yarsko, yärskö, yarasa and yar(ıg) kanat Turkic 'bat' revisited

Hans Nugteren*

Abstract: The recently discovered Old Uyghur word Y'RSQW 'bat' fills a gap in our data. It is now probably the oldest word for 'bat' recorded in Turkic languages. It sheds some new light on terms for 'bat' in other modern and historical Turkic languages. It seems useful to have another look at these words. Previous etymological proposals will be discussed, of which some are based on Turkic roots, while others assume a foreign origin.

Keywords: Old Turkic, Old Uyghur, Maitrisimit, Turkic languages, etymology, animal names, bat, yarasa.

Özet: yarsko, yärskö, yarasa ve yar(ıg) kanat. Yarasa Anlamındaki Adlara Yeniden bir Bakış

Yakın zamanda keşfedilen Eski Uygurca Y'RSQW 'yarasa' kelimesi verilerimizdeki bir boşluğu doldurmaktadır. Bu kelime muhtemelen Türk dillerinde 'yarasa' için kayda geçmiş en eski addır. Diğer çağdaş ve tarihi Türk dillerindeki 'yarasa' terimlerine de yeni bir ışık tutmaktadır. Bu kelimelere bir kez daha bakmakta fayda var gibi görünüyor. Bu makalede, daha önce ortaya atılan ve bir kısmı sözcüğün kökünün Türkçe olduğunu, bir kısmı ise yabancı bir dilden ödünçlendiğini savunan etimoloji önerilerinden bazıları tartışılacaktır.

Key Words: Eski Türkçe, Eski Uygurca, Maitrisimit, Türk dilleri, etimoloji, hayvan adları, yarasa sözü.

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^{*} Dr., Göttingen Academy of Sciences and Humanities in Lower Saxony, hans.nugteren@adwgoe.de; ORCID: 0000-0001-9055-5031.

Introduction

Bats, mysterious animals which in premodern times were hard to observe and classify due to their nocturnal lifestyle, in many languages lack a primary name and are often described as 'flying mice', 'night birds' or 'leatherwings'. Alternatively, they share names with other flying creatures such as owls, swallows, butterflies or moths. Other naming motives refer to the sound of flapping wings or to the bats' poor eyesight.¹

In Turkic languages we also find such new descriptive names as well as loanwords from neighbouring languages. However, there are a couple of 'bat' terms in older Turkic sources that are not transparent descriptions. These words survive in modern languages and at first sight look like native formations.

Nearly all etymological aspects of the Turkic words for 'bat' have been discussed by Stachowski (1999), who ultimately explained *yarasa* and other documented forms as a compound of the words 'leather' and 'wing' borrowed from the Samoyedic language Mator which went extinct in the 19th century.

The 'bat' terms were included in the etymological dictionaries by Clauson, Räsänen, and Levickaja (ĖSTJa IV) and have also been mentioned or discussed by other colleagues such as Doerfer, Poppe, Helimski, Hauenschild, Starostin et al., Ščerbak, Tekin, Ünal and Aksu. Many of these colleagues gave useful overviews and reasonable opinions about its etymology and divergent developments in the modern languages. This paper will discuss the Turkic terms for 'bat' and review some of the published ideas about their origin.²

1. Old Turkic names for 'bat'

The motivation to pick up this topic again is the appearance of one new data point. The Old Uyghur form Y'RSQW was recently published for the first time in a manuscript of the *Maitrisimit* discussed by Laut and Semet (2021: 316, leaf 10 v.). The word

For a survey of naming motives in Western and Northern Eurasia see Lina (2016: 7–9), who views the Turkish form as unexplained, and Kabakova (2023), where the etymological remarks are unfortunately not that helpful.

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occurs in an enumeration of ominous winged creatures in an apocalyptic vision.

The passage – skipping some problematic (parts of) words – is as follows: $\ddot{u}t\ddot{l}\ddot{a}rint\ddot{a}$ yaroklarınta ... $t\ddot{a}g\ddot{l}\ddot{u}\ddot{g}\ddot{a}n\ddot{l}\ddot{a}r$ tananlar ... $k(a)rliga\ddot{c}lar$ yarsGWlar $kir\ddot{u}$ $\ddot{u}n\ddot{a}$ $k\ddot{a}nt$ $\ddot{u}z\ddot{a}$ konmis $b(\ddot{a})lg\ddot{u}rtir$ "[Maitreya] makes appear [in a vision] how ... kites, jackdaws ... swallows and bats go in and out of the holes and crevices and descend upon the town".³

Y'RSQW in the *Maitrisimit* is now probably the oldest recorded Turkic word for 'bat', predating the two words recorded in Kāšġarī's eleventh-century *Dīwān luġāt al-Turk* (DLT).⁴ This changes the perspective on some of the previously recorded Turkic words for 'bat' and the connections between them. We now have the following terms:

1.	y'rsqw	- Constant	in Uyghur script in the Maitrisimit (Laut/Semet 2021)
2.	'ay ^a ' y ^a rskw ^u = 'ayā yarskū	أَيَايَرُسُكُو	in Arabic script in DLT (Čigil dialect)
3.	$y^a r^i s^{a'} = yaris\bar{a}$	يرسا	in Arabic script in DLT (probably Oghuz but not marked as such, attributed to 'some other [tribes]'
4.	yar(ıg) kanat		in Arabic script from the 14 th century onwards (see Boeschoten 2022)

The spelling in the original scripts allow for several readings. Unlike in many other cases of ambiguous notation, the reading of this lexical item cannot immediately be established by comparing the surviving cognates in modern languages. One's choice of transcription cannot

Before the kites there should be another creature of which only the plural suffix remains. Before the swallows (or perhaps swifts) there is another creature, provisionally read *kuri anlar* by Laut & Semet. They do not provide a translation or detailed commentary.

⁴ The Hami manuscript of the *Maitrisimit* stems from the 11th century and is thus roughly contemporary with the time the DLT was written, although the only known copy of Kāšġarī's compendium is from 1266 (Dankoff & Kelly 1982–1985, I, 1). The *Maitrisimit* may have been translated from Tocharian as early as the 9th century.

be separated from one's views on the morphological structure and the likelyhood of certain semantic changes.

The Uyghur spelling *y'rsqw* could be read *yarsku*, *yarsko*, *yarsgu* or *yarsgo*. As this is the only attestation of the word, there is no particular reason to assume the presence of unwritten vowels, although of course defective spellings are not uncommon in native and foreign words.

Kāšġarī's Arabic spelling $y^a r^i s^a$ ' indicates yarısa, although modern forms suggest yarasa, with several deviations. The spelling allows for a front-vocalic reading $y\ddot{a}ris\ddot{a}$, but the only argument for that would be to make it more similar to $y\ddot{a}rsk\ddot{o}$.

The Uyghur notation with undotted q favours a reading with -g- rather than -k-. Phonetically a form with -g- would be easier to connect to the modern Oghuz yarasa. Morphologically, the reading -gu would be preferable if the word were a (de)verbal noun. However, the required verb yars- is not attested, although the disyllabic verb yars- 'to be disgusted, to feel aversion' is attested both in Old Uyghur and in Middle Turkic.⁵

The provisional readings yarsko and $y\ddot{a}rsk\ddot{o}$ are inspired by Clauson's practice to read o/\ddot{o} in Old Turkic or Proto-Turkic to indicate that some languages have U and others A. Clauson applies this shorthand or 'trick' in native words like orto 'middle' (ortu in Tuva, orta in Turkish). This practice, which bears no relation to the actual instances of Old Uyghur o/\ddot{o} as indicated in the Brāhmī script

⁵ In *yarsok* 'disgusting' the final vowel of the stem was elided before the deverbal noun suffix -Ok.

such as *oron* 'place', is not recommended in general, but we will apply it here for the sake of convenience to avoid a proliferation of tildes every time the form is mentioned. We will in the etymological considerations below stick to the notations *yarsko* and *yärskö* without constantly repeating all of the alternative possible readings.

The forms *yarsko* and *yärskö* must be variants of a single etymon. Their syllable structure is rare but permissible in Turkic, but this set of variants may in fact represent two interpretations of a single foreign etymon, even though there is no obvious source language. The vowels of these two forms are reconstructed differently on the basis of the -q- and -k-. However, vowel harmony does not necessarily apply if we are dealing with a loanword, and perhaps a single pronunciation underlies both the Uyghur and Arabic spelling.

The readings *yarsko* and *yärskö* facilitate the connection to *yarısa* > *yarasa*, which will here be taken to be a descendant of the same etymon, as was already assumed by several authors including Clauson (1972: 972a) and Hauenschild (2003: 40, 239–240).

The loss of postconsonantal -g/k- is of course known from native Turkic words, most systematically in Oghuz. Kāšġarī gives tamak 'palate' and yorınča 'clover' as Oghuz equivalents for tamgak and yorınčga in other dialects. In western Oghuz languages, postconsonantal -g- is lost in apparently unsegmented words like älgä- 'to sieve', bürgä 'flea', inčgä 'fine' and yalgan 'lie', and also when -g- is a suffix-initial consonant as in ädgü 'good', sıčgan 'mouse' and orgak 'sickle'. ⁶ This phenomenon is also often encountered in Kipchak and Chaghatay languages including Tatar and Modern Uyghur, apparently due to intra-Turkic exchanges.

2. Later forms of yarsko, yärskö and yarasa

Descendants of *yarsko* survive with back vowels. They feature different treatments of the consonant sequence *-rsg-/-rsk-*, which is

In Turkish: ele-, pire, ince, yalan, iyi, sıçan, orak. It is debatable whether after a voiceless consonant, as in inčgä and sıčgan, the -g- had become assimilated to -k- before being elided. There is not as much evidence for the elision of original postconsonantal -k-, as in Kāšġarī's Oghuz arka- 'to search' vs. modern Oghuz ara-. Two special early cases of elision of postconsonantal g/k are kärgäk ~ käräk 'necessary' and kulgak/kulkak/kulxak ~ kulak 'ear'.

permissible on a syllable boundary but uncommon in Turkic, and was broken up or simplified in later languages.⁷

yarsko is the parent form of several (previously orphaned) modern forms. Baraba (Siberian Tatar) yarısqı added a vowel between r and s. This is a close relative of the oldest recorded form. A similar Turkic form يرسقى is recorded in Steingass' Persian dictionary (1892: 1530a), mistranscribed as yarsaqī. Doerfer discusses this item, more plausibly transcribed yarısqı (although yarsqı would also be possible), in TMEN 1836 (IV:143). Gandjeï (1977: 628) points out that this is not a loanword in Persian but a 'Turkish' (i.e., Azeri) word from the 15th century Farhang-i Ibrāhīmī that ended up in the Persian dictionaries. Of course this deviates from the standard Azeri and other typical modern Oghuz forms.

Tuva $\check{c}a$ "ski lost the r and $\check{c}asqa$ in closely related Soyot changed the final vowel.⁸ The loss of -r- in Tuva suggests that $\check{c}a$ "ski goes back to an earlier $*\check{c}a$ "rski; the loss of -r- would be unexpected if it were intervocalic.⁹

Chaghatay *yarasiq* (Pavet de Courteille 1870: 520) apparently broke up the cluster and then lost the final vowel.¹⁰ The same can be

The sequences *-rsg-* and *-rsk-* are rare in Old Uyghur stems, but do occur, as in *tärsgü* 'pine tree' and *kumursga* 'ant'; on the morpheme boundary they may appear as follows: the dative *bars-ka* 'to the tiger', the petrified directive *tärs-gärü* 'contrary' or the participle *sars-gu* 'scolding'

gärü 'contrary', or the participle sars-gu 'scolding'.

The Kangat form čas kiš may be from an earlier *časki with an altered last syllable, as if the suffix -gU (which it in fact did not contain) was replaced by -gUč. The altered Tofa form ča"pqiš on the surface looks like a deverbal noun in -gUč from ča"p- (< *yap-) 'to stick, glue', which reminds us of the Bulgarian 'bat' designation prilep, related to the Slavic verb for 'to stick, glue, cling', referring to the bats' roosting habits. For the analysis of ča"pqiš as *yap kuš lit. 'fluff bird' see Stachowski (1999: 132).

Stachowski (1999: 131) mentions the loss of preconsonantal -r- in Tuva kımıskayak 'ant' from *kumursga. The loss of the middle syllable after the loss of an intervocalic consonant is more commonly seen in -k-, as in te < *teke 'Siberian roebuck', ses < *säkiz 'eight', ten < *tikän 'thorn', šan-ı < čıkan 'cousin', and occasionally with -l- as in dorzuk < tolarsuk 'lower thigh' (Tenišev 1968: 174a).

Pavet de Courteille's entry yarasa, yarasıq 'chauve-souris; qui plaît, qui charme' is somewhat conspicuous, as the meaning 'qui plaît, qui charme' seems to belong to the following entry yarasıq, so that perhaps only yarasa should be interpreted as 'bat'.

seen in yarasig 'bat' in the Qisas al- $Anbiy\bar{a}$ (Boeschoten 2022: 400b).

The front-vocalic variant *yärskö* does not seem to have any descendants. Phonetically the second element of Chuvash *śara śerśi* 'bat' (Skvorcov 398c) might have gone back to *yärskö* if Clauson's emendation *yersigü* (see below) had been correct, but it is more likely that it is the transparent 'bald sparrow', with the second element coming from *särčä 'sparrow, small bird'. This has an equivalent in neighbouring Mountain Mari *cäragek* lit. 'bald bird' (Vasil'jev, Savatkova & Učaev 1991: 381b). Mari *cära* is the same word as Chuvash *śara*, which because of the vocalism cannot be related to *yarıg discussed below.¹¹

Oghuz (Turkish, Gagauz, Azeri, Turkmen dialect) suggest *yarasa. As shown by Boeschoten (2022: 400b), yarasa was not restricted to Oghuz in Middle Turkic. The motivation for the added -v- in dialectal Turkmen yarva:za is unclear. An inexplicable -n appears in Salar yarasan, and is also found, with other phonetic irregularities, in the Azeri dialect form yaraxsan (Axundov, Kazımov & Behbudov 2007: 541b) and the Turkish dialect form yelesen (DS 4233b). The rare yavsun (DS 4206b) may also be an irregular development of the same word.

By means of such changes, etymologically opaque word stems can be made more transparent or be provided with meaning. Foreign words can be nativized in pronunciation and provided with a meaning ('folk etymology'). In the case of the terms for 'bat', only some of the phonetic and morphological alterations have resulted in more transparent or understandable forms for the native speakers.

Unexpected word shapes may be tabooistic deformations, a consequence of a prohibition against using the correct name of certain creatures or objects. This often happens in the case of animal names, not only those denoting animals hunted by people or predators that pose a risk to humans and livestock. Animals whose original names are avoided in several Turkic languages include 'bear', 'wolf', 'weasel' 'snake' and 'elk' but also 'squirrel' and 'mosquito'. The words for 'butterfly' and 'spider' were preserved in most Turkic subgroups; rather than being replaced by different

Meadow Mari čara; Tatar and Bashkir šärä 'bald, bare' may be borrowings from Chuvash. I would like to thank Ane H. Nauta for a discussion on the Chuvash form.

words, their pronunciation and morphological structure was, apparently intentionally, altered.¹²

3. Proposed Turkic Etymologies for yarsko, yärskö and yarasa

The old Turkic words for 'bat' are hard to explain with the normal etymological and morphological methods. The word is unlikely to be an unsegmented native word stem, but there is neither an established shorter root nor a morphologically and semantically plausible derivation. This situation inspired several, often speculative explantion attempts.

Before discussing Stachowski's explanation as a compound consisting of two Samoyedic words, some other opinions will be presented here.

Clauson attempted to derive Kāšġarī's Čigil form *uya yersigü* (vocalisation of both components thus 'emended' by Clauson) from an otherwise unattested verb *yer-si-* 'to make a nest', which should be rejected. He does not present a separate solution for *yarısa*. Dankoff & Kelly (1982–1985) do not suggest an etymology for either form.

Nişanyan (2021: 956a) considers the Turkish *yarasa* to be related to the Old Turkic forms. He reads the DLT form as *aya yarısğu* (replacing *g* with *ġ* and changing the vowels accordingly, as if *ġ* were written), which in his opinion goes back to 'Old Turkic *yarsıġu/yarasa*'. He derives this (with question mark) from the verb *yarsı*- 'to be disgusted'.

Tekin (2013: 176) views *yarısa* as *yarı-sa*, a denominal formation based on *yarı* 'hide' but with an unexplained suffix. ¹³ He explains Tuva *ča''skı* as **yar-sgu*, also with an unexplained and otherwise unknown suffix. He views both *yarı* and *yar* as cognates of Mongolic *arasun* 'skin'.

Starostin et al. (2003: 478) derive *yarasa* from a Proto-Altaic root *diari 'a small animal', although they note the problem with the element -sa and do not attempt to explain Kāšġarī's *yärskö* and Tuva

Compare the development of 'spider', 'butterfly' and 'fly' in South Siberian Turkic in Sumačakova et al. (2013). For 'spider' see also Hauenschild (2003: 173) and Nugteren & Roos (1996: 46). For 'butterfly' see Hauenschild (2003: 103) and Nugteren & Roos (1996: 44).

Gülensoy (2007: 1071-1072) also derives yarısa from 'hide' with a suffix -sa.

ča"ski; they also view the first element of the later form yarkanat discussed below as related to the same Altaic root.

Eyuboğlu (1991: 730b) fancifully explains the western form *yarasa* as *yarı-sağ* 'half sound' in the sense of 'underdeveloped'.

Poppe (1978: 140) already proposes that *yarasa* goes back to an earlier *yarasqa*. However, the pathway is dubious. He suggests that the stem is (Tatar) *yari* 'membrane' to which a suffix *-sqa* was added. He quotes Turkic *kumursga* 'ant' as a parallel formation, although it is not obvious what the stem of that word would be. Although numerous animal and plant names end in +gA (see Erdal 1991: 83)¹⁴, this proposal should probably be rejected, as it does not account for the *-s-*. It is not problematic that the stem *yari* goes back to an earlier **yarig*, which will be encountered again below in the discussion of *yarkanat*.

Poppe's idea was perhaps inspired by the Mongolic suffix -skA that makes (mostly skin-related) nouns from nominal and verbal stems as well as from stems/roots of indeterminate character that do not occur independently. Examples include *ada-ska, *hüke-ske, and *kurï-ska, for which the original meanings 'skin of a dead horse', 'skin of dead cattle', and 'skin of a dead lamb', can be assumed. ¹⁵ These words are related to *adaun/*adaasun 'horse herd/livestock', *hüker 'bovine', and *kurïgan 'lamb'. A deverbal -skA form is *turuska from tur- 'to be emaciated'.

There is some marginal evidence for a suffix $+skA \sim +sA$ in Southwestern Kipchak languages, but this lacks the specific semantics of the Mongolic suffix. The most striking example is a

⁴ Erdal (1991: 84) considers it possible that *kumursga* 'ant' may have an Indo-European base (related to Sanskrit *kṛmiḥ* 'worm') with the Turkic element +*gA*.

¹⁵ LM adasqa 'worn-out horse, jade; raw hide used as a mat or rug' (Lessing 1960: 11a), Kalmyk adşχv 'dry, shriveled-up skin, old hide' (Ramstedt 1935: 2a), Khalkha adsaga Hangin 1986: 10b; Middle Mongolian (Muqaddimat al-Adab) ük(e)ske 'rawhide' (Poppe 1938: 292b), Kalmyk üküskə '(old) cow hide' (Ramstedt 1935: 456b) (derivation from the verb *ükü- 'to die' cannot be entirely excluded, as h- would have been expected in the Middle Mongolian form if it derives from *hüker); Kalmyk χürsχν ~ χursχν 'prepared lambskin' (Ramstedt 1935: 203a), Eastern Yugur ġurəsġa 'lambskin' (Bolčuluu 1984: 80); LM turasqa 'skin of a dead animal' (Lessing 1960: 843b), Kalmyk turusχν (Ramstedt s.v. adşχν), Khalkha tursaga (Hangin 1986: 516a). Further examples include *hanī-ska 'eyelid' from *hanī- 'to shut the eyes', *kondaska 'skin of the rump' related to *kondasun, *kondalaï 'rump', and *kömeske 'eyebrow' of unknown affinity.

word derived from *boyun 'neck': Karachay boyunsxa, Balkar boyunsa 'yoke' (Tenišev & Suyunčev 1989: 163b) ¹⁶, Kumyk boyunsa 'yoke' (Bammatov 1969: 82b), Karaim boyunsa (all dialects) 'yoke; headstall; scarf' (Baskakov & Zajončkovskij & Šapšal 1974: 127b), Crimean Tatar boyunsa ~ boyunsa 'yoke; horse collar' (Aqtay & Jankowski 2015: 93ab). Nogay of Stavropol moysa 'yoke' (Khalilov 10.780). Note also the deviant form Nogay boyuskan 'rope, woollen leash (to tie up the calves when the cow is milked)' (Baskakov & Kalmykova 1963: 1983b). ¹⁷ However, none of this elucidates the origin of the 'bat' terms.

4. Non-Turkic Etymologies for yarsko, yärskö and yarasa

Clauson (1972: 972a) already concluded that "the wide range of forms suggests that they are all different representations of a l[oan]w[ord]". Unfortunately, it was not possible to find a suitable donor form or donor language.

Doerfer (TMEN [IV] 1836) also considered the word impossible to analyse and assumed it was of foreign origin or a taboo form.

Tietze (2019: 306) omits the standard Turkish *yarasa* but incorrectly considers *yelese/yelemse* to be a Persian loanword in Turkish.¹⁸

Stachowski (1999) proposed to explain yarısa/yarasa as * $\acute{n}arV + sa$, a compound of two words from Mator, a now extinct Samoyedic language. As $\acute{n}arV$ means 'thin skin, leather' and sa 'wing', the correspondence is semantically excellent and phonetically sound. The idea is generally plausible as 'leather wing' is a common naming motive; some of the weak or unsupported aspects of the etymology were already indicated by Stachowski. The compound is not attested in the source language and sa 'wing' is itself of unclear origin. Moreover, another Mator word for 'bat' is actually attested as

¹⁶ Mudrak (2023: 1707) proposes a different etymology for *boyunsxa*: Turkic *boyun* 'neck' plus Ossetic (Digoron) æфсой ~ æфсойнæ 'yoke'.

¹⁷ Cf. also dialectal Turkish *boyunsalık* 'rope that passes under the neck of an animal and is attached to the bit and halter; scarf; headstall' (DS 748a).

¹⁸ Incidentally, the old form Pelliot يلاسه (1931: 574) could also be read *yäläsä* and be viewed as an alteration influenced by 'wind'.

As Stachowski explains, *ńarV is not attested in the limited Mator materials but well supported elsewhere, whereas *sa* is documented but etymologically unclear.

čabkəpso(n). Stachowski considers this to be a probable Turkic loanword (cf. the abovementioned Tofa *ča"pqiš*). ²⁰

One may consider *yarısa* or *yarasa* to be opaque and insufficiently Turkic in structure but, given that *yarsko* and *yärskö* are as old as the *yarasa*-type forms, *yarsko* and *yärskö* cannot simply be explained as later morphological alterations of *yarasa* to make the word more Turkic-looking or more etymologically transparent.

The present distribution suggests that *yarasa* is a western or even Oghuz form. It would be unexpected if the very Turkic varieties that were geographically closer to the Samoyedic languages had felt the need to alter the phonetic shape.

If one does not accept the Samoyedic etymology, *yarsko*, *yärskö* and *yarasa* can still be of non-Turkic origin.

The foreign source form of the Old Turkic terms may have been close to the phonetic shape *yarsko* or, if *aya* in the DLT does not represent *aya* 'palm of the hand', *ayayarsko*. Unfortunately, no such form has been found in any of the usual donor languages. Somewhat similar is the Tocharian B *arśakärśa* 'bat', perhaps similar enough to assume a connection. *arśakärśa*, which appears instead of the rat in the twelve animal calendar, was deemed etymologically unclear by Adams (2013: 26). Pinault (2014: 208 ff.), thinks it is unlikely to be a calque of one of the many recorded Sanskrit 'bat' terms and views it as a Tocharian compound, with the first element meaning 'night', and the second element denoting some kind of small animal or bird, perhaps with the original form *kurkya.²¹

5. yar... kanat

*ka:nat is obviously the old and widespread Turkic word for 'wing'. There is some disagreement about the first element, but generally this is viewed as a reduced form of *yarıg 'membrane, thin skin' or

²⁰ Stachowski (1999: 132). According to Helimski (1995), the element –*pson* is a well-known Mator formans.

See Pinault for the phonetic details. Vasmer (1986 II 389) rejects the comparison of the second element of the Tocharian form to Russian krysa 'rat'. Perhaps an Indic compound cannot be entirely excluded as the source of yarsko c.s. (and even the Tocharian form); Mayrhofer (1992: 248) mentions an Indic root rkṣa- 'bald', which would be a typical first member of a compound meaning 'bat'.

(perhaps its diminutive) *yargak.²² The naming motive 'skin wing' is an obvious one with parallels in many languages both in Turkic (Turkish deri kanat, Yakut tirii kınat, Khakas xırna xanat) and elsewhere. The analysis as *yarıg kanat was already proposed by Budagov (1871: 327a; see also yarasa 325a), as well as recently endorsed by Károly (2015: 3411).

*yarıg itself is not attested in Old Turkic, but the distribution in Middle Turkic and modern languages confirms its age. The word yarıg 'membrane' survives as an independent word in many languages and displays the usual sound changes as in similarly-structured words (arıg 'clean', sarıg 'yellow', tarıg 'crop', etc). In the name for 'bat' it is generally shortened to yar-, but disyllabic forms are recorded in Middle Turkic and survive until this day.

It seems less likely that *yar*- as an element of bat names represents a shortening of *yargak*. This was suggested in Sanglax, as referred to by Hauenschild (2003: 240) and Boeschoten (2002: 400b).²³

*yargak is not attested in Old Turkic either, but it is found several times in the Khotanese corpus²⁴ and survives in several modern Turkic languages.

The full form *yarıg survives in the Yakut form saru kınat 'bat'. 25 Stachowski (1999) has proposed alternative etymologies for Yakut sarıı. He connects it to the verb saar- 'to moult', which he views as a foreign item related to the Samoyedic root *ńarV mentioned above.

A selection of modern cognates of *yarıg kanat is listed in the following table:

It is unlikely that the element yar represents 'ravine, cliff, cleft, river bank', although it seems acceptable as a place where bats may be encountered; yar 'saliva' does not provide any semantic connection. Vámbéry' (1878: 134) saw yarkanat as 'shiny wing' ('Glanzflügel') based on an assumed connection with yaru- 'to be or become bright', yaruk 'light, brightness'. As Stachowski indicates, this suggestion can be rejected as well.

Afghan Uzbek has a form *yarkanat* (*yarġaġkanat*) according to Sayed Mahmod (2012: 199b). It is unclear whether *yarġaġkanat* represents an 'authentic' form or a post-hoc etymological explanation of *yarkanat*.

²⁴ Bailey (1979) s.v. aurmaka, khauśka, pveca, mūṣaka-.

Note that Stachowski (1998: 122) derives Dolgan huru 'whore' from *yarıg < *yar- 'to split'. This is the same word as Yakut suru '(...) philanderer, adulterer, swindler' (Pekarski 1907–1930: 2486), '(...) wanton, depraved' (Slepcov 1972: 362a).</p>

Turkmen	nanaamat
TUIKIIICII	yarga:nat
Uzbek	yårqanåt (dial.)
Kirghiz	jarganat ∼ jarkanat
Altai	d'arganat
Teleut	d'arganat ~ d'arkanat
Kazakh	žarqanat
Tatar	yarkanat
Bashkir	yaryanat
Nogay	yarganat
Crimean Tatar	jarγana
Khakas	čarxanat
Shor	čaryanat
Yakut	sarıı kınat

It is unclear whether *ya(:)rig derives from the verb *ya:r- 'to split'. The verb does not seem to be attested in the narrow context of skinning, tanning or leatherworking, but it is conceivable that the semantic spectrum of the verb *ya:r- included the removal of fur from the outside of the hide or scraping off the impurities (blood, fat, glands) from its inside, as the first step in the tanning process. 26 An argument against such a connection could be that the vowel length of the verb is not confirmed by the Turkmen word for 'bat'. 27 Turkmen does not have long a in yari and yargak either, but does have long a: in several of the obvious derivations of the verb ya:r- (ya:ri 'half', ya:rim 'half', ya:rim 'groats', ya:rik 'crevice'; Baskakov et al. 1968: 819-820). yarig may instead derive from an unrelated verb *yar-.

Alternatively, *yarıg* may be a polysyllabic but – with our present knowledge – unanalyzeable word like *elig* 'hand', *adak* 'foot', *yilik* 'marrow', etc. At any rate, the existence of a lexeme *yarıg* does not depend on our ability to derive it from a shorter stem.

Aberrant forms abound. Some forms preserve the second syllable of *yarıg 'membrane' in some form, such as Bashkir dialect form yarıqanat (Yanauıl and Boray districts; Xisamitdinova 2008: 203), Baraba (Siberian) Tatar yaruqanat (Tumaševa 1992: 71a). That this is not a recent secondary development is demonstrated by Middle Turkic yarı qanat (Boeschoten 2022: 400b).

DLT yarındaq 'strap [sliced from a hide]' (Clauson 1972: 971a) and Middle Turkic yarındaq 'rawhide' (Boeschoten 2022: 400b) may be a deverbal derivation, although Clauson derives it from yarın 'shoulder'.

However, Tekin et al. (1995: 680a) do have *yaargaanat*.

Shor developed a reduced form *čarnat* (recorded by Radloff 1893–1911: 1867).

Inexplicable replacement of the initial consonant took place in Kumyk *varqanat* and Khakas *parxanat*. Crimean Tatar *jaryana* lost its final consonant. ²⁸ Crimean Tatar *čangarata* (Garkavec & Useinov 2002: 229b) may be another alteration of the same etymon, but the *č*- is peculiar, giving it a spooky resemblance to Iranian terms such as Pashto *camgaal*, Punjabi *camagidara* 'bat' related to Sanskrit *carman*- 'skin, leather' (Turner No. 4700 ff). ²⁹

Frembgen (2006: 243) assumes that the name *yer-qanat* (lit. 'earth-wing') he found in the language of the Yomut Turkmen of Iran can be explained from "the earth-like color of the wings". However, this could also be a mere phonetic development or an attempt to make sense of an opaque word. Similar forms are found in Balkar *jerqanat* (Tenišev & Suyunčev 1989: 243b) and in Oghuz of Uzbekistan *yerqanat* (Eker 2006: 121). Another adaptation is Crimean Tatar *yelqanat* (lit. 'wind-wing') Garkavec & Useinov (2002: 229b).

The Bashkir dialect form yarqanati (both in Yanauil and Boray districts; Xisamitdinova 2008: 203) and the Troki Karaim form $y\ddot{a}rikanati$ are compounds with a possessive suffix on the second element³⁰, while the suffix +lXg was added to the Halicz form yarikanatli.

6. Other naming motives

Most other 'bat' terms involve the Turkic elements 'bird' and 'wing'. Dialectal Turkish *derikanat*, literally 'leather wing' (DS 1434a), with an equivalent in 'Middle Turkic' *täri qanat* (*at-Tuhfa az-zakiyya*; Boeschoten 2022: 332b).³¹

Western Yugur (Yellow Uyghur) uses the Mongolic-Turkic compound *sarsın qana*^ht as well as *sudan qanat*, whose first member

²⁸ This is reminiscent of the 'Mongolic' form *yalaqana* mentioned by Poppe (1925: 207), which may be the Turkic word remodeled after other animal and plant names in +*GAnA*. The resemblance to Zakataly Avar čerxeni 'bat' (in Northern Azerbaijan) is also striking but likely to be coincidental (Khalilov 3.591).

²⁹ Sattarova & Kurtseitova (2021) are of the opinion that this is a word of Greek origin.

Note the older Western Karaim form *yarï qanati* (Németh 2021: 1032).

³¹ Dialectal Yakut *tirii kınat* is 'flying squirrel' (Afanas'ev, Voronkin & Alekseev 1976: 240a).

is also recorded as *sagdan*, *saldan*, *sodan*, and *sedan*. It also occurs in *sagdan teri* 'sheepskin of which the hair has been pulled out' (Lei 1992: 318b); it does not seem to occur independently. It is of unknown origin, but it possibly represents a distorted form of Persian *saxtiyān* 'morocco leather'.³²

Dahe dialect of Western Yugur features an alternative 'bat' term $guro^h qpa$ (Lei 1992: 159a). It is tempting to interpret this as 'blind flyer', but Persian $k\bar{u}r$ 'blind' (known from Turkish $k\bar{o}r$ and also seen in the Uzbek $kor\ \check{s}apalak$ 'bat') is in fact not attested in Western Yugur; the verb 'to fly' is historically front-vocalic $*\ddot{o}r\ddot{u}$ -k- and, with the verbal noun -mA, should have resulted in $u^h kpe$.

Turkish *etkanat*, literally 'flesh-wing' (Ayverdi online) has an equivalent in Chaghatay (Pavet de Courteille 1870: 94).

Turkish gecekuşu (~ dialectal geceguşu) 'night bird', is also found elsewhere including Kumyk gečequš (Bammatov 1969: 99a). Turkish dialect forms based on the same idea are karanlıkkuşu 'darkness bird', akşam kuşu and akşamcık kuşu 'evening bird' (DS 2651b; 162a). Kabakova (2023) quotes a Karachay-Balkar soqur keče čıpčıq, literally 'blind night sparrow'.

Dialectal Turkish *çıplak kuş* lit. 'naked bird' is documented once (DS 1184a). In Turkish dialects we also find *kayış kanat* 'bat' (DS 2701b), with Turkic **kadıš* '(leather) strap, thong'.³³

Ayverdi's Turkish dictionary (consulted online) has both *şeytan kuşu* lit. 'devil bird' and the fully Persian *mürg-ı Îsâ* lit. 'Jesus bird'.

As mentioned above, terms for owls can also used for bats, as in Siberian Tatar ögö lit. 'owl', tön yabalaq lit. 'night owl' (Tumaševa 1992: 163b, 215a). Le Coq (1911: 99c) records yūpulaq with the meaning 'butterfly' and sačqán yūpulaq (lit. 'mouse-owl') for 'bat'.

7. Mongolic connection?

The Turkic words for bat have been connected to Mongolic in a number of ways. These can be viewed in the framework of Altaic

The phonetic variants are puzzling. It should be noted that Persian and Arabic words are quite rare in Western Yugur. These forms are also reminiscent of Aramaic *šltn*, *šltn*² 'bat' (?) (variants: *šultana*, *ašlutina*, *šulutana*, *šlutana*; see Kaufman et al., consulted 6 June 2025), Mandaic *sultana*, Akkadian *š/suttinnu* 'bat', but these can hardly be connected to the Western Yugur word which only means 'hairless skin'.

This has an equivalent in the Russian dialect of Novgorod *remenuxa* 'bat' related to *remen*' 'strap' (Levickin & Myznikov 2010: 1029a).

etymology but they do not necessarily deepen our knowledge about the history of the Turkic terms.

Tekin (2013: 176) proposed a connection between the part yar-seen in the Turkic 'bat' terms and Mongolic * $ara.sun \sim *ari.sun$ 'skin', inspired by the $y-\sim \mathcal{O}$ - alternation more typically seen in words with high vowel in the first syllable. Ünal (2023: 119) connects the Turkic words with Mongolic *sari.sun 'thin skin, membrane'. ³⁴ Both of these ideas aim to achieve greater time depth in etymology but neither of them enlightens us about the internal Turkic developments of the 'bat' terms.

The most common Central Mongolic word for bat has itself no connection to the Turkic words under discussion, but *sari.sun 'membrane' plays a role in many Mongolic 'bat' terms. LM (sarisun) baybayai 'bat' (Lessing 1960: 69a, 676a), Khalkha (sar'san) bagvaaxay (Hangin 1986: 43b, 442a), Ordos (sarisũ) bagwaaxää (bagbaaxää) (Mostaert 1968: 45a, 563a), Kalmyk bawxä: etc. (Ramstedt 1935: 37a), perhaps originating from an imitation of the flapping sound. It seems to contain the formans -kAI that is found in several animal names such as *gakaï 'pig', *menekei 'frog', and *nokaï 'dog'. 35 This is also used in combination with *herbeekei 'butterfly', Buryat har'han erbeexey 'bat' (Čeremisov 1973: 679a), Bargu $xar^y v$: $ar\beta axi$: 'bat' (Uuda 1983: 100), Khamnigan sarisan erbeekey (Damdinov & Sundueva 2015: 249b). Eastern Yugur has sarəsən xanat 'bat' (Bolčuluu 1984: 99), which combines Mongolic *sari.sun 'membrane' with Turkic *ka:nat 'wing'. Mongghul sorosə buldu: (Khasbaatar et al. 1985: 136) is literally 'membrane bird'³⁶. Dongxiang (Santa) sarisun 'bat' (Bökh 1983: 115) perhaps developed elliptically from a similar compound 'membrane bird'.

He thereby abandoned an earlier comparison to Khalkha *jirx*, Buryat *jerxi* (via **jirsge*), which typically denotes the Siberian chipmunk, but has a recorded Middle Mongolian equivalent meaning 'bat'. For details see Tenišev (1997: 168), Ünal (2019: 561).

^{*}ga- 'pig', *mene- 'frog', and *no- 'dog' are not attested, but in some cases, -kAI is added to known stems, as in *čarčaa-kai 'locust', whose first part is related to Turkic saričga. A similarly-structured modern Khalkha term for bat is sarmaaxay, perhaps a new coinage inspired by *sari.sun 'membrane', for which cf. also Buryat har'may 'sheep's or goat's skin without the wool' (Čeremisov 1973: 679b).

The word *sorosə* as a separate word apparently only survives in Mongghul as 'flowers of wild onion' from the unrelated **sorï.sun*.

At first sight, the second element of Mangghuer ami sara 'bat', urmen sara (Nugteren 2011: 483) is the Mongolic 'moon', but perhaps it here represents a reduced form of *sarï.sun 'membrane'. ami is the Mongolic word for 'life, soul' (in Mangghuer 'fate'), reflecting the association of butterflies and bats with the souls of the departed; urmen is 'cream', reminiscent of butterfly and Yakut ürümäčči, derived from the Mongolic word for 'cream, skin on milk' and normally used for 'butterfly', but used dialectally in abaahı ürümäččitä 'bat', lit. 'evil spirit-butterfly' (Afanas'ev, Voronkin & Alekseev 1976: 39a).

8. Non-Altaic Loanwords

Foreign words for 'bat' found in Central Asian Turkic include the Arabic *waṭwāṭ* and *xuffāš* and the Persian *šabpara(k)* in several altered forms including Modern Uyghur *šäpäräŋ*. Karachay uses *bittir(koč)* of Ossetic origin, cf. *(xælyn)byttyr (xælyn* = membrane; Bigulaev 2011: 381a).

In the Amdo area several Mongolic languages use Chinese or Tibetan words, such as Kangjia *ibex#* (Sečenčogt 1999: 279b) from dialectal Chinese 夜蝙蝠 *yebianfu* and Eastern Yugur (Nggar) *pəyəŋ* related to Tibetan *pha-wan*. Dagur *əlirdə:n* 'bat' (Enkhbat 1984: 24) is from the neighbouring Tungusic language Solon *əligdā:* (see Cincius II 446b).

Closing remarks

The Old Turkic forms yarsko (with surviving cognates in South Siberia) and $y\ddot{a}rsk\ddot{o}$ are variants of the same etymon and the western/Oghuz form yarasa seems to represent a secondary development of the same word. If yarasa is a development of yarsko, etymologies should attempt to explain both forms. The loss of postconsonantal g/k is seen elsewhere in native words, but here it may have occurred in a word of foreign origin.

In Turkic, polysyllabic stems are generally assumed to be segmented. Their morphological analysis involves determining the stem and derivational suffix(es). It is important that the resulting stem has a suitable meaning and that form and function of the suffixes are appropriate. Both the suffixes and the stem should be otherwise known and not be reconstructed for the occasion. Most of

the published proposals do not meet these criteria, and involve otherwise unknown stems such as *yar* 'small animal', and unknown suffixes such as Tekin's *-sgu*. If we accept that the word derives from a word *yarıg* 'hairless skin', the suffixes remain unclear.

Phonetically, the development of yarsko, yärskö and yarasa exhibits numerous irregularities. Both irregular phonetic developments and morphological reanalysis may be due to folk etymology or due to a desire to adapt words that are subject to a linguistic taboo. Similar irregularities can be seen in Turkic words for 'spider', 'butterfly' and 'fly'.

Stachowski proposed that the form *yarısa/yarasa* may be explained as a compound of two Mator (Samoyedic) words *ńarV 'leather' + sa 'wing', which is semantically and phonetically reasonable. Unfortunately the compound is not attested in Mator itself, while čabkəpso(n), a Mator word for 'bat' that is recorded, appears to be a loanword from Turkic. However, the main argument against the Mator etymology is the fact that yärskö and yarsko would have to be viewed either as secondary alterations of yarısa/yarasa or as similar-looking but unrelated lexemes. Given the borrowing scenario, it seems peculiar that yarasa survives in Oghuz rather than in Siberia.

Yarsko and yärskö may be different representations of the same foreign word. In yarsko, the vowels of the donor form may have moved the pronunciation of the -k- to the uvular area, whereas in yärskö, the -k- was probably perceived as palatal and fronted the vowels.

The exact shape in the donor language may have been close to yarsko. The Tocharian B form arśakärśa is not the source of the Old Uyghur word but can be considered similar enough to allow for the possibility that both forms are somehow connected, perhaps through the intermediation of a third language. The first element of the longer form aya yärskö recorded by Kāšġarī may be the Turkic aya 'palm of the hand', but it seems strange to prefix a loanword with an explicative Turkic attribute. Alternatively there may have been a foreign source form ayayarsko.

The Middle Turkic and modern yarıg kanat ~ yarkanat etc. seems to be adequately explained as 'leather wing', also in view of the typical naming motives of bats in other languages. It is possible, but not necessary, that yarıg kanat was conceived to make sense of or replace the foreign word, by using two established elements, yarıg

'(thin) skin, leather' (specifically 'hairless skin') and *kanat* 'wing'. They are native Turkic words which also make semantic sense in the context. *yarıg* is not attested in Old Turkic, but *yargak* (perhaps a diminutive *yarıg-ak*) is found as a Turkic loanword in Khotanese, and well-attested in modern Turkic.

It remains unclear whether *yarig* derives from the well-known verb ya(:)r- 'to split, sever', from a verb *ya:r- that may be the source of Yakut saar- 'to moult (of birds)', or from yet another verb; it may also be a non-derived stem.

It seems improbable and unnecessary to assume a root *yar- that itself means 'bat' or 'small animal'. The potential Mongolic cognates discussed in the literature are of interest on an 'Altaic' level, but do not seem to elucidate the internal Turkic developments of the 'bat' terms. The sound laws of various languages offer many opportunities for analogy and irregularities, leading to confusion between originally unrelated lexemes in Turkic and Mongolic languages. Looking at some examples from the lexical field 'skin, leather' we find that the Mongolic *ara.sun 'skin' has developed a variant *ari.sun 'skin' perhaps under the influence of *sari.sun 'thin skin', which made *saari (cf. Turkic sagrı) 'thick skin from the croup' shorten its vowel in Buryat. Phonetically, Yakut saari should have the meaning of Turkic *yagrı 'saddle-gall (skin abrasions or sores caused by faulty placement of the saddle)' but in fact suits *saarı semantically, pointing at a Mongolic loanword. Kalmyk äärsn 'callus' may be a hybrid of *ara.sun 'skin' and *kaïr.sun 'scales'.

Geographically and taxonomically, the extant forms are today not neatly distributed. One may summarize a likely scenario as follows: yarsko and yärskö are the original attempts to nativize a foreign word. A form yarısa with elided postconsonantal guttural already arose in the Old Turkic period and became the ancestor of the Oghuz yarasa. Front-vocalic yärskö did not leave any descendants, but yarsko survived in South Siberia in two altered forms as *yarıskı (as in Baraba Tatar, with added middle syllabe to break up the consonant sequence and as *jaskı (as in Tuva ča "skı, with loss of -r- to simplify the cluster). Both developments lost the rounding in the final vowel. yarıg kanat lit. 'membrane wing' is documented from the 14th century onwards but perhaps arose much earlier, as it is not limited to Kipchak languages but also found in Yakut in North Siberia. It

may have coexisted with the older terms in several regions and subgroups.

References and further reading

- Adams, Douglas Q. 2013 A Dictionary of Tocharian B.: Revised and Greatly Enlarged. Amsterdam—New York.
- Afanas'ev, Pjotr Savvič & Voronkin, Mixail Spiridonovič & Alekseev Mixail Pavlovič. 1976. *Dialektologičeskij slovar' jakutskogo jazyka*. Moscow.
- Aksu, Ahmet. 2019. Doğu Türkçesi Kur'an Tefsirindeki Yarıg Kanat "Yarasa" Tamlaması Hakkında. In: Fikret Turan & Özcan Tabaklar, *Doğumunun 120. Yılında Prof. Dr. Ahmet Caferoğlu Hâtıra Kitabı*. Istanbul. 137–150.
- Aqtay, Gulayhan & Jankowski, Henryk. 2015. A Crimean Karaim— English Dictionary. Poznań.
- Axundov, Ağamusa Ağası oğlu & Kazımov, Qəzənfər Şirin oğlu & Behbudov, Sefi Maxış oğlu (eds.) 2007. *Azərbaycan dilinin dialektoloji lüğəti*. Baku.
- Bailey, Harold W. 1979. Dictionary of Khotan Saka. Cambridge.
- Bammatov, Zajnal Zijautdinovič (ed.). 1969. *Kumyksko-russkij slovar*'. Moscow.
- Baskakov, Nikolaj Aleksandrovič et al. (eds.). 1958. Karakalpaksko-russkij slovar'. Moscow.
- Baskakov, Nikolaj Aleksandrovič et al. (eds.) 1968. *Turkmensko-russkij slovar*'. Moscow.
- Baskakov, Nikolaj Aleksandrovič & Inkižekova-Grekul, *Anastasija Ivanovna*. 1953. *Xakassko-russkij slovar*'. Moscow.
- Baskakov, Nikolaj Aleksandrovič & Kalmykova, Sofija Abdul-Xamidovna. 1963. *Nogajsko-russkij slovar*'. Moscow.
- Baskakov, Nikolaj Aleksandrovič & Toščakova, Tajsija Makarovna. 1947. *Ojrotsko-russkij slovar'*. Moscow.
- Baskakov, Nikolaj Aleksandrovič & Zajončkovskij, Ananij & Šapšal, Seraja Markovič (eds.). 1974. *Karaimsko-russko-pol'skij slovar'*. Moscow.
- Bigulaev, Boris Borisovič et al. 2011. Osetinsko-russkij slovar'. S očerkom grammatiki osetinskogo jazyka Abaeva V. I.

- Vladikavkaz.
- Boeschoten, Hendrik with the editorial assistance of John O'Kane. 2022. *A Dictionary of Early Middle Turkic*. Leiden/Boston.
- Bökh et al. 1983. Düngsiyang kelen-ü üges / Dōngxiāngyǔ cíhuì. Hohhot.
- Bolčuluu et al. 1984 [1985]. *Jegün Yuyur kelen-ü üges / Dōngbù Yùgùyǔ cíhuì*. Hohhot.
- Borgojakov, Mixail Ivanovič. 1971. Slovnik G. F. Millera po tjurkskim jazykam Sibiri. *Tjurkskaja leksikologija i leksikografija*. Moscow.
- Budagov, Lazar' Zaxarovič. 1871. Sravnitel'nyj slovar tureckotatarskix narečij so vključeniem upotrebitel'nejšix slov arabskix i persidskix is perevodom na russkij jazyk. Vol. II. St Petersburg.
- Butanaev, Viktor Jakovlevič. 1999. *Xakassko-russkij istoriko- ėtnografičeskij slovar*'. Abakan.
- Čeremisov, Konstantin Mixajlovič. 1973. *Burjatsko-russkij slovar'*. Moskva.
- Cincius, Vera Ivanovna (ed.) 1975–1977. Sravnitel'nyj slovar' tunguso-man'čžurskix jazykov. Materialy k etimologičeskomu slovarju. Leningrad.
- Clauson, Sir Gerard. 1972. An Etymological Dictionary of Pre-Thirteenth-Century Turkish. Oxford.
- Damdinov, Dašnima Galdanovič & Sundueva, Ekaterina Vladimirovna. 2015 *Xamnigansko-russkij slovar'*. Irkutsk.
- Dankoff, Robert & Kelly, James. 1982–1985. *Compendium of the Turkic dialects (Dīwān lughāt al-Turk)* by Mahmūd al-Kāshgharī. 3 Vols. Duxbury, Massachusetts.
- Doerfer, Gerhard. 1963-1975. Türkische und mongolische Elemente im Neupersischen I-IV. Wiesbaden.
- Doerfer, Gerhard & Tezcan, Semih. 1980. Wörterbuch des Chaladsch (Dialekt von Charrab). Budapest.
- DS = Türkiye'de Halk Ağzından Derleme Sözlüğü I-XII. 1963–1982. Ankara.
- Eker, Süer 2006. Özbekistan'da Oğuzca Bir Diyalekt: Güney Harezm-Oğuzcası. *Türkiyat Araştırmaları* 5. 113–128.
- Enkhbat. 1984. Dayur kelen-ü üges / Dáwò 'ĕryŭ cihuì. Hohhot.

- Erdal, Marcel. 1991. Old Turkic Word Formation: A Functional Approach to the Lexicon I-II. Wiesbaden.
- Eyuboğlu, İsmet Zeki. 1991 (2nd enlarged ed.). *Türk Dilinin Etimoloji Sözlüğü*. İstanbul.
- Frembgen, Jürgen Wasim. 2006. Embodying Evil and Bad Luck Stray Notes on the Folklore of Bats in Southwest Asia. *Asian Folklore Studies* 65, No. 2. 241–247.
- Gandjeï, Tourkhan. 1977. [Review of] Türkische und mongolische Elemente im Neupersischen (TMEN) IV by Gerhard Doerfer. Bulletin of the School of Oriental and African Studies, University of London 40: 3. 627–630.
- Garkavec, Aleksandr Nikolaevič & Useinov, Sejran Memetovič. 2002. *Krymskotatarsko-russko-ukrainskij slovar'*. *Tom I. Bukvy A–L.* (3rd revised and expanded ed.). Simferopol'.
- Gülensoy, Tuncer. 2011. Türkiye Türkçesindeki Türkçe Sözcüklerin Köken Bilgisi Sözlüğü. Ankara.
- Hangin, Gombojab. 1986. A Modern Mongolian-English Dictionary. Bloomington.
- Hauenschild, Ingeborg. 1998. Krimtatarische Tierbezeichnungen. *Orientalia Suecana* XLVII. 29–54.
- —, 2003. Die Tierbezeichnungen bei Mahmud al-Kaschgari. Wiesbaden.
- —, 2008. Lexikon Jakutischer Tierbezeichnungen. Wiesbaden.
- Helimski, Eugen (= Xelimskij Evgenij Arnol'dovič). 1986. Etymologica 1–48 (Materialy po ėtimologii matorskokaragasskogo jazyka). *Nyelvtudományi közlemények* 88. 119– 143.
- Helimski, Eugene. 1995. Samoyedic Loans in Turkic. In: Barbara Kellner-Heinkele & Marek Stachowski, *Laut- und Wortgeschichte der Türksprachen. Beiträge des internationalen Symposiums. Berlin, 7. bis 10. Juli 1992.* 75–95.
- Helimski, Eugen unter Mitarbeit von Beáta Nagy. 1997. Die matorische Sprache. Wörterverzeichnis, Grundzüge der Grammatik, Sprachgeschichte. Szeged.
- Judaxin, Konstantin Kuz'mič. 1965. Kirgizsko-russkij slovar'. Moscow.

- Kabakova, Galina. 2023. La chauve-souris. In: Julien D'huy & Frédérique Duquesnoy & Patrice Lajoye (eds.), *Le Gai Sçavoir: Mélanges en hommage à Jean-Loïc Le Quellec*. Oxford. 363–370.
- Károly, László. 2015. Tatar. In: Peter O. Müller, Ingeborg Ohnheiser, Susan Olsen & Franz Rainer (eds.) Word-Formation: An International Handbook of the Languages of Europe. Vol. 5. 3398–3413.
- Khasbaatar et al. 1985 [1986]. *Mongyor kelen-ü üges / Tǔzúyǔ cíhuì*. Hohhot.
- Laut, Jens Peter & Semet, Ablet. 2021. Neues zum 18. Kapitel des altuigurischen Maitreyasamiti-Sūtra (Maitrisimit nom bitig). In: Hannes A. Fellner, Melanie Malzahn and Michaël Peyrot (eds.) *Lyuke wmer ra. Indo-european Studies in Honor of Georges-Jean Pinault*. Ann Arbor/New York. 308–318 (plates V–XII).
- Le Coq, Albert von. 2011. Sprichwörter und Lieder aus der Gegend von Turfan. Mit einer dort aufgenommenen Wörterliste. Leipzig/Berlin.
- Lei Xuanchun. 1992. Xībù Yùgù Hàn cídiăn. Chengdu.
- Lessing, Ferdinand (ed.). 1960. *Mongolian-English dictionary*. Berkeley and Los Angeles.
- (ĖSTJA IV =) Levickaja, Lija Sergeevna (ed.). 1989. *Ėtimologičeskij slovar' tjurkskix jazykov IV*. Moscow.
- Levičkin, Aleksandr Nikolaevič & Myznikov, Sergej Alekseevič. 2010. *Novgorodskij oblastnoj slovar'*. St.-Petersburg.
- Lin Lianyun. 1992. Sàlā-Hàn Hàn-Sàlā cíhuì. Chengdu.
- Lina, Peter H. C. 2016. Common Names of European Bats. *EUROBATS Publication Series* 7.
- Malyševa, Ninel' Vasil'evna. 2024. *Proisxoždenie leksiki živoj* prirody: onomasiologija i ėtimologija (jakutskij jazyk i ego dialekty). (Dissertation) Moscow.
- Mayrhofer, Manfred. 1992. Etymologisches Wörterbuch des Altindoarischen. Bd. 1. Heidelberg.
- Mostaert, Antoine. 1968. *Dictionnaire ordos*. New York–London. [reprint of original 1941 Peking edition]
- Mudrak, Oleg Alekseevič. 2023. Sloj zaimstvovanij v karačaevo-

- balkarskoj kul'turnoj leksike. *Oriental Studies* (Previous Name: *Bulletin of the Kalmyk Institute for Humanities of the Russian Academy of Sciences*) 16: 6. 1692–1731.
- Mukambaev, Jeembay. 2009. *Kırgız tilinin dialektologiyalık sözdügü*. Biškek.
- Myrzabekova, K. et al. (eds.). 1992. *Kasachisch-Deutsches Wörterbuch*. Almaty.
- Németh, Michał. 2021. The Western Karaim Torah A Critical Edition of a Manuscript from 1720. Leiden-Boston.
- Nişanyan, Sevan. 2021. *Nişanyan Sözlük. Çağdaş Türkçenin Etimolojisi*. [3rd edition of *Sözlerin soyağacı. Çağdaş Türkçenin Etimolojik Sözlüğü.*] Istanbul.
- Nugteren, Hans. 2011. *Mongolic phonology and the Qinghai-Gansu languages*. Utrecht.
- Nugteren, Hans, & Roos, Marti 1996. Common Vocabulary of the Western and Eastern Yugur Languages. The Turkic and Mongolic Loanwords. *Acta Orientalia Academiae Scientiarum Hungaricae* 49:1. 25–91.
- Pavet de Courteille, Abel. 1870. Dictionnaire Turk-Oriental. Destiné principalement à faciliter la lecture des ouvrages de Bâber, d'Aboul-Gâzi et de Mir-Ali-Chir-Nevâï. Paris.
- Pekarskij [Piekarski], Ėduard Karlovič. 1907–1930 (reprint 1958–1959). *Slovar' jakutskogo jazyka I-III*. St. Petersburg.
- Pelliot, Paul. 1931. Les Formes turques et mongoles dans la nomenclature zoologique du "Nuzhatu-'l-kulūb". *Bulletin of the School of Oriental Studies* 6, No. 3. 555–580.
- Pinault, Georges-Jean. 2014. The 'one-night-and-day observance' of lay-followers in Tocharian Buddhism. *Tocharian and Indo-European Studies* 15. 187–215.
- Poppe, Nikolaj N. (= Nicholas) 1925. Mongol'skie nazvanija životnyx v trude Xamdallaxa Kazvini. *Zapiski Kollegii Vostokovedov* I. 195–208.
- —, 1938. *Mongol'skij slovar' Mukaddimat al-Adab*. Moscow/Leningrad.
- —, 1978 [Review of] Türkische und mongolische Elemente im Neupersischen (TMEN) IV by Gerhard Doerfer. *Central Asiatic Journal* 22, 1/2 (1978). 140–141.

- Radloff, Wilhelm. 1893–1911. *Versuch eines Wörterbuch der Türk-Dialecte I-IV*. St.-Petersburg.
- Ramstedt, Gustaf John. 1935 [Reprinted 1976]. *Kalmückisches Wörterbuch*. Helsinki.
- Räsänen, Martti. 1969. Versuch eines etymologischen Wörterbuchs der Türksprachen. Helsinki.
- Rassadin, Valentin Ivanovič. 2012. Jazyk Sojotov Burjatii. Elista.
- —, 2014. Tofalarskij jazyk i ego mesto v sisteme tjurkskix jazykov. Elista.
- —, 2016. Tofalarsko-russkij slovar'. Moscow.
- Rjumina-Syrkaševa, Ljudmila Timofeevna & Kučigaševa, Nadežda Aleksandrovna. 1995. *Teleut-orus sözlik. Teleutsko-russkij slovar'*. Kemerovo.
- Sadykova, Zida Rašidova 1994. Zoonimičeskaja leksika tatarskogo jazyka. Kazan'.
- Sattarova, Zera Mambetovna & Kurtseitova, Feride Rašid kızı. 2021. Meždialektnaja sinonimija v krymskotatarskom jazyke (na osnove zoonimov). *Krymskotatarskaja filologija: Problemy izučenija i prepodavanija* 1 (5). 76-83.
- Sayed Mahmod, Sayed Farid 2012 Afganistan Özbek Türkçesinde Birleşik İsimler (Yüksek Lisans Tezi). Ankara.
- Ščerbak, Aleksandr Mixajlovič 1961. Nazvanija domašnix i dikix životnyx v tjurskix jazykax. In: *Istoričeskoe razvitie leksiki tjurskix jazykov*. Moscow. 82–172.
- Sečenčogt. 1999. Kāngjiāyǔ yánjiū. Shānghǎi.
- Skvorcov, Mixail Ivanovič (ed.). 1982. Čuvašsko-russkij slovar'. Moscow.
- Stachowski, Marek. 1993. Geschichte des Jakutischen Vokalismus. Cracow.
- —, 1998. Dolganischer Wortschatz. Supplementband. Cracow.
- —, 1999. Uralistisch-Turkologische Überlegungen zur Fledermaus. *Studia Etymologica Cracoviensia* 4. 127–136.
- —, 2005. Turkologische Anmerkungen zum Altaischen Etymologischen Wörterbuch. *Studia Etymologica Cracoviensia* 10: 227–246.
- —, 2019. Kurzgefaßtes etymologisches Wörterbuch der türkischen Sprache. Cracow.

- Starostin, Sergej Anatol'evič & Dybo, Anna Vladimirovna & Mudrak, Oleg Alekseevič 2003. *Etymological Dictionary of the Altaic Languages* 1-3. Leiden.
- Steingass, Francis Joseph. 1892. Comprehensive Persian-English dictionary. Beirut.
- Sumačakova, Mar'jana Vladmimirovna & Šagdurova, Ol'ga Jur'evna & Nugteren, Hans 2013. Einige Insektennamen im Tschalkanischen (im Vergleich zu anderen südsibirischen Türksprachen). *Handbuch des Tschalkantürkischen*. Wiesbaden. 231–246.
- Tekin, Talât. 1994. Türk Dillerinde Önseste *y* Türemesi. *Türk Dilleri Araştırmaları* 4: 51–66.
- —, 2013. Altaic Etymologies Based on "Sporadic Alternations". In: *Makaleler I. Altayistik*. Ankara. 205–213 [originally published in 1985 in: *Olon ulsyn mongolč erdemtniy IV ix xural I*, Ulaanbaatar. 63–72. The original was unavailable to me].
- Tekin, Talât et al. (eds.) 1995. Türkmence-Türkçe Sözlük. Ankara.
- Tenišev, Ėdgem Raximovič. 1968. *Tuvinsko-russkij slovar'*. Moscow.
- —, (ed.) 1997. Sravnitel'no-istoričeskaja grammatika tjurkskix jazykov Leksika. Moscow.
- Tenišev, Ėdgem Raximovič & Suyunčev, Xanafi Idrisovič (eds.) 1989. *Karačaevo-balkarsko-russkij slovar'*. Moscow.
- Tietze, Andreas [eds. Nurettin Demir & Emine Yılmaz] 2019. *Tarihi* ve Etimolojik Türkiye Türkçesi Lugati. Vol 9 (Y–Z). Ankara.
- Tumaševa, Diljara Garifovna. 1992. *Slovar' dialektov Sibirskix Tatar*. Kazan'.
- Turner, Ralph Lilley. 1966-1969. A Comparative Dictionary of the Indo-Aryan Languages. London.
- Uuda. 1983 [1985]. *Baryu aman ayalyun-u üges / Bāĕrhǔ tǔyǔ cíhuì*. Hohhot.
- Uraksin, Zinnur Gazizovič. 1996. *Baškirsko-russkij slovar'*. Moscow.
- Uyojurqə-Hənzuqə Luojət / Wéi-Hàn cídiăn. 1982. Ürümči.
- Ünal, Orçun. 2019. Klasik ve Orta Moğolca Söz Varlığında Türkçe Kökenli Kelimeler I (A–D). *Journal of Old Turkic Studies* 3/2. 502–615.

- —, 2023. Kayıp Bir Dilin İzinde. Tarihî Bir Türk Lehçesinin Avrasya Dillerindeki Örtük İzleri. Çanakkale.
- Vámbéry, Hermann. 1878. Etymologisches Wörterbuch der turkotatarischen Sprachen. Leipzig.
- Vasil'jev, Valerian Mixajlovič & Savatkova, Anna Andreevna & Učaev, Zinovij Vasil'evič. 1991. *Marijsko-russkij slovar'*. Joškar-Ola.
- Vasmer (Fasmer), Max. 1986. *Ėtimologičeskij slovar' russkogo jazyka*. V 4 tomax. Tom II (E–Muž). Moscow.
- Verbickij, Vasilij Ivanovič. 1884. *Slovar' altajskago i aladagskago narečij tjurkskago jazyka*. Kazan. [Reissued Gorno-Altajsk 2005.]
- Xisamitdinova, Firdaus Gilmitdinova (ed.). 2008. Bašqort teleneŋ tön'yaq-könbayiš dialekti 1954 yilği dialektologik ekspediciya otčeti / Severo-zapadnyj dialekt Baškirskogo jazyka. Naučnyj otčet dialektologičeskoj ekspedicii 1954 goda. Ufa.

Internet sources:

- Ayverdi, İlhan. Misalli Büyük Türkçe Sözlük (Kubbealtı Lugatı). Consulted at lugatim.com, 6 June 2025.
- CAL = Kaufman, Stephen A. et al. *The Comprehensive Aramaic Lexicon*. Consulted at *cal.huc.edu*, 6 June 2025.
- Khalilov Madzhid. *Nogai Dictionary*. https://ids.clld.org/contributions/73, 6 June 2025.
- Khalilov Madzhid. *Avar (Zakataly dialect) Dictionary*. https://ids.clld.org/contributions/30, 6 June 2025.
- Starostin, Sergej Anatol'evič. *Starling Database*. Consulted at *starlingdb.org*, 6 June 2025.