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# Evosheep – Cuneiform Data on Sheep Husbandry in Mesopotamia from the third millennium BC to the second millennium BC.

par [Philippe Abrahams et Cécile Michel](#) · Publié 29 septembre 2023 · Mis à jour 29 septembre 2023

*EvoSheep is a multidisciplinary project on the origins and evolution of sheep breeds, involving archaeozoologists, epigraphists, bio-statisticians, and geneticists (Vila et al. 2021). The research focuses on the region of sheep domestication in Southwest Asia, specifically the Near East, to understand the onset of differentiation of early domestic sheep into multiple breeds. Part of this research is based on the study of cuneiform texts.*

The sheep plays a central role in the economy of ancient Mesopotamia through the exploitation of its fleece. The majority of the textiles produced in the Ancient Near East are made of wool. Sheep were the main provider of meat and milk. Other by-products such as leather, fat and sinews, also had an important role in crafts. Sheep organs, in particular the liver, were also used in divination (Postgate 2009-2011). As part of the Evosheep project, we looked at the data in cuneiform texts relating to the different varieties of sheep, where they came from and how they were reared.

Cuneiform sources from the third and early second millennia provide much evidence on the varieties of sheep and sheep husbandry. They originate from major cities of southern Mesopotamia such as Ur, Uruk, Umma, Girsu, and Isin. Important data also come from the Middle Euphrates and Central Anatolia. These texts, written in Sumerian and Akkadian languages, include mainly letters, contracts and administrative documents produced by palaces, temples and family households. Lexical lists, especially from Nippur, provide a whole categorization of sheep according to their origins, age, gender, colour, as well as practical vocabulary related to their exploitation and the management of flocks [OB Nippur ura 3](#). (Fig. 1 [Old Babylonian Nippur ura3 lexical list CDLI P228711](#)).



Fig. 1 Old Babylonian Nippur ura3 lexical list CDLI P228711©Cuneiform Digital Library Initiative

Varieties of sheep are designated according to their physical characteristics, especially the tail and the fleece, or to their geographical origins (Steinkeller 1995: 51-54). Several words describe the shape and length of the tail. The most common is the fat-tail sheep (*udu gukkal*, *gukkalum*) (Fig. 2 Fat-tail sheep Awassi sheep) These animals are well-attested already during the 26<sup>th</sup> century BCE, and they are not associated with a specific colour. Large flocks of this type of sheep are mentioned in an Old Babylonian letter from Mari (18<sup>th</sup> century BCE) ([ARM 28, 179: 18-21](#)):

Take from your people one thousand fat-tailed sheep, (that is) 500 male fat-tailed sheep and 500 fat-tailed ewes, and bring them to me.



Fig. 2 Fat tailed Awassi breed Lebanon ©EvoSheep

Other breeds are referred to as ‘long tail sheep’ (*udu kun-gid<sub>2</sub>*) (Fig. 3 Long tail sheep Tsigai sheep), which mainly occurs in texts from the 21<sup>st</sup> century BCE from the kingdom of Ur (Ur III) while ‘extra-large fat-tail sheep’ (*udu gal tabbum*), appears as a less common local variety in the same documentation.



Fig. 3 Long tailed Gumz breed Ethiopia ©EvoSheep A. Amane

The fleece is the second important key feature which distinguishes the different breeds. The most frequent is the *aslum* sheep (Ur III), also referred to as ‘sheep with long wool fibres’ (udu siki-sud/gid<sub>2</sub>). The ‘woolly sheep’ (udu-siki) appears already in the Early Dynastic texts (26<sup>th</sup> cent.) in reference to sheep producing greater quantity or quality of wool, but these ‘woolly sheep’ do not form a special breed. A text from Girsu suggests that they were selected from a herd of ordinary sheep during an inspection ([Nik 1, 155](#), Selz 1989: 377-378)

Another feature that characterises breed varieties is the colour of the sheep fleece. The most numerous evidence relates to black sheep (udu ge<sub>6</sub>). Sheep qualified as white (udu babbar) are less common presumably because sheep are by default white, so they may be qualified as such by opposition to black ones. The great majority of black sheep originate from western Iran (Šimaški) in Ur III administrative texts ([HSS 68, 15](#): 8-9).

Brown-red sheep (udu su<sub>4</sub>) are not very common, but may appear in large numbers, listed together with sheep of different colours in Ur III texts (Fig. 4 Brown-red sheep Ghezel sheep)



Fig. 4 Brown-red sheep-Menz Breed Ethiopia ©EvoSheep

Yellow-beige (udu sig<sub>17</sub>) sheep are also rare, perhaps because the colour is considered by default, just as for the white sheep. However, an Ur III text from Puzriš-Dagan quotes a group of yellow-beige animals, including different varieties and ages. They are mentioned together with black and white lambs ([BIN 3, 539: 1-12](#)).

In a few instances, sheep are said to be spotted (gun<sub>3</sub>-a). Their present-day name, ‘Jacob sheep’ (Fig. 5 Spotted sheep Jacob sheep), originates from Genesis 30: 25-43, which explains the breeding method used by Jacob to obtain his wages from the flock of Laban, which consisted of black, spotted, speckled and striped sheep and goats.



Fig. 5 Spotted sheep Jacob Sheep ©Livestock of the World

Wild sheep are regularly attested as breeding animals, the most commonly used to create hybrids being the ‘mountain sheep’ (udu hur-sag). This animal is often mentioned together with other wild animals. The ‘foreign sheep’ (udu kur-ra) is also considered as a wild variety of sheep even though it could be raised, and there were shepherds in charge of ‘foreign sheep’. According to literary texts, the wild ram (*atudum*) lived in the mountain or in the forest, but it also occurs in some flocks in Central Anatolia. The mouflon (*tišānum*) was considered precious enough to be offered as a diplomatic gift on the occasion of a royal marriage ([ARMT 26/1, 11:24](#)).

Other varieties of sheep were distinguished according to their geographical origin, whether a country or a town. Sumerian sheep (udu eme-gi<sub>7</sub>) are opposed to ‘foreign sheep’. Sheep could come from different parts of Iran, named broadly as Elamite sheep (udu elam). Among these are those from Šimaški, north-west of Iran, in the Zagros mountains. Less numerous are the sheep from DuhduhNI, Sabum, Anšan, and Hupum.

In the Ur III text, sheep may come from the Lullubu, which is located in the Northern Zagros. There are also Šarumiyum sheep, presumably from the Diyala; most of these are recorded as breeders. According to the early II<sup>nd</sup> millennium texts, several sheep are from Sutû in north Babylonia, from Amurru west of Mesopotamia, or from Šubarû, north-east of Mesopotamia. It is not always clear whether or not some of these geographical characterizations are to be understood as specific breeds.

The terminology of sheep as regards to age and sex of the animal is especially well-developed. The generic Sumerian term udu (*immerum*) includes both male and female sheep. Male sheep (udu-nita<sub>2</sub>) are supposedly castrated animals because they appear in great numbers in herd compositions. The ewe (u<sub>8</sub> *immertum*) can be pregnant (*erītu*).

The adult animal (udu-gal) is distinguished from the old one (udu libir). Regarding the young sheep, the terminology is very detailed. There are two expressions to refer to the newborn animal: the newborn sheep (udu gibil) and the just born lamb (sila<sub>4</sub> u<sub>3</sub>-tu-da), then comes the suckling lamb, male or female (sila<sub>4</sub>/kir<sub>11</sub> ga), the half-weaned lamb (sila<sub>4</sub>/kir<sub>11</sub> gab-ba), the lamb of the spring (sila<sub>4</sub>-nim), the age of the animal may be given in the expression ‘a sheep of x years old’ (udu mu-x), or according to the number of times the animal was plucked: A ‘lamb in age to be plucked’ (sila<sub>4</sub>-ur<sub>4</sub>), or a ‘lamb plucked for the first time’ (sila<sub>4</sub>-1-ur<sub>4</sub>) (Heimpel 1993: 134; Van de Mieroop 1993: 162-165).

There are very large numbers in the overall figures attested in texts already from the early III<sup>rd</sup> millennium, some of which exceed ten thousand animals. Numbers are even higher during the Ur III period with, for example, a total of 347,394 sheep among a large variety of other domestic and wild animals ([RA 063, 102:9](#)). According to Maeda (1989, 84), some 77,000 sheep and goats would have been transferred through the royal animal park of Puzriš-Dagan every year.

The sheep and goats belonging to the great institutions were divided under the authority of officials (na-gada / *nāqidum*) who themselves entrusted smaller numbers to individual shepherds ([Greco 2021.2: 8-9](#)). For example, an administrative document records 12,867 sheep entrusted to more than twenty shepherds ([BM 024954](#)).

Ur III ‘shepherd texts’ from Lagash present a fixed list of sheep and goats entries used to record the different categories of animals composing the flocks (Mander 2008: 99-108). The

head ram bucks (maš<sub>2</sub> sag) are few and usually placed at the head of the flock because of their intelligence, so they could lead it.

During the early II<sup>nd</sup> millennium, shepherds are often responsible for some 200 animals or less, the number of sheep being five to six times more important than the number of goats, perhaps because sheep by-products were much more valuable. The herds often mix different sheep breeds and age as in the following example from Mari ([ARM 23, 219: 1-7](#)):

65 amorite sheep, 16 sheep grass fattened, 4 long-fleece Amorite sheep, 2 long-fleece grass fattened sheep, 6 spring male lamb, 6 spring female<sup>7</sup> lamb, total: 99 sheep.

The male sheep were normally used for divination or for consumption. Those selected for reproduction were kept in the herd and defined as geš-du<sub>3</sub>. All types of sheep could be used for that purpose and defined as such, whether coming from different regions or with tail or fleece characteristics. The text [PDT 2, 1052: iii 18-25](#) mentions several of these breeders. Selection for breeding applies also to young animals as in the case with lambs in [BIN 3, 359: 4](#)

In Ur III texts, the hybrid sheep is referred to as literally ‘sheep (of) mountain sheep sperm’ (udu a-udu hur-sag). By contrast to the sheep breeder (udu geš-du<sub>3</sub>), there are no other types of sheep used for hybridization besides the ‘mountain sheep’. The female, never specified, is probably a domestic ewe.

This use of mountain sheep could be an evidence for the practice of ‘re-breeding’ which involves occasional use of a wild male (here a mountain sheep) with domestic females in order to avoid inbreeding, or to introduce a particular wild character to the domestic.

An interesting point emerging from Ur III documentation is that the resulting hybrids are fertile. As a matter of fact, some sheep are recorded as ‘hybrid breeder sheep’ (udu a-udu hur-sag geš-du<sub>3</sub>, see for instance [PDT 2, 1052: iii 24](#)).

Hybrid sheep are considered as a specific breed among others (long-tail, long fleece, fat-tail, and sheep from different geographical origins), as shown through the descriptive categories which composed some lists of flocks ([PDT 1, 345](#)).

Sheep were grazed in pasture (udu u<sub>2</sub>) or fattened (udu niga) with various foodstuffs, starting with barley. According to their age, sheep received different daily rations of barley, quantities varying around a litre or more. They were sometimes given complements such as bran (duh) ([Nisaba 31/2, 86](#)), and even flour (zi<sub>3</sub>-kum) ([CUSAS 15, 28](#)). The fattener (kurušda) was in charge of feeding the sheep.

Royal archives from Mari provide interesting data in relation to movement of herds toward pasture. This could concern a very wide spatial range, stretching from the Hamrim Mountains (northeast Iraq, ancient Mount Ebih) to a western branch of the Habur, as noted in the following letter: (Fig. 6 Range of the grazing flocks according to FM 6, 9).

“News of the grazing flocks (*nawû*) does not reach me regularly!” This is what my Lord wrote to me. The grazing flocks are scattered throughout the land. On the right of the pasture is Mount Ebih and on its left is Talhayum’ ([FM 6, 9](#)).

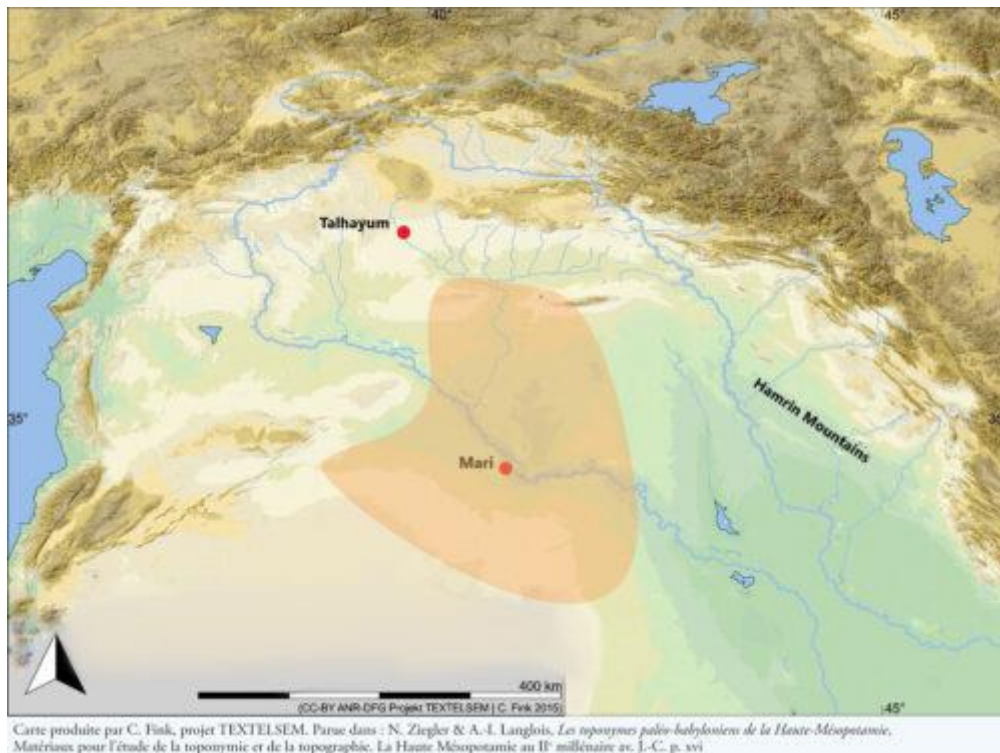


Fig. 6 : Range of the grazing flocks according to FM 6, 9. Shaded in orange: extension of the Mari kingdom under Zimri-Lim (1774 B.C – 1762 B.C), M. Sauvage (dir.), *Atlas historique du Proche-Orient ancien*, Les Belles Lettres, Institut français du Proche-Orient 2020, p. 82

All the lands situated north of the alluvial kingdom of Mari represented an utmost strategic region which the kings of Mari strived to control in order to guarantee grazing land for the royal flocks during the summer. Conflicts could arise over access to grazing areas as suggested in the following accusation: ‘Your sheep feed at our pastures and drink at our wells!’ ([ARM 26/2 524](#)).

The sheep were entrusted to a professional, the shepherd (*sipa / rē’û*), who was responsible for taking care and ensuring the day-to-day management of the herd, most probably during a year’s tenure which ended at the plucking time in the spring (Snell 1986: 138).

The shepherd duties and their wages in kind, consisting for example of wool and his own share of the growth of the flocks, were sometimes recorded in contracts documented at different periods. The exact composition entrusted to a shepherd is usually indicated ([Meek AJSL 33, 3](#)) and the expected yield of the growth of the herd that the shepherd has to reach as well as his wage paid in wool. Losses, with a bearable rate accepted of 10%, are placed under the responsibility of the shepherd who has to replace the lost animals.

‘1 ewe, brand (*šimtum*) of Amurru-tukulti, 1 ewe, brand of Abba, 1 ewe, brand of Tawirum, 1 ram. Total: 4 skins of dead (litt. fallen) (animals)’ ([UET 5, 611: 1-7](#)), (Béranger 2020: 254).

Branding the animal is used to identify who was in charge of it or to whom it belongs, as is also indicated in the ([Hammurabi Codex, Law 265](#)).

Third millennium and early second millennium BC cuneiform sources provide an impressive amount of data on sheep. This presentation focused on breeds, physical characteristics,

provenance as well as sheep husbandry including for example feeding, reproduction and hybridization. In this ongoing study, other aspects were left aside such as the by-product that characterize the animal as a resource fully utilised in all its various forms, i. e. wool, skin, sinews, carcass, dairy and meat products. As for the latter, it is interesting that the animal parts such as the head, neck, chest, shoulder, scapula, thigh and leg are also documented as pieces of meat for consumption not to mention the terminology of the innards in relation to oracular consultation which is primarily based on the sacrifice of lambs.

As philologists, it is extremely important for us to be part of the multidisciplinary EvoSheep project which enables the necessary discussion between specialists of different fields, thus improving our understanding of the written documentation on such issues as the process of hybridization or the reasons behind the different proportions of animals in herds.

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