

Dietz Otto Edzard, *ša kullati idû kalama hassu, – iḫīṣma miḥāriš kibrāti naḫar nēmeqi ša kalami iḫuz niširta imurma katimta iptē* – zu seinem 70. Geburtstag in Hochachtung und freundschaftlicher Verbundenheit gewidmet.

New Light on the Hydrology and Topography of Southern Babylonia in the Third Millennium*

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Through an extensive study of third millennium sources, chiefly among them, the Ur III tablets from Umma, this paper reaches the conclusion that the watercourse thought by Th. Jacobsen and other scholars to represent the “eastern branch of the Euphrates” was known in antiquity as the Tigris (Idigna). In this connection, various other related problems of topographic nature are considered, such as the location of the canal Iturungal and the town Nagsu, the course of the Tigris in the Umma province,

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Abbreviations used are those of the Sumerian Dictionary of the University of Pennsylvania Museum and M. Sigrist and T. Gomi, *The Comprehensive Catalogue of Published Ur III Tablets* (Bethesda 1991) 7–12, with the following additions:

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| Istanbul | F. Yildiz et al., <i>Die Umma-Texte aus den Archäologischen Museen zu Istanbul</i> , 1 = MVN 14 (Rome 1988); 2 = MVN 16 (Rome 1994); 3 (Bethesda 1993); 4 (Bethesda 1997); 5 (Bethesda 2000) |
| Oxford | J.-P. Grégoire, <i>Archives administratives et inscriptions cunéiformes de l'Ashmolean Museum et de la Bodleian Collection d'Oxford</i> (Paris 1996) |
| Sigrist Yale | M. Sigrist, <i>Texts from the Yale Babylonian Collections, Parts 1 and 2 Sumerian Archival Texts 2 and 3</i> (Bethesda 2000) |
| SNAT | T. Gomi/S. Sato, <i>Selected Neo-Sumerian Administrative Texts from the British Museum</i> (Abiko 1990) |
| TCNSU | A. Archi/F. Pomponio/G. Bergamini, <i>Testi cuneiformi neo-sumerici da Umma</i> (Turin 1995) |
| Touzalin | M. Touzalin, <i>L'administration palatiale à l'époque de la troisième dynastie d'Ur: Textes inédites du Musée d'Alep</i> (unpubl. PhD dissertation, Université de Tours 1982) |

the role of Kasahar in the canal system of southern Babylonia, the identities of the towns of Esagdana and Tūmtur, and the sites situated along the stretch of the Tigris between Adab and Kasahar.

1. Introductory Remarks

This study grows out of my project “Population Density, Settlement Patterns and Rural Landscape in Southern Babylonia under the Ur III Dynasty: The Case of the Province of Umma,” the results of which I hope to present soon in the form of a book. As indicated by its title, my project aims, among other things, to catalogue the settlements of the Umma province (as they can be identified in ancient sources) and, by combining this evidence with the relevant archaeological and surface-survey data, to attempt to arrive at an estimate of the population of the region in question in **Ur III times**. In this undertaking, I have intentionally tried not to delve too deeply in the immensely complicated questions of the Umma topography, limiting generally my inquiry to the point whether a given settlement can confidently be classed as an Umma locality. However, to be able to reach any meaningful conclusions about Umma’s settlement patterns and the density of population, a determination of its territorial extent is absolutely necessary, which, in turn, depends on the knowledge of the locations of Umma’s main settlements and waterways. As I was trying to construct such a basic “Umma map,” it became clear to me that this task is impossible without considering various topographic issues of broader significance, which take one far beyond the strict compass of the Umma province. The results of the ensuing investigation deemed sufficiently important to warrant a separate treatment. This is how this article came about, which, though far from being fully comprehensive in its coverage, provides, as I hope, an improved understanding of the hydrology and topography of southern Babylonia in the third millennium.

2. The Question of the Tigris

In an important and highly influential article published in 1960,¹ Th. Jacobsen offered the first comprehensive reconstruction of the wa-

¹ “The Waters of Ur,” *Iraq* 22 (1960) 174–85, with pl. XXVIII. Here it should be noted that the thesis of the primacy of the Tigris and the identification of the “eastern Euphrates” as the Iturungal had both been offered by Jacobsen in essentially the same form already three years earlier, in his article “Early Political Development in Mesopotamia,” *ZA* 52 (1957) 96–97: “Of the two major watercourses, the Euphrates and the Tigris, the former is by far the easier one to tap and on it depends,

tercourses of ancient Babylonia on record. Based primarily on the testimony of ancient sources, but utilizing also the archaeological and geomorphological data collected by the Central Sumer survey,² this reconstruction established a paradigm that has been widely used and relied on till this very day.

A central feature of Jacobsen's reconstruction is that it identifies all the major watercourses in the core area of the alluvium as effluents of the Euphrates, and that it assumes that the ancient Tigris flowed to the east of the alluvium, in a location roughly identical with that occupied by the modern Tigris. The obvious corollary of this is that the ancient settlements of both southern and northern Babylonia relied almost exclusively on the Euphrates for their supplies of irrigation water. Since the Tigris is mentioned in various sources from southern Babylonia, especially those from Girsu/Lagaš, Jacobsen acknowledged that some Tigris water did reach southern Babylonia, but, in his view, such water supplies came there only indirectly, through a system of feeder canals branching off from the Tigris far to the north. Accordingly, he explained all the mentions of "Tigris" (Sumerian *Idigna*) as references to the various Tigris feeders.³

therefore, most of the ancient settlements. Beginning at a point north of the latitude of modern Baghdad a number of major canals were drawn from the Euphrates and carried with the surface contours southeast toward the Tigris, which in this stretch flows parallel with, and not very far to the east of, the Euphrates ... Further to the south, approximately at Babylon, the Euphrates divided in antiquity into two major branches which watered the country of Sumer. The easternmost of these, the Iturungal, flowed in the southeastern direction well north of Nippur to Adab, then south over Zabalam and Umma to Badtibira, where it veered west and, over Larsa, seems to have rejoined the main, western, branch. The western branch itself, the ancient Euphrates, followed a course somewhat to the north and east of that of the present Hilla branch, passed through Nippur, curved down to Shuruppak, and flowed from there due south over Uruk to Ur and on through extensive marshlands to the Persian Gulf. Besides these two major Euphrates branches there was a third important watercourse, the Sirara, which took off from the Iturungal at Zabalam and, flowing first southeast then south, watered the district of Girsu, Lagash, and Ninâ, continuing southward through marshes to the Gulf. This canal seems at various times to have fed also from the Tigris, most likely through a cut running down from a point somewhere near modern Kut-el-Amara."

² Conducted in 1953–1954 by Jacobsen, Vaughn Crawford, and Fuad Safar. See Iraq 22, 175 n. 1.

³ "Some Tigris supplies were brought into Sumer by Entemena shortly before the Agade period. They grew steadily in volume and importance, so that by Old Babylonian times the feeder and the lower part of the Iturungal were considered a main branch of the Tigris" (ibid., 175 n. 2). See also the quotation cited in n. 1 above and his article "A Survey of the Girsu (Telloh) Region," Sumer 25 (1969) 103–09.

As for the configuration of the Euphrates effluents south of Nippur – which is the problem preoccupying us here specifically – Jacobsen identified two major branches there: the main (or western) branch, along which were situated Nippur, Šuruppak, and Uruk, and which bore the ancient name of Buranun (Akk. *Purattu*); and the eastern branch, which, as he thought, bore the name of Iturungal. The course of the latter branch was identified by him as follows:

“At an as yet unidentified point, Ka-saḥar-ra, situated on the Euphrates a day’s journey or so upstream from Nippur, the important effluent Iturungal took off, flowing first eastward, then southward. The line of its course was picked up in the Survey of Central Sumer at Bismayah (Adab), from where it continued southward over Jidr, past Bzeikh (Zabalam), over Jokha (Umma), Umm-el-Aqarib, Mansuriyah to Madinah (Bād-tibira). Here it veered west over Able and Senkerekh (*Larsa*) to junction with the Euphrates again. Two effluents took off from the left bank of the Iturungal, the Íd-Nina^{ki}-ḡen-a, which over Bzeikh (Zabalam) flowed to Telloh (Girsu), al Hibba (Uru-kù, Lagaš?), and Surghul (Nina), and an anonymous branch which takes off from a point north of Mansuriyah, passes well to the east of Madinah (Bād-tibira), and continues south-east down to a small mound also called Madinah. A branch takes off from the right bank and runs to Tell Sifr (Kutalla).”⁴

Since Jacobsen offers no systematic argument in support of his thesis about the third millennium Tigris, but he rather presents it in categorical terms and simply leaves out the Tigris from consideration, his reasons for locating it to the east of the alluvium’s core are not entirely clear. The data produced by the Central Sumer survey must have been a factor here, though not the decisive one, since there is nothing in those data that would necessarily lead to such a radical conclusion. What impressed Jacobsen more in this connection appears to have been the idiosyncrasies of the Tigris as a natural waterway, in particular, the fact that its volume and velocity vastly exceed those of the Euphrates, which almost *ex definitio* preclude the possibility of its having been effectively utilized as a source of irrigation water.⁵ As Jacobsen apparently felt, this point is borne out by ancient sources (at least those available to him at the writing of his article), in which the Tigris seems to figure rarely and only in the contexts peripheral to the alluvium.

Subsequent to Jacobsen’s study, the question of the ancient Tigris was treated most extensively R. McC. Adams, in his monumental work synthesizing the results of the Uruk and other surface surveys

⁴ Iraq 22, 177.

⁵ Cf. the beginning of the passage quoted in n. 1.

conducted in the Mesopotamian alluvium.⁶ Like Jacobsen, Adams sought the third millennium Tigris to the east of the alluvium's core area, without, however, committing himself to any specific location, other than noting that "as yet there is no basis for deciding whether to place it in the latitude of Wilaya, in the vicinity of the present Tigris bed, or perhaps still farther north."⁷

The mentions of the Tigris in Lagaš sources were accounted for by Adams in a way similar to that of Jacobsen's. In Adams' opinion, such references "converge on a canal situated along the eastern frontier of the kingdom of Lagash, hence well to the east of the modern Shatt al-Gharaf," therefore indicating "that a watercourse existed somewhere to the north, whence irrigation supplies could be brought by canal into the region of Lagash, Larsa, and other southern cities."⁸

Noting also the presence of references to work done along the Tigris in the Ur III texts from Umma, Adams speculated that this fact seems to mean that "territories administered from Umma extended northward to the Tigris, and that it at least implies that during the Third Dynasty of Ur the northern hinterlands of the city were watered in part by feeder canals from the Tigris."⁹

Adams' most important contribution to the Tigris question was his observation that, in the fourth millennium, the configuration of the Euphrates and the Tigris was significantly different,¹⁰ since the two rivers apparently "were joined near the head of the alluvium," whence "they diverged once more into an uncertain but probably considerable number of channels that together may have constituted a shifting, bifurcating, and rejoining combination of an anastomosing pattern and an alluvial fan as they crossed the lower Mesopotamian plain toward a number of separate points of outflow into the Gulf."¹¹ Among those channels, at least one was identified by Adams as an unmistakable Tigris bed. According to him, this ancient Tigris was eventually forced,

⁶ *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates* (Chicago 1981), 6–7, 16–18, 61–63, 134, 158–59.

⁷ *Ibid.*, 159. Cf. also *ibid.*, 18.

⁸ *Ibid.*, 159. These conclusions were anticipated, at least in part, by R. Paepe, "Geological Approach of the Tell ed-Dēr Area, Mesopotamian Plain, Iraq," in: L. De Meyer et al., *Tell ed-Dēr I* (Louvain 1971), 9–27 (especially, 24–27).

⁹ *Heartland*, 159. Cf. also *ibid.*, 7: "There are occasional references to earlier canals emanating from the Tigris ..., but nothing suggests that they continued to function over long periods or achieved real economic importance."

¹⁰ *Ibid.*, 16–18, 61–63.

¹¹ *Ibid.*, 17–18.

through the cumulative effect of the Euphrates floodings, to shift its course into a more easterly bed, the event which, as he speculated, took place toward the end of the fourth millennium. However, in his view, this separation of the Tigris from the Euphrates was not necessarily complete, so that "some Tigris water may at least periodically have joined with what have been described as 'Euphrates' branches flowing nearer the center of the alluvium."¹²

The last paragraph begs the question of why Adams was so categorical about the location of the third millennium Tigris, since, as his own data show, the only convincing evidence of an ancient Tigris bed comes from the alluvium,¹³ and since he himself admitted the possibility of at least some Tigris water reaching the alluvium directly. One surmises that his reasons in this connection were, on the one hand, the alleged absence of textual evidence connecting the Tigris with any third millennium sites located in the alluvium (other than those mentioned in Girsu/Lagaš and Umma sources), and, on the other hand, the fact that all the settlements along the postulated ancient course of the Tigris were abandoned toward the end of the fourth millennium, with no subsequent reoccupation. These facts together must have suggested to him, very reasonably, that the eastward shift of the Tigris could only have occurred sometime between the abandonment of the settlements in question and the point at which textual evidence bearing on ancient waterways becomes available.¹⁴

This view of the third millennium Tigris, as formulated by Jacobsen and further developed by Adams, acquired normative status in the

¹² *Ibid.*, 158.

¹³ In this connection, note Adams' statement that "there was no band of dense cultivation and urban settlement along the [present-day] Tigris comparable to what existed along several Euphrates branches" (*ibid.*, 158). In my opinion, this fact is sufficient to exclude any possibility of the third millennium Tigris having been situated near the bed of the modern river.

¹⁴ In their recent study "Second and First-Millennium BC Rivers in Northern Babylonia," in: H. Gasche/M. Tanret (ed.), *Changing Watercourses in Babylonia: Towards a Reconstruction of the Ancient Environment in Lower Mesopotamia*. MHEM 5 (Ghent 1998), 1–64, S. W. Cole and H. Gasche reach important new conclusions about the course of the Tigris in the upper section of the alluvium. In particular, they trace a stretch of an ancient Tigris bed some 17 km to the northeast of the site of Tell 'Uqair (*ibid.*, 24–25, 49 Map 8). This reconstruction, though only partial and limited to the second millennium BC, appears to us to be compatible, at least potentially, with the conclusions about the course of the third millennium Tigris we offer below in this article.

subsequent literature,¹⁵ and it remained unchallenged till 1990, when W. Heimpel published an article entitled “Ein zweiter Schritt zur Rehabilitierung der Rolle des Tigris in Sumer.”¹⁶ As the title of this article indicates, Heimpel set out in it to “rehabilitate” the importance of the Tigris in the hydrological configuration of southern Babylonia. Radically departing from the earlier reconstructions, Heimpel proposed that the waterway thought by Jacobsen and other scholars to represent an effluent of the Euphrates (the so-called “eastern branch” or the Iturungal), along which Girsu, Umma, Adab, and Urusagrig were situated, was actually the Tigris.

The evidence Heimpel offered in support of this contention was, in the main, the Ur III text YOS 4 56 (probably from Umma), which lists huge expenditures of beer and bread, as well as of gold, silver, cattle, and sheep, on behalf of several governors (*énsi*) and chief temple administrators. The occasion of those expenditures was the festivities, held on the banks of the Euphrates and the Tigris, that celebrated the installation of a statue of Šulgi. As Heimpel pointed out, the cities whose administrative heads took part in those festivities were Umma, Adab, Urusagrig, Larsa, Šuruppak, Uruk, and Ur, among which Umma, Adab, and Urusagrig were located on the “eastern Euphrates.” Since the text names the Euphrates *and* the Tigris, Heimpel concluded that what is meant by the Tigris there can only be the “eastern Euphrates.”

In spite of the fact that nearly a decade has passed since the appearance of Heimpel’s article, his hypothesis has not so far received any reaction, positive or negative.¹⁷ The reason, one suspects, is that this hypothesis was based on broad, essentially common-sense arguments, without any hard data (save for the text YOS 4 56) in its support.

¹⁵ See, e.g., H. Sauren, *Topographie der Provinz Umma nach den Urkunden der Zeit der III. Dynastie von Ur* (Heidelberg 1966); H. J. Nissen in Adams/Nissen, *The Uruk Countryside: The Natural Setting of Urban Societies* (Chicago 1972) 41–54; F. Carroué, “Études de géographie et de topographie sumériennes II: À la recherche d’Euphrate au III^e millénaire,” *ASJ* 13 (1991) 111–56; idem, “Études [...] III: L’Iturungal et le sud sumérien,” *ASJ* 15 (1993) 11–69.

¹⁶ *ZA* 80 (1990) 204–13. Note also Heimpel’s earlier comments in *JNES* 46 (1987) 316–17.

¹⁷ At least one scholar took note of it, although without taking any position, for or against it. See D. T. Potts, *Mesopotamian Civilization: The Material Foundations* (Ithaca 1997) 26, who limits himself to the following statement: “For the most part Jacobsen’s reconstruction [of the watercourses] has stood the test of time, although ... W. Heimpel now suggests that the watercourse which flowed past Girsu, Umma, and Adab, was in fact the Tigris.” Cf. also *ibid.*, 9.

As a result of my own many-year preoccupation with the topography of Umma, specifically, and of southern Babylonia, more generally, I have recently come to the conclusion that the ONLY way to arrive at a global and fully coherent reconstruction of the third millennium watercourses of southern Babylonia is to assume, with Heimpel, that the “eastern Euphrates” was indeed the Tigris, or, at the very least, that the “eastern Euphrates” is what the ancient sources mean by the toponym Idigna, “Tigris.”¹⁸ The evidence supporting this view, which has been substantially augmented by the recent publications of some 6,000 Umma sources, is rich and, in my opinion at least, completely unequivocal.

To begin with the arguments of more general nature, there is, first, the fact that the Tigris is mentioned as a matter of fact in Ur III Umma sources, both as a source of irrigation water,¹⁹ and, as we shall

¹⁸ That the sign in question (LAK-63 = KWU-689) is to be read Idigna is assured by the Ebla syllabary line 34, which gives the equation LAK-63 = i-ti-gi-ra-um (A. Archi, *Eblaïtica* 1 [1987] 94). This precludes any possibility of reading it “Zubi” or the like. Here note that the value zubi belongs to KAM₄GAM = LAK-29, which, in the Ebla Vocabulary line 18, is glossed ga-mu-um (see *ibid.*, 93). For the question of Zubi, see G. Conti, *RA* 82 (1988) 115–16; Cole/Gasche, “Rivers in Northern Babylonia,” 16–18.

¹⁹ See the following examples, which concern the hoisting of Tigris water, no doubt for irrigation purposes: 10 guruš ud 15-še a zi-ga gú Idigna-ka-da gub-ba (Sigrist Princeton 500:1–4); 12 guruš ud 15-še a zi-ga gú Idigna-ka-da gub-ba (Sigrist Yale 1689:1–2); 15 UN-il 0.0.3<-ta> ud 2-še a zi-ga Idigna-da gub-ba (Sigrist Princeton 384:3); 50 lá 1 guruš ud 32-še a zi-ga id-Idigna-da gub-ba (MVN 20 210:1–3); 138 ½ guruš a zi-ga Idigna gub-ba (Sigrist Princeton 397:1–2); 6 guruš ud 20-še a zi-ga id-Idigna-da gub-ba (Nikolski 2 104:1–3); 1 guruš 0.1.0-ta 7 UN-il 0.0.4-ta 4 UN-il 0.0.3-ta a zi-ga Idigna-da gub-ba (SACT 2 21:1–4); 16 guruš ud 10-še á-bi ud 160-kam a-da gub-ba a zi-ga Idigna (Istanbul 1694:5–8); 12 guruš ud 15-še a zi-ga gú Idigna-ka šu ù-ra, “leveling the banks of the Tigris” (Sigrist Yale 1699:1–3); 12 guruš ud 8-še a-da gub-ba š[ag₄] gú id-Idigna (Istanbul 1794:1–3); 14 guruš engar dumu-ni ud 8-še a-da gub-ba gú Idigna-ka (MVN 9 202:1–2); 10 guruš engar dumu-ni ud 7-še a-da gub-ba gú Idigna-ka (Sigrist Princeton 413:1–3); 6 guruš šag₄-gud ud 12-še a-da gub-ba gú Idigna-ka (Istanbul 2597:1–3); 18 guruš ud 8-še á-bi ud 144 a-da gub-ba gú Idigna (Istanbul 2901:8–10); 17 guruš ud 15-še a-da gub-ba gú Idigna á-bi ud 255 (TCL 5 5676 iii 27–29); 20 UN-il ud 11-še Idigna a gub-ba (JCS 28, 218 no. 36:1–3); ¹⁰ guruš ud ¹ 15-še ù id-Idigna-ka šu ù-ra a zi-ga dib-ba (Jean Šumer et Akkad LXXXI:78:1–3). The hoisting apparently was done through the use of clay pithoi (^{du}ekur-ku-dù); see MVN 14 359:1–2: 6 ^{du}ekur-ku-dù 1.0.0 gur a Idigna dé-dè, “6 k. of 300 liter (capacity each) to irrigate (with) Tigris water.” Cf. also 10 guruš ud 15-še gú Idigna šu ù-ra (Istanbul 1587:1–2); 2 guruš ud 15<-še> gú Idigna-ka šu ù-ra (Sigrist Yale 1547:1–2).

show below, in connection with various specific Umma toponyms, which allows one to chart its course within the Umma province fairly exactly. On the other hand, one looks in vain for any possible designation of the putative “eastern Euphrates” in the extant sources, for that designation certainly did not apply to the Iturungal (which can positively be identified as a canal that branched off from the “eastern Euphrates” downstream from Karkar and flowed south toward Uruk²⁰), nor was it the Euphrates (Buranun). The latter name does in fact appear four times in Umma documentation of the Ur III period,²¹ but in each case it is mentioned, very significantly, in connection with Tummal, whose location on or near the main (western) branch of the Euphrates is beyond doubt.²² Therefore, the Umma sources know only two terms, the Tigris and the Euphrates, the latter signifying the Euphrates’ main branch. The absence of any designation for the “eastern Euphrates” is completely unexplained, unless one concludes that the “eastern Euphrates” is the Tigris.

Second, there is an important, but previously overlooked, passage from the famous inscription of Utuhegal. Describing the deplorable conditions that arose in Babylonia as a result of the Gutian domination, the inscription in question says the following: “he (i. e., Tiri-gan, the king of Guti) seized both banks of the Tigris; in the south, in Sumer, he immobilized (lit.: ‘tied up’) the fields.”²³ As this passage makes clear, the “immobilization” of the fields of Sumer (by which the depriving of irrigation water is obviously meant²⁴) was thought by the author to have been the direct consequence of the Gutian occupa-

²⁰ See below Section 3.

²¹ See below nn. 190, 191, and 199.

²² At the same time, this evidence proves that, in the Ur III period, the watercourse that connected Nippur with Uruk bore the designation Buranun. For this point, note further the Nippur text TMH NF 1/2 311:27–28, which concerns the construction of a brick wall-course “from the ‘new town’ of Nintinuga to the trees on the bank of the Buranun, at the gate of Ninšubur” (uru-gibil-^dNin-tin-ug₅-ta giš gú id-Buranun ká ^dNin-šubur-šè). Since both Nintinuga and Ninšubur were deities native to Nippur and its region, the area of Nippur is clearly meant here. Cf. kar-^dNin-tin-ug₅-ga šag₄ Nibru^{ki} (Sigrist Yale 1918:9–10).

²³ id-Idigna gú min-a-ba bí-in-dab₅ sig-šè Ki-en-gi-rá GÁNA bí-kešda (Frayne, RIME 2, 285 lines 39–42).

²⁴ Cf. Frayne’s translation “he blocked (water from) the fields” (RIME 2, 285). And cf. also “Lamentation over Sumer and Ur” line 61: ^dEn-ki-ke₄ id-Idigna id-Buranun-na a im-ma-da-an-kéš, “Enki blocked the water in the Tigris and Euphrates” (P. Michalowski, *Lamentation over the Destruction of Sumer and Ur*. MC I [Winona Lake 1989] 40–41).

tion of both banks of the Tigris. This makes sense only if the “eastern Euphrates” is understood here, since the reference (if one follows Jacobsen’s reconstruction) to a waterway largely marginal to the central portion of the alluvium, and therefore irrelevant to its irrigation problems, would be completely illogical and out of place in the mouth of an Uruk speaker, such as Utuhegal. That Idigna means the “eastern Euphrates” in this text is independently supported by historical data, for it is known that the Gutians controlled much of the “eastern Euphrates” valley, including sites such as Umma (certainly) and Urusagrig (very likely).²⁵

Third, we have a record of the Larsa king Sin-iddinam (1849–1843) excavating the Tigris. This undertaking must have been of great importance for the Larsa kingdom, since it gave name to one of Sin-iddinam’s year formulae and was cited as one of his chief accomplishments in the royal inscriptions from his reign.²⁶ Rather revealingly, the Tigris project had been preceded only few years earlier by a similar undertaking involving the Euphrates, carried out by Sin-iddinam’s father and immediate predecessor Nur-Adad.²⁷ As in the case of Utuhegal’s active interest in freeing the Tigris river valley from Gutian control, the silting-up of the Tigris could have been a matter of concern to Sin-iddinam only if the kingdom of Larsa depended heavily on the Tigris for its irrigation water. And Sin-iddinam’s words leave no doubt as to the correctness of that point: “In order to provide sweet water for the cities of my country ... (An and Enlil) commissioned me to excavate the Tigris (and) to restore it (to its original bed). At that time, by the decree of An and Inana (and with the assistance of other gods), (and) through my own achievement I grandly excavated the Tigris, the river of Utu’s abundance. After I had taken it (all the way) to its intake at the earthen wall of my (divinely) chosen border, I grandly directed (its overflow) into swamps (as a preventive measure to avoid uncontrolled flooding). (In this way) I provided perpetual water, an unceasing abundance, for Larsa (and) my land ... By the

²⁵ Assuming that Sar-a-ti-gu-bi-si-in, the name of an overlord of Urusagrig, is Gutian (Frayne, RIME 2, 250–51). For the Gutian presence at Umma, see Frayne, RIME 2, 267–68 Namhani 1 and Lugal-ana-tuma 1, which name Gutian rulers.

²⁶ mu id-Idigna ba-ba-al = Sin-iddinam 2 (Sigrist, *Larsa Year Names* [Berrien Springs 1990] 24); Frayne, RIME 4, 158–60 2, 171–72 11, 175–76 14.

²⁷ mu id-Buranun-na sahar ‘dab₅-ba’ gibil’-bi-šè [h]u-mu-un-ba-al (JCS 19 [1965] 2–3 lines 209–211). N.B. this passage (and likewise the entire inscription) has no direct bearing on the question of the “eastern Euphrates” (contra Nissen, *Uruk Countryside*, 48–49).

might of my (entire) country I completed this work-project. Through the orders (and) decisions of the great gods, I restored the Tigris, a wide river, to (its original bed).”²⁸ As a matter of fact, the Larsa dynasty continued to pay great attention to the Tigris as late as the reign of its last ruler, Rim-Sin, who, in his 19th regnal year, “excavated the Tigris, the river that brings abundance to the gods, all the way to the sea.”²⁹

Lastly, one should not ignore the fact that, in historical and literary sources, the Euphrates and the Tigris are consistently paired together and accorded the image of a twin life-line of Babylonia. As a matter of fact, in such pairings the Tigris is always listed first.³⁰ Nor can one forget in this connection the highly poetic introductory stanzas of Gudea’s hymn to the Eninnu, in which the heart of Enlil, unpredictably violent and then overflowing with tenderness and generosity, is compared to the Tigris, which, at the flood-season, violently overflows its banks and brings a gift of life-giving water.³¹ More than anything else, this praise of the Tigris by a Lagaš ruler is the best illustration of the ancient Babylonians’ physical, as well as psychological, dependence on the Tigris for their survival and well-being.

Turning now to more specific points, the data (nearly all of them coming from Ur III Umma sources) that corroborate the “eastern Euphrates” = the Tigris identification are as follows:

²⁸ *uru^{ki} ma-da-mu-še à dūg gá-gá-dè ... íd-Idigna ba-al-la-a-da ki-bi-še gi₄-a-da ... á-bi hu-mu-da-an-ág-eš ud-ba dug₄-ga dug₄-ga An ^dInana-ta ... íd-Idigna íd hé-gál-la ^dUtu-ke₄ ù-ma-mu-ta gal-bi hé-em-mi-ba-al ki-sur-ra in-dub pād-mu-še ka-bi um-mi-tūm¹ a-gam-ma-bi-še si-gal hé-em-mi-sá a da-rí hé-gál mūš nu-tūm-mu Larsam^{ki} kalam-ma-mu-še hé-im-mi-gar ... usu ma-da-mu-ta kin-bi hé-em-mi-til inim ka-aš-bar dingir gal-e-ne-ta íd-Idigna íd dagal-la ki-bi-še hé-em-mi-gi₄ (Frayne, RIME 4, 158–60 2:17–68).*

²⁹ *mu ^dRi-im-^dSuen lugal íd-Idigna íd dingir-re-e-ne nam hé-tūm zag a-ab-ba-še mu-ba-al(-la) (Sigrist, Larsa Year Names, 47–48).*

³⁰ See, e.g., *Idigna kug Buranun(A.KIB.NUN) kug-ge* (“Barton Cylinder” xiii 3, xvii 2 = ASJ 16 [1994] 43–46); *Idigna Buranun-bi* (Lugalzagesi’s Nippur inscription ii 6–7 = Steible ABW II, 317); *ud-ba gú íd-Idigna gú íd-Buranun gú íd dū-a-bi ad[dir si hé-em-mi-sá-sá]* (“Ur-Namma Code” lines 150–154 = Frayne, RIME 3/2, 49); *íd-Idigna íd-Buranun-na* (“Lamentation over Sumer and Ur” lines 25, 38, 61, and 498 = Michalowski, Lamentation, 36–69); *íd-Idigna mah hé-ma-al-la-sa₅-a maš-tab-ba íd-Buranun-na*, “the great Tigris filled with abundance, the Euphrates (its) twin” (M. E. Cohen Lamentations I, 236 lines 279–280, 305 lines 153–154); *a íd-Idigna sikil-àm a íd-Buranun dag-dág-ga* (YOS II 48:2–3).

³¹ See D. O. Edzard, RIME 3/1, 69 Cylinder A i 5–9. Cf. Heimpel, JNES 46, 316–17.

1) According to the text ASJ 8, 68–69 i 3–4, twenty-two workers spent one day carrying reeds “from the storehouse (situated) at the edge of the quay (of Umma) to the bank of the Tigris.”³² It is known from other sources³³ that the quay of Umma was located some 10 km. south or southeast of the “eastern Euphrates,” along the canal that branched off from the “eastern Euphrates” at the place called the Ka’ida (of Umma), “takeoff of the (Umma) canal,” and flowed past the city of Umma. The traffic from Umma to the “eastern Euphrates” invariably proceeded first to the kar (of Umma), and then to Ka’ida; whether by foot or by boat, such a trip – either upstream or downstream – took one day. It follows, therefore, that in the present text “Tigris” is the watercourse on which the Ka’ida (of Umma) was situated. Thus the “eastern Euphrates” = the Tigris.

2) In MVN 15 94 iii 7–8,³⁴ twenty-one workers spent two days carrying reeds from a storehouse to the bank of the Tigris, then took one day to plait those reeds into a raft. Subsequently, they spent two days towing the raft upstream to NAGSU. The location of the original storehouse is uncertain, though because of the short length of the ensuing trip, it must have been situated in the vicinity of Umma,³⁵ and was perhaps the same storehouse that is referred to in the preceding text. However, this point is immaterial here. What merits our attention in this text is that the raft was towed to(ward) NAGSU *on the Tigris*, an operation which took two days. Since NAGSU was located on the Iturungal canal, only a short distance from the latter’s takeoff from the “eastern Euphrates,”³⁶ it is clear that the raft was towed first upstream on the “eastern Euphrates,” and then downstream on the Iturungal. This again forces us to conclude that the “eastern Euphrates” = the Tigris.

3) As one learns from Sigrist Yale 1452,³⁷ four workers spent three days carrying reeds from the bank of the Tigris to the storehouse, “in

³² 22 guruš ud 1-šè gá-nun gaba kar-ra-ta gú id-Idigna-šè gi il-gá. The same storehouse is mentioned in numerous other sources. See, e.g., ASJ 8, 68–69 iii 6, 16; Oxford Ashm. 1924-665 iii 16 viii 22; Istanbul 847:3, 883:2–3, 1907:6, 1974:4, 2470:4, 2828:7; MVN 5 79:3; RA 49, 91 no. 33:3; MVN 13 259:3, 304:2–3.

³³ See below Section 4.

³⁴ 21 guruš ud 2-šè gá-nun-ta gú Idigna-šè gi il-gá ud 1-šè má-lá-a kéš-rá ud 2-šè NAG-su^{ki}-šè má gid-da.

³⁵ A trip from Umma to NAGSU took one or two days. See below p. 45f.

³⁶ See below p. 47f.

³⁷ 4 guruš ud 3-šè gú id-Idigna-ta gá-nun-šè gi il-gá šag₄ É-te-na (Sigrist Yale 1452:1–5).

Esagdana.” Since Esagdana is a variant designation of Puzriš-Dagan,³⁸ it is certain that the reeds were carried from the “eastern Euphrates,” which flowed past Puzriš-Dagan as close as 12 km to the northeast of it. That another, located farther to the east, waterway could be meant here appears to be sheer impossibility.

4) A similar work-assignment is recorded in MCS 3, 87 105534, where eleven workers spent three days carrying reeds from the bank of the Tigris to the storehouse of Gišummud.³⁹ This three-day-long operation probably involved repeated trips from the Tigris to the storehouse and back, as well as the time it took to deposit the reeds in the storehouse, meaning that Gišummud lay either directly on the Tigris or only a short distance away from it. Since, based on other evidence, Gišummud can safely be located on the “eastern Euphrates” well to the north of Adab,⁴⁰ in this case too one needs to conclude that the “eastern Euphrates” = the Tigris.

5) The data discussed thus far establish conclusively that the whole stretch of the “eastern Euphrates” from Gišummud north of Adab down to the “inlet of the (Umma) canal” just north of the city of Umma was known in antiquity as the Tigris. The only certain location where the Tigris can be traced to the east of Umma is at Apišal, an exceedingly important town in the Umma province. The location of Apišal on the Tigris is beyond doubt, for our sources speak of the “weir/barrage of the Tigris of Apišal.”⁴¹

Although the exact location of Apišal is unknown, it appears fairly certain that it lay in the northeastern corner of the Umma province. Therefore, it would make good sense to seek it at or near the site of modern Muhallaqiya, where the Warka Survey data offer strong

³⁸ See below Section 5.

³⁹ 11 guruš ud 3-šè gú id-Idigna-ta gá-nun Giš-^{kuš}ummud-a-ka-šè gi il-gá.

⁴⁰ For the location of Gišummud and its neighbor Ašgipada, see below Section 7.

⁴¹ See the following attestations: 13 UN-il á $\frac{1}{3}$ ud 32-šè á-bi ud 266 $\frac{2}{3}$ -kam (the numbers do not add up!) kun-zi-da Idigna A-pi₄-sal₄^{ki}-ka gub-ba (MVN 10 102 iii 4); 4guruš šag₄-gud ud 34-šè gi se₁₂-a ù ad gid-da kun é dšāra-ka-ta kun-zi-da Idigna A-pi₄-sal₄^{ki}<-šè> (Sigrist Princeton 431:1–5); 73 guruš šag₄-gud ud 1-šè kun-zi-da Idigna Íd-dè-na (a syllabic writing of Idigna!; the same spelling also appears in JNES 50, 262–63 ii 2, cited below in n. 50) A-pi₄-sal₄^{ki} gub-ba (Nikolski 2 158:1–4); 10 guruš gú-zi-da A-bi-sal^{ki} gub-ba ud 1-šè (Touzaín, 206 M 3517:1–2). At the same location, there also existed a bar-lá irrigation device: 3 sar sahar guruš-e 10 gín-ta á-bi ud 18 bar-lá id-Idigna A-pi₄-sal₄^{ki} ba-al-la (SNAT 477:14–16).

indications of a major waterway (= “eastern Euphrates”) either making a sharp southward turn or bifurcating in that direction.⁴²

Another site that was almost certainly situated on the “eastern Euphrates” is Zabalam, identical with modern Ibzaykh (WS 169), located some 9 km north of Umma. Unfortunately, no data connecting Zabalam directly with the Tigris are available.

That the course of the “eastern Euphrates” between the Ka’ida (of Umma) and Apišal was known in antiquity as the Tigris is shown by the text BIN 5 242:1–13,⁴³ which records a round-trip between Apišal and Esagdana (= Puzriš-Dagan⁴⁴), with the objective of transporting 220 bushels of barley from Apišal to Esagdana. The following itinerary can be confidently reconstructed for it: from Apišal to Kasahar upstream on the “eastern Euphrates” (some 20 km to the north of Nippur⁴⁵); from Kasahar downstream on the Kasahar canal to Esagdana; from Esagdana upstream on the Kasahar canal to Kasahar, and, finally, from Kasahar downstream on the “eastern Euphrates” to Apišal; the total time spent on this trip was nineteen days. In addition, it took three days to load the barley into the boat at Apišal, four days to unload the boat, to carry the barley over, and to deposit it in a grain silo at Esagdana, as well as four days “to move the boat over into the Tigris” (má bala-ak šag₄ id-Idigna). The expression má bala-ak describes the transferring of a boat over various man-made obstacles blocking the stream, usually “weirs” or “barrages” (kun-zi-da) that were constructed to raise the river’s level in order to force it into a takeoff⁴⁶; má bala-ak was an arduous and lengthy process,

⁴² See in detail below p. 54 f.

⁴³ 220.0.0 še gur guruš-bi 18 ud 3-šè še má-a si-ga ud 20 lá 1-šè má gid-da má dirig-ga ud 4-šè má bala-ak šag₄ id-Idigna ud 4-šè še ba-al-la še bala-a ù guru₇-a im ùr-ra A-pi₄-sal₄^{ki}-ta gá-nun Ê-te-na ku₄-ra, “(the cargo of) 220 bushels of barley – (its work-force being) 18 men: for 3 days loading the barley into a boat (in Apišal); for 19 days towing the boat upstream and floating the boat downstream (from Apišal to Esagdana and back to Apišal); for 4 days moving the boat over into the Tigris; for 4 days unloading the barley (in Esagdana), transferring the barley, and encasing it with plaster in a grain silo; (this cargo was transported) from Apišal (and) deposited in the storehouse of Esagdana.”

⁴⁴ See below Section 5.

⁴⁵ See below p. 59 f.

⁴⁶ For this interpretation of má bala-ak, see already D. A. Foxvog, ASJ 8 (1986) 66: “má bala a₅ refers to the transferring of a boat from one watercourse to another, past weirs, locks or other barriers which blocked direct water passage.” For this operation being performed specifically at kun-zi-da’s, see the following examples: ud 2-šè kun-zi-da-a bala-ak (Touzalín, 174 M 4220:3); 12 guruš ud 5-šè má-a si-ga kun-zi-da Maš-gán^{ki}-ka má bala-ak (Limet Ur III Brussels 53:2);

especially if the boat was loaded, in which case it had to be unloaded and loaded again. We know that there were at least three weirs between Apišal and Kasahar: at Apišal itself,⁴⁷ at the Ka'ida (of Umma),⁴⁸ and at the takeoff of the Iturungal.⁴⁹ And there may have been still others.⁵⁰ Be that as it may, BIN 5 242 demonstrates conclusively that the entire stretch of the “eastern Euphrates” from Apišal through the Ka'ida (of Umma) to Kasahar was the Tigris.

6) This point is further corroborated by Istanbul 1815:1–12,⁵¹ which records a round-trip between Umma and an Umma site called Ušgida. From Umma, for two days an empty boat was first towed and then floated to the grain silo of Ušgida. The route used undoubtedly was that which is documented in numerous other Umma sources: from Umma upstream on the Umma canal to Ka'ida, and then downstream on the “eastern Euphrates.”⁵² From there, a small local canal must have branched off toward Ušgida. After the boat was loaded with barley at Ušgida, it was then moved over “from Ušgida into the banks of the Tigris,” both operations having taken four days. Subsequently,

[Gú]-eden-na-ta kun-zi-da Maš-gán^{ki}-šè má bala-šè ak (RA 25, 20–21 v 13–14); ud 1-šè Gú-dè-na-ta kun-zi-da Maš-gán^{ki}-šè má gid-da ud 2-šè kun-zi-da bala-ak ud 3-šè kun-zi-da-ta kar-šè má gid-da (MVN 13 282:5–9); ud 1-šè kun-zi-da na(-gáb)-tum-ka má bala-ak (Nikolski 2 141:11–12); ud 2-šè kun-zi-da ^dAmar-Suen-ni-tum-ma-ta Uru-sag-rig^{ki}-šè má gid-da má bala-ak (TCL 5 5676 x 17; SNAT 459:12–15); etc.

⁴⁷ See above n. 41.

⁴⁸ See below p. 53.

⁴⁹ See below p. 42 f.

⁵⁰ E. g., at Kasahar. Note also kun-zi-da ^dŠul-pa-è, mentioned in Istanbul 2728:1–3: 50 guruš ud 1-šè kun-zi-da Idigna ^dŠul-pa-è kud-rá. Since (Eduru-)Šul-pae lay in the Apišal district (Pettinato Untersuchungen 2, 191), the weir in question could have been the same as the weir of Apišal (see above n. 41). Note also the occurrences of an unspecified kun-zi-da Idigna in TCL 5 5676 xi 8–9 (283 guruš ud 1-šè kun-zi-da ^gú¹ Idigna gub-ba), Sigrist Yale 323:1–2 (reeds kun-zi-da Idigna ba-an-gub), and JNES 50, 262–63 ii 2, iii 15 (x géme ud 1-šè kun-zi-da Íd-dè-na gub-ba).

⁵¹ 15 guruš ud 2-šè má sug₄ Umma^{ki}-ta guru₇ Uš-gid-da-šè má gid-da má dirig-ga ud 4-šè ¹kar¹-[t]a še má-a si-ga Uš-gid-da-ta ^gú¹ Íd-Idigna-a má bala-ak ud 3-šè Uš-gid-da-ta má gid-da ù Ka-íd-da má bala-ak ud 2-šè še Íl-gá šag₄ Umma^{ki}, “15 men for 2 days towing an empty boat upstream and floating it downstream from Umma to the grain silo of Ušgida; for 4 days loading barley into the boat from the quay (of Ušgida) and moving the boat over from Ušgida into the banks of the Tigris; for 3 days towing the boat upstream from Ušgida (to Ka'ida) and moving it over at Ka'ida (onto the Umma canal, and then floating it to Umma); for 2 days carrying the barley into Umma.”

⁵² See below Section 4.

the towers took three days towing the boat upstream to Ka'ida and moving it over at Ka'ida, clearly from the "eastern Euphrates" into the Umma canal, on which the boat must have finally been floated down to Umma. This context too leaves no doubt that the course of the "eastern Euphrates" east of Ka'ida must be identified as the Tigris.

7) A text from Ur (UET 3 1444 iv 9–11) records a work-assignment involving 120 female workers who were "placed at the weir of the Tigris, at the Mušbi'ana canal" (kun-zi-da id-Idigna-ka id-Muš-bi-an-na-ka gub-ba).⁵³ This linking of the Mušbi'ana canal with the Tigris must signify that the canal in question branched off from the Tigris at one of its weirs.⁵⁴ Importantly, the canal is named after Mušbi'ana, one of the four main districts of the Umma province, so it must have flowed towards or through Mušbi'ana. Since the latter is known to have been situated either to the south or to the southeast of the city of Umma, the canal undoubtedly took off from a location farther north. The only waterway from which it could have branched was the "eastern Euphrates."⁵⁵

⁵³ Alternatively, this passage can be read kun-zi-da id-Idigna ka id-Muš-bi-an-na-ka, "at the weir of the Tigris (and) the inlet of the Mušbi'ana canal," which would fit our interpretation even better. A connection between Mušbi'ana and the Tigris is further indicated by Istanbul 3168:18–20, which places the field of Mušbi-ana along the bank of the Tigris: 12 guruš ud 25-še a-da gub-ba gu Idigna a-ša₄ Muš-bi-an-na.

⁵⁴ The same locality is also mentioned in two sources from Umma: 'ud¹ 1-še ka id-Muš-bi-an-na-ta mā è-a, "(x men) for 1 day taking out the boat from the inlet of the Mušbi'ana canal" (MVN 18 343 iv' 2'); mā sug₄ gid-da ka id-Muš-bi-an-na-ta Ka-ma-ri^{ki}-še (SNAT 305:14–15).

⁵⁵ Other Umma canals that branched off from the Tigris were the Magur and the Dununuz. For the Magur canal, see the evidence cited below in n. 60 (especially Nakahara Kyoto 17), plus the following example, which shows that at the takeoff of the Magur from the Tigris there was a "weir": 57 guruš ud 1-še kun-zi<-da> ka id-Má-gur₈ gub-ba (Istanbul 2683:1–2). For kun-zi-da id-Má-gur₈(-ra), see also SET 274:262–263; TCL 5 5674 x 7; SNAT 335:3–4. Other sources mention the "outlet" (kun) of this canal: 13 guruš ud 2-še¹ En-gaba-rá-ta kun (Má->) gur₈-še gi il-gá (Istanbul 2437:1–4); 16 guruš ^{gi}štir⁴ Nin-geštin-an-na-ka-ta kun id-Má-gur₈-ka-še⁴ nūnun im-il (MVN 18 184:1–4); 5 guruš ud 1-še ku[n¹] id-Má-gur₈-ka gub-ba (Istanbul 2600:6–7); 4 ½ guruš ud 1-še kun id-Má-gur₈-ra-ka kéš-rá (Istanbul 2869:7–8). Importantly, the Magur canal flowed near Engabara (see below n. 60), which is known to have been located near Umma, either to the east or southeast of it.

For the Dununuz canal, see YOS 4 31:1–4: ka 'id-Idigna¹-[t]a suh pa₄-Li-[ir²]-dam-^fma⁷]-[š]è 70 nindan gid id-Du₆-nunuz-ka-kam, "from the takeoff from the Tigris to the ... of the Lirdama⁷ canal, the length of the Dununuz canal is

8) If at all necessary, still further corroboration of the “eastern Euphrates” = the Tigris hypothesis is provided by the fact that at least ten Umma sites – AkunNE,⁵⁶ Ašag-amarkišig,⁵⁷ Ašag-tur,⁵⁸ Elugal,⁵⁹ Engabara,⁶⁰ Hi’abara,⁶¹ Iš.U.U,⁶² Kamari,⁶³ Kamsala,⁶⁴ and (Eduru-) Šulpae,⁶⁵ lay either directly on the Tigris or close to it. Of those, AkunNE, Elugal, and Engabara are positively known to have been located south of the “eastern Euphrates.”⁶⁶ This too forces us to con-

70 nindan (= ca. 420 m).” For the pa₄-Lirdama, see tir pa₄-Li-ir-da-ma-ka (Sauren New York Library 207:6); for the Dununuz, cf. a-šag₄ Du₆-nunuz (BIN 5 277:97–98; SNAT 364:3; Istanbul 3493 i 5).

⁵⁶ 20 lá 1 géme 0.0.3<ta> ud 1-šè ki-sur₁₂ A-kun-NE-ka-ta gú Idigna-šè in-u il-gá (Touzalín, 187 M 3715:1–5); 20 géme 0.0.3<ta> ud 1-šè ki-[sur₁₂ A]-kun-N[é]-ka-ta gú Idigna-šè in-u il-gá (Sigrist Princeton 544:1–4); 20 géme 0.0.3<ta> ud 1-šè ki-sur₁₂ A-kun-NE-a-ka-ta gú Idigna-šè še-i<giš> il-gá (Touzalín, 260 M 4133:1–4).

⁵⁷ 26 guruš ud 1-šè A-šag₄-amar-kišig-ta gú Idigna-šè gi kun-zi-da il-gá (SNAT 477:1–4). Cf. also Istanbul 2397:1–4, which links A-šag₄-amar-kišig with Kam-sal₄-la, for which see below n. 64.

⁵⁸ 110 guruš ud 1-šè gá-nun A-šag₄-tur-ra-ta gú Idigna-šè gi il-gá (Touzalín, 180 M 3597:1–4). The figure of 110 guruš assuredly represents man-days and not the actual number of the workers employed; accordingly, the real length of the project was several days.

⁵⁹ 12 guruš ud 1-šè ég É-lugal-ta «GÁ» gá-nun id-Idigna-šè gi il-gá (ASJ 8, 68–69 ii 7–8).

⁶⁰ 23 guruš ud 1-šè a-šag₄ En-gaba-rá-ta gú Idigna-šè ù id-Má-gur₈-šè gi il-gá má-lá-a kéš-ra (Sigrist Syracuse 10:1–6); 270 guruš ud 1-šè En-gaba-rá-ta gú Idigna-šè ù gú id-Má-gur₈-ra-šè gi il-gá (TCL 5 5675 ix 39–40); 28 $\frac{1}{2}$ guruš ud 1-šè a-šag₄ En-gaba-rá-ta gú Idigna-šè ù gú id-Má-ka-šè gi il-gá (Sigrist Yale 783:1–5); gi zi a-ta gaba a-šag₄ En-gaba-rá-ta ^{gi}širi₆-gu-la a-egir₅ Idigna-a ù ka id-Má-gur₈-ra-ka-šè il-gá (Nakahara Kyoto 17:1–7); 8 guruš ud 1-šè En-gaba-rá-ta gú Idigna-šè gi il-gá (Sauren New York Library 268:4–7); 10 guruš ud 2-šè En-gaba-rá-ta gú Idigna-šè gi il-gá (Sigrist Yale 1514:1–3, 1659:1–3); 10 guruš ud 2-šè En-gaba-rá-ta gú id-Idigna-šè gi il-gá (Sigrist Yale 1548:1–4); 20 guruš ud 3-šè pa kud gi il-gá? En-gaba-rá-ta gú I[digna]-šè (Oberhuber Florenz 29:1–5); reeds gá-nun gú Idign[a-šè] gi il-gá ... a-šag₄ En-gaba-rá-ta (Istanbul 769:1–13).

⁶¹ 6 guruš ud 7-šè gig zíz ki-sur₁₂ Hi-a-bar-ra-ka-ta gú Idigna-šè il-gá kar Umma^{ki}-šè má gid-da ù kar Umma^{ki}-ka má ba-al-la (Nikolski 2 154:1–7).

⁶² [7] guruš ud 1-šè ki-sur₁₂ Iš.Ú.Ú-ta kun<zi-da> Idigna-šè še il-gá (OrSP 47–49 417:1–3 + OrAnt. 17, 51).

⁶³ a-šag₄ Ka-ma-rí zag Árad-^dNanna-ta gú Idigna-šè (Contenau Umma 97:10–11).

⁶⁴ [x] guruš ud 1-šè gú Idigna-ta é-udu Kam-sal₄-la-šè giš-ùr ù gi il-gá (Istanbul 2397:10–13).

⁶⁵ 50 guruš ud 1-šè kun-zi-da Idigna ^dŠul-pa-è kud-rá (Istanbul 2728:1–3).

⁶⁶ AkunNE belonged to the district of da-Umma^{ki}, “the area of the city of Umma” (see, e. g., OrSP 47–49 500; Watson Birmingham 2 230), and, therefore, was located

clude that the Tigris of the Umma sources can only be the “eastern Euphrates.”⁶⁷

To sum up, third millennium sources, in particular those from Ur III Umma, leave no doubt that the watercourse identified by Jacobsen and other scholars as the eastern branch of the Euphrates, at least its stretch between Kasahar and Apišal, was in fact the Tigris. See Map 1 (p. 40) for a reconstruction.

The course of the Tigris north of Kasahar is uncertain, but it is reasonable to assume that it continued to the area of Maškan-šapir (Tell Abu Duwari),⁶⁸ since, according to an Old Babylonian source, Maškan-šapir lay near the Tigris.⁶⁹ As far as I know, there are no reliable data that would permit us to trace its course farther north, except for the information that it flowed near Baš(u),⁷⁰ which is probably to be sought in the general area of Sippar.⁷¹

The course of the Tigris beyond Apišal still presents major problems. I will discuss this issue at some length in Section 4.

Admittedly, these data do not prove that the Tigris of third millennium sources is the *geographical* Tigris; it is still theoretically possible that the former was an effluent of the Euphrates that separated from

in the vicinity of Umma. For Engabara, and its neighbor Elugal (see, e.g., gá-nun En-gaba-an-rá gaba É-lugal-ka-da tuš-a [Sigrist Syracuse 225:2–4]), being situated southeast of Umma, see the evidence cited below in n. 121. For Engabara's proximity to Umma, see, e.g., Istanbul 847:1–3, 3152:16–18, 3193:5–6; Sigrist Princeton 471:1–5.

⁶⁷ In this connection, note also the mentions of unspecified “storehouse” and “house” on the bank of the Tigris: reeds gá-nun gú Idigna-šè (BIN 5 185:1–10); reeds gá-nun gú Idigna-ka ku₄-ra (Istanbul 2095:1–5); 12 men ud 10 lá 1-šè é dù-a gú Idigna (Oberhuber Florenz 33:1–6).

⁶⁸ See Adams, Heartland, 256 site 639.

⁶⁹ A letter from Kiš talks of 240 enemy ships that have gathered in Maškan-šapir, and are now poised to move against the quay of Kiš: 4 šu-ši MÁ.HI.A na-ak-ri-im i-na Maš-gún-SABRA^{ki} pa-aḥ-ra-a[t a]-na pa-nim šu-a-ti a-na KAR Kiš^{ki} a-na še-ri-ka pa-nu-šu ša-ak-nu (J.-R. Kupper, RA 53 [1959] 34–35 AO 10788:4–10). Since only a major waterway could have accommodated such a huge flotilla, the Tigris is necessarily implicated here. For this conclusion, see already W. F. Leemans: “[AO 10788] shows that [Maškan-šapir] was on the river ... Apparently it was on the Tigris and a canal must have connected it with the region of Kish” (Foreign Trade in the Old Babylonian Period [Leiden 1960], 166).

⁷⁰ According to the so-called Maništušu Obelisk, the “field of Baš” (also designated as the “field of Baš in Dūr-Suen”) bordered on the Tigris. See Gelb et al., *Earliest Land Tenure Systems in the Near East: Ancient Kudurrus*. OIP 104 (Chicago 1991), 122–23 ix 9–x 1, 125 xvi 18–19. Cf. *ibid.*, 117 Figure 11.

⁷¹ See R. Zadok, RGTC 8, 70–72. Cf. also B. Groneberg, RGTC 3, 39. For Dūr-Suen, see Groneberg, *op. cit.*, 62; Kh. Nashef, RGTC 5, 99.

the main branch somewhere in northern Babylonia. However, such a possibility is unlikely, in my view, if only because ancient sources consistently present the Tigris as an autonomous waterway, fully on par with the Euphrates. In this connection, especially significant is the fact that the Sargonic royal inscriptions talk of the “sources of the Tigris and the Euphrates,” and locate Šišil, a town otherwise known to have been situated in the trans-Tigridian region, on the Tigris.⁷²

By all indications, therefore, the third millennium Tigris ran a completely separate course from that of the Euphrates. It is also evident that it flowed in the alluvium. This leads us to the conclusion that the easterly shift of the Tigris occurred sometime during the second millennium, certainly after the end of the Larsa period, since, as we showed earlier, the Larsa kingdom still relied on it very heavily for its irrigation water. As to exactly when that shift occurred, I am neither qualified nor ready to speculate, but the mention of the use of Tigris water for irrigation purposes in the oft-cited Kassite letter from Nippur⁷³ would seem to provide a secure post-quem date for that event.

3. The Iturungal and NAGSU

The question of the Iturungal is closely connected with that of the town of NAGSU,⁷⁴ which makes it necessary to treat these two toponyms together. Of crucial importance for the location of both of them is the itinerary of Utuhegal’s military campaign against the Gutian ruler Tirigan, as it is described in the Utuhegal inscription we referred to earlier.⁷⁵ According to that source, the staging place of the campaign was Uruk, where the troops were assembled, and offerings at the local temple of Iškur were made.⁷⁶ The army then marched to “NAGSU on the Iturungal” (NAG-su Íd-en-urin-gal-ka [var.: Íd-ÉREN-nun-na-ka]), reaching it on the fourth day. Following a stop-over at NAGSU, the army proceeded to Barag-Ì-lí-TAB.BA-e, reaching it on the fifth day. From Barag-Ì-lí-TAB.BA-e, it continued on to Karkar, arriving there on the sixth day. At Karkar, Utuhegal made offerings to its chief deity Iškur, imploring him for his assistance. In the middle

⁷² For the occurrences, see B. Kienast/W. Sommerfeld, *Glossar zu den altakkad. Königsinschr.*, FAOS 8 (Stuttgart 1994) 115. For Šišil, cf. Edzard/G. Farber, *RGTC* 2, 183.

⁷³ See R. D. Biggs, “A Letter from Kassite Nippur,” *JCS* 19 (1965) 95–102.

⁷⁴ As suggested by M. Yoshikawa, *ASJ* 17 (1995) 344–45, NAG-su is very likely to be read Káb-su. However, since this is not entirely certain, we retain the reading NAG-su.

⁷⁵ Frayne, *RIME* 2, 283–93 Utuhegal 4 lines 68–103.

⁷⁶ Undoubtedly, this was done in anticipation of Utuhegal’s stop at Karkar, whose chief deity was Iškur.

of the following night, Utuhegal rose the troops, marching them out at first light. Having proceeded to a location north of Adab (iginim Adab^[ki]), he set an ambush against Tirigan, where the battle was subsequently fought and won.

As far as I know, the only systematic attempt, to date, to reconstruct the itinerary of Utuhegal's campaign is that by H. Sauren.⁷⁷ Following Jacobsen, Sauren worked under the assumption that "der Iturungal zweigte bei KA.sahara, wenig nördlich von Nippur, ab und floß südostwärts bis in die Gegend von Larsa, wo er wieder in den Euphrat mündete."⁷⁸ This led him to the conclusion that Utuhegal's troops proceeded from Uruk first southeastward along the Euphrates to the outlet of the Iturungal (near Larsa), then northward along the Iturungal to NAG-su, and finally northwestward to Barag-Ī-lī-TAB.BA-e and Karkar.⁷⁹ According to this reconstruction, NAGsu was located to the south of Umma, with the Iturungal bypassing Umma to the east of it.

Sauren's interpretation was subsequently accepted by H. J. Nissen,⁸⁰ who, though having doubts as to the Iturungal being identical with the entire "eastern Euphrates," opted for NAGsu's being located downstream from Umma. Based on this fact, he suggested that NAGsu may be identical with modern Tell al-Nasirīya.

The NAGsu = Nasirīya hypothesis has received wide acceptance by scholars.⁸¹ Most recently, it was entertained by F. Carroué,⁸² who, however, added to it an important twist. As Carroué was correct to point out, three of the surviving mentions of the Iturungal in Umma sources⁸³ concern the "inlet" (ka) of the Iturungal, with one text mentioning in

⁷⁷ "Der Feldzug Utuhengals von Uruk gegen Tirigan und das Siedlungsgebiet der Gutäer," RA 61 (1967) 75–79.

⁷⁸ Ibid., 76.

⁷⁹ See ibid., 77 map.

⁸⁰ Uruk Countryside, 48 n. 42, 52–53, and 54.

⁸¹ See, e.g., Edzard/Farber/E. Sollberger, RGTC 1, 125–26 and map 2; Edzard/Farber, RGTC 2, 137–38 and map 2. This identification was also provisionally accepted by M. A. Powell, "Karkar, Dabrum, and Tall Ġidr: An Unresolved Geographical Problem," JNES 39 (1980) 49, although with a caveat that "it is by no means certain from the evidence adduced."

⁸² ASJ 15, 11–34, 62–64.

⁸³ 36 guruš ud 1-šè ka Īd-en-urin-gal-ka sahar si-ga, "filling (the breaches with) dirt at the inlet of the Iturungal" (Nikolski 2 162:14–15); 8 guruš ud 1-šè ka Īd-en-urin-gal kun-zi-da gi₄-a, "repairing the weir at the inlet of the Iturungal" (ASJ 8, 68–69 ii 19); reeds and timber gir PN ka Īd-en-urin-gal, "collected via PN at the inlet of the Iturungal" (MVN 10 230 vi 9). See also 9 $\frac{2}{3}$ (wr. $\frac{1}{3}$) sar 5 gín sahar guruš-e 7 $\frac{1}{2}$ gín-ta á-bi ud 78-kam Īd-en-urin-gal sahar si-ga (Oxford 1924-665 ii 18).

this context also a “weir” (kun-zi-da). This fact, Carroué concluded, can only be understood that the Iturungal began within the Umma province; therefore, it could not have denoted the entire “eastern Euphrates” branch. Assuming that NAGSU is very likely Nasirīya, Carroué consequently located the beginning of the Iturungal at Nasirīya.⁸⁴

Before we offer our own assessment of these facts, a few words need to be said first about the name Iturungal. The surviving third millennium spellings of this name are as follows: (1) Íd-en-urin-gal (Ur III sources from Umma⁸⁵); (2) Íd-en-urin-gal, with a variant Íd-ÉREN-nun-na (Utuhegal Inscription); (3) Íd-en-urin-gal (an inscription of Ur-Namma dedicated to Inana⁸⁶); and (4) En-éren-gal (a Pre-Sargonic literary text from Lagaš⁸⁷). The pronunciation I-tu-ru-un-gal (also I-su-ru(-en)-gal, I-dar-en-gal, and Íd-dur-an-gal) comes from second millennium and later lexical sources, where it is attached to the logograms Íd-UD.NUN(.KI) and Íd-ÉREN.GA (which is, in fact, a phonetic writing Íd-éren-ga)⁸⁸; the former logogram also appears in a number of Sumerian literary texts.⁸⁹ It appears certain that the original writing of the toponym in question was Íd-en-urin-gal, “the canal (of) the lord of the great standard,”⁹⁰ and that It(t)urungal and related readings are simply contracted pronunciations of this nominal compound (idenuringal > it(e)nuringal > itturungal). Although it could be theoretically argued that the correct form was in fact Íd-en-éren-gal (which is the earliest one attested), the presence of the vowel /u/ in the pronunciation Iturungal, and the fact that the lexeme urin-gal (Akk. *urigallu*) is well-attested (whereas the combination *éren-gal is unknown), speak strongly against such a possibility.⁹¹ As for the variant Íd-ÉREN-nun-na of the Utuhegal inscrip-

⁸⁴ ASJ 15, 18–23, 30–31, 60 map, 63 map.

⁸⁵ For the attestations, see above n. 83.

⁸⁶ ^dInana n[in] É-an-na nin-a-ni Ur-^dNamma ... Íd-en-urin-gal íd ki-ág-ni mu-na-ba-al (Sumer 46 [1989–90] 85 ll. 1–10).

⁸⁷ id-bi En-éren-gal dingir-bi MES.SANGA-Unug^{ki} énsi-gal ^dInana, “its canal is Iturungal, its deity is MES.SANGA-Unug, the great governor of Inana (– which town is it?)” (JNES 32, 27 iv 7’–8’).

⁸⁸ See Carroué, ASJ 15, 11–12.

⁸⁹ See *ibid.*, 12–13.

⁹⁰ In this name, the “lord” (en) is very likely god Enki. For Enki’s association with a “great standard,” see Steinkeller, Fs. Szarzynska, 88 n. 8, 91. For this connection, note also Enki’s names ^dEn-^ú-rušēš, and ^dNin-^ú-rušēš in An II 135–136.

⁹¹ Carroué’s proposal, ASJ 15, 26, to interpret EN.URIN.GAL as urun_x(EN)^{urin}-gal, “le Fleuve aux grandes crues,” is interesting, but it is not based on any solid evidence. Here note that, contrary to the entry urun_x(EN) = MIN (= *a-gu-ú*) íd in Antagal F 56, urun_x, “powerful, high,” does not by itself mean *agú*, “high water.” See a-gi-

tion, it almost certainly is a scribal mistake, which resulted from the confusion of the Iturungal with Íd-EN.ÉREN-nun, a canal in the region of Ur.⁹² Such a confusion is easy to understand, especially if one considers the existence of the variant spelling Íd-en-éren-gal (see above). For the significance of the logogram Íd-UD.NUN(.KI), see below.

Returning to the Iturungal/NAGSU question, we need to focus our attention again on the itinerary of Utuhegal's expedition. It hardly needs to be pointed out that Sauren's reconstruction of this itinerary makes little sense, since logic dictates that Utuhegal must have taken the shortest possible route to Karkar, rather than making a completely unjustified detour through Larsa – as Sauren's reconstruction would have it. The answer as to which route it must have been is offered by the Warka Survey, which shows very strong evidence of a major canal that branched off from the "eastern Euphrates" northwest of Umma and flowed in an almost straight line south, joining the Euphrates in the vicinity of Uruk.⁹³ Apart from the purely common-sense arguments, this interpretation finds support in the fact that the distance between Uruk and Karkar (= Tall Jidr⁹⁴) along the line marked out by the canal in question and then by the Tigris is ca. 60 km. Since it is unlikely that the speed of Utuhegal's progress could have exceeded 10 km per day,⁹⁵ during the six days it took him to reach Karkar, he

urun_x-na = a-gu-u MIN (= e-lu-u) (Nabnitu XXV 165); ú-rù EN = ta-ni-ḫi šá a-gi-i aš-šum a-gi-i šá ÍD šap-šu : dan-nu : na-ak-lu : šá-qu-u šá-niš dan-nu (SbTU 2 54: 2–3).

⁹² Although Carroué, ASJ 15, 15–17, suggests that the two canals were identical, there is no basis for such an assumption. The Íd-EN.ÉREN-nun clearly flowed much farther south, in the vicinity of Ur. This is shown not only by the fact that, in Ur-Namma's inscriptions UET 1 45 and 46, Íd-EN.ÉREN-nun is virtually a synonym for the Íd-Úrim^{ki}-ma, "the Ur canal," but also by the distribution of the surviving exemplars of those inscriptions (at Ur and Diqdiqqah). For the conclusion that the Íd-EN.ÉREN-nun was a local Ur canal, see already Jacobsen, Iraq 22, 182–83.

⁹³ See Adams/Nissen, Uruk Countryside, 16 fig. 6, p. 36 fig. 17; Adams, Heartland, 161–63 figs. 29–30. Nissen, Uruk Countryside, 53, characterizes this watercourse as follows: "... a canal of unknown name, which branched off from the eastern Euphrates southeast of Tell Jidr and flowed in an almost straight line past Tell Jid [WS 164] toward Uruk. *Since this was certainly not a main transport route* [italics mine], there is little hope of finding much information in the transportation texts." In view of the obvious prominence and hence importance of this watercourse, the last conclusion is surprising, to say the least.

⁹⁴ For the identification Karkar as Tall Jidr, see below p. 72.

⁹⁵ This is in consideration of the fact that his troops must have carried (or towed on boats or rafts) food, weapons, tents, and other supplies. Here note that the maximum boat-towing speed appears to have been ca. 20 km per day (see below n. 156), although it must have varied considerably, depending on the boat's size and the number of towers, and on whether the boat was full or empty.

could not have covered more than 60 km, which is exactly the distance we have calculated for the Uruk-Karkar line.

There are other considerations as well. First, it is known that the Iturungal had strong Urukean associations. In an inscription of Anam of Uruk recording the erection of a temple for the goddess Kanisura,⁹⁶ Kanisura is called the “mistress of the Iturungal” (nin Íd-UD.NUN^{gal}). Moreover, as already noted, the Iturungal was linked to two other Urukean deities, MES.SANGA-Unug and Inana.⁹⁷ These facts can only mean that the Iturungal flowed through the Uruk province, very likely in the vicinity of Uruk itself.

Second, there is the earlier-noted logogram Íd-UD.NUN(KI). Since UD.NUN is primarily a writing of Adab’s name, the meaning of Íd-UD.NUN, at least at the level of the script, is “the Adab canal.” This implies that some connection between the Iturungal and Adab must have existed. If one assumes, as we do, that the Iturungal branched off from the Tigris to the south of Adab, that connection is easy to explain: the Iturungal was the usual route one took when traveling from Ur and Uruk to Adab.

This reconstruction of the course of the Iturungal is supported by the fact that, through the use of completely independent data, it may confidently be shown that NAGsu was located no more than 20 km to the northeast of Umma, i. e., precisely the area within which we have plotted the course of the Iturungal. Our key evidence in this connection is as follows:

- 1) It is absolutely certain that NAGsu was located *upstream* from Umma, since, as extant records show,⁹⁸ boats were towed (gid) from Umma to NAGsu. This fact alone excludes an identification with Nasirīya.
- 2) According to Or. 47–49 382,⁹⁹ the “forest of NAGsu” belonged to a group of ten forests that were situated in the northwestern portion of the Umma province. This is shown by the fact that this group also includes the forests of ki-sur-ra Adab, “border of the Adab (province),” kar (Umma), “quay (of Umma),” Zabalam, Girgiš, and Elugal. In this connection, note that NAGsu is grouped with Zabalam and ki-sur-ra (Adab) also in Istanbul 1586: 1–7, which talks of “15 workers for 3 days, floating the rented boat

⁹⁶ Frayne, RIME 4, 468 2002:1–2.

⁹⁷ See above p. 43.

⁹⁸ See the data cited below in n. 100.

⁹⁹ For a full edition and discussion of this text, see Steinkeller, in: Powell (ed.), *Labor in the Ancient Near East*. AOS 68 (New Haven 1987) 76–80, 107–10 no. 41.

downstream from the border (of the Adab province), NAGsu, and Zabalam (to) the threshing floors of Asaldua and Dugag” (15 gurusu¹² ud 3-šè ki-sur-ra-ta NAG-su^{ki}-ta ù Zabalam^{ki}-ta ki-sur¹² g^{iš} Ásal^a-dù-a ù ki-sur¹² Du⁶-g^{iš}gag má hun-gá má dirig-ga).

- 3) As one learns from ASJ 8, 68–69 ii 22–23,¹⁰⁰ a round-trip by boat from Umma to NAGsu could be completed in as little as one day. This means that the distance between Umma and NAGsu could not have exceeded 20 km.
- 4) From other Umma sites, such as Elugal, Engabara, Gišabba, Idlugal, and Ki'an, boat trips to NAGsu took more time, but they invariably involved towing,¹⁰¹ which indicates that these places were lo-

¹⁰⁰ 10 gurusu¹² ud 1-šè NAG-su^{ki}-šè má gid-da má ba-al-[la] ù kar-šè má dirig-ga, “10 men for 1 day towing the boat upstream (from the quay of Umma) to NAGsu, unloading the boat (in NAGsu), and floating the boat downstream to the quay (of Umma).” Istanbul 1769:1–8 assigns six days to a trip from Umma and NAGsu, but those six days included the time spent to carry the cargo and the boat(?) from Umma to the quay of Umma, and almost certainly also the time spent to unload the cargo at NAGsu and to bring the boat back to Umma (10 gurusu¹² ud 6-šè má i ú-sa Umma^{ki}-ta kar-šè i il-gá NAG-su^{ki}-šè má gid-da ù má bala-ak). Contra Sauren, RA 64, 76 n. 1, Powell, JNES 39, 50, and Carroué, ASJ 15, 21, the text AnOr. 1 250:37–40, which talks of “132 female workers for 1 day carrying jars with oil from Umma to NAGsu (for) the house of...” (132 géme ud 1-šè Umma^{ki}-ta NAG-su^{ki}-šè dug-šagan i é Ša²-x-tum-ma⁷¹ il-gá), is of little help in estimating the distance between Umma and NAGsu, since the figure of 132 géme represents man-days (note that man-days are given throughout this text!), and therefore the actual number of days spent on this project was more than one day. At best, this source shows that NAGsu was located sufficiently close to Umma to permit the employment of human carriers on this route.

¹⁰¹ Elugal: 5 gurusu¹² ud¹ [x-šè] gá-nun gaba É-[lugal] gilim sur-ra má-lá-a k[éš-r]já ud 2-šè NAG-su^{ki}-šè má gid-da má ba-al-la ù kar-šè má dirig-ga (ASJ 8, 68–69 iii 8–10).

Engabara: ud 5-šè En-gaba-rá-ta NAG-su^{ki}-[šè má] gi gid-[da má ba-al]-la (Sigrist Yale 858:12–14).

Gišabba: 16 gurusu¹² ud 4-šè gá-nun Giš-ab-ba-ta má-lá-a kēš-rá NAG-su^{ki}-šè gid-da ù dirig-ga (Sigrist Princeton 347:1–5); 8 gurusu¹² ud [x-šè] gá-nun Giš-ab-[ba-ta] má-lá-a kēš-r[á] ud 4-šè Giš-ab-ba-ta NAG-su^{ki}-šè má gid-da má ba-al-lá ù gá-nun dù-a (ASJ 8, 68–69 iv 2–4); 8 gurusu¹² ud 5-šè má-[lá-a] kēš-rá¹ gá-nun Giš-ab-ba-ta NAG-su^{ki}-šè (CST 625 + MVN 12, 121); 12 gurusu¹² ud [x-šè] gá-nun Giš-ab-ba gi má-a gá-ra NAG-su^{ki}-[šè¹] má gid-da má dirig-ga (Sigrist Syracuse 19:1–5).

Idlugal: 11 gurusu¹² ud 3-šè kar-ra Umma^{ki}-ta Íd-lugal-šè má gid-da má dirig-ga ud 2-šè še má-a si-ga ud 3-šè Íd-lugal-ta NAG-su^{ki}-šè má gid-da ud 2-šè NAG-su^{ki}-a má bala-ak ù kar-ra-šè má dirig-ga (MVN 20 84:1–10).

Ki'an: 10 gurusu¹² ud 6-šè šag₄ Ki-an^{ki}-ta NAG-su^{ki}-šè má-lá-a gi gid-da (AfO 18, 105 NBC 2863:1–3).

cated downstream from NAGsu. This fact corroborates the assumption that NAGsu is to be sought in the upper section of the Umma province.

- 5) Two records of boat trips from NAGsu to Nippur have survived. Compared with similar expeditions originating at Umma, these trips took less time to complete,¹⁰² indicating that NAGsu was situated closer to Nippur than was Umma.
- 6) In the same way, a boat trip from NAGsu to Kasahar,¹⁰³ which was situated on the Tigris some twenty km northwest of Nippur,¹⁰⁴ was shorter than a trip from Umma to Kasahar.
- 7) A similar conclusion about the relative position of NAGsu vis-à-vis Umma is reached when one compares the lengths of boat trips from NAGsu to Ašgipada and Gišummud (two neighboring sites situated on the Tigris north of Adab¹⁰⁵) with those from Umma. From NAGsu to Ašgipada: 2 days; from Umma to Ašgipada: 3 or 4 days. From NAGsu to Gišummud: 3 days; from Umma to Gišummud: 4 days.¹⁰⁶
- 8) Oxford Ashm. 1924–665 v 3–14, records a boat trip from Umma to Nippur which involved a stop-over at NAGsu.¹⁰⁷ This must mean that NAGsu was situated, if not directly on, then at least in the vicinity of the Umma-Nippur route.

When combined with our earlier conclusions about the course of the Iturungal, these data suggest very strongly that NAGsu is identical

¹⁰² 3 guruš ud 5-šè NAG-su^{ki}-ta Nibru^{ki}-šè má i-šáh ib-gíd (Istanbul 1693:1–4); 2 má 30.0.0 gur ud 12-šè má zíd-da NAG-su^{ki}-ta Nibru^{ki}-šè zid si-ga má gíd-[d]a ù má ba-al-la (Istanbul 1001:1–6). In the second text, the figure of twelve days clearly represents a round trip. Trips from Umma to Nippur took from five to eight days, the most common length being six days; round trips took fourteen or fifteen days. See Appendix A.5 and A.15.

¹⁰³ 20 guruš ud 5-šè má-lá-a NAG-su^{ki}-ta KA-sahar-šè má gíd-da (Istanbul 519:1–3). A boat trip from Umma to Kasahar took six or nine days. See Appendix A.1.

¹⁰⁴ See below p. 60.

¹⁰⁵ See Section 7.

¹⁰⁶ See Appendix E.1 and E.2.

¹⁰⁷ 12 guruš ud 2-šè Umma^{ki}-ta Ka-id-da-šè níg má bala-šè ak ud 2-šè Ka-id-da níg má-a gar má a-a gá-ra má ba-al-la ù NAG-su^{ki}-ta má hun-gá ud 8-šè má gíd-da ud 2-šè má ba-al-la níg na-gáb-tum bala-a-ri ku₄-ra Umma^{ki}-ta Nibru^{ki}-šè má gíd-da má dirig-ga á-bi ud 168, “12 men for 2 days (towing the boat with cargo) from Umma to Ka’ida (and) moving the cargo (and) the boat over (at Ka’ida); for 2 days loading the cargo on the boat at Ka’ida, putting the boat onto the water, unloading it (at NAGsu), and, for 8 days, towing the rented boat from NAGsu (to Nippur/Esagdana); for 2 days unloading the boat

with the site WS 175, which is the largest of the tells situated along the Warka Survey canal line which we have identified as the Iturungal.¹⁰⁸ WS 175 lies 10 or 11 km northwest of Umma, and ca. 5 km downstream from the point where the canal in question branches off from the Tigris (as is strongly indicated by the Uruk Survey maps). It was precisely at that place, we assume, that the Iturungal's inlet (ka) and weir (kun-zi-da) were located.

Needless to say, the identification of NAGSU with the site WS 175 fits the itinerary of Utuhegal's expedition perfectly. Given that the distance between Uruk and WS 175 is ca. 43 km, at the posited speed of roughly 10 km per day (see above), Utuhegal would have reached WS 175 on the fourth day, which is exactly the time it took him to reach NAGSU.

As for the waterway connections between Umma and NAGSU (= WS 175), the Uruk Survey maps suggest the existence of a canal running directly between Umma and WS 175.¹⁰⁹ If such a canal did not exist, NAGSU was reached from Umma by a more complicated route: from Umma upstream on the Umma canal to Ka'ida (Umma)¹¹⁰; from Ka'ida (Umma) upstream on the Tigris to the Iturungal; and on the Iturungal downstream to NAGSU.

To sum up, the Iturungal branched off from the Tigris to the south of Karkar (= Tall Jidr), flowed south past NAGSU (= WS 175), and joined the Euphrates near Uruk. As such, it constituted an exceedingly important link between the Tigris and the Euphrates systems, the only

and depositing the cargo in the *naGaBtum* that is across the river (at Nippur/Esag-dana); (a trip) from Umma to Nippur (during which) the boat was towed upstream and flowed downstream; its labor (was) 168 (men-)days." For the beginning of this passage, cf. below Section 4, where the role of Ka'ida in boat traffic is discussed in detail.

¹⁰⁸ See Adams/Nissen, *Uruk Countryside*, 226: "Northeast mound very slightly elevated. Very limited Early Dynastic I, mainly late Early Dynastic–Akkadian, continuing into Larsa period only at south end. Main mound primarily Ur III–Larsa, but with some late Early Dynastic–Akkadian wares, thin Neo-Babylonian–Parthian debris, and much late kiln slag. Surface debris is also found in intervening area between the two mounds, suggesting that they form parts of what was originally a single large settlement." See also Nissen, *ibid.*, p. 53: "This ruin consists of a long southern mound and a small, seemingly older one. The latter began in Early Dynastic I times, but the principal occupation of the site was in the Akkadian–Ur III periods; it continued on a smaller scale into the Isin-Larsa period."

¹⁰⁹ See Adams/Nissen, *Uruk Countryside*, 16 fig. 6, 36 fig. 17; Adams, *Heartland*, 161–63 figs. 29–30. This canal is possibly to be identified with *id-Pa₄-siki-lun-na*, which is mentioned in MVN 18 322:1–4 (cited in Appendix A.5).

¹¹⁰ See below Section 4.

such link south of the Kasahar canal, which flowed between the Tigris and Euphrates in the area of Nippur.¹¹¹ If we can trust the Sumerian literary composition “Inana and Enki,” which identifies the Iturungal (spelled *íd-UD.NUN*) as the sixth (and the penultimate) stop before reaching Uruk on the way from Eridu,¹¹² then the confluence of the Iturungal and the Euphrates was located a short distance downstream from Uruk. See below Map 2 (p. 50) for a reconstruction.

4. The Hydrology of the Umma Province

Ur III sources mention some thirty or more canals (*íd*) that belonged to the Umma province. As is shown by their names, the overwhelming majority of those were small, local canals. The task of reconstructing the network of Umma waterways is a highly daunting one,¹¹³ due, primarily, to the scarcity of securely-established geographical points (apart from Umma, Zabalam, NAGsu, and possibly *Apišal*, for which see below). This makes it exceedingly difficult to identify and to plot the courses of even the main Umma canals. Since a comprehensive reconstruction of the Umma canal network is clearly beyond the scope of this study, only two issues will be considered here: the waterways in the immediate vicinity of Umma and the course of the Tigris as it ran through the Umma province (see Map 2, p. 50).

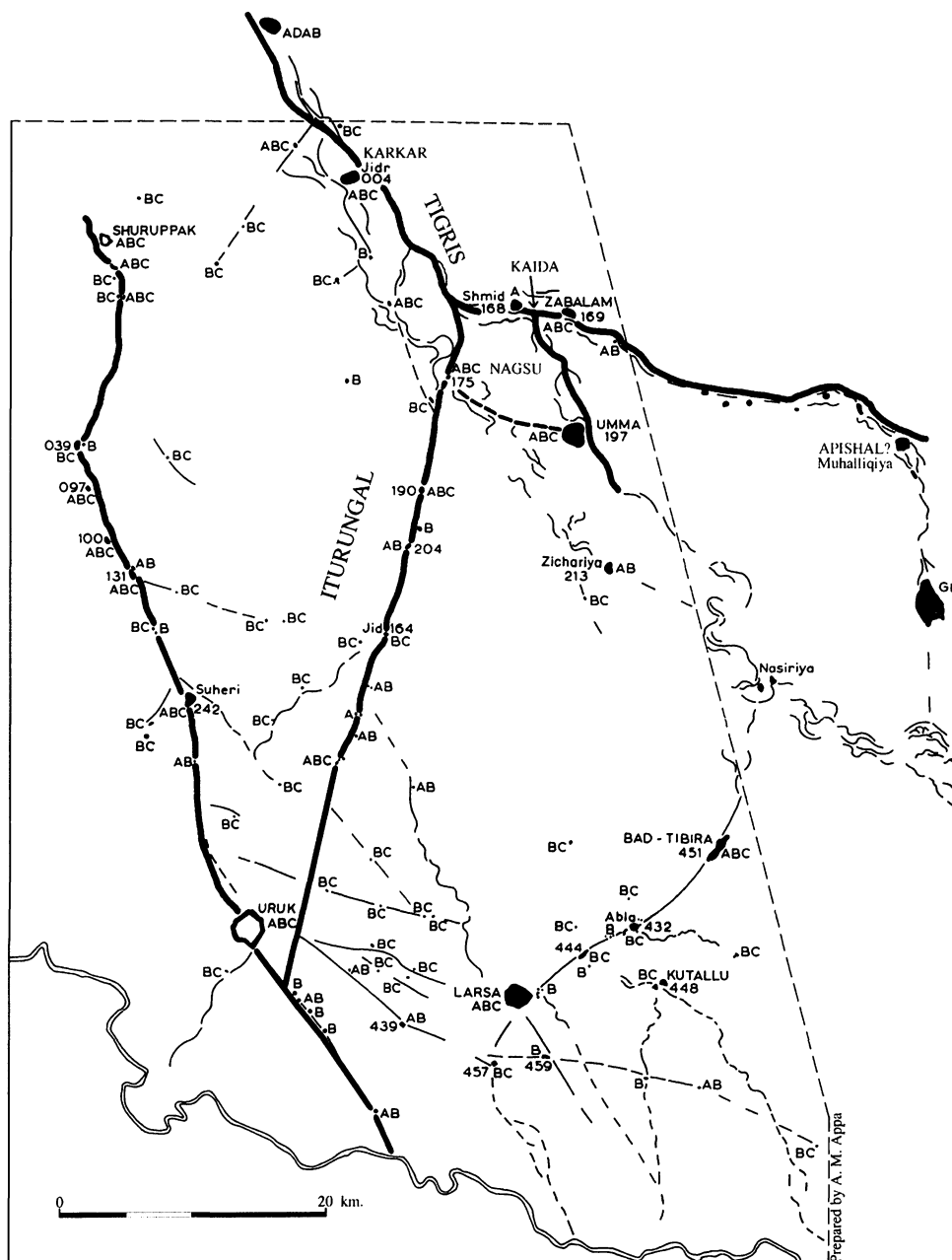
Umma was linked to the Tigris by a canal – called *íd-Umma^{ki}*, “the Umma canal,” or simply *íd*¹¹⁴ – which branched off from the Tigris at a place called *Ka-íd-da* (*Umma^{ki}*), “the inlet of the canal

¹¹¹ See below pp. 56 f.

¹¹² See G. Farber-Flügge, *Der Mythos “Inanna und Enki”*. StP 10 (Rome 1973) 46 III iii 44.

¹¹³ Here it should be said as a word of warning that H. Sauren’s confident reconstruction of Umma’s canals and topography in his *Topographie* is completely unreliable, and that it should not be used even as an introduction to the problem – although the book itself is not without merit as a collection of references. The difficulties involved in such a reconstruction are quite enormous, much greater than any casual student of Umma sources might suspect. But the goal is not impossible to achieve, IF one utilizes the entire body of relevant data and takes the time necessary to piece together the jigsaw puzzle of Umma’s countryside, a task of almost frightening complexity. This would be a perfect topic for a doctoral dissertation – one hopes that some bright graduate student will take up this challenge.

¹¹⁴ See, e.g., 5 *guruš* <ud> 3-šè *ka íd-Umma^{ki}-ka má ba-al-la* (Istanbul 1615:9–10); 10 *guruš* ... ‘ud’ 5-šè *Gána-mah-ta íd-da Umma^{ki}-šè má gid-da ud 1-šè má ba-al-la ud 2-šè Ka-íd-da-ta A-pi₄-sal₄^{ki}-šè má gá-ra* (Istanbul 2881:20–25).



Map. 2. Watercourses of the Umma province in Ur III times
(adapted after Adams and Nissen, *Uruk Contryside*, 36 fig. 17)

(of Umma).”¹¹⁵ That place was located upstream – and therefore north or northwest – of the city of Umma. The distance between the two localities was quite small, since both human carriers and boats could cover it within one day.¹¹⁶

The Umma canal flowed past Umma, either west or east of it, through a place called *kar* (Umma^{ki}), “the quay (of Umma),”¹¹⁷ from which the city of Umma could be reached directly. It was at the *kar* (of Umma) that the boats were usually loaded or unloaded, and it was from there that the outgoing trips from Umma most often commenced¹¹⁸; alternatively, such trips began at the *Ka’ida* (of Umma).

¹¹⁵ Although *ka-id-da* is a generic term for “canal inlet,” it is clear that, in Umma sources, unmarked attestations of this term invariably mean the “inlet of the Umma canal.”

¹¹⁶ This is demonstrated by the following examples: 36 *géme* *ud* 1-*še* *géme* *kín-kín-na* ... *Ka-id-da-ta* Umma^{ki}-*še* *še* *zi-ga* *ù* *še* *‘íl’-[gá]* (Sigrist Syracuse 291:1–7); 50 *géme* *ud* 1-*še* *Ka-id-da-ta* Umma^{ki}-*še* *še* *íl-gá* (Istanbul 76:3–4); 10 *guruš* *ud* 10 *lá* 1-*še* *Ka-id-da* *‘nūmun* *se₁₂-a* *ud* 1-*še* *má-lá-a* *kéš-rá* Umma^{ki}-*še* *má* *dirig-ga* *ù* *é-kikkin-še* *má* *ba-al-la* (ASJ 8, 68–69 iii 1–4); 6 *guruš* *ud* 10-*še* *má* *sug₄* *kar* Umma^{ki}-*ta* *‘Ur-bi-an-na-ki-‘še* *má* *gid-da* *ud* 3-*še* *še* *bala-a* *ga* *še* *má-a* *si-ga* *ud* 6-*še* *má* *dirig-ga* Umma^{ki}-*še* *ud* 2-*še* *Ka-id-da-ka* *má* *bala-ak* *ud* 2-*še* Umma^{ki}-*a* *še* *íl-gá* (Istanbul 469:1–11); (*x* workers) *ud* 1-*še* Umma^{ki}-*ta* *Ka-id-da-še* *má* *še* *ib-gid* (Slechter TJA pl. 65 IOS 45:18–20); 10 *lá* 1 *guruš* *ud* 1-*še* Umma^{ki}-*ta* *Ka-id-da-še* *má* *ku₆* *gid-da* (ASJ 8, 68–69 i 17–18); 5 *guruš* ... *ud* 1-*še* *Ka-id-da-ka* *má* *bala-ak* *ù* Umma^{ki}-*še* *má* *gid-da* (sic) (ASJ 8, 68–69 iv 5–10); 2 *guruš* *šag₄-gud* *ud* 1-*še* *Ka-id-da-ta* Umma^{ki}-*še* *má* *bala* *zid-da* *gur-ra* (Touzalin, 172 M 3992:1–4); (*x* *guruš*) *ud* 2-*še* *Kam-sal₄-la-ta* *Ka-id-da* Umma^{ki}-*še* *má* *gid-da* *ud* 2-*še* *Ka-id-da* Umma^{ki} *má* *bala-ak* Umma^{ki}-*še* *má* *dirig-ga* (SNAT 451:8–12; Istanbul 2602:7–11; MCS 4, 9 111779:1–5 – the same trip in each case!); 1 *má* 30.0.0 *gur á-bi* 0.0.1-*ta* *ud* 6-*še* *A-pi₄-sal₄-ki-ta* *Ka-id-da* Umma^{ki}-*še* *siki* *ib-de₆* 7 *má* 10.0.0 *gur* 0.0.3 5 *si-la-ta* *ud* 2-*še* *še-bi* 0.1.1 *ud* [2]-*še* *Ka-id-ta* Umma^{ki}-*še* *siki* *má* *bala-še* *ib-a* *še-bi* 0.2.1 (YOS 4 266:1–10); boats Umma^{ki}-*ta* *Ka-id-da-še* *má* *bala-ak* *zid-da* (Contenau Umma 49:1–7); 12 *guruš* *ud* 2-*še* Umma^{ki}-*ta* *Ka-id-da-še* *nig* *má* *bala-še* *ak* (Oxford 1924-665 v 3–6).

¹¹⁷ Although not entirely free of ambiguity, occurrences of *kar* alone almost invariably stand for *kar* Umma^{ki}, this can usually be determined from the context.

¹¹⁸ The movement of cargo and boats between Umma and *kar* (Umma) is illustrated by the following examples: 18 *guruš* *ud* 1-*še* Umma^{ki}-*ta* *kar-še* *zid-sig₁₅* *íl-gá* (ASJ 8, 69–69 ii 16–17); 13 *guruš* *ud* 1-*še* Umma^{ki}-*ta* *kar-še* *nig-ár-ra* *íl-gá* (Sigrist Princeton 339:1–3); 22 $\frac{1}{2}$ *guruš* *ud* 1-*še* Umma^{ki}-*ta* *kar-še* *zid-sig₁₅* *íl-gá* (Oxford 1924-665 ii 18–20); 25 *guruš* *ud* 1-*še* *kar-ta* Umma^{ki}-*še* *šis¹ x¹* *íl-gá* (Sigrist Princeton 471:1–3); 2 *guruš* *ud* 1-*še* *kar-ta* Umma^{ki}-*še* *pisan* *im-sar-ra* *íl-gá* (Sigrist Syracuse 214:1–3); 2 *géme* *ud* 1-*še* *kar-ta* Umma^{ki}-*še* *še* *íl-gá* (Sigrist Yale 1734:12–13); 13 *guruš* *ud* 1-*še* Umma^{ki}-*ta* *kar-še* *má* *zid-da* *gid-da* *ù* *má* *bala-ak* (ASJ 8, 69–69 ii 5–6); 5 *géme* *ud* 2-*še* Umma^{ki}-*ta* *kar-še* *zid-sig₁₅* *íl-gá* (Istanbul 3377:9–10); 12 *géme* *ud* 2-*še* *kar-še* *má* *gid-*

From the kar (of Umma) the cargo would be carried by carriers into the city of Umma. Since occasional mentions of the towing of boats from the kar (of Umma) to Umma itself survive,¹¹⁹ an additional small canal that led from the quay into the city seems to have existed.

The course of the Umma canal to the south of Umma is less clear. There are references to the “outlet of the (Umma) canal,”¹²⁰ which show that it emptied into another waterway, but the identity of that waterway and the exact location of the outlet remain uncertain.¹²¹

da ù Umma^{ki}-šè gur-ra 12 géme ud 1-šè zíz il-gá šaga Umma^{ki} (Istanbul 899:3–7). For the sequence Umma > kar (Umma) > ka-id-da (Umma), see 20 gu[ruš] má níg [gún-na bala-a] Ka-id-da-šè gid-da ù má bala-ak Umma^{ki}-ta kar-šè níg gún-na ba[la-a] il-gá, “20 men towing the boat (with) the [gún tax and bala] contributions from (the quay) to Ka’ida and moving the boat over (at Ka’ida), (and earlier) carrying the gún tax and bala contributions from Umma to the quay” (Istanbul 1802:8–12). See also Istanbul 847:1–7, which appears to record the sequence kar (Umma) > Ka’ida (Umma): 15 guruš ud 5-šè En-gaba-rá-ta gá-nun kar-šè gi il-gá ud 3-šè má kéš-rá ud 1-šè Ka-id-[da-šè] má gid-da ud 2-šè Ka-id-¹da¹ má ba-al-la, “15 men for 5 days carrying reeds from Engabara to the storehouse at the quay (of Umma), for 3 days making a raft there (and loading an unspecified cargo on it), for 1 day towing the raft to Ka’ida, for 2 days unloading the raft at Ka’ida.” Cf. further Sigrist Yale 128:1–6: 20 guruš ud 4-šè¹ Ka-id-da-šè níg gún-na má-a gá-ra ù má bala-ak 15 guruš ud 3-šè kar-šè níg gún-na má-a gá-ra, “20 men for 4 days at Ka’ida loading the gún tax contributions into a boat and moving the boat over; 15 men for 3 days at the quay (of Umma) loading (earlier) the gún tax contributions into a boat.”

¹¹⁹ See ASJ 8, 68–69 ii 5–6 and Istanbul 899:3–7 cited in the preceding note, and Istanbul 3106:1–4: 13 guruš ud 1-šè kar-ta Umma^{ki}-šè má zid gid-da.

¹²⁰ SACT 2 75:4–8: 16 guruš ud 4-šè níg A-šaga-lá-mah-ta kun i[d-d]ja-šè il-gá ud 6-šè kun id-da Umma^{ki}-ta Ka-sahar-ta má nigin-na Tum-imma^{ki}-šè má gid-da. It may also be mentioned in the following passages: 20 lá 1 géme ud 1-šè a-e kú-a kun id-da-ka gub-ba <sahar> si-ga (Sigrist Princeton 315:1–2); x grain sá-dug₄ šc é-gud-ta¹ kun id-da-šè¹ (BIN 5 119:48–49). See also the following note.

¹²¹ As is suggested by Sigrist Syracuse 276:1–4, the waterway in question may have been the Magur canal: 15 guruš ud 2-šè kun id-da id-Má-gur₈-ra-ka-ta sa-har si-ga, “15 men for 2 days filling in (the breaches with) dirt at¹ the outlet of the (Umma) canal (and?) the Magur canal.” On the other hand, the following two sources appear to indicate that the outlet of the Umma canal lay near Engabara: 26 géme 0.0.3 En-gaba-rá-ta kun id-da-šè ú il-gá sahar si-ga (Istanbul 1081:1–4); 1 géme 0.0.3 En-gaba-rá-ta kun id-da-šè ú il-gá sahar si-ga (Sigrist Yale 1318:1–4). In this connection, it is important that, according to the sources cited above n. 60, Engabara lay in the vicinity of the Magur canal, which branched off from the Tigris (see especially Nakahara Kyoto 17) clearly downstream from Ka’ida. On the basis of these data, it may tentatively be suggested that the Umma canal and the Magur flowed from the Tigris southeastward in parallel courses, down to a point ca. 10–25 km southeast of Umma where the Umma canal joined the Magur, and roughly where Engabara was situated.

Most of the boat traffic documented in Umma sources passed through the Ka'ida (of Umma), which underscores the dependence of the Umma canal system on the Tigris. All the boats traveling to the destinations north and west of Umma passed through Ka'ida, as did the majority of boats traveling to various locations to the northeast, east, and southeast, both within Umma's territory and in the neighboring province of Girsu/Lagaš. It may be assumed that the traffic to Uruk and neighboring sites also passed through Ka'ida; apparently, the boats were first towed from Ka'ida to the inlet of the Iturungal, from whence they were floated on the Iturungal toward Uruk. The same route could also be used by the boats destined for Ur, though a more common way of going there appears to have been on the Tigris via Apišal (see below).

Although our sources do not mention it directly, Ka'ida must have been the site of a major weir or barrage, which diverted the flow of the Tigris into the Umma canal. This is shown not only by Ka'ida's very name, but also by the fact that, by traveling either away from or towards Umma, boats were invariably "transferred" (*bala-ak*) between the two waterways.¹²²

A good illustration of the role of Ka'ida in the river traffic around Umma is offered by ASJ 8, 68–69 iv 5–11, which records a round trip from Umma to an Umma site called Idlugal, which was situated either east or southeast of Umma: "5 men for 2 days towing the boat upstream (on the Umma canal) from Umma (to Ka'ida and then) floating the boat downstream (on the Tigris) to Idlugal; for 1 day transferring barley (and) loading into the boat; for 2 days towing the boat (upstream on the Tigris) from Idlugal to Ka'ida; for 1 day moving the boat over at Ka'ida (and) floating¹ it (downstream on the Umma canal) to Umma; for 1 day unloading the barley (from the boat) into the 'Old Mill'."¹²³

Our sources contain surprisingly few records of boats being floated downstream from Umma, i.e., from *kar* (Umma) downwards on the Umma canal and other waterways. The rarity of such trips suggests that the canal system to the south of Umma was poorly developed,

¹²² For the meaning of *má bala-ak*, see above p. 35 f. and n. 46. For this operation being done at Ka'ida, see Contenau Umma 49:5–7; Istanbul 469:9–10, 1615:9–10, 1802:9–10, 1815:11; TCL 5 6036 v 21; SNAT 451:11–12; MCS 4, 9 111779:4–5; ASJ 8, 68–69 iv 9; etc.

¹²³ 5 guruš ud 2-šè Umma^{ki}-ta Íd-lugal-šè má gíd-da má dirig-ga ud 1-šè še bala-a še má-a si-ga ud 2-šè Íd-lugal-ta Ka-íd-da<-šè> má gíd-da ud 1-šè Ka-íd-da-ka má bala-ak ù Umma^{ki}-šè má gíd-da ud 1-šè é-kikkin-sun-šè ba-al-la. For a similar trip, cf. Istanbul 1815 discussed above p. 36.

and it may even be questioned whether there existed a straightforward water-link between Umma and Badtibira, and then Larsa. However, this question cannot be answered conclusively without a systematic study of the entire system of Umma's canals, and such a study, as noted earlier, cannot be undertaken here.

As we already argued in Section 2, the course of the Tigris within the Umma province was marked by Ka'ida, Zabalam, and Apišal, of which only the location of Zabalam is known with certainty (Ibžaykh = WS 169).¹²⁴ As for Ka'ida, whose proximity to Umma and its role as a relay point were stressed earlier, this site may be sought very confidently some 10 km north(west) of Umma, in the area where, as indicated by the remains of ancient levees, the Tigris veered eastward toward Zabalam, and where there is evidence of a canal branching off in the direction of Umma.¹²⁵ Such a location would coincide with modern Tell Shmīd (WS 168),¹²⁶ though more as a reference point than as an actual identification, since there is no reason to think that Ka'ida was, like Tell Shmīd, a settlement of any significance.

The question of Apišal¹²⁷ is considerably more complicated. It is clear from the Ur III documentation that Apišal was a major urban center – if not on par with Umma, then at least the second most important provincial town after Umma. It is also certain that Apišal was located to the northeast of Umma, not far from the border with the Girsu/Lagaš province. A settlement of such importance should easily be spotted in a surface survey, but, unfortunately, the northeastern section of the Umma province (where Apišal is certainly to be sought) was not covered by the Warka Survey. As an educated guess, it may be proposed that Apišal is identical with modern Muhallaqiya,¹²⁸

¹²⁴ See Adams/Nissen, *Uruk Countryside*, 226.

¹²⁵ See Adams/Nissen, *Uruk Countryside*, 16 fig. 6, 36 fig. 17; Adams, *Heartland*, 161–63 figs. 29–30.

¹²⁶ See Adams/Nissen, *Uruk Countryside*, 226: “800 diam. x 6, but reaching that height only in a suggestively square citadel (?) at north end of mound. Late Uruk-Early Dynastic I, with many clay sickles and cones. Surface debris preponderantly late Early Dynastic. Akkadian wares and bricks ... present in smaller quantities, later periods probably are not represented.”

¹²⁷ The reading A-pi₄-sa₄ is proved by the syllabic spelling gú-zi-da A-bi-sa^{ki} in Touzalin, 206 M 3517:1. The spelling gú-zi-da (for kun-zi-da) also appears in UCP 9/2, 259 no. 100:2, 261 no. 104:4.

¹²⁸ Muhallaqiya (or Muhalliqa) was examined by the Central Sumer survey, but no information is available as to its size and periods of occupation. See Jacobsen, *Sumer* 24 (1969) 106–07, 109 map; A. R. Al-Haik, *Key Lists of Archaeological Excavations in Iraq 1842–1965* (Coconut Grove 1965) 51 under No. 38, 153 map G.7. The Apišal = Muhallaqiya identification would not be incompatible with the fact

where, as is indicated by the Uruk Survey data,¹²⁹ the “Tigris” made a sharp southwardly turn toward Girsu. In this connection, it is significant that there was a major weir (kun-zi-da) in the vicinity of Apišal.¹³⁰ Tying these two observations together, it was very likely this weir that was responsible for the change in the direction of the ancient waterway.

A reconstruction of the course of the Tigris beyond Apišal still presents major problems, and this issue also cannot be fully treated at this time. I will limit myself here to the following observations:

It is clear that there was a major canal, called id-Nun, which branched off from the Tigris and flowed southward along the border between the Umma and Girsu/Lagaš provinces. This canal, which is mentioned for the first time in pre-Sargonic sources, continued to flow through the Umma province in Ur III times.¹³¹ It would seem that this canal (or its extension) eventually reached the city of Ur, since the “Lamentation over the Destruction of Sumer and Ur” talks of “the Nun canal of god Nanna” and its “villages (and) road-houses.”¹³²

If this was the canal that branched off from the Tigris in the area of Apišal, we would have to conclude that the main course of the Tigris continued eastward or, alternatively, that it also eventually turned southward, and ran a course more or less parallel to that of the id-Nun. The latter explanation is probably to be favored, since

that the walking distance between Umma to Apišal was 2 or 3 days. See 6 guruš ud 3-še Umma^{ki}-ta A-pi₄-sal₄^{ki}-še gir-a gin-na 6 guruš ud 2-še A-pi₄-sal₄^{ki}-ta gir-a Umma^{ki}-še gin-na (BIN 5 140:1–8); 18 guruš ud 3-še Umma^{ki}-ta A-pi₄-sal₄^{ki}-še gir-a gin-na 10 guruš ud 2-še A-pi₄-sal₄^{ki}-ta Umma^(ki)-[še gir]-a gin-n[a] (Istanbul 1637:1–8). [Because BIN 5 140 and Istanbul 1637 date to the same year and involve the same official (Da-da-ga), one and the same expedition is apparently meant.] The distance between Umma and Muhallaqiya, as a crow flies, is ca. 30 km. At a speed of 15 km per day, this would translate into two days of walking.

¹²⁹ See Uruk Countryside, p. 36 fig. 17.

¹³⁰ See above p. 34.

¹³¹ For the evidence bearing on this canal, see Carroué, ASJ 15, 52–59, 62–64.

¹³² gú id-Nun-na dNanna-ka á dugud ba-ši-in-gub maš-gán maš-gán é-danna dNanna-ka tūr dugud-gim ba-gul, “a heavy arm was set over the banks of the Nun canal of Nanna, the villages (and) roadhouses of Nanna (situated there) were destroyed like a massive cattle pen” (Michalowski, Lamentation, 47 lines 185–186). The passage immediately following of this composition is concerned with the towns of Ga-eš^{ki} and Aš-šu/šú^{ki} (lines 188–199), which, because of the context, must have been situated on the Nun canal just north of Ur. Note that Aššu – spelled Iš-su^{ki} – is mentioned in the Ur III texts YOS 4 66:3 and Sigrist Princeton 562:2 (the same source also lists an expenditure for Ur).

the sources make it quite clear that, in Ur III times, the Tigris flowed through the Girsu/Lagaš province, apparently past Girsu and near the Gu'edena district,¹³³ which lay in a border area between Umma and Girsu/Lagaš. Such an explanation would also better fit the fact that the Larsa kings talk of the Tigris as a source of irrigation water for Larsa and Ur¹³⁴ (unless what they mean by "Tigris" is a Tigris canal). However, it is difficult to accommodate *both* the Nun canal and the Tigris in this (comparatively) narrow territory.

Unfortunately, with the data at hand, it is doubtful that these questions can be answered conclusively at the present time. In my view, this could happen only if reliable information on the settlement patterns and ancient watercourses in the eastern section of the alluvium becomes available.

5. Kasahar and Esagdana

The importance of Kasahar¹³⁵ for the water traffic of southern Babylonia was recognized first by Jacobsen.¹³⁶ As we noted earlier, Jacobsen situated Kasahar on the Euphrates a day's journey upstream from Nippur, and thought that it was from there that the eastern branch of the Euphrates (identified by him as Iturungal) took off. More recently, the question of Kasahar was studied by Carroué,¹³⁷ with largely similar conclusions, as well as by Heimpel.¹³⁸ The latter speculated that Kasahar was located either on the Tigris or on the Euphrates, at a canal link between these two rivers.

The data extant leave no doubt that Kasahar lay on the Tigris, some 20 km northeast of Nippur (see in detail below). From there a canal called *id-KA-sahar*, the "canal of Kasahar," flowed in the southwesterly direction and joined the Euphrates in the immediate vicinity of Nippur. Some of the sources describing boat trips via Kasahar talk specifically of the "inlet" (*ka*) of the Kasahar canal,¹³⁹ which marked the place (obviously at or very near the site of Kasahar) from which the canal took off. There also survives a mention of the "outlet"

¹³³ See Pettinato, *Mesopotamia 5/6* (1971/72) 316–20; Carroué, *ASJ* 15, 56–59.

¹³⁴ See above pp. 31 f.

¹³⁵ Spelled *KA-sahar(-ra)*. Since the reading of the first element remains somewhat uncertain (probably *Ka-*, but unconfirmed), we leave it capitalized.

¹³⁶ *Iraq* 22, 177.

¹³⁷ *ASJ* 13, 136–42.

¹³⁸ *ZA* 80, 211–12.

¹³⁹ *SNAT* 495:4, 5, 9, 10.

(kun) of the Kasahar canal,¹⁴⁰ marking the place of its confluence with the Euphrates.

The Kasahar canal was of great importance for the hydrological system of southern Babylonia, since it offered the only connection between the Tigris and the Euphrates north of the Iturungal, which, as we demonstrated earlier, branched off from the Tigris just north of Ka'ida (Umma) and joined the Euphrates at Uruk. This is shown emphatically by the fact that all the boat traffic from Umma and various Umma sites to Nippur and the places situated immediately to the south of it, such as Esagdana and Tummal, invariably proceeded either via Kasahar or, but only exceptionally, via Uruk.¹⁴¹ Had there existed a lateral connection with the Euphrates to the south of Kasahar, it would have provided a much shorter access to Nippur, and would undoubtedly have been the primary means of traveling there.¹⁴²

Our sources offer a detailed and highly consistent picture of the traffic passing through Kasahar. The boat trips thus documented began in the province of Umma (or, in some cases, at Girsu/Lagaš) and terminated usually either at Nippur or at Esagdana. The purpose of such trips was almost invariably to transport the staples (cereals, flour, reeds, and timber) and work-force that the provinces owed to the central government in lieu of their tax contributions. Having been loaded with cargo at Umma¹⁴³ or at other Umma sites, the boats were then towed upstream on the Tigris to Kasahar. A trip from Umma to Kasahar took between six and nine days; from NAGsu, Kasahar could be reached in only five days.¹⁴⁴

From Kasahar boats were floated down on the Kasahar canal toward Nippur and Esagdana. This changing of waterways is sometimes

¹⁴⁰ BIN 5 234:13.

¹⁴¹ There survive four records of trips from Umma to Esagdana "via Uruk" (á Unugki-ta). See Appendix A.20. Such trips appear to have taken the following course: upstream on the Tigris to the takeoff of the Iturungal, downstream on the Iturungal to Uruk, and upstream on the Euphrates to Esagdana.

¹⁴² For this reason, the reconstruction of the "Amar-Suena canal," as offered by Frayne, RIME 3/2, 241–42, 143 map, in reference to C. Wilcke's discussion in ZA 62, 57, is impossible. As a matter of fact, Frayne confuses the id-^dAmar-^dSuen-ke₄-gá-ra (which was clearly situated within the Umma province) with the id-^dAmar-^dSuen-ni-tum (= *Amar-Suenitum*), located near Urusagrig. It was the latter canal, and not the id-^dAmar-^dSuen-ke₄-gá-ra, that was discussed by Wilcke! Although Edzard/Farber, RGTC 2, 254–55, assume that the two canals were identical, this is not the case. For the id-^dAmar-^dSuen-ni-tum, see Appendix E.3.

¹⁴³ Actually, such trips usually began either at kar (Umma) or Ka'ida (Umma). See above p. 51.

¹⁴⁴ See Appendix A.1 and A.2.

referred to explicitly, by the use of the expressions “(going) via Kasahar” (á KA-sahar-ra-ta) and “turning around at Kasahar” (KA-sahar nígin-na).¹⁴⁵

The floating time from Kasahar to Nippur was one day, with one or two days taking to make the same descent to Esagdana.¹⁴⁶ After the cargo was unloaded and deposited at its final destination, boats – either empty or with a new cargo – were returned to Umma, following the reverse sequence: first upstream to Kasahar on the Kasahar canal, and then downstream on the Tigris to Umma. The first leg of the trip, either from Nippur or from Esagdana, lasted one or two days¹⁴⁷; it took two or three additional days to complete the trip.¹⁴⁸ In addition, it is known that it took up to one day to tow a boat from Esagdana to Nippur,¹⁴⁹ a point which, as we shall see later, is significant for the question of Esagdana’s identity.

The most detailed descriptions of trips from Umma to Nippur/Esagdana are offered by the following two texts:

“15 men for 6 days carrying flour (and) bread from Umma to the quay (of Umma); for 6 days towing the boat (upstream) from the quay to the inlet of the Kasahar canal; for 1 day floating the boat (downstream) from the inlet of the Kasahar canal to Nippur; for 2 days unloading the boat in Nippur; for 2 days towing the boat (upstream) from Nippur to the inlet of the Kasahar canal; for 2 days floating the boat (downstream) from the inlet of the Kasahar canal to Umma.”¹⁵⁰

“12 men for 1 day removing reeds from the storehouse; for 1 day making a raft (and loading the reeds on it); for 9 days towing the raft (upstream) from the storehouse of the quay (of Umma) to Kasahar; for 1 [day] floating the raft (downstream)

¹⁴⁵ See the following examples: ud 15-šè má gid-da má dirig-ga ... ki-sur-ra-ta É-da-na-šè á KA-sahar-ra-ta (SACT 2 89:3–10); ud 13-šè kar-ta á KA-sahar-ra-ta má gid-da má ba-al-la ù Umma^{ki}-šè má sug₄ gur-ra (ASJ 8, 68–69 iii 7); ud 6-šè kun id-da Umma^{ki}-ta KA-sahar-ta má nígin-na Tum-im-ma^{ki}-šè má gid-da (SACT 2 75:4–9); 12 guruš ud 20-šè má še Šu-^dSuen (from Girsu) Nibru^{ki}-šè gid-da KA-sahar-ta nígin-na má ba-al-la Gír-su^{ki}-šè gid-da (ITT 5 8239:1–6). Cf. 6 guruš ud 3-šè kar Umma^{ki}-ta A-pi₄-sa₄^{ki}-šè má nígin-na má dirig-ga, “6 men for 3 days turning the boat around (at Ka’ida) (and) floating it down – from the quay of Umma to Apišal” (Nikolski 2 107:1–4).

¹⁴⁶ See Appendix A.3 and A.4.

¹⁴⁷ See Appendix A.10 and A.11.

¹⁴⁸ See Appendix A.12.

¹⁴⁹ See Appendix A.9.

¹⁵⁰ 15 guruš ud 6-šè Umma^{ki}-ta kar-šè zíd ninda ¹il-gá kar-ta ud 6-šè ka id-KA-sahar-ka-šè má gid-da ud 1-šè ka id-KA-¹sahar¹-ka-ta Nibru^{ki}-šè má dirig-ga ud 2-šè Nibru^{ki} má ba-al-la ud 2-šè Nibru^{ki}-ta ka id-KA-sahar-ka-šè má gid-da ud 2-šè ka id-⟨KA⟩-sahar-ka-ta kar Umma^{ki}-šè má ¹dirig¹-ga (SNAT 495:1–11).

from Kasahar to Esagdana; [for x day(s)] unloading the [raft] in Esagdana; [for x day(s)] counting the reeds; for 1 [day] towing the raft (upstream) from Esagdana to Kasahar; for 3 days floating the raft (downstream) from Kasahar to the quay of Umma.”¹⁵¹

Other sources offer less detailed itineraries. In most instances, the text simply says that “from Umma (or from some other Umma site) a boat was towed and floated to Nippur or Esagdana”, a shorthand way of saying that it was first towed to Kasahar and then floated down to Nippur/Esagdana. In the texts dealing with return trips, the corresponding formulation is: “from Nippur/Esagdana the boat was towed and floated down to Umma (or some other Umma) site”, meaning that it was first towed upstream to Kasahar, and from there floated downstream to Umma. On average, the cumulative length of such trips was between six and eight days for the Umma – Nippur/Esagdana connection¹⁵²; return trips lasted between three and five days.¹⁵³ Trips starting at other Umma sites generally took more time.¹⁵⁴

There exist even more abbreviated itineraries, in which it is simply stated that “a boat was towed from Umma to Nippur/Esagdana.” This formulation may describe either a one-way or a round trip, with the only indication being provided by the length of the trip.¹⁵⁵ Needless to say, some instances of such trips remain ambiguous.

Given the fact that the traveling time between Kasahar and Nippur – moving either downstream or upstream – was one day or less, it follows that the distance between the two places could not have been more than 20–25 km.¹⁵⁶ On the other hand, it is known that Kasahar was situated upstream from (and therefore northeast of) Nippur. This

¹⁵¹ 12 gurus̄ ud 1-šè gá-nun-ta gi è-a ud 1-šè má-lá-a kéš<-rá> ud 10 lá 1-šè gá-nun kar-ta KA-sahar-šè má gid-¹da¹ [ud] 1-šè KA-sahar-ta [É]-te-na-šè má dirig-ga [ud x-šè] ¹É¹-te-na-ka [má ba]-al-la [ud x]-šè gi ¹šid¹-da-a [ud] 1-šè É-te-na-ta KA-sahar-šè má gid-da ud 3-šè KA-sahar-ta kar Umma^{ki}-šè má ¹dirig-ga¹ (ASJ 9 [1987] 314 no. 2:1–14).

¹⁵² See Appendix A.5 and A.6.

¹⁵³ See Appendix A.13 and A.14.

¹⁵⁴ See Appendix A.7 and A.8.

¹⁵⁵ See Appendix A.15, A.16, A.17, A.18, and A.19.

¹⁵⁶ It can be estimated that the towing rate ranged between 15 and 20 km per day, rarely exceeding 20 km. See A. Salonen, *Nautica Babyloniaca*. StOr. 11 (Helsinki 1942), 46; Sauren, *Topographie*, 26. But this rate must have varied considerably depending on many factors, such as the size of the boat and the volume of the cargo, the number of towers, the width of the waterway and the configuration of its embankments, and, last but not least, the presence of man-made obstructions (such as weirs and bridges) that called for the má bala-ak operation (see above p. 35 f. and n. 46).

general localization of Kasahar can be made even more specific (see Map 1), owing to the fact that Kasahar is otherwise known to have been situated in the relative proximity of Maškan-šapir (modern Tell Abu Duwari).¹⁵⁷ The latter information can be gleaned from the Ur III texts from Puzriš-Dagan, in which the same three individuals are once identified as shepherds of Maškan-šapir, and only six months later are called shepherds of Kasahar.¹⁵⁸ This variation, occurring within such a brief period of time, can only mean that Maškan-šapir and Kasahar were situated close to one another, with Kasahar probably being administratively subordinated to the former settlement. Assuming that Kasahar lay no more than 10–15 km from Maškan-šapir, a very likely candidate for it would be site no. 781,¹⁵⁹ which contains mainly Larsa and Old Babylonian remains, with limited Old Akkadian and earlier occupations.

At this point we need to consider the identity of Esagdana, which, as noted earlier, is the second most common destination (after Nippur)

¹⁵⁷ See Adams, Heartland, 256–57 site no. 639.

¹⁵⁸ The three individuals in question are Abī-ṭāb, Ur-Alla, and Ur-lugal:

- (a) *A-bī-DUG*: sipad Maš-gán-sabra^{ki} (MVN 11 210 ii 18, 21 [Šulgi 42/xii]); sipad KA-sahar^{ki} (AUCT 2 235:6, 12 [Š 43/iii]); AnOr 12, 278 iv 18 [...]); sipad (AUCT 2 303:6, 14 [Š 45/xi]); (sipad) (TCL 2 5498 i 28 [Š 45/xii/30]).
- (b) *Ur-Al-la*: sipad Maš-gán-sabra^{ki} (MVN 11 210 ii 20–21, [Š 42/xii]); sipad KA-sahar^{ki} (AUCT 2 235:9, 12 [Š 43/iii]); sipad (AUCT 2 303:3, 14 [Š 45/xi]); (sipad) (TCL 2 5498 i 31 [Š 45/xii/30]); na-gada (PDT 2 802 vii 25 [Š 47/v]).
- (c) *Ur-lugal*: sipad Maš-gán-sabra^{ki} (MVN 11 210 ii 15, 21 [Š 42/xii]); sipad KA-sahar^{ki} (AUCT 2 235:3, 12 [Š 43/iii]); (sipad) (TCL 2 5498 i 26 [Š 45/xii/30]); na-gada (PDT 2 802 vi 27 [Š 47/v]).

Note also the following mentions of unnamed shepherds: x sheep ki sipad Maš-gán-sabra-ta (AUCT 2 313:14 [–/–/27]); x sheep ki sipad Maš-gán-sabra^{ki}-ta x sheep ki sipad KA-sahar^{ki}-ta (Legrain TRU 159:1–5 [Šu-Sin 1/xi]).

Incidentally, it was this information about Maškan-šapir's proximity to Kasahar, plus the archaeological evidence adduced by E. C. Stone, that led Steinkeller in 1988 to consider that Tell Abu Duwari might be the site of Maškan-šapir. At that time, Steinkeller and Stone discussed this idea with a number of colleagues, who, however, voiced general skepticism. But, even before this identification could be suggested in print, it was fully confirmed by the discovery, in January of 1989, of Abu Duwari's inscription of Sin-iddinam, in which Maškan-šapir is named explicitly. For an edition of this inscription, see Steinkeller, "An Inscription of Sin-iddinam and Other Inscribed Materials from Abu Duwari," to appear as Chapter 7 in *The Anatomy of a Mesopotamian City: The Survey and Soundings at Mashkan-shapir*, ed. by E. C. Stone and P. Zimansky (in press).

¹⁵⁹ Adams, Heartland, 262. Carroué, ASJ 13, 141, suggested as possible candidates for Kasahar sites nos. 944 and 947, but, in my opinion, these two sites are situated too far from Maškan-šapir to be taken into serious consideration.

of the boat traffic passing through Kasahar. Although it was thought that this place, whose name is usually spelled É-sag-da-na or É-te-na in the Umma sources,¹⁶⁰ is to be sought either on the borders of the Umma province¹⁶¹ or in a territory to the northeast or southeast of Nippur,¹⁶² it is absolutely certain that Esagdana was situated in the immediate vicinity of Nippur. As we have already noted, this point is demonstrated by the fact that the traveling time between Kasahar and Esagdana was virtually the same as that between Kasahar and Nippur: one or two days from Kasahar to Esagdana, as compared with one day of travel from Kasahar to Nippur when moving downstream; and one or two days from Esagdana to Kasahar, as compared with one or two days from Nippur to Kasahar when moving upstream. In fact, the records of boat trips between Umma and Nippur are so similar to those between Umma and Esagdana – not only with reference to their respective lengths and itineraries, but also as concerns the types of transported cargoes – that Esagdana appears to have been almost synonymous with Nippur.

Another important indication that the Esagdana of Umma sources was located in the neighborhood of Nippur is provided by the text Sigrisť Syracuse 147:1–9.¹⁶³ According to this source, a shipment of flour was sent by boat from Apišal to Esagdana, with the boat having been subsequently reloaded with hides and returned to Apišal. However, the same text notes that the flour in question was unloaded and handed over *in Nippur*, which means that either the boat made an additional stop-over in Nippur or that Esagdana and Nippur were understood to be essentially one and the same location.

A similar conclusion about the location of Esagdana is reached from the evidence supplied by the text Sigrisť Princeton 359:1–11,¹⁶⁴

¹⁶⁰ Spelled also É-sag-dē-na (Sigrisť Syracuse 434:8), É-sag-te_x(Pi)-na (Sigrisť Syracuse 48:12), É-sag-te-na (MVN 1 201:12), Sag-da-na (Istanbul 2407:6; MVN 13 221 iv 6'), Sag-te-na (Slechter TJA pl. 50 IOS 3:1), É-da-na (e. g., Nikolski 2 192:6), É-ta-na (Istanbul 352:5), and Á-te-na (Istanbul 1615:2).

¹⁶¹ Sauren, *Topographie*, 9; Edzard/Farber, *RGTC* 2, 49.

¹⁶² Carroué, *ASJ* 13, 138, 140 fig. 3.

¹⁶³ 1 guruš šag₄-gud ud 5-šē zíd má-a si-ga 1 guruš ud 20-šē A-pi₄-sal₄^{ki}-ta É-sag-da-na-šē má gid-da ù má kuš gur-ra 1 guruš ud 5-šē zíd má-a ba-al-la ù zíd bala-a šag₄ Nibru^{ki}, “1 man, a plowing assistant, for 5 days loading the flour into a boat; 1 man for 20 days towing the boat (upstream) from Apišal to Esagdana and returning the boat (loaded with) hides (to Apišal); 1 man for 5 days unloading the flour from the boat (and) handing the flour over in Nippur.”

¹⁶⁴ 12 guruš ud 5-šē zíd má-a si-ga ud 8-šē Umma^{ki}-<ta> É-te-na^{ki}-šē má gid-da ud 10 lá 1-šē É-te-na-ta Sippar(UD.NUN.KIB)^{ki}-šē má gid-da ù má Nibru^{ki}-šē gur-ra ud 1-šē má šag₄ Nibru^{ki}-ka má da-a ud 4-šē zíd ba-al-la

which describes a two-leg boat trip. First, a shipment of flour was sent from Umma to Esagdana, this part of the trip lasting eight days. The boat was then towed from Esagdana to Sippar, whence it “was *returned to Nippur*,” the whole operation having taken nine days. Like Sigrist Syracuse 147, this source offers an indication that the names of Esagdana and Nippur could be used virtually interchangeably.

For this conclusion, even more significant is the text Szlechter TJA pl. 61 IOS 36:1–18.¹⁶⁵ According to this source, a raft with unspecified cargo was towed upstream and then downstream to Esagdana from Elugal, a well-known settlement in the Umma province. After the cargo was brought into the storehouse of Esagdana’s *naGaBtum* establishment,¹⁶⁶ the crew spent one day towing the raft (apparently loaded with new cargo) to Nippur, where it was subsequently unloaded

zíd bala-a ud 2-šè Umma^{ki}-šè gin-na, “12 men for 5 days loading flour into a boat; for 8 days towing the boat upstream from Umma to Esagdana; for 9 days towing the boat upstream to Sippar and returning it to Nippur; for 1 day sailing the boat into Nippur; for 4 days unloading the flour (and) carrying it over; for 2 days going back to Umma.”

¹⁶⁵ 16 guruš ud 5-šè má kéš-rá gá-nun É-lugal-ta ud 13-šè má gid-da má dirig-ga ud 3-šè gá-nun na-ga-ab-tum-ma ku₄-ra ud 1-šè É-da-na-ta Nibru^{ki}-šè má gid-da ud 3-šè Kar-geštin-na má ba-a[-l]ja ù gá-nun dù-a ud 2-šè Kar-[geštin-na]-ta ‘é’ dirig⁷¹ [...] ‘má’ gid⁷¹-d[a’ ...] ud 1-šè Kar-geštin-na-ta šag₄ Nibru^{ki}-šè má bala-ak ud 6-šè im-ùlu-um im-mir má da-a gá-nun É-lugal-ta Nibru^{ki}-šè, “16 men for 5 days making a raft; for 13 days towing the raft upstream and floating it downstream from the storehouse of Elugal (to Esagdana and then back to Elugal); for 3 days bringing (the transported materials) into the *naGaBtum* (of Esagdana); for 1 day towing the raft upstream from Esagdana to Nippur; for 3 days unloading the raft at the quay Kargeština (of Nippur) and building a storehouse there; for 2 days [...] from the quay Kar[geština]; for 1 day moving the raft over from the quay Kargeština into Nippur; for 6 days sailing the raft with the southern (and) northern winds; (a trip) from the storehouse of Elugal to Nippur.” The thirteen days assigned to the towing and floating of the raft clearly represent a round trip between Elugal and Esagdana/Nippur. This figure apparently does not include the one day spent to tow the boat from Esagdana to Nippur.

The meaning “to sail a boat” of má ... da seems to be assured by the context of the present text. Cf. also ud 3-šè Adab^{ki} im-mir-da má da-a, “sailing the boat for 3 days with the northern wind to Adab (from Gišummud)” (MVN 15 94 iii 11 = Appendix E.2), and ud 1-šè im-ùlu-da da-a, “sailing (the boat) for 1 day with the southern wind (as part of a trip from an Umma site Kisura to Esagdana)” (SACT 2 89:7). For other examples of má ... da, see Sigrist Princeton 359, cited above in n. 164, and Sallaberger, *Kalender* 1, 180–81 and n. 851.

¹⁶⁶ For the *naGaBtum* (probably an animal-fattening establishment) of Puzriš-Dagan, see Sigrist, *Drehem* (Bethesda 1992) 39–40.

at Kargeština, Nippur's famous quay.¹⁶⁷ Importantly, the text labels this whole operation as a trip "from the storehouse of Elugal to Nippur." Apart from showing again that Nippur and Esagdana were virtually identical, this source establishes conclusively that Esagdana lay *downstream* from Nippur.

Now, given the fact that its location in the neighborhood of Nippur is assured,¹⁶⁸ it becomes evident that the Esagdana of Umma texts must be the same place as Esagdana Nibru, which is frequently mentioned in a group of early "Puzriš-Dagan" documents dealing with precious objects and leather products. As was shown by C. Wilcke,¹⁶⁹ the latter Esagdana was an administrative center in the neighborhood of Nippur and, very likely, the home of the so-called "Early Drehem Series." Since its name¹⁷⁰ does not appear in later Puzriš-Dagan texts, Wilcke considered the possibility that Esagdana Nibru was simply the original name of Puzriš-Dagan (before it was officially established in the year Šulgi 38) or, in other words, that Esagdana Nibru and Puzriš-Dagan (modern Tell Drehim) are one and the same place.

¹⁶⁷ Kargeština is named in a number of literary compositions: "Enlil and Ninlil" line 5 (H. Behrens, *Enlil und Ninlil*. StP SM 8 [Rome 1978] 15); TCL 15 12:104 = Ur-namma C 104; Šulgi D 376; KAR 16:35–36. As described by Behrens, *op. cit.*, 66: "Der Kargeštinna in Nippur ist damit der Kai, an dem Götter und Könige festmachen bei ihren Reisen nach Nippur." Mentions of Kargeština in economic sources are exceedingly rare. As far as I know, apart from the Ur III example cited here, the only such reference is found in a Sargonic tablet from Nippur: NAG-su Kargeštin-ta, "(to) NAGsu from Kargeština" (Westenholz OSP I 71:12).

¹⁶⁸ Note that the two places are also linked in YOS 18 85:3–4: 10 guruš ud 1-šè giš-ùr-ta Nibru^{ki}-šè šag₄ É-te-na-ka, "10 men for 1 day (sent away) from the harrowing-work to Nippur, in Esagdana."

¹⁶⁹ "É-sag-da-na Nibru^{ki}. An Early Administrative Center of the Ur III Empire," in: M. deJ. Ellis (ed.), *Nippur at the Centennial* (Philadelphia 1992) 311–24.

¹⁷⁰ Wilcke, *ibid.*, 323, explained the name É-sag-da-na as "house at the top of a mile," basing this interpretation on the fact that Puzriš-Dagan lies ca. 10 km from Nippur, a distance corresponding exactly to the length of the Sumerian "mile" (danna). An equally likely analysis of this toponym is é-sag danna-ak "chief house of a mile," i. e., "chief road station." In the latter case, É-sag-da-na would be a variety é-danna/da-na, Akk. *bīt bēri*, "road station" (lit.: "the house of a mile"), for which see é-KASKAL.GID^{da-na ki} = [bi-it be]-e¹-ri (Hh XXI 4:6 = MSL 11, 14); é-danna^{ki} (MSL 11, 102 line 211); lú é-da-na-ka (TMH NF 1/2 179:8); é-danna-šè (NSATN 717:2'); maš-gán maš-gán é-danna^dNanna (Michalowski, *Lamentation*, 47 line 186; see above n. 132). In fact, as is shown by the abbreviated writings É-da-na, É-ta-na, and Á-te-na, É-sag-da-na = Puzriš-Dagan was colloquially known as "the road station." This fact possibly indicates that the origins of Puzriš-Dagan were that of a road station.

As the Umma data now make certain, the operations of Esagdana Nibru did not cease with the year Šulgi 38. But how are we to explain the complete absence of its name in the later Puzriš-Dagan and Nippur documentation? In my view, the only possible solution to this dilemma is that, in agreement with Wilcke's hypothesis, Esagdana Nibru was identical with Puzriš-Dagan (or, at the very least, with the original settlement there), and that, in Umma texts, Esagdana is simply a local designation of Puzriš-Dagan. Apart from the data offered here, this is demonstrated by the fact that, in the Umma sources, besides Nippur and Ur, Esagdana is the most frequent destination of agricultural and other contributions that the Umma province made to the central government in lieu of its bala obligation.¹⁷¹ And last, but not least, is the fact that the name of Puzriš-Dagan (apart from the year-name Šulgi 39) is virtually never mentioned in Umma texts.¹⁷²

That Esagdana is Puzriš-Dagan is further shown by the fact that Esagdana was located a day's journey downstream from Nippur (see above). This fits perfectly Puzriš-Dagan's position, which is situated ca. 10 km to the south of Nippur. In this connection, it is also significant that the trips from Kasahar to Esagdana seem to have taken slightly longer than those from Kasahar to Nippur,¹⁷³ again indicating that Esagdana is to be sought at a short distance to the south of Nippur.

Apart from the evidence of boat trips, various other Umma sources confirm that Esagdana = Puzriš-Dagan. Of special importance here are the references to the work done on, and the shipments entered into, the "storehouse of Esagdana," which parallel a similar reference to the "storehouse of Puzriš-Dagan."¹⁷⁴

¹⁷¹ See, in detail, T. M. Sharlach, "Bala: Economic Exchange Between Center and Provinces in the Ur III State" (unpublished PhD Dissertation, Harvard University 1999).

¹⁷² The only such mentions known to me are Orient 16, 64 no. 75:4, and Sigrist Syracuse 129:3 (cited below in n. 174).

¹⁷³ See above p. 58.

¹⁷⁴ See 48 guruš ud 1-še im-du₈-a gá-nun-na ak ki guru₇ É-Puzur₄-i_š-Da-gan, "48 men for 1 day building mud walls of the storehouse at the site of grain silos of Puzriš-Dagan" (Sigrist Syracuse 129:1–3), as compared with the following examples: 5 guruš ud 7-še gá-nun-na gub-ba-a im-du₈-a ak ... šag₄ É-te-na-ka (Sigrist Syracuse 252:9–12 = Contenau Umma 90:8–11); 8 guruš ud 2-še gá-nun-na im-tu ak šag₄ É-te-na (Istanbul 2080:1–3; the same text also lists 5 assignments of boat-towing to Nippur). For gá-nun Esagdana, see further Sauren New York Library 292:5–7; Sigrist Syracuse 47:7–8, 48:12–13; Forde Nebraska 10:5–6; Touzalin, 175 M 4200:7; TCNSU 615:8–10, 619:6–7; Szlechter TJA pl. 50 IOS 3:1; BIN 5 242:12–13; Istanbul 3395:5 (mentions also a gá-nun šag₄ Nibru^{ki}-ka).

If any further proof is still required, note that the boats returning to Umma from Esagdana very often carried animal hides,¹⁷⁵ which is in perfect agreement with Puzriš-Dagan's reputation as an animal collecting and processing center.

In consideration of all these data, the following conclusions about Esagdana may be offered. The original settlement, called Esagdana Nibru, seems from its very inception to have functioned as a key collecting center of tax contributions from the core provinces of the Ur III state.¹⁷⁶ This center was expanded in the year Šulgi 38, very likely to create animal corrals, slaughterhouses, leather workshops, and related facilities, which were necessary to process the vast numbers of cattle, sheep, and other animals that had at that time begun to be delivered as the so-called gún ma-da tax by the peripheral territories of the Ur III state.¹⁷⁷ We may assume that it was on the occasion of this expansion that Esagdana Nibru was renamed Puzriš-Dagan. However, for one reason or another, this designation was never adopted at Umma, whose administrators continued to use the original name.

Another place where the old name was retained was the province of Girsu/Lagaš. Although Puzriš-Dagan is occasionally mentioned in the Girsu/Lagaš sources, the name more commonly used is Sag-da-na, most often in reference to the "slaughterhouse of Sagdana," which interchanges with the "slaughterhouse of Puzriš-Dagan" in the very same sources.¹⁷⁸

¹⁷⁵ See, e. g., Sigrist Syracuse 147 (cited above in n. 163); Istanbul 520, 2916; SACT 2 90. Of special interest here is the text Istanbul 2396 (cited in Appendix A. 16), in which leather-workers, having transported a boat from Umma to Esagdana, bring it back to Umma filled with hides, and subsequently deposit the hides in the palace. Cf. also Istanbul 2341:1–7: 4 guruš ašgab iti 3 ud 15-šè ^{kuš}ummud-dè šu dug₄-dug₄-ga šag₄ Ê-te-na-ka 'ù⁷ ^{kuš}ummud-da Der(BAD.AN)^{ki}-šè gin-na, "4 leather-workers for 3 months (and) 15 days processing waterskins in Esagdana and going with the waterskins to Der."

¹⁷⁶ Although it has been speculated that the chief collecting center of the Ur III state was Du₆-sa-bar-ra, thought to have been situated near Nippur (R. M. Whiting, ZA 69 [1979] 16 n. 19), it is clear that Du₆-sa-bar-ra actually belonged to the Girsu/Lagaš province; in addition, there is nothing to suggest that it was an administrative center of any significance. See Steinkeller, "Money Lending Practices in Ur III Babylonia: The Issue of Economic Motivation," in: M. Hudson/M. Van de Mieroop (ed.), Debt and Economic Renewal in the Ancient Near East. Peabody Museum Bulletin 8 (Cambridge, MA forthcoming).

¹⁷⁷ See Steinkeller, "The Administrative and Economic Organization of the Ur III State: The Core and the Periphery," in: McG. Gibson/R. D. Biggs (ed.), The Organization of Power. SAOC 46 (Chicago 1987) 30–37.

¹⁷⁸ See é-gud-gaz Nibru^{ki} ... é-gud-gaz Sag-da-na (MVN 5 240:9–10), as compared with é-gud-gaz Ê-Puzur₄-iš-d Da-gan ... é-gud-gaz Nibru^{ki} (MVN 11 83,

6. TumTUR and Tummal

One of the places which could be reached by boat from Umma via Kasahar is TumTUR. This place, whose name is written with the signs Tum-TUR, is documented exclusively in the Ur III sources from Umma. Because of this, scholars believed that TumTUR belonged to the Umma province.¹⁷⁹ However, in a 1991 article,¹⁸⁰ Carroué was able to demonstrate that TumTUR was actually situated to the south of Nippur, along a canal that branched off from the Euphrates. On the basis of the lengths of trips between Umma and TumTUR known to him, Carroué concluded that the canal in question took off from left bank of the Euphrates at Kisura (Abu Hatab), and that TumTUR was situated to the east of the Euphrates, halfway between Kisura and Šuruppak. As a possible candidate for TumTUR, Carroué suggested site WS 005.¹⁸¹

Since the evidence bearing on TumTUR has increased very considerably since the publication of Carroué's article, it will be useful to review the relevant data in detail. The Umma texts contain numerous records of trips from the Umma province to TumTUR, which commenced either at the city of Umma or at other Umma sites. From Umma, such trips took between six and ten days; there also survive records of trips taking fourteen or even fifteen days, but those were almost certainly round trips.¹⁸² Trips beginning at other Umma sites were longer.¹⁸³

Extant data confirm Carroué's conclusion that one traveled by boat to TumTUR via Kasahar.¹⁸⁴ As we have already seen,¹⁸⁵ it took between five and six days to reach Kasahar from the Umma province. Given that the minimum traveling time between Umma and TumTUR was six days, it follows that TumTUR was situated no more than a two day trip downstream from Kasahar. This fixes its position in the

85, 104; etc.). [N. b. the "slaughterhouse of Esagdana" is also mentioned in the Umma text Istanbul 425:1–7: reeds é-gud-gaz-šè ... gud udu ba-ra-ši-šum' É-da-na.] For the identity of Sagdana with Puzriš-Dagan, cf. HSS 4 122 and 126, where É-sag-da-na interchanges with Nibru^{ki} in identical contexts. For the deliveries of staples and labor from Girsu/Lagaš to Puzriš-Dagan/Sagdana, see the extensive discussion in Sharlach, *op. cit.* (n. 171).

¹⁷⁹ See Sauren, *Topographie*, 167–68; Edzard/Farber, *RGTC* 2, 83.

¹⁸⁰ ASJ 13, 134–35, 139–42, 143 fig. 4.

¹⁸¹ See Adams/Nissen, *Uruk Countryside*, 220.

¹⁸² See Appendix D.1.

¹⁸³ See Appendix D.2.

¹⁸⁴ See SACT 2 75 and Istanbul 360 cited in Appendix D.1.

¹⁸⁵ See above p. 57.

neighborhood of Nippur and Puzriš-Dagan, since it took one or two days to reach either of those places from Kasahar.¹⁸⁶

There also survives a single reference to a walking expedition between Umma and TUMTUR. According to MVN 18 520:1'–4',¹⁸⁷ several men spent four days carrying fish from the field Ašaglamah, in the Umma province, to TUMTUR. Assuming that their destination point was in the area of Puzriš-Dagan, which lies ca. 75 km as a crow flies from Umma, this would result in a rate of ca. 18 km per day, which is quite realistic. A location some distance to the south of Puzriš-Dagan would make it even more plausible.

In addition, we have records of trips between TUMTUR and Uruk. According to one source,¹⁸⁸ it took two days to float a boat from TUMTUR to Uruk, and then three days to tow it back. A more complicated itinerary is found in another text,¹⁸⁹ where a boat was floated down for two days from Esagdana to Uruk, to be then towed, for four days, from Uruk to the inlet of the TUMTUR canal.

As already concluded by Carroué, TUMTUR was situated near the Euphrates. This is demonstrated by the records of workers carrying various articles either from “the bank of the Euphrates to the storehouse of TUMTUR,”¹⁹⁰ or from “TUMTUR to the bank of the Euphrates.”¹⁹¹ The last reference of particular interest, since it places the workers in question at Esagdana, thus again indicating the proximity of TUMTUR to Puzriš-Dagan.

Most of the trips between Umma and TUMTUR terminated at the “inlet of the TUMTUR canal” (ka íd-Tum-TÛR^{ki}).¹⁹² From that place, which is mentioned in various other sources,¹⁹³ the TUMTUR canal

¹⁸⁶ See above p. 58.

¹⁸⁷ Cited in Appendix D.2.

¹⁸⁸ Istanbul 1911 cited in Appendix D.3.

¹⁸⁹ Sigrist Yale 2223 cited in Appendix D.4.

¹⁹⁰ [x] + 5 guruš ud 3-šè [g]ú íd-Buranun(KIB)-ta gá-nun Tum-TÛR^{ki}-šè gi íl-gá (Sigrist Princeton 347:6–9); 24 guruš ud 6-šè má Lugal-e-šim kar Umma^{ki}-ta Kasahar-ta má dirig Tum-TÛR^{ki}-šè má gíd-da ud 4-šè gi še-ta sa₁₀-a Lú^dNin-ur₄[r]a gú Buranun-ta gá-nun-šè íl-gá (Istanbul 360:1–10).

¹⁹¹ 20 guruš šag₄-sahar-ra im-du₈-a ak sig₄ du₈-a in-u íl-gá é-šidim gub-ba <<gub-ba>> Tum-TÛR^{ki}-ta gú íd-Buranun(NUN.KIB.KI)-šè dug-sila íl-gá šag₄ É-te-na-ka (Istanbul 789:1–11).

¹⁹² See the examples cited in Appendix D.1, D.2, and D.4.

¹⁹³ 116 guruš ud 1-šè gá-nun ka íd-Tum-TÛR šag₄ ka-da tuš-a (Oxford Ashm. 1924-665 iv 13–14); 12.0.0 <še> gur kišib Lú-bala-sig₅ ka íd-Tum-TÛR-ta ugula kín-kín-ke₄-ne šu ba-ab-ti (Bedale STU 31:5–9); 120 sa gi Maš-gula-ra hé-na-ab-sum-mu ka íd-Tum-TÛR^{ki}-ka hé-na-ab-sa₁₀-sa₁₀ (Istanbul 465:1–5).

branched off toward TUMTUR. There also survive mentions of the “outlet” (kun) of this canal,¹⁹⁴ which was probably located in TUMTUR’s immediate vicinity. Two Umma tablets record boat trips between kun íd-Tum-TUR^{ki} and Nippur; in both cases, the traveling time was two days.¹⁹⁵

Our sources talk also of the “quay of donkeys”¹⁹⁶ and, clearly related, the “‘house’ of donkeys,”¹⁹⁷ the latter apparently being a type of ass-raising establishment. The “quay of donkeys,” which is also mentioned in a number of sources from Nippur,¹⁹⁸ was probably situated on the Euphrates, at the inlet of the TUMTUR canal.

While these data are important for plotting the general location of TUMTUR, they do not provide us with any direct clues as to the identity of this site. For that, of much greater help are other references to TUMTUR, especially those which name specific buildings and institutions present at that settlement. Here of special importance is the fact that TUMTUR was home to an é-uz-ga sanctuary,¹⁹⁹ as well as to the funerary chapel (ki-a-nag) of Ur-Namma.²⁰⁰ Now, the only known é-uz-gas in Ur III times were those of Tummam and Nippur.²⁰¹ As for the funerary chapel of Ur-Namma, which also appears frequently in the Puzriš-Dagan documentation, its location has remained a mystery until now. Most recently, this problem was investigated by Sallaberger,²⁰² who, somewhat reluctantly, opted for Ur, at the same time citing TUMTUR as an alternative possibility. In fact, since the above pas-

¹⁹⁴ See the examples cited in Appendix D.5, plus the following attestations: 40 (guruš) kun íd-Tum-TUR^{ki} úš-a (MCS 4, 10 105367:8 = Orient 17, 36); 4 guruš šag₄-gud ud 17-šè 3 guruš ud 17-šè kun íd-Tum-TUR^{ki}-ka sahar si-ga (MVN 3 273:1–5). Cf. 3 guruš šag₄-gud ud 17-šè 3 guruš ud 13-šè gú íd-Tum-TUR^{ki} sahar si-ga (Nikolski 2 134:1–3), which describes the same work project as MVN 3 273.

¹⁹⁵ Istanbul 3172 and 3410 cited in Appendix D.5.

¹⁹⁶ See Istanbul 767 cited in Appendix D.1.

¹⁹⁷ See MVN 15 94 cited in Appendix D.1.

¹⁹⁸ See Steinkeller, FAOS 17, 194–95.

¹⁹⁹ 50 dug 0.0.3 6 dug-gal gú Burunan-ta é-uz-ga Tum-TUR^{ki}-šè a íl-íl-dè + other pots šag₄ é-uz-ga (Istanbul 359:3–9). There survive numerous Umma texts recording various materials and labor that were regularly supplied by the Umma province to this institution. See, e.g., reeds é-uz-ga dù-dè (Touzalin, 128 M 3558:1–2 – undated); reeds é-uz-ga dù-dè (Istanbul 27:1–3 – undated); reeds é-uz-ga (Touzalin, 130 M 3755:1–3 – Šulgi 34); reeds ùr é-uz-ga (Touzalin, 131 M 3578:1–2 – Š 35). Cf. further Istanbul 317, 472, 786, 846, 945, 1115, 1425, 1626. For such deliveries, see in detail Sharlach, *op. cit.* (n. 171).

²⁰⁰ Timber ki-a-nag Ur-^dNamma-šè šag₄ Tum-TUR^{ki} (MVN 10 230 iii 6–8).

²⁰¹ See Sigrist *Drehem* 162; Sallaberger *Kalender* 131.

²⁰² *Kalender* 63.

sage is the only secure datum for the location of Ur-Namma's ki-a-nag, the obscurity of TUMTUR is the only objection against accepting this localization. But, if TUMTUR is Tummal, this objection is removed. All of this suggests very strongly that TUMTUR is simply a variant spelling of Tummal's name.²⁰³

This possibility becomes a virtual certainty when one considers the evidence of the text MVN 15 390. This huge Umma tablet (containing twenty-four columns) is a record of the labor that the Umma province supplied, in the 37th year of Šulgi's reign, for an unspecified project at the site of Tummal. This information comes from the tablet's colophon (xxiii 40–xxiv 11), which records the grand total of expended man-days, labeled [guruš] gub-ba Tum-ma-al, "[workers] stationed at Tummal." As for the nature of the project in question, it almost certainly was the reconstruction of Ninlil's temple at Tummal, since Šulgi is known to have been its onetime restorer.²⁰⁴ Most of MVN 15 390 is a listing of laborers that were supplied by the Umma province to work on the project in question. An exception to this observation is found in the concluding two columns of the text (xxii and xxiii), which tally the labor expended to transport various building materials (timber, wooden tools, bitumen, and straw) that were to be used on the project in question. Those trips began either at Umma or other Umma sites, and terminated, without exception, at *the inlet of the TUMTUR canal*. This information forces us to conclude that TUMTUR is Tummal. As far as the appearance of two different spellings (Tum-ma-al and Tum-TÜR) is concerned, this is explained by the fact that MVN 15 390 is a composite record, which was digested from dozens or possibly even hundreds of individual tablets; clearly, the entries recorded in columns xxii and xxiii came from separate tablets, which had been composed by scribes other than the compiler of the final product and the author of the colophon.

The final confirmation of our proposal is provided by TUMTUR's name. Since one of the readings of the sign TÜR is immal,²⁰⁵ it be-

²⁰³ For the same conclusion, see now R. de Maaier, "İB.TÜR^{ki} = Tummal," NABU 1999/92.

²⁰⁴ See the so-called "Tummal Inscription" lines 22–24 (E. Sollberger, JCS 16 [1962] 44).

²⁰⁵ The history of the value immal – and of the related value šilam (both corresponding to *littu*, "cow") – appears to have been as follows: (1) in Early Dynastic sources, the value šilam, together with tür, was attached to TÜR = LAK-77 (= NUN.LAGAR), whereas the value immal was represented by LAK-78 (= DIŠ.TÜR); see TÜR = si-lam-um in Ebla syllabary line 11 (Archi, Eblaitica 1, 93); šè-li-im = TÜR, šè-li-im gal = gal TÜR, šè-lam <<x>> = TÜR, šè-lam kar = kar TÜR (J. Krecher, OA 22 [1983] 182 lines 27, 28, 43, 44); ù-ma-al₆ = LAK-78, [ù]-ma-al₆ [gal] = gal LAK-78, ù-ma-al₆ = LAK-78, ù-ma-al₆ kar = kar LAK-78 (ibid., 182–83 lines 30, 31, 45, 46; I

comes absolutely clear that this toponym is to be read Tum-immal or Tum-mal_x.

For this conclusion, note further the mentions, in three sources from Nippur, of a “storehouse at the inlet of the Tummal canal,”²⁰⁶ which nicely match that of a “storehouse at the inlet of the TumTUR canal” (see n. 193). And, in a similar way, the “palace of TumTUR” finds a correspondence in the “palace of Tummal.”²⁰⁷

The knowledge that TumTUR is Tummal aids us considerably in plotting the location of the latter site. The question of Tummal’s location was studied most recently by M. Yoshikawa,²⁰⁸ who, building on

owe the reference to Krecher’s edition to G. Rubio); cf. also ^dNin-lil ... šilam(TÜR) niga i-na “the grain-fed cow of his (i. e., of Enlil) fat” (BE 1 93:3–5); (2) in Ur III times, all three values – šilam, immal, and tūr – were apparently attached to TÜR(NUN.LAGAR), since only TÜR is documented in the Ur III script; (3) in Proto-Ea 398–398b, one finds the equations [tu-ur] = TÜR, [ši-la-a]m = TÜR×SAL, and [i]m-m[a-al] = TÜR×SAL (MSL 14, 47), where TÜR×SAL appears to be an Old Babylonian development.

²⁰⁶ All three texts record the expenditures of grain from the “storehouse at the inlet of the Tummal canal”: grain ba-zi ganun ka id-Tum-al-ta (NSATN 245:9–10); grain ganun ka id-Tum-al-ta ba-zi (NSATN 276 rev. 2’–5’, 281:7–8). The same canal-inlet is mentioned, in connection with Esagdana, in Sigrist Syracuse 434:1–9: reeds and timber ka id-Tum-ma-al-ta inim énsi-ta Lugal-ki-ág-mu ugula Kas₄ É-sag-dè-na ba-an-de₆. See also ^{gi}š₆kir₆ ka id-Tum-ma-al-la, listed together with ^{gi}š₆kir₆ É-sag-da-na, in AuOr. Suppl. 5, 204 text 8.5.1. Significantly, in NSATN 245 the grain in question was used to finance the cultivation of the “field of Tummal” (a-šag₄-Tum-al, lines 1–4), the “rent of the boat transporting cattle across the canal” (si má-a gud id-dè bala-a, line 6), the “rent of the boat bringing straw down to Tummal” (si má in-u šag₄ Tum-ma-al-šè e₁₁, line 7), and the “rent of the boat transporting sheep across the canal” (si má-a udu id-dè bala-a, line 8). [For si má-a, attested also in NSATN 288:13; etc., compare á má anše bala-e in TMH NF 1/2 155:15, etc.; si is possibly an abbreviation of PAD.DUG.GIŠ.SI = addir_x.]

The “field of Tummal” (described as a-šag₄-gaba-Tum-al, “field on the border of Tummal”) is also mentioned in the Nippur text BE 3 88:7, where it is listed next to the “field of the district of the Isin canal” (a-šag₄-nànga(LÁL×SAR)-id-IN^{si}-na, line 3). For the implications of this evidence for the location of Tummal, see below n. 212. For a-šag₄-nànga-id-IN^{si}-na, see also BE 3 127 rev. 2’ and NSATN 286:8.

²⁰⁷ Both types of references come from Umma sources: timber tir Ti-um-KU.KU^{ki}-ta ... é-gal Tum-immal^{ki}-šè (YOS 4 274:1–11 – Šulgi 37), as compared with timber é-gal Tum-ma-al^{ki}-šè (SNAT 528:1–11). Here note that the date of the former text coincides with that of the text MVN 15 390 discussed earlier! For é-gal Tum-immal^{ki}, see also MVN 1 79, MVN 13 136, and Istanbul 2770. In this connection, note also the delivery of an oven “for the kitchen of Tummal” (é-muhal^{dim}-šè ... šag₄ Tum-immal^{ki}) in Istanbul 2748:1–5, where the “kitchen” in question is conceivably the one so often mentioned in Puzriš-Dagan sources.

²⁰⁸ “Looking for Tummal,” ASJ 11 (1989) 285–91.

the earlier work by Wilcke,²⁰⁹ argued for an identification with modern Tell Dlehim,²¹⁰ which is situated some 21 km to the south of Nippur. The evidence for trips between Umma and Tummal which we discussed earlier, in particular, the fact that Tummal lay no more than a two-day trip downstream from Kasahar, supports this identification very strongly. Also in favor of it is the fact that Tell Dlehim is located ca. 5 km east of the ancient Euphrates bed,²¹¹ which would agree with the fact that Tummal was linked to the Euphrates by a separate canal.²¹² See Map 1 (p. 40) for a reconstruction.

The only possible objection that could be raised against this solution is the fact, which we noted earlier, that in one instance it took only three days to tow a boat from Uruk to Tummal. Since the distance between Uruk and Tell Dlehim is ca. 80 km, this would mean a towing rate of more than 25 km per day, which is in excess of the usual rate of ca. 20 km per day.²¹³ However, since the boat in question was apparently empty, such a towing rate does not seem to fall outside the realm of possibility.

7. Sites Situated on the Tigris North of Ka'ida (Umma) and South of Kasahar

Although most of the northward traffic documented in Umma sources went directly to Kasahar, there are also occasional records of boat trips that terminated at sites located to the south of Kasahar. Excluding Adab (Bismaya), whose location is known, and which, as a matter of fact, is mentioned only twice in such contexts,²¹⁴ the sites belonging to this group are Karkar, Ašgipada, Gišummud, and Urusagrig.

²⁰⁹ AfO 24 (1973) 5.

²¹⁰ See Adams, *Heartland*, 277–78 no. 1237.

²¹¹ See *ibid.*, 163 fig. 31.

²¹² See the evidence on the canal *id-Tum-imma^{ki}/id-Tum(-ma)-al^{ki}* cited above. This localization of Tummal finds further support in the Nippur text BE 3 88 (see above n. 206), which places Tummal not too far from the Isin canal. It appears highly probable that the canal in question, which clearly branched off from the right bank of the Euphrates in the direction of Isin, began ca. 10 km to the south of the takeoff of the Tummal canal. See Map 1 for a possible reconstruction.

²¹³ See above n. 156.

²¹⁴ 10 guruš ud 6-šè Adab^{ki}-ta má hun-gá gid-da (Oxford 1924-665 v 19–20); the destination of this trip was probably Nippur or Esagdana. The other reference is MVN 15 94 iii 11 (= Appendix E.2), for which see below. — Although Adams, *Heartland*, 16, writes that Adab's "historic associations with the Euphrates are close and absolutely unmistakable," there is no textual evidence suggesting such a connection. A location on the Tigris is implied by the text YOS 4 56 (see above p. 28).

In agreement with M. A. Powell's suggestion,²¹⁵ Karkar is to be confidently identified with the site of Tall Jidr, which was assigned no. 004 in the Warka Survey.²¹⁶ The primary evidence for this identification is provided by the itinerary of Utuhegal's campaign against Tirigan, which places Karkar two days' worth traveling time upstream from NAGSU.²¹⁷ Since NAGSU was located to the northwest of Umma, very likely at site WS 175,²¹⁸ the 17 km separating that site from Tall Jidr fits the two days of travel time exactly. That Tall Jidr is Karkar is further indicated by the fact that Karkar could be reached by foot from Umma in one day.²¹⁹ Even more importantly, Karkar almost certainly belonged to the Umma province in Ur III times,²²⁰ which excludes any other potential candidates located farther north, and thereby makes it mandatory that Karkar is Tall Jidr.

The site of Ašgipada²²¹ was situated upstream from Umma; because its name ("Selected by the god Ašgi") invokes the chief deity of Adab, it may have belonged to the Adab province. The surviving records of boat trips from Umma to Ašgipada indicate three or four days of towing time; a round trip from an Umma site Idsala to Ašgipada took ten days.²²² This information establishes conclusively that Ašgipada was situated to the south of Kasahar, and certainly to the north of Adab.

An apparent neighbor of Ašgipada was the site of Gišummud,²²³ which could be reached from Ašgipada by foot in one day.²²⁴ A trip from Umma to Gišummud by boat took four days of towing; the

²¹⁵ JNES 39, 50–52.

²¹⁶ Adams/Nissen, *Uruk Countryside*, 219–20.

²¹⁷ See above p. 41.

²¹⁸ See above p. 48.

²¹⁹ See 2 guruš ud 1-šè Umma^{ki}-ta Karkar^{ki}-šè GÁ.LÁ.SAR íl-la (Nikolski 2 98:5–6).

²²⁰ Here of special importance is the fact that the Ur III text BM 25053 (unpublished) places Karkar, together with various other Umma sites, within the "borders of Umma" (ki-sur-ra Umma^{ki}). Further, note that the Umma government made regular offerings to Iškur of Karkar (MVN 18 246; SACT 2 236; Istanbul 1844).

²²¹ Its name is variously spelled ^dAšgi(AŠ.ŠIR.GI₄)-pàd-da^{ki} (Lafont-Yildiz Tello Istanbul 2 3543:15), Aš-gi₄-pàd-da, A-aš-gi₄-pàd-da, and A-aš-ki-pàd. Cf. ^dAšgi(AŠ.ŠIR)-pàd-da^{ki} (MSL 11, 103 line 238); ^dAšgi(AŠ.ŠIR.GI₄)-pàd-da^{ki} = šu (ibid. 18 Hh XXI 9:22'). According to Lafont-Yildiz Tello Istanbul 2 3543, Ašgipada supplied on one occasion 620 éren, "soldiers/workers," towards a corvée project. Assuming that these individuals represented at the very minimum $\frac{1}{3}$ of the entire population, Ašgipada's population must have numbered 2,000 or more individuals.

²²² See Appendix E.1.

²²³ This settlement is documented only in Ur III times.

²²⁴ Oxford 1924-665 = Appendix E.1 and E.2.

return trip lasted one day.²²⁵ A trip to Gišummud from NAGsu took only three days, with the return trip taking one day.²²⁶ On the other hand, a boat trip from Gišummud to Esagdana took one or two days²²⁷; given that the traveling time between Kasahar and Esagdana was one day,²²⁸ this fixes Gišummud's position to the south of Kasahar, but well to the north of Adab. This is confirmed by the text MVN 15 94 iii 11 (cited in Appendix E.2), according to which a boat was sailed for three days from Gišummud to Adab with the *northern* wind (ud 3-šè Adab^{ki} im-mir-da má da-a).

As was noted earlier,²²⁹ the text MCS 3, 87 105534 (= Appendix E.2) places the "storehouse of Gišummud" either directly on or near the Tigris, which demonstrates that the watercourse along which Gišummud (and its neighbor Ašgipada) was situated could only have been the Tigris. On the other hand, frequent mentions of Gišummud in the Ur III texts from Nippur²³⁰ indicate that Gišummud lay relatively close to Nippur, and therefore, that the Tigris flowed not too far from Nippur itself.²³¹

While it is certain that both Ašgipada and Gišummud are to be sought along the stretch of the Tigris between Adab and Kasahar, their relative position vis-à-vis one another is unknown. The fact that the trip from Umma to Ašgipada seems to have taken slightly less time than that from Umma to Gišummud (3 or 4 days over and against 4 days) may indicate that Ašgipada was located downstream of Gišummud, but this is far from certain.

The very important town of Urusagrig²³² is known to have been situated close to Nippur. As can be surmised from the text YOS 4 56,²³³ Urusagrig lay on the Tigris. There is only one account (recorded in four separate texts) of a boat trip to Urusagrig.²³⁴ The trip

²²⁵ Istanbul 1907 and 3392 = Appendix E.2.

²²⁶ MVN 15 94; Or. 47–49 354 = Appendix E.1 and E.2.

²²⁷ Sigrist Yale 962 and Istanbul 2327 = Appendix E.2.

²²⁸ See above p. 58.

²²⁹ See above p. 34.

²³⁰ Agricultural work/expenditures of grain in a-šag₄ Giš-^{kuš}ummud-a, "field of Gišummud" (NSATN 74:5, 78:14, 795:2'; NRVN 1 286:9); šag₄ Giš-^{kuš}ummud-a, "in Gišummud" (NSATN 30 iii 17).

²³¹ Similar conclusion could be reached based on NSATN 723:2'–3', dealing with the baking of bricks in the field located on the bank of the Tigris (a-šag₄ gū Idigna-ka sig₄-al-ur₅-ra íb-HAR), if this text stems from Nippur.

²³² For Urusagrig, see Wilcke, ZA 62 (1972) 55; Edzard/Farber, RGTC 2, 232–34.

²³³ See above p. 28.

²³⁴ TCL 5 5676; SNAT 459; Istanbul 2896, 3455 = Appendix E.3.

involved four days of towing from Umma to Urusagrig, with the return trip taking two days; in addition, as part of the same operation, a number of side-trips were made from Urusagrig to the obscure sites of Tabni-Mama,²³⁵ (Eduru-)Urindua, (íd-)Amar-Suenītum, and Kiri-geštin, which appear to have been Urusagrig's satellites.²³⁶ Since, in the Ur III period, Urusagrig was an independent province, run by a governor (énsi), it assuredly was located north of the Adab province. On the other hand, the fact that the towing-time between Umma and Urusagrig was four days, and, therefore, less than the average five days of towing-time between Umma and Kasahar, assures that Urusagrig was located downstream of Kasahar.

These data indicate that Ašgipada, Gišummud, and Urusagrig were all situated within the same general area. However, the information at hand is insufficient to propose any specific locations for these sites. Along the Tigris south of Kasahar (located at or near site no. 781) one finds at least three major tells that may be considered possible candidates here: nos. 1032, 1056, and 1071.²³⁷ Simply as an educated guess, Gišummud and Urusagrig are to be sought within this group. If Ašgipada was in fact situated downstream of Gišummud, one would need to look for it farther south. In that region, the most prominent site is no. 1188,²³⁸ which lies ca. 20 km north of Adab. This site would be a good match for Ašgipada, because of the latter's large population.²³⁹ See Map 1 (p. 40) for a reconstruction.

Appendix

A. Trips to Kasahar, Esagdana, and Nippur from Umma and other sites of the Umma province.

1. From Umma upstream to Kasahar.

6 days: kar-ta ud 6-še ka íd-KA-sahar-ka-še má gíd-da (SNAT 495:3–4).

9 days: ud 10 lá 1-še gá-nun kar-ta KA-sahar-še má gíd-¹da¹ (ASJ 9, 314 no. 2:4–5).

²³⁵ Various spelled *Tab-ni-Ma-ma*, *Tab-ne-Ma-ma*, and *Da-mi-Ma-ma*.

²³⁶ For an attempt to plot the locations of these places in relation to Urusagrig, see Wilcke, ZA 62, 55–59, who, however, had at his disposal only TCL 5 5676, and thus was not aware of the additional difficulties raised by Istanbul 2896, 3455, and SNAT 459.

²³⁷ See Adams, Heartland, 270–71.

²³⁸ See Adams, Heartland, 276.

²³⁹ See above n. 221.

2. From various Umma sites upstream to Kasahar.

5 days: ud 5-šè má-lá-a NAG-su^{ki}-ta KA-sahar-šè má gíd-da (Istanbul 519:1-3).

6 days: ud 6-šè Ka-ma-ri^{ki}-ta KA-sahar-ra-šè má gíd-da (Istanbul 2485:1-3).

9 days: [ud] 10 lá 1-šè Gú-eden-na-ta [K]A-sahar-šè má gíd-da (Istanbul 3171:6-7).

3. From Kasahar downstream to Nippur.

1 day: ud 1-šè ka id-KA-¹sahar¹-ka-ta Nibru^{ki}-šè má dirig-ga (SNAT 495:5-6).

4. From Kasahar downstream to Esagdana.

1 day: [ud] 1-šè KA-sahar-ta [É-t]e-na-šè má dirig-ga (ASJ 9, 314 no. 2:6-7).

2 days: ud 2-šè KA-sahar-ta É-te-na-šè má dirig-ga (Istanbul 519:4-5).

2 days: [ud] 2-šè KA-sahar-ta É-te-na-šè má dirig-ga (Istanbul 3171:8-9).

5. From Umma upstream to (Kasahar, then downstream to) Nippur.

5 days: ud 5-šè má udu-niga (from Umma?) Nibru^{ki}-šè gíd-da (AAS 38:1-3).

6 days: ud 6-šè (from Umma) Nibru^{ki}-šè (má gíd-da) (Istanbul 2080:11-12).

6 days: ud 6-šè (from Umma) Nibru^{ki}-šè (má gíd-da) (Istanbul 2080:14-15).

6 days: ud 6-šè (from Umma) Nibru^{ki}-šè (má gíd-da) (Istanbul 2080:17-18).

6 days: ud 6-šè Umma^{ki}-ta Nibru^{ki}-šè má gíd-da má dirig-ga Pa₄-sikil-nun^{ki}-ta má bala-ak GAR má zíd-da má ninda gíd-da (Contenau Umma 46:1-7). As is suggested by the following passage, Pasikilnun was located between Umma and NAGsu: id-Pa₄-sikil-nun-na lú Umma^{ki}-ke₄ lú NAG-su^{ki}-da di in-da-an-dug₄ (MVN 18 322:1-4).

6 days: ud 6-šè (from Umma?) Nibru^{ki}-šè má bala-a gíd-da (Sigrist Yale 425:1-2).

7 days: ud 7-šè (from Umma) Nibru^{ki}-šè (má gíd-da) (Istanbul 2080:8-9).

8 days: ud 8-šè (from Umma to Nibru) má gíd-da (Istanbul 2080:5-6).

8 days: ud 8-šè (from Umma) Nibru^{ki}-šè má zíd munu₄ énsi gíd-da (Istanbul 2803:1-3).

8 days: ud 8-šè (from Umma) Nibru^{ki}-šè má gíd-da (Sigrist Yale 818:4-5).

8 days: ud 2-šè Ka-id-da níg má-a gar má a-a gá-ra má ba-al-la ù NAG-su^{ki}-ta má hun-gá ud 8-šè má gíd-da ud 2-šè má ba-al-la níg na-gáb-tum bala-a-ri ku₄-ra Umma^{ki}-ta Nibru^{ki}-šè má gíd-da má dirig-ga (Oxford 1924-665 v 7-13).

6. From Umma upstream to (Kasahar, then downstream to) Esagdana.

4 days: ud 4-šè Umma^{ki}-ta É-te-na-šè má gíd-da (SNAT 460:3-5). The same text also gives a very short time for the return trip.

5 days: má giš gíd-da ... má ⁵bul₅-bul₅ ma-an-sim ⁵gur nag gíd-da ud 5-kam Ka-id-da-ta É-sag-da-na-šè (Sigrist Yale 123:2-7).

6 days: ud 6-šè kar Umma^{ki}-ta É-te-na-šè má zíd-da gíd-da (Istanbul 1803:1-4).

- 6 days: ud 6-šè gá-nun gaba kar-ta É-te-na-šè má gíd-da ... ud 11-šè kin íd-gibil É-te-na gub-ba (Oxford 1924-665 iii 15–19).
- 6 days: ud 6-šè má-lá kéš-rá kar Umma^{ki}-ta É-te-na-šè má gíd-da (MCS 4, 9 105416).
- 7 days: ud 7^l-šè kar Umma^{ki}-ta¹ má zíd-da É-te-na-šè má gíd-da (ASJ 8, 306 no. 1:1–4).
- 7 days: ud 7-šè kar Umma^{ki}-ta É-te-na-šè má zíd-da gíd-da (Istanbul 2601:1–4).
- 7 days: ud 7-šè Umma^{ki}-ta É-sag-te-na-šè má zíd-da gíd-da (Istanbul 520: 1–4).
- 7 days: ud 7-šè Umma^{ki}-ta É-sag-te-na-šè má zíd-da gíd-da (SACT 2 90: 1–3).
- 7 days: ud 7-š[è] kar Umma^{ki}-[ta] má zíd-da gíd-[da] É-te-na-š[è] (Sigrist Princeton 349:1–4).
- 7 days: ud 7^l-šè má-lá-a kar Umma^{ki}-ta É-te-na-š[è] má gíd-da (Istanbul 3378:5–7).
- 8 days: ud 8-šè Umma^{ki}-ta É-te-na^{ki}-šè má gíd-da (Sigrist Princeton 359: 3–4).

7. From various Umma sites upstream to (Kasahar, then downstream to) Nippur.

- 5 days: ud 5-šè NAG-su^{ki}-ta Nibru^{ki}-šè má i-šáh íb-gíd (Istanbul 1693:1–4).
- 7 days: ud 7-šè A-pi₄-sal₄^{ki}-ta Nibru^{ki}-šè má níg-^làr-ra ù¹ še-mu-ta gíd-da (Istanbul 2608:5–8).
- 8 days: ud 8-šè (from Maškan) Nibru^{ki}-šè má gíd-da ù má ba-al-la (Limet Ur III Brussels 53:3–4).
- 10 days: ud 10-šè má gíd-da ud 5-šè má ba-al-la ... ud 5-šè im-du₈-a ak šag₄ na-ga-ab-tum ... Nin₁₀-nu-dù-ta Nibru^{ki}-šè (ASJ 9, 244 no. 20: 2–16).
- 10 days: ud 10-šè má gíd-da ud 5-šè má ba-al-la ... Nin₁₀-nu-dù-ta Nibru^{ki}-šè (ASJ 9, 244 no. 20:13–16).
- 10 days: ud 10-šè tir Ú-lá-ka-ta Nibru^{ki}-šè ^lmá^l-lá-a gíd-da (MVN 18 i' 10').

8. From various Umma sites (located downstream from Umma) upstream to (Kasahar, then downstream to) Esagdana.

- 9 days: ud 10 lá 1-šè Íd-lugal-t[a[?]] É-te-na-šè má gíd-da má ba-al-la še bala-a (Nikolski 2 107:6–9).

9. From Esagdana upstream to Nippur.

- 1 day: ud 1-šè É-da-na-ta Nibru^{ki}-šè má gíd-da (Szlechter TJA pl. 61 IOS 36:6–7).

10. From Nippur upstream to Kasahar.

- 1 day: ud 1-šè (from Nippur) KA-sahar-šè má gíd-da (Nikolski 2 119:9).
- 1 day: ud 1-šè Nibru^{ki}-ta KA-sahar-šè má gíd-da (Nikolski 2 119:19–20).
- 2 days: ud 2-šè Nibru^{ki}-ta ka íd-KA-sahar-ka-šè má gíd-da (SNAT 495: 8–9).

11. From Esagdana upstream to Kasahar.

- 1 day: [ud] 1-šè Ê-te-na-ta KA-sahar-šè má gíd-da (ASJ 9, 314 no. 2: 11–12).
 2 days: ud 2-šè (from Esagdana) KA-sahar-šè má kuš gíd-da (Istanbul 520: 6–7).
 2 days: ud 2-šè (from Esagdana) KA-sahar-šè má kuš gíd-da (SACT 2 90: 5–6).
 2 days: ud 2-šè Sag-te-na-ta má ugula kikkín-na-ke₄-ne KA-sahar-šè gíd-da (Istanbul 2319:1–4).
 2 days: ud 2-šè (from Esagdana) KA-sahar-šè má kuš gíd-da (Istanbul 2916: 5–6).
 2⁷ days: [ud 2⁷]-šè [Ê-te-na]-ta [KA]-sahar-šè [má¹] gíd-da (Istanbul 3171: 12–13).

12. From Kasahar downstream to Umma and other Umma sites.

- 2 days: ud 2-šè ka íd<-KA>-sahar-ka-ta kar Umma^{ki}-šè má 'dirig'¹-ga (SNAT 495:10–11).
 2 days: ud 2<-šè> (from KA-sahar) tir Íd-gal-la<-šè> má dirig-ga (Nikolski 2 119:21).
 2 days: ud 2-šè KA-sahar-ta tir Šu-na-mu-gi₄-šè má dirig-ga (Nikolski 2 119:10–11).
 2 days: ud 2-šè KA-sahar-ra-ta kar Umma^{ki}-šè má dirig-ga (Istanbul 894: 5–6).
 2 days: KA-sahar-ta kar Umma^{ki}-šè ud 2-šè má dirig-ga (Istanbul 2319: 5–7).
 2 days: [ud] 2-šè KA-sahar-ta [k]ar Umma^{ki}-šè má dirig-ga (Istanbul 3171: 14–15).
 3 days: ud 3-šè KA-sahar-ta kar Umma^{ki}-šè má 'dirig-ga'¹ (ASJ 9, 314 no. 2: 13–14).
 3 days: ud 3-šè (from KA-sahar) Umma^{ki}-šè má sug₄ dirig-ga (MVN 14 520:8–9).
 3 days: ud 3-šè (from KA-sahar) Umma^{ki}-šè má dirig-ga (SACT 2 90:7–8).
 3 days: ud 3-šè (from KA-sahar) Umma^{ki}-šè má dirig-ga (Istanbul 2916:7–8).

13. From Nippur, first upstream (to Kasahar), then downstream to Umma and other Umma sites.

- 3 days: ud 2+[1-š]è (from Nippur to Nin₁₀-nu-dù) má sug₄ gíd-da dirig-ga (ASJ 9, p. 244 no. 20:5).
 3 days: ud 3-šè (from Nippur to Nin₁₀-nu-dù) má sug₄ gíd-da dirig-ga (ASJ 9, 244 no. 20:15).
 4 days: ud 4-šè (from Nippur to Umma) má gur-ra (Sigrist Yale 818:8).
 5 days: ud 5-šè má ésir Nibru^{ki}-ta Umma^{ki}-šè gíd-da (Istanbul 785:4–6).
 5 days: ud 5-šè šag₄ Nibru^{ki}-ta kar Umma^{ki}-šè má hun-gá íb-gíd (Sigrist Syracuse 109:1–5).
 8 days: ud 8-šè má hun-gá Nibru^{ki}-ta Umma^{ki}-šè gíd-da (Touzalin, 173 M 4021:1–3).

14. From Esagdana, first upstream (to Kasahar), then downstream to Umma.

- 2 days: ud 2-šè Ê-te-na-ta Umma^{ki}-šè má gíd-da má dirig-ga (SNAT 460: 7–9). The same text gives also a very short time for the incoming trip.

- 3 days: ud 3-šè (from Esagdana to kar Umma) má gu[r-ra] (Sigrist Princeton 349:8).
- 4 days: ud 4-šè É-te-na-ta Umma^{ki}-šè má gid-da má dirig^l-ga (Istanbul 519:7–9).
- 4 days: ud 4-šè (from Esagdana to kar Umma) má gur-ra (ASJ 8, 306 no. 1:7).
- 5 days: ud 5-šè má gur-ra (from Esagdana) kar Umma^{ki}-šè (Istanbul 1803:8–9).
- 5 days: ud 5-šè É-te-na-ta kar Umma^{ki}-šè má gid-da má dirig-ga (Nikolski 2 107:11–12).
- 5 days: ud 5-šè É-te-na-ta Umma^{ki}-šè má gid-da ù má dirig-ga (MCS 4, 9 105561).
- 5 days: ud 5-šè (from Esagdana to kar Umma) má gur-ra (MCS 4, 9 105416).
- 5 days: ud 5-šè (from Esagdana to kar Umma) má gur-ra (Istanbul 3378:8).
- 7 days: ud 7-šè É-te-n[a]-ta Umma^{ki}-šè má sug₄ gur-ra (Istanbul 2601:7–8).

15. Round trips from Umma to Nippur (via Kasahar).

- 10 days: ud 10-šè Umma^{ki}-ta má ku₆ nisig-ga Nibru^{ki}-šè^l gid-da ù má gú-ra (Struve, IRAIMK 2, no. 4:1–5).
- 12 days: ud 12-šè má zid munu₄ Nibru^{ki}-šè gid-da ù Umma^{ki}-šè gur-ra (Sigrist Yale 1155:1–3).
- 12 days: 14 guruš ad-ku₁₀ ud 12-šè Umma^{ki}-ta Nibru^{ki}-šè (Sigrist Yale 133:4–6).
- 14 days: ud 14-šè (from Umma to Nippur) má gid-da má dirig-ga ud 2-šè má ba-al-la Nibru^{ki} (AuOr. Suppl. 5, 199 7.8:2–5).
- 14 days: ud 14-šè (from Umma) [Nib]ru^{ki}-šè má-lá-a ib-gid (MVN 18 552:1–2).
- 14 days: ud 14-šè má gid-da ud 2-šè zid ba-la-a zid še bala-a (from Umma) Nibru^{ki}-šè (MVN 13 292:3–7).
- 15 days: ud 15-šè kar Umma^{ki}-ta má-lá-a gi gid-da Nibru^{ki}-ta Umma^{ki}-šè> má gur-ra (Oxford 1924-683:3–8).
- 15 days: ud 15-šè (from Umma?) Nibru^{ki}-šè> má še gid-da (Sigrist Yale 99:1–2).
- 15 days: ud 15-šè má dabin-da (from Umma?) Nibru^{ki}-šè gid-da (Sigrist Yale 149:1–4).
- 15 days: ud 15-šè má 'x x x^l gid-da Umma^{ki}-ta Nibru^{ki}-šè (Touzalin, 163 M 3590: 2–5).
- 20 days: ud 20-šè (from Umma?) Nibru^{ki}-šè [má ...] gid-da (Istanbul 2941: 1–3).

16. Round trips from Umma to Esagdana (via Kasahar).

- 10 days: ud 10-šè má gid-da Umma^{ki}-ta É-da-na-šè (Orient 16, 66 no. 87:3–5).
- 12 days: 4 guruš ašgab ud 12-šè [U]mma^{ki}-ta É-te-na-šè [má] gid-da ù má kuš gur-ra [kuš] é-gal-la ku₄-ra (Istanbul 2396:1–4).
- 12 days: [x] guruš ašgab [U]mma^{ki}-ta É-te-na-šè [má] gid-da gur-ra kuš é-gal-la^l ku₄-ra (Istanbul 2396:7–9).
- 13 days: ud 13-šè Umma^{ki}-ta É-te-na^{ki}-šè má ninda gid-da (Sigrist Syracuse 128:5–6).

14 days: ud 14-šè [má gid-da] má dirig-ga ud 3-šè má ba-al-la Ka-id-da-ta É-da-na-šè (Sigrist Yale 881:3–7).

14 days: ud 14-šè má gid-da Ka-id-da Umma^{ki}-ta É-da-na-šè (Sigrist Syracuse 95:3–7).

15 days: ud 15-šè Umma^{ki}-ta É-te-na-šè má še nag lugal-ka gid-da má ba-al-la ù má sug₄ gur-ra (Istanbul 1827:1–7).

17. A round trip from Umma (to Nippur/Esagdana) via Kasahar.

13 days: ud 13-šè kar-ta á KA-sahar-ra-ta má gid-da má ba-al-la ù Umma^{ki}-šè má sug₄ gur-ra (ASJ 8, 68–69 iii 7).

18. Round trips from various Umma sites to Nippur (via Kasahar).

9 days: ud 9-šè (from [dNin]-ildum?) Nibru^{ki}-šè má gid-da ù má gur-ra (Sigrist Yale 411:6–9).

10 days: ud 10-šè Me-en-kár-ta Nibru^{ki}-šè má gid-da má ba-al-la guru₇-a im ùr-ra ù má gur-ra (ASJ 8, 68–69 iii 14).

10 days: ud 10-šè Kam-sal₄-la^{ki}-ta Nibru^{ki}-šè má gid-da má ba-al-la guru₇-a im ùr-ra ù Umma^{ki}-šè má gur-ra (ASJ 8, 68–69 iv 14–v 1).

12 days: ud 12-šè má zíd-da NAG-su^{ki}-ta Nibru^{ki}-šè zíd si-ga má gid-[d]a ù má ba-al-la (Istanbul 1001:2–6).

14 days: ud 14-šè gá-nun É-lugal-ta' KA(!)-sahar-ra-šè má gid-da ù Nibru^{ki}-šè dirig-ga (Nikolski 2 119:4–6).

15 days: ud 15-šè tir Šu-na-mu-gi₄-ta Nibru^{ki}-šè má gid-da (Nikolski 2 119:15–16).

16 days: ud 16-šè tir Íd-gal-ta Nibru^{ki}-šè má-lá-a gid-da (Nikolski 2 119:24–25).

19 days: [2] má 60.0.0 gur 0.0.2-ta má-lah₄-bi i-ib-ù ud 20 lá 1-šè še-bi 2.2.4 gur Zabalam^{ki}-ta Nibru^{ki}-šè giš ba-a-gar gir Ur-sila-luh (Oxford 1911-171:1–7).

20 days: ud' 20'-šè A-pi₄-sal₄^{ki}-ta Nibru^{ki}-šè má i ga gid-da ù má gur-r[a] (Limet Ur III Brussels 53:6–8).

22 days: ud 22-šè ... A-pi₄-sal₄^{ki}-ta Nibru^{ki}-šè (RA 25, 20–21 v 21–22).

26 days: ud 26-šè A-pi₄-sal₄^{ki}-ta Nibru^{ki}-šè má gid-da (Sigrist Princeton 360:2–5).

19. Round trips from various Umma sites to Esagdana (via Kasahar).

11 days: ud 11-šè Zàr-bàd-ta É-te-na-šè má gid-da ù gur-ra (Sigrist Princeton 373:3–5).

13 days: gá-nun É-lugal-ta (to Esagdana) ud 13-šè má gid-da má dirig-ga (Szlechter TJA pl. 61 IOS 36:2–3). The total number of days spent on this trip was apparently 14, since the text lists separately 1 day of towing-time from Esagdana to Nippur. See p. 62 and n. 165 for a full edition and discussion.

13 days: ud 13-šè gá-nun É-lugal-ta Nibru^{ki}-[šè] má gid-da ù má sug₄ gur-ra (Sigrist Yale 1589:4–6).

13 days: ud 13-šè GAR-ša-na-ka^{ki}-ta É-te-na-šè má gid-da (Sigrist Yale 895:5–8).

- 14 days: ud 14-šè má gíd-da má dirig¹-ga ud 2-šè má ba-al-la gá-nun gaba É-lugal<-ta> gá-nun É-te-na<-šè> má íb-gíd (Touzalín, 175 M 4200:3–8).
- 14 days: ud 14-šè gá-nun En-gaba-rá-ta É-te-na-šè má-lá gíd-da (AuOr. Suppl. 5, 198 7.2:3–6).
- 15 days: ud 15-šè kun-zi-da Maš-gán^{ki}<-ta> É-da-na-šè má gíd-da má gur-ra (Sigrist Yale 2221:12–15).
- 16 days: gá-nun gaba É-lugal-ka-ta É-sag-te-na-šè ud 16-šè má gíd-da ù gur-ra-a (Istanbul 2212:3–7).
- 16 days: ud 15-šè má gíd-da má dirig-ga ud 2-šè ba-al-la ud 2-šè še bala-a ud 1-šè im-ùlu-da da-a Ki-sur-ra-ta É-da-na-šè á KA-sahar-ra-ta (SACT 2 89:3–10). The 16 days include 1 day of sailing.
- 17 days: ud 17-šè gá-nun En-gaba-rá-ta É-sag-te-n[a-šè] má-lá-a íb-g[íd] (MVN 13 289:1–4).
- 17 days: ud 17-šè (En-gaba-rá-ta É-sag-te-na-šè) má-lá-a íb-gíd (MVN 13 289:8–9).
- 17 days: ud 17-šè má-lá-[a g]íd-da a-šag₄ E[n-g]aba-rá-ta É-sag-da-na-šè (Sigrist Syracuse 256:1–4).
- 17 days: ud 17-šè A-ba-gal-ta É-sag-te-n[a]-šè má-lá-a íb-gíd (Oberhuber Florenz 32:1–5).
- 20 days: A-pi₄-sal₄^{ki}-ta É-sag-da-na-šè má gíd-da ù má kuš gur-ra ... ud 5-šè zíd má-a ba-al-la ù zíd bala-a šag₄ Nibru^{ki} (Sigrist Syracuse 147:3–9).
- 23 days: ud 20 lá 1-šè má gíd-da má dirig-ga ud 4-šè má bala-ak šag₄ íd-Idigna ... A-pi₄-sal₄^{ki}-ta gá-nun É-te-na ku₄-ra (BIN 5 242:4–13). The 23 days include the 4 days spent on the má bala-ak operation.
- 23 or 24 days: ud 20-šè<A->pi₄-sal₄^{ki}-ta É-sag-da-na-šè má gíd-da ud 5-šè zíd bala-a ù má kuš gur-ra (VO 8, pl. III no. 15:3–7).

20. Trips from Umma and various Umma sites to Esagdana via Uruk (upstream on the Tigris to the takeoff of the Iturungal, downstream on the Iturungal to Uruk, and upstream on the Euphrates to Esagdana).

One-way-trip:

- 8 days: ud 8-šè á Unug^{ki}-ta má gíd-da ù má dirig-ga ... Umma^{ki}-ta É-te-na-šè (MVM 21 199 rev. iii 38–42 = Salesianum 4, 197 no. 9:7–11).

Round trips:

- 14 days: ud 14-šè má gíd-da má dirig-ga ... ud 15-šè má gíd-da má dirig-ga tir Zár-bád-ta á Unug^{ki}-ta É-te-na-šè (MVN 21 199 vi 28–37).
- 15 days: ud 15-šè má gíd-da má dirig-ga ... gá-nun gaba kar-ra-ta á Unug^{ki}-ta gá-nun Sag-te-na ku₄-ra (MVN 21 199 rev. iv 4–8).
- 18 days: ud 18-šè Umma^{ki}-ta É-te-na-šè má gíd-da má gur-ra á Unug^{ki}-ta (Syracuse 6:7–10).

21. A trip from Umma upstream (and then downstream on the Tigris) to Ur, (then upstream on the Euphrates) to Kasahar, and downstream (on the Tigris) to Umma.
- 25 days: ud 25-šè Umma^{ki}-ta Úrim^{ki}-šè má gud udu gíd-da Úrim^{ki}-ta KA-sahar(-ra)-šè má gíd-da ù Umma^{ki}-šè má dirig-ga (Sauren New York Library 111:1–8; Nikolski 2 116:1–6).

22. A trip from Ur (upstream on the Euphrates) to Nippur, (then upstream to Kasahar), and (downstream on the Tigris) to Apišal.

23 days: ud 23-še Ûrim^{ki}-ta Nibru^{ki}-še má zíd-da gid-da má ba-al-la zíd ág-gá ù má sug₄ A-pi₄-sal₄^{ki}-še gur-ra (Istanbul 2745:1–6).

23. A trip from Girsu (upstream on the Tigris) to Zabalam, (then via Kasahar) to Nippur.

20 days: ud 20-[še] má zíd-da Gír-su^{ki}-ta Zabalam^{ki}-še Zabalam^{ki}-ta Nibru^{ki}-še gid-da (ITT 5 6983:1–5).

B. Traffic via Kasahar involving sites outside of the Umma province.

1. A round trip from Girsu to Nippur: upstream (on the Tigris to Kasahar), turning at Kasahar, (then downstream) to Nippur, unloding the boat (in Nippur), upstream (to Kasahar, downstream on the Tigris) to Girsu.

20 days: ud 20-še má še Šu-^dSuen (from Girsu) Nibru^{ki}-še gid-da KA-sahar-ta nigin-na má ba-al-la Gír-su^{ki}-še gid-da (ITT 5 8239:1–6).

2. A trip from Kasahar (to Nippur, downstream on the Euphrates) to Ur.

8 days: ud 8-še KA-sahar-ra-ta Ûrim^{ki}-še má dirig-ga (Istanbul 2485:4–6).

3. A trip from Ur (upstream on the Euphrates to Nippur) to Kasahar.

9 days: ud 10 lá 1-še Ûrim^{ki}-ta KA-sahar-ra-še má níg dirig gid-da (Istanbul 894:1–4).

4. A trip from Enki (a GN) to the outlet of the Kasahar canal.

1⁷ day: gúrum(IGI.ÉREN)-ak 1 má gid-da ^dEn-ki-ta kun <íd->KA-sahar ud 1-kam-ka-še (BIN 5 234:11–14). “1 day” is probably not the real time. Does ^dEn.ki stand here for Eridu?

C. Traffic from Esagdana to sites outside the Umma province.

1. A trip from Esagdana (downstream on the Euphrates) to Unug.

8 days: 1 má 20.0.0 gur 0.0.2-ta ud 1-kam u[d 8-še še]-bi 0.2.4 zíd [x] ù ^{giš}ma-nu Sag-da-na-ta Unug^{ki}-še de₆-a (TIM 6 25:1–6).

2. A trip from Esagdana to Šulgi-hegal.

No time given: 1.4.0 še gur á má hun-gá Sag-da-na-ta udu¹ ^dŠul-gi-hé-gál^{ki}-še¹ sabra ù-a ù-na-a-du₄-ta (Nesbit Drehem 22:1–5).

3. A trip from Esagdana to Kiri-geštin to Umma.

21 days: ud 11-še Á-te-na-ta ^{giš}Kiri₆-geštin¹(transliteration: giš-ḥar)-še má gid-da ... ud 10-še má dirig-ga ... <ud->3-še ka id-Umma^{ki}-ka má ba-al-la (Istanbul 1615:1–10). For Kiri-geštin, see Appendix E.3.

D. Traffic to Tummal.

1. Trips from Umma (via Kasahar) to Tummal.

- 6 days: ud 6-šè kun íd-da Umma^{ki}-ta KA-sahar-ta má nigin-na Tum-im-ma^{ki}-šè má gíd-da (SACT 2 75:4–8).
- 6 days: ud 6-šè má Lugal-e-šim kar Umma^{ki}-ta KA-sahar-ta má dirig Tum-immal^{ki}-šè má gíd-da, “towed a boat to Tummal, floating it via Kasahar”; ud 4-šè gi še-ta sa₁₀-a Lú-^dNin-ur₄-[r]a gú Buranun-ta gá-nun-šè íl-gá (Istanbul 360:1–10).
- 8 days: ^rud 8¹-šè [U]mma^{ki}-ta Tum-immal-^{ki}-šè má gíd-da (Istanbul 2680:1–4).
- 10 days: ud 10-šè Umma^{ki}-t[a] ka íd-T[um]-immal^{ki}-ka-šè má ^{giš}šinig ^{giš}eren[?] im-gíd (MVN 15 390 xxiii 19–23).
- 10 days: ud 10-šè Umma^{ki}-[ta] ka íd-[Tum]-immal^{ki}-ka-šè má ^{giš}1x [giš]al ^{giš}1l im-gíd (MVN 15 390 xxiii 26–30).
- 10 days: ud 10-šè (from Umma) é gibil d[ù]-dè[?] ka íd-[Tum]-immal^{ki}-ka-šè má ésir-hád im-[g]íd gú Idigna-ta im-í[l] (MVN 15 390 xxiii 32–36).
- 14 days: ud 14-šè kar Umma^{ki}-ta é-anše Tum-immal^{ki}-šè má gíd-da má dirig-ga ud 5-šè é-anše-ka gi dù-a ùr-ba a gá-ra ù é-zíd-da-ke₄ šu dug₄-dug₄-ga ud 5(-šè) má ba-al-la ù zíd¹ bala-a (MVN 15 94 iii 15–iv 2).
- 15 days: ud 10 lá 1-šè má níg kar Umma^{ki}-ta kar-anše Tum-immal^{ki}-šè má gíd-da ud 5-šè níg ba-^ral¹-la šag₄ ka íd-Tum-immal^{ki}-šè ud 3-šè má sug₄ gíd-da ud 3-šè má sug₄ dirig¹-ga (Istanbul 767:1–10).

2. Trips from various Umma sites (via Kasahar) to Tummal.

- 4 days: [ud] 4-šè [A-šag₄]-lá-mah-ta [T]um-immal^{ki}-šè [k]u₆ íl-la (MVN 18 520:1'–4').
- 10 days: ud 10-šè [k]a[?] A-šag₄-x-ta [ka] íd-Tum-[im]ma^{ki}-ka-šè [má] giš[?]-ka[?]-[x]-ka[?] [i]m-gíd (MVN 15 390 xxii 61–65).
- 12 days: ud 12-šè A-šag₄-^dŠára-ta ka íd-Tum-immal-ka-šè má in-u-da im-gíd (MVN 15 390 xxiii 2–5).
- 12 days: ud 12-šè A-šag₄-^dŠára-ta ka íd-Tum-immal^{ki}-ka-šè má in-u-da im-gíd (MVN 15 390 xxiii 7–10).
- 13 days: ud 13-šè tir Íd-dul₉-la^{ki}-ta ka íd-Tum-immal^{ki}-k[a-šè] ^rmá dirig[?] [im-gíd] (MVN 15 390 xxii 48–51).
- 14 days: ud 14-šè Íd-sal₄-la-ta ka íd-Tum-immal^{ki}-ka-šè má in-u-da im-gíd (MVN 15 390 xxiii 13–16).
- x days: 54 guruš ud 1-šè En-gaba-rá-ta Tum-immal^{ki}-šè má-lá-a gi gíd-da (Istanbul 819:1–3). “1 day” is not the real time; “54 guruš” clearly represents man-days.
- x days: ud [x]-šè [A]-pi₄-s[al₄]^rki¹-[ta] ka íd-Tum-immal^{ki}-ka-šè má in-u-da im-gíd (MVN 15 390 xxii 67–70).

3. A round trip from Tummal to Uruk.

- 5 days: 20 lá 1 guruš ud 2-šè má-lá ak ud 2-šè Unug^{ki}-šè má dirig-ga ^rud¹ [x]+2-šè Unug^{ki}-ta má ba-al-la ud 3-šè Unug^{ki}-ta Tum-immal^{ki}-šè má gur-ra (Istanbul 1911:1–7).

4. A trip from Esagdana to Uruk and from Uruk to Tummal.

6 days: ud 2-šè É-da-na-ta Unug^{ki}-šè má dirig-ga ud 2-šè má ba-al-la ud 4-šè Unug^{ki}-ta ka id-Tum-immal^{ki}-šè má sug₄ gur-ra (Sigrist Yale 2223:3–12).

5. Trips from Tummal to Nippur.

2 days: 1 má ... ud 2-šè ... 'kun' id-Tum-immal-ta Nibru^{ki}-šè) nig gún-na 'bala' ba-a-[ga]r (Istanbul 3172:18–23).

2^d days: 1 má ... 'ud 2ⁿⁱ-šè kun id-Tum-immal^{ki}-ta Nibru^{ki}-šè má bala-ak (Istanbul 3410 rev. 3'–6').

E. Traffic to various Tigridian sites situated north of the Umma province and south of Kasahar.

1. Ašgipada.

ud 2-šè má gid-da ud 1-šè má ba-al-la ud 2-šè má dirig-ga a-rá l-kam é-gá-nun NAG-su^{ki}-ta (to Ašgipada) ... ud 3-šè má gid-da ud 1-šè má ba-al-la ud 2-šè má dirig-ga é-gá-nun gaba kar-ta é-gá-nun ka id-da 'A-aš'-gi₄-pád-da-šè (Oxford 1924-665 viii 13–24).

ud 4-šè kar Umma^{ki}-ta A-aš-gi₄-pád-da-aš má énsi-ka gid-da (AuOr. Suppl. 5, 199 7.11:1–4).

ud 5-šè Umma^{ki}-ta Aš-gi₄-pád-da Diš-gá-aš-TAR-ta' má udu-niga má gi-zi gid-da ù gur-ra (Istanbul 3102:1–6).

ud 10-šè Íd-sal₄-la-ta še má-a si-ga A-aš-ki-pád-šè má ba-al-la [m]á gur-ra (Istanbul 1358:1–6).

ud 1-šè A-aš-gi₄-pád-da-ta Giš-^{kuš}ummud-šè gi íl-gá (Oxford 1924-665 ii 21–iii 1).

2. Gišummud.

ud 4-šè má gid-a (sic) ud-2-šè má ba-al-la ud 1-šè má dirig-ga gá-nun 'gaba' kar-ta Giš-^{kuš}ummud-šè (Istanbul 1907:3–7).

ud 4-šè Ka-id-da-ta Giš-^{kuš}ummud-šè má gid-da (Istanbul 3392:3–4).

NAG-su^{ki}-ta Giš-^{kuš}ummud-šè ud 3-šè má gid-da ud 3-šè Adab^{ki} im-mir-da má da-a ud 2-šè má ba-al-la ud 1-šè gá-nun dù-a (MVN 15 94 iii 8–13).

ud '3ⁿⁱ-šè má gid-da ud '2ⁿⁱ-šè má ba-[al]-la ud '1ⁿⁱ-šè má dirig-ga Giš-^{kuš}ummud¹-ta NAG-su^{ki}-šè (OrSP 47–49 354:5–9).

ud 3-šè gú Íd-idigna-ta gá-nun Giš-^{kuš}ummud-a-ka-šè gi íl-gá (MCS 3, 87 105534:1–4).

ud 4-šè zíd má-a si-ga ud 1-šè Giš-^{kuš}ummud-da-ta É-te-ne-ta(sic) má gid-da ud 2-šè má ba-al-la (Sigrist Yale 962:1–6).

ud 4-šè zíd má-a si-ga Giš-^{kuš}ummud-da-ta ud 2-šè É-te-na-šè má gid-da (Istanbul 2327:1–5).

ud 1-šè A-aš-gi₄-pád-da-ta Giš-^{kuš}ummud-šè gi íl-gá (Oxford 1924-665 ii 21–iii 1).

Cf. wood Giš-^{kuš}ummud-ta (MVN 10 230 viii 8–10); wood gá-nun Giš-^{kuš}ummud ku₄-ra (MVN 10 230 ix 4–11); wood gá-nun¹(GÁ) Giš-^{kuš}ummud ku₄-ra (BRM 3 138:9–10).

3. Urusagrig.

4 guruš ud 4-še kar Umma^{ki}-ta Uru-sag-rig^{ki}-še má gíd-da ud 1-še Uru-sag-rig^{ki}-ga še má-a si-ga ud 1-še Uru-sag-rig^{ki}-ta Urin^l-dù-a-aš má dirig-ga ud 1-še še bala-a ud 8-še še il-gá ud 2-še kun-zi-da ^dAmar-^dSuen-ni-tum-ma-ta Uru-sag-rig^{ki}-še má gíd-da má bala-ak ud 2-še Uru-sag-rig^{ki}-ta ka Tab-ni-Ma-ma-še má gíd-da ud 2-še má dirig-ga (TCL 5 5676 x 11–18; ŠS 2/-).

[4] guruš ud 4-še kar Umma^{ki}-ta Uru-sag-rig^{ki}-še má gíd-da ud 1-še še má-a si-ga Uru-sag-rig^{ki}-ta ud 2-še kun-zi-da ^{gis}Kiri₆-geštin-še má gíd-da ud 4+[4]-še É-duru₅-urin^l-dù-a še bala-a k[un-z]i-da id-^dAmar-^dSuen^l-ni-tum-še še il-gá kun-zi^l-da id-^d[Amar]-^dSue[n]-ni-tum-ta ^lud 2-še Uru^l-sag-ri[g^{ki}]-še m[á] gíd-da ù má bala-ak [ud 2-še] Uru-sag-ri[g^{ki}]-ta ka Da-mi-[Ma]-ma-še má gíd-da ^lud 2-še Umma^{ki}-še má dirig-ga (Istanbul 2896:1–18; ŠS 2/-).

[4 guruš] ud 4-še [kar Umma^{ki}]-ta U[ru-sag-ri]g^{ki}-še má gíd-da [ud] 1-še še bala-a ù še má-a si-ga [Ur]u-sag-rig^{ki}-ta [ud] 2-še kun-zi-da Kiri₆-geštin-še má gíd-da ud 1-še É-duru₅-urin^l-dù-a-ka še bala-a ud 7-še É-duru₅-urin^l-dù-a-ta kun-zi-da id-^dAmar-^dSuen-ni-tum-še še il-gá kun-zi-da id-^dAmar-^dSuen-ni-tum-ta ud 2-še Uru-sag-rig^{ki}-še má gíd-da ù bala-ak ud 2-še Uru-sag-rig^{ki}-ta ka Da-mi-Ma-ma-še má gíd-da ud 2-še Umma^{ki}-še m[ā] dirig-ga^l(DA) (SNAT 459:1–18; ŠS 2/-).

4 guruš ud 4-še kar Umma^{ki}-ta Uru-sag-rig^{ki}-še má gíd-da ud 1-še še má-a si-ga Uru-sag-rig^{ki}-ta ud 2-še kun-zi-da ^{gis}Kiri₆-geštin-še má dirig-ga ud 8-še É-duru₅-urin^l-dù-a-ta kun-zi-da id-^dAmar-^dSuen-ni-tum-še še il-gá kun-zi-da ^lid-^dAmar-^dSuen-ni-tum-ma-ta ud 2-še Uru-sag-rig^{ki}-še má gíd-da ù má bala-ak ud 2-še Uru-sag-rig^{ki}-ta ka Da-mi-Ma-ma-še má gíd-da ud 2-še Umma^l^{ki}-še^l má dirig-ga (Istanbul 3455:1–19; ŠS 2/xii).

Cf. gúrum(IGI.ÉREN)-ak má gíd-da má bala-ak ka Tab-ne-Ma-ma Pa₄. ^lSA².UKKIN²)-še ud 1-kam (Watson Birmingham 2 45:12–13; undated). For Amar-Suenītum, cf. šag₄ ^dAmar-^dSuen^l-ni-tum (Oxford 1924-665 viii 10). For Kiri-geštin, cf. a-šag₄ ^{gis}Kiri₆-geštin-na (UET 3 1364:22, 1371:5), šag₄ ^{gis}Kiri₆-geštin-na (UET 3 1371:14), and Appendix C.3. For Eduru-urindua, cf. a-šag₄ Urin^l-dù-a (UET 3 1364:6).

Addenda

Save for a couple of truly important occurrences, which were added to the article's proofs, N. V. Koslova's Neusumerische Verwaltungstexte aus Umma aus der Sammlung der *Ermitage* zu St. Petersburg – Russland, MVN 21 (Rome 2000), appeared too late to be digested systematically.

A nice corroboration of the suggested identifications and locations of Esagdana and TumTUR is provided by the Umma tablet YBC 14640:1–9 (unpubl., courtesy of M. Sigrist, collated), which records the following boat trip: 10 guruš ud 1-še Tum-im-mal^{ki}-ta É-te-na-še má gíd-da ud 2-še má ba-al-la ud 4-še [KA]-sahar-ra-še má gíd-da [(ù) KA-sa]har-ra-ta [Um]ma^{ki}-še má dirig-ga, “10 men for 1 day towing the boat upstream (on the Euphrates) from Tummal to Esagdana, for 2 days unloading the boat (in Esagdana), for 4 days towing the boat upstream to Kasahar (and then) floating it down (on the Tigris) from Kasahar to Umma.”