

Worcester Slaughterhouse Account

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§1. The text published in this note (for images and full transliteration, see the CDLI entry <http://cdli.ucla.edu/texts/P218067.html>) was brought to my attention by Jordan Love, Curatorial Assistant at the Worcester Art Museum <<http://www.worcesterart.org>> in Worcester, MA. Ms. Love exhibited great patience in dealing with my several requests for better images of the substantial tablet; despite the very fine photos I did receive from the WAM, there remain some few obscurities in the interpretation of the text, which I must put to my account and not to the efforts of the museum. Nonetheless, the text seems now sufficiently clear as to warrant its publication in the pages of the *CDLB* rather than waiting for a collation trip that is likely to result in an only modest improvement of the transliteration. Eventual collation improvements will be entered into the corresponding entry in the pages of the Cuneiform Digital Library Initiative, and reference in the following to transliteration or image of the text is based on the CDLI entry.

§2. The tablet entered the Worcester collection in 2000 under the account number 2000.47, as a gift of Dr. Sidney and Mrs. Carol Smith. Dr. Smith's grandfather is reported to have purchased it from a dealer in Egypt. The Umma account measures 167 × 98 × 25 mm (H×W×T) and dates to the fifth year of the third Ur III dynasty king Amar-Suen (thus ca. 2040 B.C. according to the standard middle chronology). During one of his many study sessions at Yale, Marcel Sigrist was queried about the text by the Worcester curators, and made a correct preliminary judgment of its contents, namely, that it represented an account of cattle hides.

The account

§3. More specifically, the tablet contains a yearly account of the apparent deliveries of slaughtered cattle (oxen, cows and calves, but including the hide of one equid) by relatively well-known cowherds (Sumerian

unu₃(d)) from two temple households within the province of Umma—in fact, the account aroused my immediate interest since it recorded a number of the same herders of milk cows that I had considered in an earlier publication (“Regulating Dairy Productivity in the Ur III Period,” *OrNS* 64 [1995] 377-429) and that had in the meantime been the subject of a more detailed study by M. Stepien (*Animal Husbandry in the Ancient Near East* [Bethesda 1996], in particular pp. 54-62). The products delivered by these herders in WAM 2000.47 included the carcasses of slaughtered cattle and variously processed hides and other slaughter byproducts. Since the deliveries, according to the text colophon, took place in Apisal (rev. iv 33ff.: sa kuš mu-DU / ša₃ a-pi₄-sal₄ki; reading of the city: A. Bongenaar et al., *JEOL* 33 [1993-1994] 120, and P. Steinkeller, *ZA* 91 [2001] 54 + n. 127, who locates the settlement ca. 30 km from Umma/Djokha, possibly identical with modern Muhallaqiya), it would be reasonable to assume that this city was the center within the Umma province at least for the processing of secondary products from the slaughterhouses, if not for cattle husbandry generally.

§4. The account may be divided into three sections, each containing the records of at least several individual herders. Section one, from obv. i 1 through rev. i 31, describes the deliveries (and delivery arrears) of herders connected to the temple household of the tutelary god of Umma, Šara; section two, from rev. i 32 through rev. iii 1, those of herders connected to the household of the goddess Nin-ura (further qualified rev. iii 2 as nam-en-na, “lordship”, referring either to a quality of the animals, or, as M. van de Mierop has argued, *BSA* 7, 168, describing herds supervised for the “lord”, in our case presumably the ensi₂ of Umma); the third and final section contains the records of “varia” deliveries by the chief cattle supervisor (šuš₃) of the Šara household, Atu (rev. iii 3 through 23), and by another cattle supervisor

KAŠ₄ (rev. iii 24 through 36; this is the agent whose “official seal” [nam-ša₃-tam] bore the name en-KAŠ₄), acting for two cowherds (rev. iii 24 through 31, their cattle evidently qualified as gu₄-DU.DU/LAH₅), and a donkey herder (rev. iii 32 through 35; the sipa anše Ur-Šara is attested in *Aleppo* 407 together with the unu₃ Aba-gina of VAM 2000.47 rev. iii 30, transferring gu₄ anše DU.DU for KAŠ₄, cp. also *TCS* 164) with the hide of an aged female equid (ŠU.ANŠE.MUNUS = šu[-gi₄] eme₆, cp. *AAICAB* 1, pl. 30, Ashm. 1911-213, *Berens* 56, and *UET* 3, 1254-1255, fed to dogs; equid’s hides are not uncommon in the Ur III accounting record, usually booked as kuš [anše] dusu₂ [nita₂/munus, dusu₂ = ANŠE.LIBIR], of which *JCS* 35, 184, no. 2 [Amar-Suen 3 iv] obv. 6, appears to record, with 240, the largest attested number of donkey hides). The records of all three sections are totaled in the final column of the text, dividing subtotals into carcasses and the slaughter byproducts hides, tendons, tails and horns. Hides are further distinguished according to their apparent method or state of tanning, and the age of the slaughtered animals, but not their gender, which is otherwise distinguished in the individual records of the account (gu₄, “ox”, vs. ab₂, “cow”). The equid hide is noted separately.

§5. This account also distinguishes in its summations those animal carcasses that were qualified as having been fed to female weavers (ad₇ gu₄ geme₂ uš-bar-e gu₇-a) via the agent Lugal-inim-gina (comprising 58 of the 86 carcasses recorded in this text); the hides and tendons received by Kugani (kišib ku₃-ga-ni, probably the son of Ur-šulpa'e, the Umma šabra official during the reigns of Amar-Suen and Šu-Sin), and those products described as arrears (la₂-ia₃). These arrears appear to be related to the expectations of receiving agents that full animals enter their books *en bloc*, that is, that the delivery of a hide should be accompanied by the other pieces (carcass, tendons, horns, tail). For instance, when some herder delivers five carcasses but only four tails, the missing tail will generally be recorded as a debt owed the receiving agent. I have, however, been unable to locate a strict numerical relationship between the various items (see below for the sub-account of one of the herders, Ur-e'e).

§6. Without being fully informed on the organization and administration of this end of Ur III animal husbandry, I would hazard the opinion that the records of each of the individual herders themselves represent partial accounts of the herds each man supervised for his state-controlled household, and that the processed

animals constituted perhaps a tenth of their full herds. For instance, the subsection rev. ii 8-24 records the deliveries of the herder Ur-e'e:

10. 1 hide, “beaten” ox, tanned;
1 hide, “beaten” ox in second year, tanned;
2 hides, calves, not tanned;
1 hide, “beaten” calf, tanned;
1 hide, “šu EB” ox, tanned;
1 carcass, ox;
tendons of 4 oxen;
15. 2 tails, oxen;
delivery.
2 carcasses, oxen, eaten by the female weavers;
via Lugal-inim-gina.
Deficit: 2 carcasses, oxen;
20. 3 tails, oxen;
horns of 5 oxen;
tendons of 1 ox;
these are the deficit.
Ur-e'e cowherd.

§7. Ur-e'e accordingly delivered the remains of six animals, of which for unclear reasons one was not calculated into the expectations of other slaughter byproducts. The subsection records the real delivery of (one+two=) three carcasses, and a deficit posting of two; the real delivery of the tendons of four animals, a deficit of one; the delivery of two tails, a deficit of three; and finally the horns of no animals were delivered in this year, resulting in a deficit of the horns of five animals (this seems, again, irregular given the three recorded juvenile animals [amar] that will not have produced their first horn rings before the 10th month; we, however, do not know what the horns were used for, and indeed why the animals would not have been horned in the first two weeks after their birth when this would have been a simple procedure). This system, of course, makes very good sense, and is, to cite one of many examples, the basis for the deliveries booked in the large account *MVN* 8, 146 (dated to Šulgi 42 xii), which begins obv. i with

- 1) 26 kuš gu₄ 26 hides, oxen;
26 ad₆ gu₄ 26 carcasses, oxen;
ki ur-dba-ba₆ unu₃-ta from Ur-Baba, cowherd.
[5] kuš gu₄ [5] hides, oxen;
- 5) 5 ad₆ gu₄ 5 carcasses, oxen;
ki a-tu-ta from Atu.
20 la₂-1 kuš gu₄ 20 minus 1 hides, oxen;
20 la₂ 1 ad₆ gu₄ 20 minus 1 carcasses, oxen;
ki ur-dnun-gal-[ta] from Ur-Nungal.

etc. (the Drehem account books altogether the delivery

of 484 oxen hides and carcasses in the year Šulgi 42, while *Princeton* 1, 118, records the delivery of 941 cattle carcasses (ad₆) during the 12th month of Šulgi 44 in Drehem, reminding us of the numbers involved in that Ur III accounting center).

The persons

§8. Other sources are helpful in describing the administrative roles of the persons recorded in WAM 2000.47. For instance, the first herder Lu-Zabala was known in the Umma account *MVN* 15, 108 (*OrNS* 64, 403-429, dated to Amar-Suen 3) to have counted in his herd 83 milk cows and therefore was presumably responsible for more than two hundred animals of various ages. His delivery to craft households in Apisal of the processed hides of nineteen animals suggests that these were either slaughtered for the purpose (Sumerian ba-uš₂, “killed”), or died of other, usually unnamed causes (ri-ri-ga, “fallen”). Since the carcasses were as a rule fed to weavers, it seems likely that these were not the favored animals that would have otherwise weighed upon the tables of Umma priests. It is to be noted that

WAM 2000.47 (AS 5)
Household of Šara

Lu-Zabala	19
Lugal-ezin	4
Ur-nigar	15
Šara-kam	4
Šara-amu	10
Lugal-kuzu	13
Lugal-šunire	3
Ur-ANSida	4
Budu	1
Albanidu	4
UŠ	3
Akišar	10

§10. Since it is known from such accounts as BM 105329 (unpublished, but partially edited in Stepien, *Animal Husbandry*, 58-61; dated to Amar-Suen 7) that the three major dairying households of Ur III Umma during the Amar-Suen reign were those of Šara, Ninura and (the divine) Šulgi (note there the sequence of cowherds Lu-Zabala, Lugal-ezin, Ur-nigar, Šara-kam, Šara-amu, Lugal-šunire, [...], Ur-ANSida, [...], a nearly exact parallel of our Worcester text, thereafter poorly preserved), we can assume that WAM 2000.47 describes the “book-closing” of those animals the herders themselves processed and delivered back to state

the dairy herders themselves processed the hides of the cattle they slaughtered. I have been unable to find in the administrative corpus the records that would tell us how such work was calculated into the production norms, in particular in the deliveries of dairy fats and cheese, and in the herd growth that the cowherds were expected to achieve.

§9. A comparison of the sequence of herders listed in both accounts WAM 2000.47 and *MVN* 15, 108, makes evident the derivation of both from common personnel lists of herders and their animals that changed little through the middle years of Amar-Suen. It is then also clear that the official Atu, of whose activities the latter account ultimately reported, was responsible for the large cattle herds of the household of Šara in Umma. The following table includes the names of the cowherds from both texts in their written sequence, followed in each case by the estimated number of slaughtered animals on the one hand, by the number of recorded milk cows in the care of the herders on the other.

MVN 15, 108 (AS 3)

Lu-Zabala	83
Ur-Mami	24
Ur-nigar	61
Duge	10
Šara-amu	8
Lugal-šunire	8
Šeškala	41
Ur-ANSida	13
Guza	14
Budu	10
Albanidu	15
UŠ	17
Akišar	4

agencies, thereby receiving confirmation of the animals that would in the larger accounts be qualified ri-ri-ga (for instance, BM 105329 rev. vi' 5-6: [kilib₃]-ba 4.40 gu₄ ab₂ ħi-a / ri-ri-ga-am₃, in a grand total of animals earlier described with the same qualification together with their ages and gender; *OrSP* 47-49, 257 [Šulgi 45 xii] records explicitly rev. ii 13: ri-ri-ga sa kuš-bi, “of the fallen, their ‘tendons and hides’ [=byproducts],” recording deliveries of some of our same herders).

§11. *Buffalo SNS* 11-2 134, no. 4, although dated to the fourth month of Šu-Sin 8, that is, twelve years after

the accounting period of WAM 2000.47, documents the division into smaller herds of juvenile cattle (ab₂/gu₄ ga, “heifer/bull calf” [lit. “cow/bull of milk”], are qualified as amar ga, “suckling calf”, in the colophon of this text) from Ur III Umma temple households in uncanny parallelism to that of the earlier account. In this text we have the sequence Lu-Zabala, Ur-ANsida, Lugal-ezin, Aba-gina, Šara-kam, Šara-amu, Ur-Ašar, Lu-Šara, UŠ, and Lugal-^fezin?¹ (requires collation) as those herders of the household of Šara, followed by Lulu, Ur-gigir, Lu-duga, Aba-gina and Šeš-ani as those of Nin-ura (and Šulgi; BM 105329, in its poorly preserved reverse surface, had Lu-duga, [...], Šeš-ani).

§12. This Nin-ura sequence complements that of the WAM account, that again can be used to tie together the key dairy accounts of the Ur III period, *MVN* 15, 108, and *SET* 130 (*OrNS* 64, 398-403; confer in this regard the texts *StBibFran* 4 1 [Šulgi 33, recording only Lu-Zabala and Ur-nigar], *Syracuse* 354 [Šulgi 40], *SANTAG* 6, 121 [Amar-Suen 3; writing Ur-AN-si₄-u₂-da for usual Ur-AN-si₄-da], *SNAT* 381 [Amar-Suen 7], BM 105471 [unpubl., Amar-Suen 8, itself dealing with the delivery of cattle hides], *MCS* 1, 54, BM 106045, and *MCS* 6, 10, BM 106041 [Šu-Sin 5; certainly the largest duplicates known from Ur III archives, both of

the latter BM texts were published by T. Gomi, *Orient* 20, 17-30], *SNAT* 526 [Šu-Sin 9 ix], *TIM* 6, 46 [Ibbi-Sin 3 viii], *AAICAB* 1, pl. 71, Ashm. 1924-676, and Pettinato, *L'uomo* 53-54 [dates not preserved]; further *TCL* 5, 6038 obv. v 17-30 [Amar-Suen 7, recording labor troop foremen]). As above, the following table includes the names of the cowherds from both texts in their written sequence, followed in each case by the estimated number of slaughtered animals on the one hand, by the number of recorded milk cows in the care of the herders on the other. Note here the rather good correspondence between the number of milk cows and the number of slaughtered animals; Ur-Ištaran with the largest count of cows in *SET* 130 delivers the largest number of hides in WAM 2000.47, and Ur-e'e with 15 milk cows in *SET* 130 delivers 6 hides in our account, in both cases 60% of the numbers accompanying Ur-Ištaran (the other numbers correspond only roughly, but note also a comparable set of numbers for the two herders with the largest herds among those recorded in *MVN* 15, 108, Lu-Zabala and Ur-Nigar; the corresponding numbers from WAM 2000.47 indicate a rough relationship of five milk cows per slaughtered head of cattle, presumably based on a rough relationship of 10:1 between full herds and processed dead animals).

WAM 2000.47 (AS 5)
Household of Nin-ura

Aba-gina	1
Lalu	3
Ur-e'e	6
Ur-Ištaran	10
Šeš-ani	1

SET 130 (AS 4)

Lalu	17
Ur-e'e	15
Ur-Ištaran	25
Aba-gina	6

§13. That the two major temple households of Ur III Umma should be so intimately connected through the state agencies that received their products is not surprising in light of the evident homogeneity of all accounts that record the herds' constitution and the distribution of their products, but in light also of the centralized control of the personnel of these units. As has been shown elsewhere (for instance, *Ur III-Fischerei* 42-43 and 47 n. 162), arrears of such cowherds calculated at the time of their death could and did lead to the confiscation and integration into state slave crews of the herders' family members, based on a rough equivalency value assigned the wives and children relative to deficit animals or animal products.

The products

Hides

§14. The hides of domestic animals (Sumerian kuš, Akkadian *mašku*) were regularly used in Babylonia for shoes, bags, etc. It was thus important that this, and the other byproducts of butchered animals, be included in the general accounting of herds (in modern practice, the hide constitutes ca. 10% of the value of the slaughtered animal). WAM 2000.47 contains in its individual entries all of the common qualifications of animal skins known from Ur III accounts, including

kuš gu₄/ab₂ mah₂/amar a-GAR (nu-)gu₇-a
kuš gu₄/amar al-ḥul-a a-GAR (nu-)gu₇-a

kuš gu₄/ab₂ mu 2(aš) a-GAR (nu-)gu₇-a
kuš gu₄/ab₂ mu 2(aš) al-ḥul-a a-GAR gu₇-a
kuš šu EB gu₄/amar

hide, ox/cow/calf, (not) tanned
hide, ox/calf, "beaten", (not) tanned
hide, ox/cow, in second year, (not) tanned
hide, ox/cow, in second year, "beaten", (not) tanned
hide, šu EB ox/calf

§15. For a comprehensive treatment of the difficult terminology involved in leather accounts, see M. Sigrist, *JCS* 33 (1981) 141-190, and the indices of V. Crawford, *Leather*, and M. van de Mieroop, *Isin Crafts*; further A. Salonen, *Fischerei* 212 (to a-GAR). *PSD* A/1, 76, translates a-GAR gu₇ with "to treat with a-GAR" (literally, "to make eat a-GAR"), and a-GAR itself is described as "a flour-based watery solution used in the process of tanning hides and skins"; the Sumerian qualification ḥul is in the same *PSD* article translated with "spoiled", although the valuation in the accounts would point toward a simple means of processing. The qualification šu EB is presumed by most commentators to represent a phonetic orthography for the common qualification šudul/n. Thus M. Sigrist transliterates in *Syracuse* 354 šu-dul₉ (dul₉ is usually URšesig, but in WAM 2000.47 the sign does not appear to deviate from the form of a standard IB). In the same publication, the text *Syracuse* 489 records in line 16: 6 kuš udu šuhub₂ šu-EB u₃ šagan i₃-za₃-ga, "6 hides, sheep: boots, šu EB, leather bag, ...", suggesting that šu EB represents a leather product of some sort. The yoke šudul/n is usually written ŠU₂-DUN₄ (šudul₃ is ŠU₂-URšesig), thus Sigrist is evidently entertaining a phonetic complement in ŠU and should therefore write šušudul₅. *MSL* 17, 106 (erim-huš) Bogh. A ii 10' does show šu-dul₉ (ŠUDUN = ŠU₂-DUN₄) = *e-le-p[u]* (line 11' šu-dul₉-dul₉ = *ḥa-la-pu*); otherwise *MSL* 14, 185 (Ea I) 171 has šu-dul | DUL | *ni-i-rum*, "yoke", proto-Ea 650 šu-tu-ul (var. ...-d]u-) | šudul₅!(URšesig). Cp. W. Sommerfeld, *IMGULA* 3/1, pp. 125-128, to ŠUDUN = "battle".

Carcasses

§16. Certainly the most substantial accounts of cattle carcass deliveries derive from the accounting center of Drehem (see above), but our account WAM 2000.47 appears to book the largest numbers from Umma. The majority of these carcasses (Sumerian adda, ad_{6.8} [=KWU 81-83, following *PSD* A/III s.v.], all graphic derivatives of the sign lu₂, "person", with or without the semantic gloss uš₂, "dead") were apparently transferred

directly from the slaughter, by individual herders and their laborers, to a textile factory via a state agent named Lugal-inim-gina, and were fed there to the female weavers. The same formulation used here for cattle is known for the dispensation of sheep (*Nebraska* 44, rev. ii 2: 5 ad₇ udu uš-bar-re gu₇-a). What this says about these laborers is not obvious. The agent Lugal-inim-gina (cp. *Princeton* 1, 144) is known from other sources to have been an agent who among other duties directed a weaving establishment at Apisal (and was the father of the well-known agricultural foremen Lu-Šara, Kugani and Aba-sag); for instance, the Umma account *SAT* 2, 468 (Šulgi 36?-47), records measures of combed wool under the seal of Lugal-inim-gina, and *SAT* 2, 555 (Šulgi 47), is the receipt of various measures of wool, and in exchange the delivery of finished textiles, closing with rev. 7-9:

nig₂-ka₉-ak lugal-inim-gi-na
geme₂ kikken-na-ke₄ tag-a
ša₃ a-pi₄-sal^{ki}

account of Lugal-inim-gina,
(goods) woven by female milling laborers
in Apisal

§17. *SNAT* 315, obv. 1-2, and *UTI* 3, 2126, obv. 5 and rev. 1, assign to oxen carcasses a value of one gur of barley, or, based on standardized Ur III exchange values, one shekel of silver each (for instance, *SNAT* 315 obv. 1-2: 4 ad₇ gu₄ / še-bi 4(aš) gur). This places the value of the carcass at between a fifth and a tenth of the live animal. The carcasses could, as value units, apparently be split in two (*TUT* 261, obv. 3: 1/2 ad₇ gu₄).

Tendons

§18. It is not known whether a particular metrology applied to the amount of tendons or sinews (Sumerian sa, Akkadian *šer'ānu*, *gīdu*) expected from butchered cattle; once removed, sa were measured using the weight system. *SNAT* 323 with obv. 1 and 4, "one ox-hide and its tendons" (1 kuš gu₄ u₃ sa-bi) suggests that this was a general quantity and not immediately weighed. The use of tendons is also not well known from the texts and of course as soft tissue not from the archaeological record. As a rule, tendons are harvested, split and dried to produce strings (the Achilles tendon with its high tensile strength, for example, for bows, but tendons generally also for strong cords for fish and bird nets, to bundle reeds, sew leather bags [for instance, *MVN* 10, 200] and so on), and otherwise as

collagenous byproducts processed for instance through boiling for dog food, glue, and comparable substances. Such texts as *AnOr* 7, 366 (date broken), obv. 4'-5', suggest this connection, with $1/2$ ma-na sa / 1 ma-na še-gin₃, “ $1/2$ mana tendons, 1 mana glue” (one mana is ca. 500g) following entries recording the delivery of cattle hides (compare *UET* 3, 1498, rev. iv 5-6: 6 ma-na sa umbin / 26 ma-na še-gin₂, “6 mana tendon-hoof, 26 mana glue”; see also *BRM* 3, 49, and 51; *UTI* 3, 2041; *MCS* 6, 16, BM 106065, passim, but see rev. ii 8: [number of hides and tendons ...] še-gin₂-še₃ [?; followed by an entry recording 6 mana of tendons]). In like fashion, *CTNMC* 30, obv. 4-5, records, after entries representing the delivery of hides, one and four mana, respectively, of “glue of the carpenter” and “glue of the leatherer”.

Horns

§19. While reference to horns (Sumerian si) in the textual record of the Ur III period is not common, still it is known and expected. The Nippur texts *NATN* 855 (Amar-Suen 1 iii), obv. 1-3, and *BE* 3-1, 77 (without date), rev. 3, record the deliveries of 96 horns of wild bulls and 90 of gazelles (preceded by antlers, Sumerian a₂), and of 88 horns of “NIMgunū” (=?: the copied sign, graphically related to *KWU* 784, requires collation), respectively. We are left to speculate about the purpose of these deliveries, as of those horns delivered by the herders recorded in WAM 2000.47. Since the relatively soft keratohyalin of cattle horns does not survive as well as bone, there is, aside from those complete horns used decoratively, little in the archaeological record as well to help determine the use of the byproduct in Ur III crafts. Its malleability suggests that horn will probably have been exploited in ancient Sumer as in other periods of documented use, that is, in producing such items as drinking goblets, containers, tableware, pins, and as inlay (compare in particular the Akkadian dictionaries under *qarnu*). *CT* 7, 16, BM 17765 (Amar-Suen 1), rev. ii 1, documents the apparent use of a cow horn to hold cream (si ab₂-ba gara₂ ba-a-la₂, following the posting of another small container with $1/3$ liter of butterfat; compare *AAICAB* 1, pl. 79, Ashm. 1932-274, obv. 11, with 4 kuš udu u₂-hab₂-bi šu₄-gan du₁₀-gan si gu₄ ab₂ ba-a-la₂, meaning unclear). *RA* 57, 96, no. 18, presumes the inlay decoration of horns with silver (obv. 1-2: 12 si ku₃ ga₂-ra / 11 si a₂-muš-DU² ku₃ ga₂-ra). The meaning of the month names iti kir₁₁-si-ak (for instance, M. van de Mierop, *JCS* 38, 31, no. 6 rev. 2 [Šu-Sin 8, from Wilayah or Adab]) and iti gu₄-si-su (second month of Nippur calendar; *JANES* 18, 43, no.

5, obv. 3, has nig₂ ezin gu₄ si [su]) is not clear.

§20. It might be noted that the hooves of the animals could have been included among the deliveries of “horns” since they might have served the same production purposes. In the administrative record, Sumerian umbin (Akkadian *šupru*, “nail”, “claw”, “hoof”) as a rule designates a wooden object used in shipbuilding and carpentry (the feet of beds and chairs, wagon parts, etc.), but there are some few references to possible animal hooves, for instance *CST* 295, obv. 10-11: 2 maš₂-gal umbin 4(aš) giš-du₃ / 10 la₂-1 ud₃ umbin 4(aš), “two breeding billy goats, four-hoof; ten minus one jennies, four-hoof”, and *AnOr* 7, 127, obv. 1-2: 7 ma-na sa-sal umbin udu hi-a / sa udu ur-re gu₇-a, “seven mana “thin” tendon (of?) hoof of various small cattle, tendon fed the dog(s)” (parallel *PDT* 1, 648, obv. 1-2, a Drehem text also recording a delivery of “tendon-hoof”).

Tails

§21. Our texts also do not tell us what purpose the tails of the animals (Sumerian kun, Akkadian *zibbatu*) served, although here too their delivery to state agencies was not uncommon. *AAICAB* 1, pl. 78, Ashm. 1924-1625 (date not preserved), obv. 3', records 118 tails of various oxen (gu₄ [hi]-a); *MCS* 6, 16, BM 106065, and the text *L'uomo* 54 cited above, contain numerous entries of tails accompanying other slaughter byproducts in general deliveries from herders. M. Civil, *Studies Sjöberg* 61-62 (A 1176), obv. 18'-19', suggests that “fine oil” could be applied to (or derived from?) cow tail ($1/3$ sila₃ i₃-nun du₁₀-ga / kun ab₂-ke₄ ak). No attestation known to me references the expected use of tails as human food, or to produce such items as whips, fly swatters or decorations.

§22. Among the many unanswered questions left by this and other Ur III accounts dealing with slaughter byproducts is that of the dogs that don't bark: the many cattle parts left out of delivery, or indeed, of consumption records. Brain, ears, tongue, all inner organs, bones, blood, and possibly hooves are all commonly exploited following slaughter in cattle-herding societies, but appear to be unknown in Ur III slaughter accounts. Most of these items will doubtless have been included in the carcass, but it is another indication of how limited is the view of day-to-day life in the many tens of thousands of documents from this period of Babylonian history. We are not parsing the records of the common man.