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The Identification of Wildlife and Animals in Sumerian: The Case of the European Turtle Dove (*Streptopelia Turtur*) and the Mysterious "Month of Flying" (iti dal)

Magnus Widell

Abstract

Identifying specific animals in the Sumerian vocabulary often requires careful examination of textual contexts, alongside bioarchaeological data and representations in Sumerian art, as well as insights from linguistic, cross-cultural, ethnographic, and faunal studies. This article supports the notion that the Sumerian bird tu-gur$_{4/8}^{\text{mušen}}$ can be identified with the European turtle dove. Artistic depictions and avifaunal remains confirm the presence of the turtle dove in early Mesopotamia, and references to tu-gur$_{4/8}^{\text{mušen}}$ are common in Ur III texts, particularly in Puzriš-Dagan, where it was kept for elite consumption. Turtle doves, unlike other *Columbidae* species, migrate. This article proposes that the seasonal migration of the turtle dove through Iraq in the early autumn is referenced in the Umma month iti dal, which should be understood as the "month of flying (birds)." The seasonal migration of turtle doves was important for the agricultural calendar and the overall economy of the state. Understanding natural events of this kind and ensuring the correct timing for agricultural tasks would have been essential to maximize yields, and the planting of the fields—as described in the subsequent Umma month known as the "month of sowing seed" (iti šu-numun)—would have commenced only after these birds had passed through the region.

Keywords

Sumerian lexicography | Sumerian wildlife | *Columbidae* | European turtle dove | *Streptopelia Turtur* | Ur III calendar | Month of flying | iti dal

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INTRODUCTION AND SUMERIAN LEXICOGRAPHY

Cuneiform writing first appears in archaic texts from Uruk and Jemdet Nasr, dating from the late 4th millennium BC to the middle of the 3rd millennium BC.[1] Approximately 85% of the earliest Uruk texts are economic and administrative texts, with the remaining 15% being so-called lexical lists.[2] The vast majority of the cuneiform texts unearthed from the third millennium BC are written in Sumerian, a language isolate with no known connections to any other language or language family. The lack of recognizable connections to other known languages has added a layer of complexity to the decipherment of the language. As a result, scholars and linguists face inherent difficulties in comprehending and interpreting the wealth of cuneiform texts composed in Sumerian from the third millennium.

Our ability to read Sumerian texts today relies rather extensively on the Mesopotamian lexical lists, particularly a group of lists written in both Sumerian and Akkadian (typically referred to as the "canonical" series) which started to appear from the middle of the second millennium BC.[3] Hence, our understanding of Sumerian vocabulary is to a significant degree contingent on our comprehension of the Akkadian language, and therefore also on Semitic etymologies.[4] It is essential, however, to recognize that our grasp of the Akkadian vocabulary is not without its imperfections and is still in the process of eluci-

[1] All references to cuneiform texts (and dictionaries) are according to the abbreviations used by the *Cuneiform Digital Library Initiative* (CDLI) at https://cdli.mpiwg-berlin.mpg.de (accessed March 12, 2024), with CDLI P-numbers for Old Babylonian and Ur III tablets. Readings of cuneiform signs follow the standards set out by the CDLI.

[2] The topics or themes of these earliest lexical lists from Uruk—of which five date back to the Uruk IV period—are: "lu_2 A," "Officials," "Cattle, Animals," "Fish," "Birds," "Swine, Dog," "Tree, Wood," "Tribute," "Plant," "Vessels," "Metal," "Food, Grain," "Cities," "Geography," and "Unidentified," Robert K. Englund and Hans J. Nissen, *Die lexikalischen Listen der archaischen Texte aus Uruk*, Archaische Texte aus Uruk 3 (Berlin: Gebr. Mann, 1993), 9–13. As noted by Piotr Steinkeller, 80% of these lists are also attested in later periods, and it is evident that during the Uruk III period, there was already a well-defined "lexical canon" in place see Piotr Steinkeller, review of *Die lexikalischen Listen der archaischen Texte aus Uruk,* by R. K. Englund, H. J. Nissen, & P. Damerow, *Archiv für Orientforschung* 42/43 (1995/1996): 212.

[3] For the so-called "dictionary approach" to the lexical lists, see Niek Veldhuis, *History of the Cuneiform Lexical Tradition*, Guides to the Mesopotamian Textual Record 6 (Münster: Ugarit-Verlag, 2014), 16–19.

[4] See, for example, Alexander Militarev and Leonid Kogan, *Semitic Etymological Dictionary. Volume 1. Anatomy of Man and Animals*, (Münster: Ugarit-Verlag, 2000); Alexander Militarev and Leonid Kogan, *Semitic Etymological Dictionary. Volume 2. Animal Names*, (Münster: Ugarit-Verlag, 2005).

dation.[5] This has impeded the progress of Sumerian lexicography on a broader scale, consequently affecting our capacity to confidently identify the numerous animals mentioned in Sumerian texts.

The lexical lists are typically concerned with specific topics and themes (see note 2), and—although the principles according to which these topics are organized remain somewhat unclear—the entries in the lexical lists do form semantic groups. Arguably, the most important of the thematically organized Sumerian-Akkadian lexical lists is the series Ur_5-ra = *ḫubullû*, which was originally composed as a unilingual list in the Old Babylonian period. The most complete version of Ur_5-ra = *ḫubullû* consists of (at least)[6] 24 tablets, and close to 10,000 Sumerian nouns and nominal expressions. It has been edited in volumes 5–11 of the series *Materialien zum Sumerischen Lexikon* (*MSL*) based on various editions dated to the first millennium, with the (rather different) Old Babylonian and unilingual/bilingual Middle Babylonian versions added as "forerunners" in appendices.[7] A wide range of subjects are covered in Ur_5-ra = *ḫubullû*, including economic and legal terms, objects made of stone, wood and metals, plants, clothes, fish, birds, domestic and wild animals, and grains.[8] Some scholars, such as Armas Salonen, have relied heavily on the canonical lexical lists

[5] Andrew George, "Babylonian and Assyrian: A History of Akkadian," in *Languages of Iraq: Ancient and Modern*, ed. J. Nicholas Postgate (London: British School of Archaeology in Iraq, 2007), 33, available at https://www.bisi.ac.uk/publication/languages-of-iraq-ancient-and-modern/. For a recent and concise discussion of cuneiform lexicography in general, see Niek Veldhuis, "Ancient Mesopotamia," in *The Cambridge World History of Lexicography*, ed. John Considine (Cambridge: Cambridge University Press, 2019), 11–35. For more specific studies on third millennium vocabulary, see the various articles by Miguel Civil, conveniently collected in Miguel Civil, *Studies in Sumerian Civilization: Selected Writings of Miguel Civil*, ed. Lluís Feliu, Barcino Monographica Orientalia 7 (Barcelona: Universitat de Barcelona, 2017), available at https://diposit.ub.edu/dspace/handle/2445/129686 (accessed May 10, 2024).

[6] For a 25th tablet of Ur_5-ra = *ḫubullû*, see Miguel Civil, *The Series* lú = *ša and Related Texts*, Materialien zum Sumerischen Lexikon 12 (Roma: Pontificium Institutum Biblicum, 1969), 90.

[7] Veldhuis, *History of the Cuneiform Lexical Tradition*, 157 and 229. For the use of the somewhat unclear term "forerunner" for the earlier versions of the canonical lists, see Walter Farber, "'Forerunners' and 'Standard Versions': A Few Thoughts About Terminology," in *The Tablet and the Scroll: Near Eastern Studies in Honor of William W. Hallo*, ed. Mark E. Cohen, Daniel C. Snell, and David B. Weisberg (Bethesda, MD: CDL Press, 1993), 95–97. For a recent critical edition of the Ur_5-ra = *ḫubullû* manuscripts from Assur, see Frauke Weiershäuser and Ivan Hrůša, *Keilschrifttexte aus Assur literarischen Inhalts:* ur_5-ra = *ḫubullu,* mur-gud = *imrû* = *ballu,* Lú-*listen. Teil 1: Einleitung, Katalog, Textbearbeitungen, Verzeichnisse, Teil 2: Glossare und Keilschriftautographien*, Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft 153 (Wiesbaden: Harrassowitz Verlag, 2018).

[8] For a more complete description of Ur_5-ra = *ḫubullû*, and a detailed list of topics/themes included in the series, see Antoine Cavigneaux, "Lexikalische Listen," in *Reallexikon der Assyriologie und Vorderasiatischen Archäologie. Band 6, 7/8. Lieferung*, ed. Dietz O. Edzard (Berlin: De Gruyter, 1983), 626–28, https://rla.badw.de/digitaler-zugriff.html.

to produce thematic glossaries or semantic studies of Sumerian lexemes spanning a diverse array of topics, such as avian life, furniture, doors, fishing, water crafts, weapons, etc.[9]

WILDLIFE AND ANIMALS IN THE LEXICAL TRADITION

For the archaeological or historical zoologist, the most relevant parts of the Ur_5-ra = *ḫubullû* are primarily found on tablets 13, 14, and 18, which include the vocabulary for domestic and wild mammals, snakes and lizards, fish, and birds.[10] The different animal sections are divided into a series of lists, which are further split up into several subgroupings which may be based on the animal's size, appearance, habitat, behavior, and even its reputation.[11] For example, within the large mammal section in the Ur_5-ra = *ḫubullû*, the animals are primarily arranged in order of decreasing size.[12] The vocabulary may also include designations for animals with very specific conditions, such as animals which are sick, pregnant, or infertile.[13]

The translations of many less frequently used terms found in the lexical lists remain uncertain. Moreover, the meanings of words and expressions have a tendency to change over time,[14] and an Akkadian translation of a Sumerian expression in a lexical list dated to the later part of the second millennium is not necessarily applicable to a Sumerian administrative text written a thousand

[9] For example, Armas Salonen, *Die Wasserfahrzeuge in Babylonien nach šumerisch-akkadischen Quellen (mit besonderer Berücksichigung der 4. Tafel der Serie* ḪAR-ra = *ḫubullu). Eine lexikalische und kulturgeschichtliche Untersuchung*, Studia Orientalia 8/4 (Helsinki: Societas Orientalis Fennica, 1939).

[10] Benno Landsberger, *The Fauna of Ancient Mesopotamia. First Part. Tablet XIII*, Materialien zum Sumerischen Lexikon 8/1 (Rome: Pontificium Institutum Biblicum, 1960); Benno Landsberger, *The Fauna of Ancient Mesopotamia. Second Part.* ḪAR-ra = *ḫubullû Tablets XIV and XVIII*, Materialien zum Sumerischen Lexikon 8/2 (Rome: Pontificium Institutum Biblicum, 1962).

[11] Guus Kroonen, "Hittite kapart-/kapirt – 'Small Rodent' and Proto-Semitic *ʕkbr-t- 'Mouse, Jerboa,'" *Indogermanische Forschungen* 121, no. 1 (2016): 53.

[12] Gebhard J. Selz, "Reflections on the Pivotal Role of Animals in Early Mesopotamia," in *Animals and Their Relation to Gods, Humans and Things in the Ancient World*, ed. Raija Mattila, Sanae Ito, and Sebastian Fink, Universal- und kulturhistorische Studien. Studies in Universal and Cultural History (Wiesbaden: Springer Fachmedien, 2019), 25.

[13] Magnus Widell, "Destined for Slaughter: Identifying Seasonal Breeding Patterns in Sheep and Goats in Early Babylonia," *Journal of Near Eastern Studies* 79, no. 2 (2020): 209–23.

[14] See, for example, Marie-Françoise Besnier, "From Sumer to IHAC: 'Home(s) of the Fish' – Some Thoughts on Gathering (Classifying) Fishes," in *Of Rabid Dogs, Hunchbacked Oxen, and Infertile Goats in Ancient Babylonia: Studies Presented to Wu Yuhong on the Occasion of His 70th Birthday*, ed. Sven Günther, Wayne Horowitz, and Magnus Widell, Supplements to the Journal of Ancient Civilizations 7 (Changchun: Institute for the History of Ancient Civilizations, 2021), 25–30.

years earlier. Nevertheless, we do have a very good understanding of the many different semantic types in the various lexical lists. Moreover, our ability to recognize specific categories of words is helped by the fact that the Sumerian language used a standard set of pre- and post-nominal classifiers—generally referred to as "determinatives" or "semantic markers" by Sumerologists—to categorize the vocabulary.[15] As recently argued by Gebhard J. Selz, the animal world was divided into five classes, based not only on the physical similarities and characteristics of the animals, but also on utilitarian and functional roles. The classes were represented by the signs for bird, fish, ox, sheep, and donkey, which were extended to the somewhat broader: "winged animal," "aquatic animal," "bovine," "ovine," and "equid."[16] Within these categories, animals of identical species were frequently differentiated by various additional factors, including sex, age, color, reproductive status, agricultural/economic function, feeding habits (e.g., hand-fed, grazing), physical attributes (e.g., size, tail length), etc.[17]

In other words, students of Sumerian cuneiform texts will typically know if a certain word represents a fish or a bird (and may have some notion of the overall characteristics of the fish or bird), but they will not necessarily know what precise kind of fish or bird. In order to achieve a more accurate identification of these animals beyond their broader categories or classes, Sumerologists must therefore meticulously examine the wider contexts in which the animals are mentioned in the cuneiform texts. This typically involves analyzing the attestations alongside bioarchaeological data and representations in Sumerian

[15] See Gebhard J. Selz, Colette Grinevald, and Orly Goldwasser, "The Question of Sumerian "Determinatives". Inventory, Classifier Analysis, and Comparison to Egyptian Classifiers from the Linguistic Perspective of Noun Classification," *Lingua Aegyptia* 25 (2017): 281–344. For the remarkably close relationship between the lexical tradition and organization of lexical lists and the classification system embedded in the Sumerian "determinatives," see Gebhard J. Selz, "Appositive Semantic Classification in Sumerian Cuneiform and the Implementation of iClassifier," *Ash-Sharq: Bulletin of the Ancient Near East* 5, no. 2 (2022): 142–71; Gebhard J. Selz and Bo Zhang, "Classification in Sumerian Cuneiform and the Implementation of iClassifier," *Journal of Chinese Writing Systems* 8, no. 1 (2024): 1–20.

[16] Selz, "Reflections on the Pivotal Role of Animals in Early Mesopotamia," 26; Gebhard J. Selz, "Animal Categorization in Mesopotamia and the Origins of Natural Philosophy," in *Seen Not Heard: Composition, Iconicity, and the Classifier Systems of Logosyllabic Scripts*, ed. Ilona Zsolnay, ISAC Seminars 14 (Chicago: Institute for the Study of Ancient Cultures, 2023), 97–98, https://isac.uchicago.edu/research/publications/isacs/isacs14; Alfonso Vives Cuesta and Silvia Nicolás Alonso, "Parámetros de clasificación zoológica comparados: la familia Anatidae en egipcio y sumerio," *Trabajos de Egiptología. Papers on Ancient Egypt* 11 (2020): 379–80.

[17] See, for example, Wolfgang Heimpel, "Zu den Bezeichnungen von Schafen und Ziegen in den Drehem- und Ummatexten," *Bulletin on Sumerian Agriculture* 7 (1993): 115–60; Piotr Steinkeller, "Sheep and Goat Terminology in Ur III Sources from Drehem," *Bulletin on Sumerian Agriculture* 8 (1995): 49–70.

art, as well as considering insights from a wide range of linguistic, cross-cultural, ethnographic, and faunal studies.[18]

THE EUROPEAN TURTLE DOVE (*STREPTOPELIA TURTUR*) IN EARLY BABYLONIA

We may take the small bird tu-gur$_{4/8}^{\text{mušen}}$ (Akk. *sukannīnum*)—from Ur$_5$-ra = *ḫubullû*, tablet XVIII, line 251—as an example.[19] The post-nominal mušen is the semantic marker used for birds and winged animals in general, and would not be pronounced, so the bird's name in Sumerian was "tu-gur," which in all likelihood should be understood as an onomatopoeia for the European turtle dove (*Streptopelia turtur*).[20] Both "turtle dove" and "*Streptopelia turtur*" are also likely onomatopoeic formations, but it would seem that the Sumerian "gur" more accurately imitates the cooing of the turtle dove, represented as gur-gur-gur, rather than tur-tur-tur. This is a natural reflection of the obvious fact that onomatopoeias mimic the sounds of the natural world while, at the same time, being shaped by the specific languages in which they are formed. Wofgang

[18] For an excellent overview of traditional studies of faunal terminology in Sumerian and Akkadian texts, see Jeremiah Peterson, "A Study of Sumerian Faunal Conception with a Focus on the Terms Pertaining to the Order Testudines," PhD diss. (University of Pennsylvania, 2007). 1–8, https://www.proquest.com/dissertations-theses/study-sumerian-faunal-conception-with-focus-on/docview/304836156/se-2 (Accessed March 3, 2024). More recent studies on animals in Mesopotamian culture include the collective volumes Raija Mattila, Sanae Ito, and Sebastian Fink, eds., *Animals and their Relation to Gods, Humans and Things in the Ancient World*, Universal- und kulturhistorische Studien. Studies in Universal and Cultural History (Wiesbaden: Springer Fachmedien, 2019); Laerke Recht and Christina Tsouparopoulou, eds., *Fierce Lions, Angry Mice and Fat-Tailed Sheep: Animal Encounters in the Ancient Near East* (Cambridge: McDonald Institute for Archaeological Research, 2021). For a recent study on animal symbolism in Sumerian literary texts, see Lorenzo Verderame, "The Seven Attendants of Hendursaĝa: A Study of Animal Symbolism in Mesopotamian Cultures," in *The First Ninety Years: A Sumerian Celebration in Honor of Miguel Civil*, ed. Lluís Feliu, Fumi Karahashi, and Gonzalo Rubio, Studies in Ancient Near Eastern Records 12 (Boston / Berlin: De Gruyter, 2017), 396–415.

[19] Landsberger, *The Fauna of Ancient Mesopotamia. Second Part.* ḪAR-ra = *ḫubullû Tablets XIV and XVIII*, 135; Benno Landsberger, "Einige unerkannt gebliebene oder verkannte Nomina des Akkadischen," *Die Welt des Orients* 3, no. 3 (1966): 267–68.

[20] Armas Salonen, *Vögel und Vogelfang im alten Mesopotamien*, Annales Academiae Scientiarum Fennicae 180 (Helsinki: Suomalainen Tiedeakatemia, 1973), 247; Elisabeth von der Osten-Sacken, *Untersuchungen zur Geflügelwirtschaft im Alten Orient*, Orbis Biblicus et Orientalis 272 (Fribourg / Göttingen: Academic Press / Vandenhoeck & Ruprecht, 2015), 300–3. Note, however, Niek Veldhuis, *Religion, Literature, and Scholarship: The Sumerian Composition Nanše and the Birds, with a Catalogue of Sumerian Bird Names*, Cuneiform Monographs 22 (Leiden: Brill, 2004), 289–92. For onomatopoeic bird names in Sumerian, see Vives Cuesta and Nicolás Alonso, "Parámetros de clasificación zoológica comparados," 376.

Heimpel, following Benno Landsberger's comment in MSL VIII/2, understands the gur_4 as the adjective "fat" (Akk. *ebûm* or *kabrum*), and translates the name "'dicke' Taube."[21] If this interpretation has any merit, the "gur_4" in tu-$gur_{4/8}^{mušen}$ would be an onomatopoeic element—representing the cooing of the turtle dove—while at the same time logographically alluding to the physical characteristics of the turtle dove.[22]

The tu-$gur_{4/8}^{mušen}$ is well attested in Mesopotamian texts from the third millennium, and is frequently mentioned in the Ur III livestock center Puzriš-Dagan, where it was kept for consumption.[23] It is the most frequently mentioned bird in the so-called Early Drehem Series and the Šulgi-simti archive, where it often appears as "food for his lady" (nig_2-gu_7 nin-ga_2-$še_3$) and/or is "brought to the palace" (e_2-gal-la ba-an-ku_4) (e.g. OIP 115 48 [P123680], 94 [P123461], 107 [P123477], 119 [P123657], 123 [P123681], 126 [P123715], etc).[24] Based on the recorded fodder rations, the tu-$gur_{4/8}^{mušen}$ was the smallest kind of bird kept in Puzriš-Dagan, where it was typically fed together with the ir_7(-sag)^{mušen} (Akk. *uršānum*, *amuršānum*), which in all likelihood should be understood as the common wood pigeon (*Columba palumbus*).[25] Various types of doves were clearly kept and fattened as a delicacy in Puzriš-Dagan during the Ur III period; however, there is no conclusive evidence for the true domestication of any *Columbidae* species in Mesopotamia throughout recorded history.[26] From the Ur III period onwards, throughout the second and first millennia, the turtle dove—appearing as either *sukannīnum* or tu-$gur_{4/8}^{mušen}$—is frequently attested as food or a

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21 Wolfgang Heimpel, *Tierbilder in der sumerischen Literatur*, Studia Pohl. Dissertationes scientificae de rebus Orientis antiqui 2 (Roma: Pontificium Institutum Biblicum, 1968), 399; Landsberger, *The Fauna of Ancient Mesopotamia. Second Part.* ḪAR-ra = *ḫubullû Tablets XIV and XVIII*, 136.

22 This type of construction, utilizing both the phonetic and semantic meanings of one or several logograms, is commonly found in Chinese translations of Western brand names, such as *Coca-Cola* (可口可乐, *kě kǒu kě lè*), or the fitness footwear brand *Reebok* (锐步, *ruì bù*), which can be roughly translated as "tasty can/may be happy" and "vigorous/rapid pace/step," respectively. For the phonaesthesia and sound symbolism in the Sumerian precedence debate between the bird and fish, see J. Cale Johnson, "Sound Symbolism in The Disputation between Bird and Fish 102–109," *Altorientalische Forschungen* 37, no. 2 (2010): 230–41.

23 For an Old Babylonian recipe for a broth made of *Columbidae* of the *amuršānum* type, see YOS 11 25, 47–49 (P291955) and YOS 11 26, Col. I 50–Col. II 20 (P309744), carefully edited and analyzed in Jean Bottéro, *Textes Culinaires Mésopotamiens*, Mesopotamian Civilizations 6 (Winona Lake, IN: Eisenbrauns, 1995).

24 For the frequent deliveries of various birds—including turtle doves—by the Puzriš-Dagan fowlers (mušen-du_3), see von der Osten-Sacken, *Untersuchungen zur Geflügelwirtschaft im Alten Orient*, 209–12. For the fowler in the Ur III period, see von der Osten-Sacken, 165–73.

25 von der Osten-Sacken, *Untersuchungen zur Geflügelwirtschaft im Alten Orient*, 293–94 and 303.

26 Bojana Janković, *Vogelzucht und Vogelfang in Sippar im 1. Jahrtausend v. Chr*, Alter Orient und Altes Testament 315 (Münster: Ugarit-Verlag, 2004), 10.

temple offering, typically listed with other (migratory) birds, such as cranes and geese.[27]

The dove was also very popular as food in ancient Egypt, and it was one of the five birds that were used in traditional sacrifices in the country. The Old Egyptian word *mnwt* appears to have been used specifically for the turtle dove, although it is possible that the word was also used as a collective term to denote doves in general. When identification is possible, the turtle dove is by far the most common species of *Columbidae* in Egyptian art. After being caught, the doves in Egypt were raised and fattened in dedicated poultry yards.[28]

In his recent study of the so-called bird frieze from the Temple of Ninḫursag in Al-Ubaid, dated to c. 2400 BC, Marcin Paszke has highlighted the considerable challenges involved in accurately identifying bird species in early Mesopotamian art. Although it remains possible that doves are portrayed on the frieze, Paszke concludes that the depictions do not satisfy all the necessary taxonomical requirements for a secure identification.[29] Doves are well attested in the zooarchaeological data from the Bronze Age Aegean, and are frequently depicted in iconography.[30] Much as in Mesopotamian art, the secure identification of bird species has proved to be challenging, especially when the depictions appear in monochrome media, such as seals, or if depictions display stylized traits. Nevertheless, distinctions among *Columbidae* species can be made through plumage patterns and specific neck markings, and Julia Binford has recently been able to identify a wide range of depictions of the turtle dove in Early and Middle Bronze Age art from Crete and the Greek mainland.[31]

Avifaunal remains and the bones of doves have traditionally received very little attention in excavation reports from Mesopotamian sites. However, evidence of the turtle dove, as well as the rock dove (*Columba livia*) and the col-

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27 *CAD* S, 353–354; *CAD* K, 562; *CAD* P, 222–224, with additional references. For uz-tur$^{(mušen)}$ (*paspasum*) as "house goose" (rather than "duck") and kur-gi$_{(4)}^{(mušen)}$ (*kurkûm*) as "crane" (rather than "goose"), see von der Osten-Sacken, *Untersuchungen zur Geflügelwirtschaft im Alten Orient*, 244–50 and 342–45.

28 von der Osten-Sacken, 283–84.

29 Joanna Piatkowska-Malecka and Anna Smogorzewska, "Animal Economy at Tell Arbid, North-East Syria, in the Third Millennium BC," *Bioarchaeology of the Near East* 4 (2010): 48–49. http://www.anthropology.uw.edu.pl/04/bne-04-02.pdf (accessed April 25, 2024). See, also, Cavigneaux, "Lexikalische Listen," 480; Vives Cuesta and Nicolás Alonso, "Parámetros de clasificación zoológica comparados," 374–75.

30 See, for example, Dimitra Mylona, "The Bronze Age Birds in Greece. A Zooarchaeological Perspective," *Quaternary International* 626–627 (2022): 71–79; Julia Binnberg, "Birds in the Aegean Bronze Age," PhD diss. (University of Oxford, 2018), 53, n. 274, https://ora.ox.ac.uk/objects/uuid:8aac9f2a-b695-4a96-9990-25c68c418e35 (accessed April 20, 2024).

31 Binnberg, "Birds in the Aegean Bronze Age"; Julia Binnberg, "Like a Duck to Water – Birds and Liquids in the Aegean Bronz Age," *The Annual of the British School at Athens* 114 (2019): 41–78.

lared dove (*Streptopelia decaocto*), has been recovered from Early Dynastic Abu Salabikh.[32] Unfortunately, the bones have not been analyzed for signs of domestication. Faunal remains from the first millennium have also been recovered from Dur Katlimmu in Northern Mesopotamia, including bones from the turtle dove, rock dove, and laughing dove (*Spilopelia senegalensis*), but the excavators have not analyzed the bones for evidence of domestication.[33] The discovery of these bones is not surprising. We already know that as many as 10,000 rock doves (tu^{mušen}) and 10,000 turtle doves were prepared for the festivities surrounding the formal opening of Aššurnaṣirpal II's palace in Nimrud in the ninth century BC.[34]

THE TURTLE DOVE AND THE "MONTH OF FLYING" (iti dal)

The turtle dove remains a highly praised (albeit nowadays illegal) delicacy across the Middle East.[35] Today, the European turtle dove is classified as vulnerable on the global IUCN Red List (https://www.iucnredlist.org), but in antiquity, this migratory bird would have crossed Iraq from east to west in vast numbers in the early autumn. Based on his observations of migratory bird patterns in Iraq from 1960 to 1962, the ornithologist Stephen Marchant wrote about the turtle dove:[36]

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32 Anne Eastham, "The Bird Bones from Abu Salabikh," *Iraq* 71 (2009): 103. For archaeological discoveries of turtle dove bones across the wider Near East, see von der Osten-Sacken, *Untersuchungen zur Geflügelwirtschaft im Alten Orient*, 279–80.

33 Cornelia Becker, "The Faunal Remains from Dur-Katlimmu—Insights into the Diet of the Assyrians," in *Archaeozoology of the Near East VIII. Actes des huitièmes Rencontres internationales d'Archéozoologie de l'Asie du Sud-Ouest et des régions adjacentes*, MOM Éditions (Maison de l'Orient et de la Méditerranée Jean Pouilloux, 2008), 556, https://www.persee.fr/doc/mom_1955-4982_2008_act_49_1_2726 (accessed July 7, 2024).

34 A. Kirk Grayson, *Assyrian Rulers of the Early First Millennium BC I (1114–859 BC)*, The Royal Inscriptions of Mesopotamia. Assyrian Periods 2 (Toronto: University of Toronto Press, 1991), 288–93. See also Karen Radner, *Die neuassyrischen Privatrechtsurkunden als Quelle für Mensch und Umwelt*, State Archives of Assyria Studies 6 (Helsinki: Neo-Assyrian Text Corpus Project, University of Helsinki, 1997), 312–13; André Finet, "Le Banquet de Kalaḫ offert par le roi d'Assyrie Ašurnasirpal II (883–859)," in *Banquets d'Orient*, ed. Rika Gyselen, Res Orientales 4 (Bures-sur-Yvette: Groupe pour l'Étude de la Civilisation du Moyen-Orient, 1992), 31–44.

35 Willi Büttiker, "Trapping of Turtle Doves (Streptopelia Turtur Linnaeus, 1758) in Saudi Arabia," *Fauna of Saudi Arabia* 9 (1988): 12–18; Anne-Laure Brochet et al., "A Preliminary Assessment of the Scope and Scale of Illegal Killing and Taking of Wild Birds in the Arabian Peninsula, Iran and Iraq," *Sandgrouse* 41, no. 2 (2019): 154–75, https://osme.org/sandgrouse/sandgrouse-41-2/(accessed June 29, 2024).

36 Stephen Marchant, "Migration in Iraq," *Ibis* 105, no. 3 (1963): 377.

> The autumn migration is spectacular and first attracted my attention to the question of passage in Iraq. During the whole of September, and possibly from mid-August, vast numbers pass Baghdad, flying almost due west. I have estimated 40 birds a minute crossing a front of 1000 m. for four hours up to 10.00 hrs., when movement diminished or stopped; and have watched birds beating into strength-4 head-winds, but never settling or appearing distressed. Sage has confirmed autumn passage at Khanaqin. Dividing my figure by ten to allow for a daily average over at least a month and assuming that the front is 100 km. wide (very conservative estimates), one arrives at a figure of three million birds passing in autumn. With such numbers involved on a relatively restricted front, it is probable that the whole population of the breeding area to the east as far as Turkestan and N.W. India performs its autumn movement in daylight, virtually at ground level.

Marchant's vivid description of vast flocks of turtle doves brings to mind the enigmatic Ur III month iti dal, which can be translated as "month of flying." The month iti dal was the fifth month in the calendar of the provincial capital Umma, located in southern Mesopotamia just north of ancient Girsu on the Umma Canal—an outlet of the Tigris River.[37]

The interpretation of iti dal is uncertain.[38] The verb dal, meaning "to fly" (Akk. *naprušum*),[39] is usually associated with the flight of birds. Robert K. Englund has tentatively linked the "month of flying" with the activity of chasing off birds from freshly seeded agricultural fields, and several Ur III texts document the stationing of workers in specific fields to chase off birds using the verb dal.[40] However, the agricultural fields in Umma province would not have been freshly seeded in the "month of flying," as this agricultural activity is referenced in the "month of sowing seed" (iti šu-numun), which immediately follows the "month of flying." Obviously, it makes little sense to chase off birds from fields that have not yet been planted with seeds.[41]

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37 Jacob L. Dahl, *The Ruling Family of Ur III Umma: A Prosopographical Analysis of an Elite Family in Southern Iraq 4000 Years Ago* (Peeters Publishers, 2007), 33.

38 Note, however, the tentative suggestion "month of gleaning" (iti ri) in Mark E. Cohen, *Festivals and Calendars of the Ancient Near East* (Bethesda, MD: CDL Press, 2015), 180–81.

39 See Ea Tablet II, line 298, in Miguel Civil, Ea A = *nâqu,* Aa A = *nâqu, with their Forerunners and Related Texts* (Roma: Pontificium Institutum Biblicum, 1979), 260.

40 Robert K. Englund, "Banks in Banning," in *Von Sumer nach Ebla und Zurück. Festschrift Giovanni Pettinato zum 27. September 1999 gewidmet von Freunden, Kollegen und Schülern*, ed. Hartmut Waetzoldt (Heidelberg: Heidelberger Orientverlag, 2004), 38, n. 16. Ur III tablets list the following birds being chased off the fields: $buru_4^{mušen}$ (Aleppo 241 [P100573], BPOA 1 995 [P339650], SAT 3 1630 [P144830], SAT 3 1630 [P144830]), $^{mušen}buru_5$ (PDT 2 925 [P126282]), $uga^{mušen}$ (JCS 16, 14 2 [P111939], UCP 09-02-2 53 [P136057]), and $gu\text{-}ur_2^{mušen}$ (MVN 21 80 [P120317]).

41 For the annual cycle of agricultural work in southern Mesopotamia and the region of Umma, see Magnus Widell et al., "Staple Production, Cultivation and Sedentary Life: Model Input

A more reasonable understanding of iti dal might therefore be as the "month of flying (birds)," alluding to the seasonal passing of migratory birds. Considering that the fifth month in Umma roughly corresponds to August/September in the Gregorian calendar, the most likely candidate for any migratory bird commemorated in the name of the month would be the European turtle dove. Literary texts and lexical lists of bird names, attested not only in archaic Uruk (see note 2), but also in Early Dynastic Šuruppak and Ebla, indicate that the Sumerians had a long tradition of classifying and categorizing various bird species.[42] Such compilations establish a strong observational relationship with birds and bird behavior, and it is hard to imagine that a massive seasonal passage of turtle doves would go unnoticed or undocumented in the Ur III administrative record. In fact, such an event would be of significance to the agricultural calendar, and to the overall economy of the state. The wild doves would no doubt have been hunted or trapped during their seasonal movement through the region, and would have formed an important complement to the diet of the people of Ur III. Moreover, the turtle dove primarily eats grains and seeds, and the species was known already in antiquity for its habit of pecking the agricultural fields for seeds.[43] Large flocks of turtle doves passing through in great numbers would no doubt have caused extensive damage to any newly ploughed/planted fields.[44] With this in mind, it seems almost certain that the ploughing of the fields with the seeder plough—described in the following Umma month, the "month of sowing seed"—would have commenced only *after* these birds had passed through the region.

The cultic and ritual character of the different Ur III calendars is well established. Even when mundane agricultural tasks appear to be referenced in the names of different months—such as sowing (šu-numum), "releasing" the plough (^{giš}apin-du$_8$-a), harvesting (še-sag$_{11}$-ku$_5$), placing the barley at the quay

Data," in *Models of Mesopotamian Landscapes: How Small-Scale Processes Contributed to the Growth of Early Civilizations*, ed. T. J. Wilkinson, McGuire Gibson, and Magnus Widell, BAR International Series 2552 (Oxford: Archaeopress, 2013), 86–89; Miguel Civil, *The Farmer's Instructions. A Sumerian Agricultural Manual*, Aula Orientalis - Supplementa 5 (Barcelona: Editorial AUSA, 1994).

42 David I. Owen, "Of Birds, Eggs and Turtles," *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 71, no. 1 (1981): 29–30; Jeremy A. Black and Farouk N. H. Al-Rawi, "A Contribution to the Study of Akkadian Bird Names," *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 77, no. 1 (1987): 18–19.

43 Veldhuis, *Religion, Literature, and Scholarship: The Sumerian Composition Nanše and the Birds, with a Catalogue of Sumerian Bird Names*, 140–41.

44 Civil, *The Farmer's Instructions. A Sumerian Agricultural Manual*, 87–88; Elisabeth von der Osten-Sacken, "Vögel beim Pflügen," in *Landwirtshaft im alten Orient*, ed. Horst Klengel and Johannes Renger, Berliner Beiträge zum Vorderen Orient 18 (Berlin: Dietrich Reimer Verlag, 1999), 265–78.

(še-kar-ra-gal$_2$-la), etc.—the references are to cultic events and festivals associated with those agricultural tasks.[45] Nevertheless, the seasonal regularity of agricultural and natural events—such as the harvest or the migratory patterns of birds—formed the basis for the Sumerian calendrical system, and Walther Sallaberger writes:[46]

> Der Zeitpunkt der Feste ist im Kalender auf bestimmte Tage festgelegt, richtet sich also nicht nach den witterungsbedingten Schwankungen. Der Kult nimmt den agrarischen Zyklus gleichsam vorweg und schafft ihn neu. Damit wird eine Ordnung vorgestellt, der die Wirklichkeit folgen Und wir dürfen sicherlich annehmen, daß die Festestermine gleichzeitig auch Richtzeiten für die landwirtschaftlichen Tatigkeiten darstellen.

In other words, economically significant agricultural and natural occurrences were commemorated in annual festivals, ensuring the continuity and prosperity of farming. These festivals were associated with specific months in the local calendars, serving as markers for agricultural and economic endeavors. Therefore, the festivals and their corresponding months played a crucial role in guiding agricultural and economic activities, making the Ur III calendars an important tool for the state in managing its agricultural and economic affairs.

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[45] Note, for example, the Sumerian precedence debate between the hoe and plough, where the (seeder) plough is trying to defend himself by highlighting the important festival associated with his first appearance in the agricultural year ploughing/seeding the fields "in the month of sowing seeds" (iti šu-numun-a): "When in the month of sowing my festival is held in the fields, the king slays bulls and numerous sheep, and the beer flows into the bowls." (From Catherine Mittermayer, "Learning Rhetoric through Sumerian Disputations," in *Back to School in Babylonia*, ed. Susanne Paulus, ISAC Museum Publications 1 (Chicago: Institute for the Study of Ancient Cultures of the University of Chicago, 2023), 186, https://isac.uchicago.edu/research/publications/isacmp1. For a complete edition of the text, see Catherine Mittermayer, *Was sprach der eine zum anderen? Argumentationsformen in den sumerischen Rangstreitgesprächen*, Untersuchungen zur Assyriologie und vorderasiatischen Archäologie 15 (Berlin / Boston: De Gruyter, 2019), 109–37).
For the preparation of beer and foodstuffs for the "festival" (ezem) of flying (birds), see CDLJ 2022/2 §03.07 (P530664), DoCu 304 (P109260), SNAT 532 (P130292), Obv. 13: ezem [dal?], TCL 5 6040 (P131754), BM 105394 (P209189). For the calendar month referred to as the "month of the festival of flying (birds)" (iti ezem dal), see AAICAB 1/3 pl. 244, Bod S 291 (P249196), OrSP 2 64 8 Wengler 28 (P124800), Princeton 2 149 (P201147), YOS 4 82 (P142146).

[46] Walther Sallaberger, "Riten Und Feste Zum Ackerbau in Sumer," in *Landwirtschaft Im Alten Orient*, ed. Horst Klengel and Johannes Renger, Berliner Beiträge Zum Vorderen Orient 18 (Berlin: Dietrich Reimer Verlag, 1999), 384. For the various festivals of the Ur III calendars, see Walther Sallaberger, *Der kultische Kalender der Ur III-Zeit*, Untersuchungen zur Assyriologie und vorderasiatischen Archäologie 7 (Berlin / New York: De Gruyter, 1993).

CONCLUSIONS

The vast majority of third millennium BC cuneiform texts are in Sumerian, a language isolate with no known connections to other languages, posing some challenges for our understanding of Sumerian vocabulary. As a consequence, scholars have to a significant degree relied on Sumerian-Akkadian lexical lists, notably the series Ur_5-ra = *ḫubullû*, which covers various subjects, including economics, law, materials, flora, and fauna. An important aspect of the lexical lists is their systematic categorization of the Sumerian nouns and nominal expressions. Moreover, the use of pre- and post-nominal classifiers in Sumerian further aids in the categorization of the vocabulary. This situation often allows Sumerian scholars to identify various classes or categories of words, yet they frequently encounter difficulty in determining the precise meanings of the words. The accurate identification of specific animals in the Sumerian language typically requires meticulous examination of contemporary textual contexts, alongside bioarchaeological data and representations in Sumerian art, as well as insights from linguistic, cross-cultural, ethnographic, and faunal studies.

This article concurs with the proposal of Elisabeth von der Osten-Sacken that the Sumerian bird tu-gur_4/$_8^{mušen}$ in all likelihood should be understood as an onomatopoeia for the European turtle dove (*Streptopelia turtur*).[47] The presence of this bird in Mesopotamia and the Eastern Mediterranean during the third and second millennia is supported by artistic depictions as well as the discovery of avifaunal remains. Furthermore, references to tu-gur_4/$_8^{mušen}$ are common in Mesopotamian texts from the Ur III period. Notably, it is frequently referenced in the Ur III livestock center, Puzriš-Dagan, where it was kept for the consumption of the elite. This practice bears some resemblance to the historical keeping of turtle doves in ancient Egypt.

Unlike other *Columbidae* species, the turtle dove is a migratory bird. In ancient times, vast numbers of turtle doves would pass through Iraq from east to west during early autumn. This article proposes that this seasonal migration of turtle doves is alluded to in the Ur III month known as iti dal, which corresponded to the fifth month in the Umma calendar (approximately August/September). If this hypothesis holds weight, iti dal should be understood as the "month of flying (birds)." The migration of large flocks of turtle doves would have been important for the agricultural calendar and the economy of the state. The doves were likely hunted or trapped during the course of their seasonal movement through the region, providing an important food source for the people of Ur III. However, their presence also posed a threat to newly ploughed and planted fields, poten-

[47] von der Osten-Sacken, *Untersuchungen zur Geflügelwirtschaft im Alten Orient*, 300–303.

tially causing extensive damage. Understanding and monitoring annually occurring natural events and ensuring the optimal timing for agricultural tasks would have been essential to maximize yields and safeguard successful harvests, and the planting of the fields—as described in the subsequent Umma month known as the "month of sowing seed" (iti šu-numun)—would therefore have commenced only after these birds had passed through the area.

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