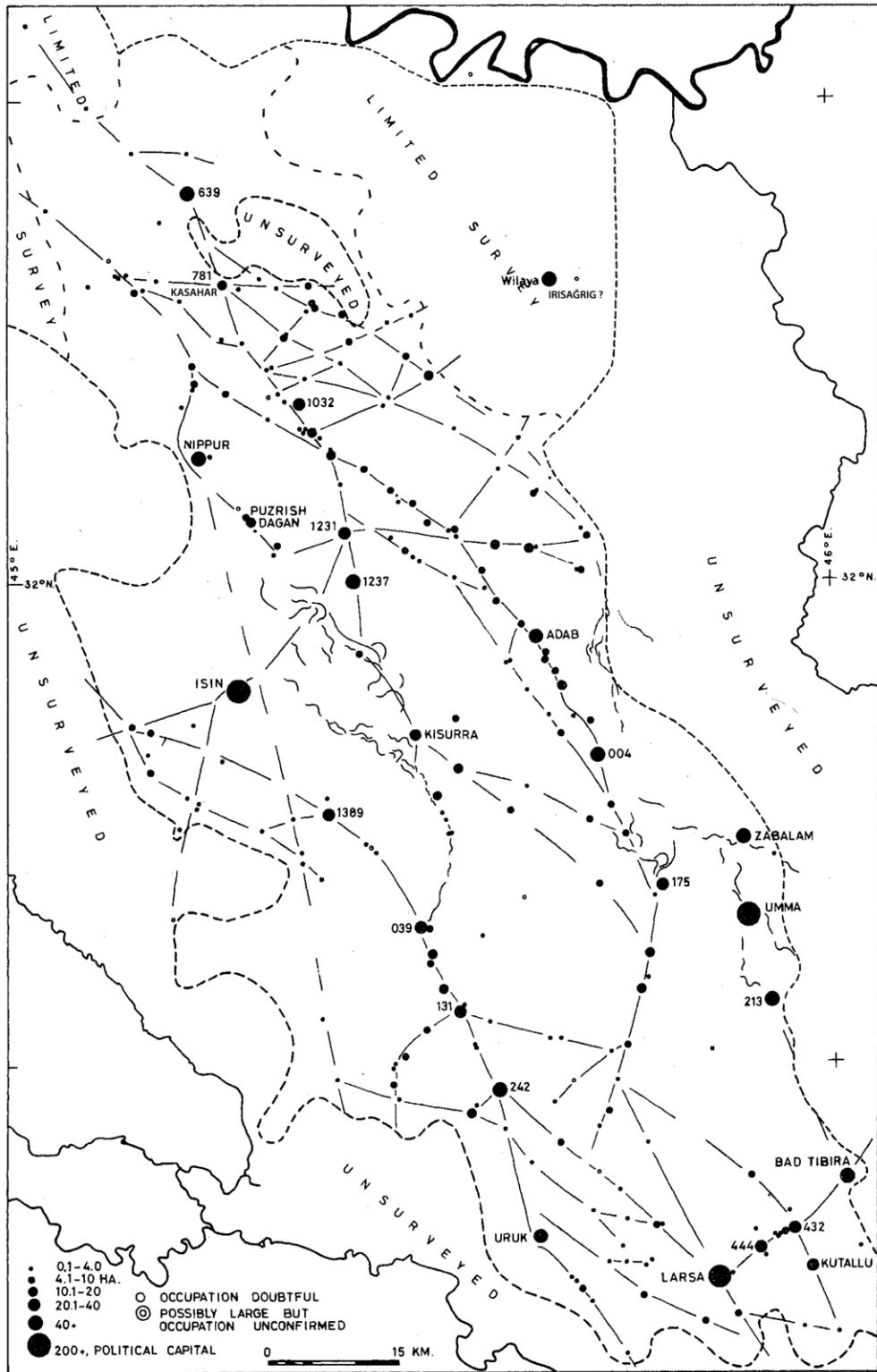


Fig. 5. Mesopotamian plain (adapted from Adams 1981: 163, fig. 31).



Fig. 6. Reconstruction of the channel system of the southeastern Tigris ©Google.

reaffirmed by Stone and Zimansky (2004: 16) on the basis of CORONA images. Molina himself (2013: 71) speculated that a canal had connected Tell al-Wilaya and the Tigris and could have provided an alternative route for the boats on the last stage of the return journey towards Umma.⁴⁰ Mama-šarrat would have turned south in the area of Tell al-Wilaya, joining the Tigris once again in the province of Umma, perhaps in the area between Karkar and Ka'ida, where Molina placed the outlet of his hypothetical canal connecting Tell al-Wilaya and the Tigris.⁴¹

5. Was Tell al-Wilaya Irišaḡrig?

Proceeding under the assumption that the Mama-šarrat canal provided a direct route from a point on the Tigris near Umma to Tell al-Wilaya, let us test our hypothesis regarding the identity of Tell al-Wilaya and Irišaḡrig against the Umma–Irišaḡrig round trip. The seven stages of the trip can be reconstructed as follows and are represented in figs. 6–7.

40. See “Return journey (Option 2)” in fig. 1.

41. This reconstruction better fits with the location of Garšana proposed by Heimpel (2009, 2011) rather than that advanced by Steinkeller 2007; Molina and Steinkeller 2017. However, the location of Garšana is outside the purview of the present contribution and a farther south outlet of the Mama-šarrat canal is not excluded.

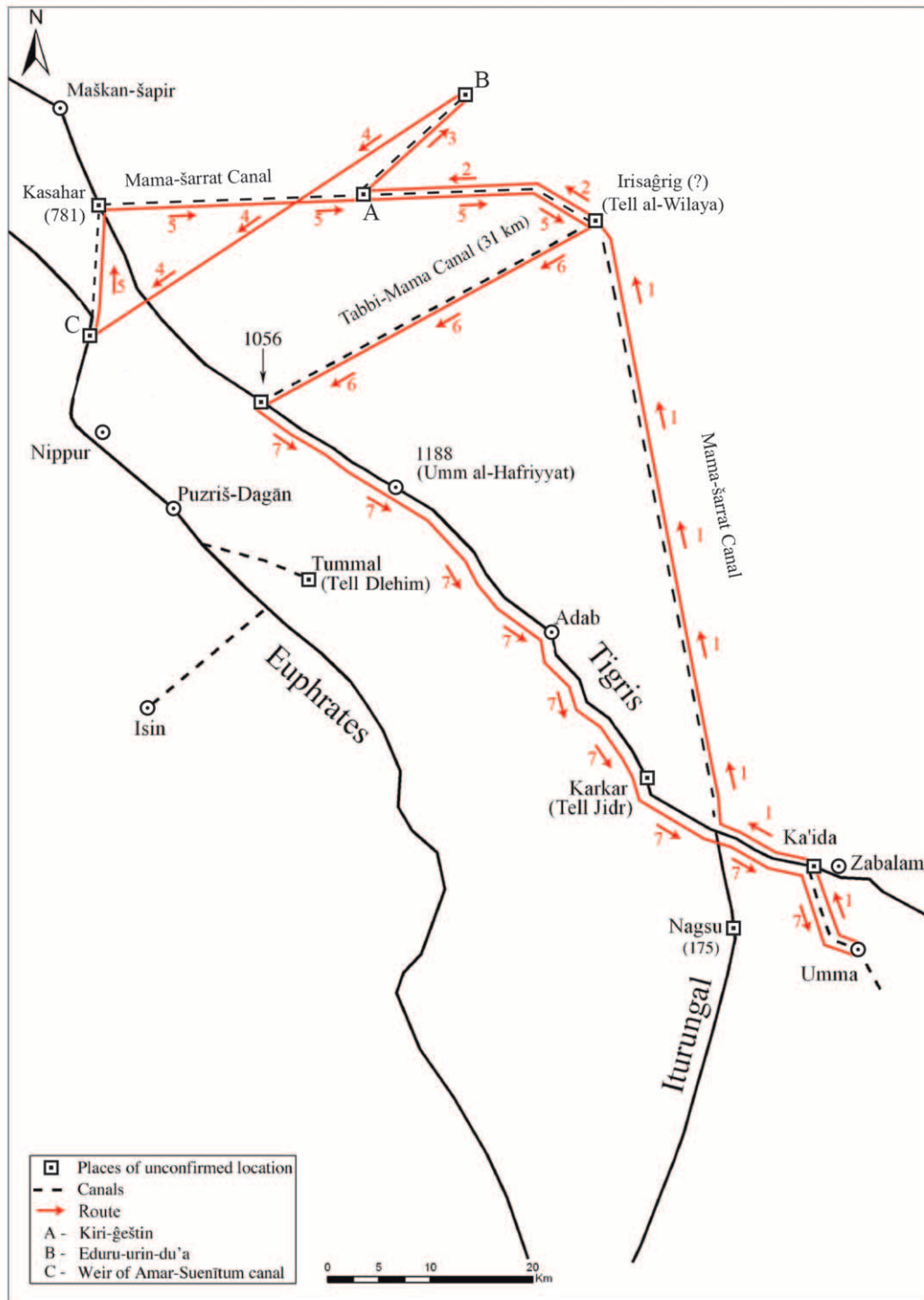


Fig. 7. Proposed reconstruction of the round trip from Umma to Iriṣaḡriḡ (adapted from Molina 2013: 69, drawing courtesy of Antonio Barrocu).

Stage 1. The boats were towed for four days from Umma to Irišaḡrig via Mama-šarrat, a distance of about 75 km, which accords well with estimates that an empty boat can be towed at a pace of 15–20 km per day.⁴² Thus, the boats were first towed from the quay of Umma to Ka'ida along the Umma canal and then towed (or floated)⁴³ to the outlet of Mama-šarrat on the Tigris. From there the boats were towed to Irišaḡrig (i.e., to Tell al-Wilaya).

Stages 2–3. In Irišaḡrig the boats were loaded with barley; they were then towed upstream to the weir of Kiri-ḡeštīn and floated downstream to Eduru-urin-du'a. Molina argued that stages 2 and 3 of the trip were recorded differently in the balanced account (*TCL* 5, 5676) and in the four receipts. Thus “the village of Kiri-ḡeštīn was located at a distance of two days by boat from Irišaḡrig, which included a short trip downstream from Kiri-ḡeštīn to Eduru-urin-du'a” (Molina 2013: 66). I accept this argument and tentatively suggest that the boats continued to be towed along Mama-šarrat to the weir of Kiri-ḡeštīn and from there floated downstream to Eduru-urin-du'a. I assume that the canal connecting Kiri-ḡeštīn and Eduru-urin-du'a branched off from Mama-šarrat on its north bank so that Eduru-urin-du'a was located further northeast. If this village had been located southeast of the Mama-šarrat canal, it would have been too close to Irišaḡrig to justify a two-day trip by boat and a seven-day transfer of goods by land to the Amar-Suenītum canal. However, if Kiri-ḡeštīn was located farther away from Irišaḡrig (ca. 35 km), close to the inlet of the Mama-šarrat canal on the Tigris, it is possible that Eduru-urin-du'a lay southeast of the canal, approximately near the northern bank of the modern shallow lake formed east of the ancient course of the Tigris.⁴⁴

Stage 4. The expedition travelled by land for seven days from Eduru-urin-du'a to the weir of Amar-Suenītum canal. The Amar-Suenītum canal flowed in the region of Nippur and I accept Molina's proposal to locate it on the Euphrates about 10 km north of Nippur.⁴⁵ As mentioned above, the seven days allotted for the land journey may have included other operations, and on the way to the weir of the Amar-Suenītum canal the caravan had to cross both the Mama-šarrat and the Tigris. Nevertheless, seven days still seems a generous allowance for a trip of about 30–40 km, and thus it is likely that the expedition halted on the way or took side-trips unrecorded in the texts.

Stage 5. From the weir of the Amar-Suenītum canal, the expedition continued by boat. Two days were needed to tow the boats to Irišaḡrig and to move them over, a procedure usually carried out at barrages.⁴⁶ I assume that the boats were towed upstream from the weir of the Amar-Suenītum canal to Kasahar and from there floated downstream along Mama-šarrat to Irišaḡrig.

Stage 6. According to our reconstruction, the Tabbi-Mama canal branched off from the Tigris, possibly at the site H1056, flowing towards Tell al-Wilaya into Mama-šarrat and perhaps continuing for a few kilometers to Irišaḡrig. Accordingly, the boats were towed for two days from Irišaḡrig to the inlet of Tabbi-Mama located on the Tigris.

Stage 7. In the last stage, the boats were floated downstream from the inlet of Tabbi-Mama to Umma via the Tigris and the Umma canal in two days.

This reconstruction finds support in another text discussed by Molina, UTI 6, 3700, which records a trip of ten or more days from Umma to Irišaḡrig.⁴⁷ Setting aside the difference in duration between the two

42. See Steinkeller 2001: 44 n. 95; Molina 2013: 66; note that H1032 and H1056 are located respectively 80 km and 76 km upstream from Umma.

43. Boats would have been floated if the outlet of the Mama-šarrat canal were downstream of Ka'ida.

44. For the sake of simplicity, fig. 7 only renders the first hypothesis for the placement of Kiri-ḡeštīn on the Mama-šarrat canal, i.e., approximately midway between Irišaḡrig and Kasahar; consequently Eduru-urin-du'a is placed northeast of Kiri-ḡeštīn.

45. Molina 2013: 67–68, with previous bibliography.

46. For this operation see Foxvog 1986: 66; Steinkeller 2001: 35–36.

47. 5 ḡuruš u₄ 10 [(+x)-še₃], kar Umma^[ki]-ta, Iri-<saḡ>-rig^[ki]-[še₃], ma₂ gid₂-da ma₂ diri¹-'ga', še ma₂-a si-ga, 'ugula' Gu₂-TAR, kišib A-du-mu, iti^dDu[mu-zi], mu ma₂ 'd¹[En-ki] / ba-'ab¹-[du₈].

trips, which may reflect the time needed for other operations, as pointed out by Molina,⁴⁸ it is relevant that in this text the trip from Umma and Irisaĝrig was made by first towing the boat upstream and then floating it downstream. In light of our reconstruction of the channel system of the southeastern Tigris, it may be suggested that the boat was towed from Umma to Kasahar and then floated to Irisaĝrig on the Mama-šarrat canal.

Another important detail that helps to secure the identification of Irisaĝrig with Tell al-Wilaya is the date and degree of looting at the site. As pointed out by Molina, the appearance of the texts from Irisaĝrig on the market is closely associated with the invasion of Iraq, as the first tablet was auctioned on Ebay in 2004 and therefore the site of Irisaĝrig must have been looted after 2003 (Molina 2013: 71–73; see also Owen 2013b: 28–33). And indeed, Tell al-Wilaya has been “almost continuously” targeted by illegal excavators since the 2003 war (Hussein, Altaweel, and Rejeb 2009: 6; see also Stone 2008: 137).

6. Conclusions

The identification of Tūlūl al-Baqarat with Keš once again raises the question of the location of Irisaĝrig in virtue of the close relation between the two centers evidenced by textual sources. Unlike previous studies that located Irisaĝrig along the ancient course of the Tigris, the present contribution has focused on the area around Tūlūl al-Baqarat, situated about 30 km to the east. The extensive site of Tell al-Wilaya, lying about 6 km from Tūlūl al-Baqarat and previously identified with Keš itself, is a plausible candidate for Irisaĝrig. Molina’s proposal to locate Irisaĝrig at either H1032 or H1056 along the ancient Tigris relied on his reconstruction of the round-trip route between Umma and Irisaĝrig as recorded in Ur III administrative texts, but a reanalysis of the textual sources exposed two difficulties in Molina’s reconstruction. A different assessment of the direction of the Tabbi-Mama canal’s flow, combined with a proposed reconstruction of the Mama-šarrat canal based on textual and archeological evidence, provided grounds to suggest an alternative route for the Umma–Irisaĝrig round trip that allows us to localize Irisaĝrig at Tell al-Wilaya.

To conclude, there is sufficient reason to reconsider the topography of the eastern area of the Tigris during the third millennium and to suggest the identification of Irisaĝrig with the site of Tell al-Wilaya. This identification better agrees with the role of Irisaĝrig as a hub for routes to the east, not only to Der, which is the city most frequently mentioned in the Irisaĝrig texts, and Diniktum, but also to the area beyond the Zagros, notably Kimaš and Šimaški.⁴⁹ The proposed identification is further supported by the calendrical system attested in the texts from Irisaĝrig, which is otherwise known only from the archives of Tell al-Wilaya, Tūram-ili and SLA.⁵⁰ While the latter two groups of texts have been confidently attributed to Irisaĝrig (Garfinkle 2012: 37–41, 78–81), the texts from Tell al-Wilaya have resisted this association.⁵¹ The menology of Irisaĝrig can be therefore reconciled with that of Tell al-Wilaya.

48. Molina 2013: 62: “It is important to keep in mind that these receipts documented *all* the workdays completed under the responsibility of a given foreman, and not only the number of days towing upstream and floating the boats downstream. Thus, even if not explicitly stated, they could also account for the time needed to load, unload, and transfer the goods transported, the time to move the boats over weirs or bridges, the time needed to plait reeds into a raft, or even the time used to accomplish side trips to other close localities where additional goods were loaded or unloaded.”

49. See Owen 2013b: 42–45. For the Irisaĝrig–Der overland route towards the Šimaškian lands see Steinkeller 2014: 291–95.

50. Owen 2013a: 91–93; 2013b: 64–76; for a recent discussion on the calendar of Irisaĝrig see Ozaki 2016.

51. Van de Mieroop 1986: 5–6 and Steinkeller 1989: 305–7 attempted to associate the Tūram-ili and SLA archives with Tell al-Wilaya. Despite the use of the same calendar, the legally excavated texts from Tell al-Wilaya (see Postgate 1976, Studevent-Hickman 2009; Saadon 2014) seem to show no connection with the looted tablets from Irisaĝrig; however, most of the tablets unearthed at Tell al-Wilaya date to the Old Akkadian period while the few properly recovered Ur III texts are quite fragmentary.

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