

From Mesopotamia to Greece: to the Origin of Semitic and Greek Star Names

Lara Bobrova and Alexander Militarev – Moscow

The fundamental and pioneering role of ancient Mesopotamian cultures in the history of astronomy is widely and duly recognized. However, the importance of Sumerian and Babylonian celestial body names as a source of corresponding terms in other cultures, up to the conventional inventory of modern astronomy, is, in our view, underestimated.

Therefore, we have endeavoured to enlarge a series of more or less known cases of full coincidence of meaning – which is by no means haphazard – between Sumero-Babylonian star, planet and constellation names and Greek, Latin and Semitic (besides Akkadian) ones with instances where the Mesopotamian origin of later or modern terms either has not, though easily recognizable, drawn due attention of the students, or is not evident or even completely disguised and has to be revealed by a special etymological analysis.

There are at least four strategies, that are probably universal, by which other cultures drew ideas for name-giving from the treasury of Mesopotamia's lexicon of celestial bodies:

- (1) echoing, or full translation, of Sumero-Akkadian terms,
- (2) shift of meaning or interpretation of the latter,
- (3) lexical, or „material“, borrowing, and
- (4) folk etymology, or misinterpretation.

The following data are accordingly arranged into four sections, each consisting of conventional astronomical terms in the alphabetic order. Though most of them correspond to several Sumerian, Semitic or Greek terms, or, in other words, the same constellation or planet usually bears more than one name in the languages under consideration, only those are mentioned in each section which are relevant for it, some of the names –

even the most used ones – fitting into no section naturally not mentioned at all.

As for the Akkadian data, it should be stressed that, except for a few cases attested in the texts (like *zibānītu*, *zuqāqīpu*, *šinūnūtu* etc.), we cannot say if an Akkadian equivalent of the Sumerian name attested only in bilingual syllabaries was ever really used as a current Akkadian term of the corresponding celestial object or it was not more than an explanatory translation of the Sumerian term normally used in Babylonian astronomical and astrological texts. Nevertheless, whatever they be, the Akkadian data should by no means be overlooked, since the literary or oral tradition based on the Akkadian language must have been an integral stage of the process of inheriting Sumerian celestial body names – no matter interpreted in a correct (echoing) or fantastic (folk etymology) way – by later cultures.

In the present study, we do not treat such complicated matters as a historical background of Mesopotamian influence, direct or indirect, on Greek culture; a direction and routes of inter-borrowing between different Semitic-speaking areas outside Mesopotamia and their contact with the Greek world; a chronology of all kinds of cultural contacts and influences. Some of these questions, like Arabic lexical loans in Ge'ez or a Greek influence upon the late (scientific, after P. Kunitzsch) Arabic tradition, are well studied and present little difficulties. Others, like very probable connections between the early pre-Islamic (indigenous, after Kunitzsch) Arabic and Babylonian traditions remain obscure. The data presented here may give a certain impulse to further investigation.

Quite a number of Hausa (Chadic) and a couple of Ahaggar (Berber) and Coptic examples are cited to demonstrate that the same strategies go on working through time and space at least in Afro-Asiatic speaking world.

The problem of identification is naturally out of our competence. In most cases, we have to rely upon the recent studies in what concerns Mesopotamian, or, rather, Sumerian constellation and star names and their identity with the Greek/Latin (resp. modern) terms as well as upon traditional studies including, for lack or sometimes inaccessibility of more specialized sources, lexical ones, which might be one of the reasons for possible errors and hence wasted etymological efforts. This refers, however, only to cases of completely wrong identification in older works

recently proved so on solid astronomical or philological grounds. A mere partial coincidence in shape and limits of a Mesopotamian and Greek (resp. modern) constellation is no obstacle to relating corresponding names. As will be demonstrated, ancient ways of borrowing astronomical notions and terms, with all kinds of metamorphoses they could undergo, were also far from being precise and direct.

On the other hand, we dare hope that feasible etymologies and relations established between names can by themselves throw some light upon debatable identification cases.

I. Echoing

1. Antares (a Scor.)

Sum. ^{mul}gaba ġír.tab „the chest of the Scorpion“, α Scor. [Pingree-Walker 315].

Arabic *qalb 'al-'aqrab* „heart of the Scorpion“, α Scor (Antares), the ind-A (and sci-A) star name [Kunitzsch 53].

One of the few cases of an Arabic star name echoing a Sumerian one, only a partial coincidence of meaning being no obstacle to this conclusion, as the notion of the middle of the scorpion is what matters in both denominations. What language or cultural tradition could have been a mediator through time and space is not clear. We do not know if a similar description of Antares was ever current in Akkadian (Hunger and Pingree, Tablet I: ii 30, transcribe ^{mul}gaba ġír.tab as *Irat Zuqaqīpi*), or in Aramaic; as for Greek see [Pingree-Walker 322].

2. Aquila

Sum. ^{multi}/e₈(mušen) „Aquila“ [Hunger-Pingree] („eagle“).

Akk. ^{mul}erû(m) „Sternbild Aquila“ [AHw 247] („eagle“).

Syrian *nešrā* „aquila; nomen sideris“ [Brockelmann 451] („eagle“).

Arabic 1.: *'al-nasr 'al-tā 'ir* „constellation de l'Aigle“ [Schjellerup 105; Belot 823] („the Flying Eagle“). 2.: *'aqāb* „l'Aigle“ [Schjellerup 105] („eagle“).

Greek [aetós] „eagle“.

3. Cancer

Sum. *mul*al.lul [Hunger-Pingree] („crab“).

Akk. *mul**alluttu(m)* „Sternbild Krebs“ [AHw 38] („crab“, a loan from Sumerian).

Hebrew *sarṭān* „crab, Cancer“ [Jastrow 1025].

Syrian *sarṭānā* „cancer, n.sidus“ [Brockelmann 499] („crab“).

Arabic *'al-saraṭan* [Schjellerup 148]; [Kunitzsch 21]: the sci-A constellation name „the Crab“.

Ge'ez *saraṭān*, *sarṭān*, *ṣarṭān* „Cancer (a sign of the Zodiac)“ < Arabic [Leslau 515].

Hausa Kaduwa „Crab“ [Hiskett 174].

Greek [karkínos] „crab, lobster“.

4. Corvus

Sum. *uga*^{mušen} [Hunger-Pingree] („raven“).

Akk. *mul**āribu* „Rabenstern; Corvus“ [AHw 68] („raven“).

Arabic *'al-ḡurāb* „le Corbeau“ [Schjellerup 240]; see also [Kunitzsch 31] („raven“).

Greek [kóraks] „raven“.

5. Gemini

Sum. *mul*maš.tab.ba [Hunger-Pingree] („twin“).

Akk. 1.: *mul**māšu(m)*, *mul**ma(š)šû*, *mul**māštu* „Sternbild Zwillinge“ [AHw 631] („twin“, a loan from Sumerian). 2.: *tū(')amu(m)* „astr. wie *mul**tu-a-mu rabûtu*“ „Zwillinge“ [AHw 1364] („twin“).

Hebrew *tə'ômîm* (pl.) „twins; Gemini“ [Jastrow 1642].

Arabic *'al-tawāmain* „les Gémeaux“ [Schjellerup 141] („the (two) twins“).

Greek [dídy moi] „twins“.

6. Hydra

Sum. *mul*muš [Hunger-Pingree] („snake“). According to [Pingree-Walker 320] only the middle of *muš* refers to Hydra.

Akk. 1.: *šerru(m)* „als Sternbild (Hydra?)“ [AHw 1093] („snake“).

2.: *mul**muš**huššu(m)* „(sum. Lw.) etwa Schlangendrache; aB als Stern“ [AHw 683]; „Rotschlange (Hydra?)“ [Weidner 73] („dragon“, lit. „red snake“, a loan from Sumerian).

Arabic *'al-šuḡā'* „le Serpent, l'Hydre“ [Schjellerup 232]; *šuḡā'* „espèce de serpent“ [Belot 360] („k. of snake“).

Greek [hýdros], [hýdrā] „water animal, water snake“.

Latin Hydra, Anguis „snake“.

7. Leo

Sum. 1.: *mul*ur.maḥ [Hunger-Pingree] („lion“, lit. „big dog“).

2.: *mul*ur.gu.la [Hunger-Pingree, Reiner-Pingree] „Leo Major“ [Labat n 575], („lion“, lit. „big dog“). 3.: *mul*^{te}ur.a [Reiner-Pingree] „Leo Minor“ [Labat n 575] („beaver“, „otter“, lit. „water dog“).

Akk. 1.: *mul*urgulû „Leo Major“ [Labat n 575], „Sternbild Löwe“ [AHw 1429] („big dog“, „lion?“, a loan from Sumerian). 2.: *mul**nēšu(m)* [Reiner-Pingree], „Leo Minor“ [Labat n 575] („lion“).

Hebrew *'ārī*, *'āryē* „lion, Leo“ [Jastrow 118].

Syrian *'aryā* „leo, nomen sideris“ [Brockelmann 486].

Mandaic *aria* „lion; the Zodiacal sign Leo“ [Drower-Macuch 37].

Arabic *'al-'asad* „the Lion“ (ind-A asterism) [Kunitzsch 41].

Ge'ez 1.: *'asad* „a sign of the zodiac (Leo)“ < Arabic [Leslau 41].

2.: *'erəhu* „name of a star“, perhaps < Syr. *'aryā* „Leo“ [Leslau 38]; cf. Ge'ez *'arwe* „wild animal“.

Hausa Zaki „Lion“ [Hiskett 174].

Greek [léōn] „lion“.

8. Libra

(see also III.1 and IV.5)

Sum. *mul*zi.ba.an.na [Hunger-Pingree] „Libra“ (a loan from Akkadian, the Sumerian word for „balance“ being *ḡišrín*).

Akk. *mulzibānītu(m)* „Waage, Libra“ [AHw 1523] („type of scale or balance“).

Hebrew *mō(')* *znayim* „balances; Libra“ [Jastrow 722].

Syrian *matqālā* „libra, trutina; sidus librae“ [Brockelmann 831] („balance“).

Arabic *mīzān* „balance, Balance (constellation)“ [Schjellerup 165, Belot 939] („balance“).

Hausa *Ma'auni* „Balance“ [Hiskett 174].

Greek [zygós] „balance; yoke; lever“.

9. Lupus

Sum. *mulur.idim* „the Mad Dog“ [Hunger-Pingree] („mad dog“ or „hawling dog“, „jackal“).

(?)Akk. *muluridimmû* „Lupus“ [Labat n 575]; *uridimmu* (Sum. Lw.) „ein mythischer Wildhund, Sternbild Ophiuchus?“ [AHw 1420].

Arabic 1.: *'al-sabū'* „la Bête féroce“ [Schjellerup 245] („wild beast“).

2.: *'al-fahd* „le Leopard“ [ibid., note 1]. 3.: *'al-'asada* „la Lionne“ [ibid. 245, note 1] („she-lion“).

Greek [t^heríon] „beast“.

10. Pisces

Sum. 1.: *mulku₆* [Hunger-Pingree; Reiner-Pingree] „Piscis Austrinus“ („fish“). 2.: *sim.maḥ* [Hunger-Pingree] („big swallow“ or, rather, „big swallow-fish“, see IV.7).

Akk. 1.: *mulnūnu* „Piscis austrinus“ [AHw 804] („fish“). 2.: *šinūnūtu* [Hunger-Pingree; AHw 1048] („swallow-fish“, see IV.7). 3.: *rikis nūni* [Waerden 288; cf. AHw 984] („the band, or cord, of the Fish“).

Hebrew *dāg* „fish“, (*māzāl*) *dāgīm* „Pisces“ [Jastrow 279].

Arabic 1.: *'al-ḥūt* „the Fish, Pisces“ [Kunitzsch 50]. 2.: *'al-samakatain* [Schjellerup 194], *samakāt* „un poisson, les Poissons (constellation)“ [Belot 342] („(the two) fish“). 3.: α Psc Alrescha, from the ind-A name *'al-rišā'* „the Cord“ for β And. Wrongly transferred to α Psc. in recent times. It is possible that this „cord“ was a remnant of the cord joining the two fish of the older Babylonian zodiac [Kunitzsch 50]. Cf. Akk. *rikis nūni* (above).

Hausa Kifi „Fish“ [Hiskett 174].

Greek [ik^hthýes] „fishes“.

11. Pleiades

Sum. *mul.lu.mul* [AHw 1511], *mul.mul* [Hunger-Pingree] („the star(s)“).

Arabic *'al-nağm* „les Pléiades“, *nağm* „astre, étoile“ [Belot 858] („the star“).

12. Regulus (α Leonis)

Sum. *mul.lugal* [Hunger-Pingree] („king“).

Akk. *mulšarru(m)* [Reiner-Pingree] („king“).

Greek [basilískos] „a little king“.

13. Saturnus

Sum. *udu.idim sağ.uš* [cf. Reiner-Pingree; Hunger-Pingree] („the constant planet“). The description of Saturnus (*sağ.uš*) as „longlasting, constant“ [AHw 420] might refer to its longest revolution period and is echoed by the Akkadian and Syrian terms.

Akk. *mulkay(y)amānu(m)* „Planet Saturn“ [AHw 420] („longlasting, constant“).

Syrian (Aramaic) *ke'wān, kewān, keywān* „Saturnus planeta“ ex. acc. *kayawānu* [Brockelmann 322]. The latter is hardly so: since the planet's name in Akkadian is *kayyamānu* (<**kayyawānu*), the Syrian term is not a loan from Akkadian, but a form derived from the verb *kwn* „fuit; firmus, stabilis fuit“ [Brockelmann 321] (< Semitic **kwn* „to be, to stay, to stand firm“) echoing the Akkadian and, eventually, Sumerian name for Saturnus.

Arabic *kaywān* „Saturne (planète)“ [Belot 714], a loan from Aramaic.

14. Scorpio

Sum. *mul/teğir.tab* [Hunger-Pingree] („scorpion“).

Akk. *ḏuzuqāqīpu* [AHw 1539]; *zuqāqīpu* [Reiner-Pingree] („scorpion“).

Hebrew *'aqrāb* „scorpion, the constellation Scorpio“ [Jastrow 1109].
 Syrian *'eqārbā* „scorpio; nomen sideris zodiaci“ [Brockelmann 544].
 Arabic *'al-'aqrāb* „the Scorpion“, ind-A (and sci-A) constellation name [Kunitzsch 52].
 Ge'ez *'aqrab*, *'aqrāb* scorpion; Scorpio“ (in the meaning „Scorpio“ is borrowed from Arabic) [Leslau 68].
 Hausa Kunama „Scorpion“ [Hiskett 174].
 Ahaggar (Berber) *tēzīrdāmt* „petit scorpion; Scorpion (constellation)“ (rare; la traduction du nom Arabe) [Foucauld 1772].
 Greek [skorpíós] „scorpion“.

15. Spica (α Virginis)

Sum. *mulab.sín* „furrow“ [Reiner-Pingree; Pingree-Walker], „barley-stalk“ [Sachs 146 n.2] („ear of corn“ or „barley stalk“ rather than „furrow“).
 Akk. *absinnu(m)* „Sternbild Spica – östl. Teil Virgo“ [AHw 7], a loan from Sumerian, cf. *absinnu* (Stern Spica) *Šala šu-bu-ul-tum* [AHw 1258; cf. Hunger-Pingree 33].
 Hebrew *šibbōlāt* „ear (of corn), spike; Spica“ [Alcalay 2528].
 Syrian *šabbālā* „spica, Virgo“ [Brockelmann 752] („ear of corn“).
 Arabic *sunbulat* „épi; la Vierge“ [Belot 344] („ear of corn“).
 Ge'ez *sanbulā* , *asanbālāh*, etc. „Virgo“ (< Arabic *as-sunbula*) [Leslau 505].
 Hausa Zangaraniya „Head of Corn“ [Hiskett 175].
 Greek [sták^hys] „ear of corn“.

16. Taurus

Sum. *mulgu₄.an.na* [Hunger-Pingree] („the bull of heaven“).
 Akk. 1.: *is lê* [Reiner-Pingree; Hunger-Pingree] α Tauri with the Hyades („the jaw of the bull“). 2.: *alû* „Himmeltstier, Sternbild Stier“ [AHw 39] (presumably „wisent“ < Afro-Asiatic **alw* „elephant“).
 Hebrew *šōr* „bull; Taurus“ [Alcalay 2574].
 Syrian *'eglā* „vitulus; cognomen tauri zodiaci“ [Brockelmann 509] („calf“).
 Arabic *'al-tawr* „taureau, boeuf, Taureau (signe de Zodiaque)“ [Belot 67; Schjellerup 129-130] („bull“).

Ge'ez *sawr* [Leslau 521], *tawr* [ibid. 582] „Taurus (name of a Zodiac)“ < Arabic *tawr*.
Hausa Sa „bull“ [Hiskett 174].
Greek [taũros] „bull“.

17. Ursa (Currus)

Sum. *mulmar.gíd.da* [Hunger-Pingree („wagon“). Cf. also *mulka₅.a γ Ursa* Majoris [Weidner 81; cf. Reiner-Pingree] corresponding to Akk. *šēlebu(m)* „Stern g in Ursa Major“ [AHw 1210] („fox“) and Arabic *'al-tu'labān* „les deux Renardeux“ [Schjellerup 45], unidentified stars in UMa or UMi („the two foxes”).
Akk. *erequ(m)* „Sternbild Großer Wagen od. Bär“ [AHw 238] („wagon“).
Hebrew *'āgālā* „wagon, the constellation called Charle's Wain“ [Jastrow 1041].
Syrian *'āgalātā* „currus, plaustrum; nomen sideris ursi minoris [Brockelmann 510] („wagon“).
Greek [hámaksa] „wagon“.
Latin *currus, plaustra*.

18. Venus

1.:

Sum *dnin.dar.an.na* „the Bright Queen of the Sky“ [Waerden 58; Reiner-Pingree Tablet 63] („the bright, or vari-coloured, queen of heavens“).
Hebrew *malkat ha-ššamayim* „the queen of the heavens (that is Venus)“ [Jastrow 619].

2.:

Akk. *kakkabu(m)* „Stern, v. Venus“ [AHw 421] („star“).
Hebrew *kōkābāt* „the planet Venus“ [Jastrow 619] („star“, feminine, or „she-star“).
Syrian *kawkabtā* „stella veneris“ [Brockelmann 321] („she-star“).
Coptic ⲙⲟⲣⲣⲟⲩ „Venus“; ⲙⲟⲩ-, ⲙⲟⲩⲟⲩ „étoile, astre“ < Egyptian (Pyramid sb³ „étoile“ [Vycichl 200]; ⲣⲟⲩ is unidentifiable („star-?“).

II. Shift of meaning

1. Auriga

Sum. *mulgām* [Hunger-Pingree; AHw 279] („crook, crooked handle“).

Akk. *mulgamlu(m)* „Auriga“ [AHw 279] („crook, crooked handle“).

Arabic *mumsik 'al-a'inna* „Celui qui tient les rênes, le Cocher“

[Schjellerup 91]; *'inān*, pl. *a'innat* „rênes“ [Belot 527], *masaka*

„tenir à la main, saisir qc.“ [Belot 770] („holding the reins“).

Greek [hēnío^hos] „(one) holding the reins“.

Latin *Auriga* „coachman“.

What we suggest here is that the Sumero-Akkadian *gām/gamlu* was interpreted by Greeks or some intermediate sources as a crooked reinholder (reinring) in a chariot attested in Mesopotamia from the 3rd millennium B.C. on, and then re-interpreted as a rein holding person (the idea, image or name only, later echoed by Arabs). Whether *gām/gamlu* could really mean that or what was the actual name of the device is not known, which dooms our suggestion to remain hypothetical.

2. Boötes

Sum. *mulšudun* [Hunger-Pingree] („yoke“).

Akk. *nīru(m)* Jochstern = „Arktur u. Teile v. Bootes“ [AHw 794] („yoke“).

Arabic *'al-baqqār*, the sci-A constellation name ... „the Ox-driver“, for Boötes [Kunitzsch 20].

Greek [bōōtēs] „plowman“ (< būs + ōtēs).

The term borrowed into Arabic and other languages like Russian (volopas „ox-driver“) looks a typical case of folk etymology explained from a confusion with the Greek [būtes] „ox-driver“. But the Greek „plowman“, in its turn, is presumbaly an interpretation (a „personification“ like in II.1) of the Sumero-Akkadian „yoke“, i.e. of an implement by which oxen are made to pull the plow, as a plowman driving oxen.

3. Corona

Akk. *kippatu(m)* „α Cor.Bor.“ [Pingree-Walker 321], „Kreis; Ring; Herrscherring“ [AHw 482-483] („circle, ring; ring of lordship“).

Syrian *kālīlā* „corona, diadema; nomen sideris“ [Brockelmann 327]:
<Akk. *kiḫlu*; [Kaufman 63-64]: the terms would appear to be only cognates.

Arabic *'al-iklīl 'al-šamālī ('al ḡanūbī)* „la Couronne Boréale (Australe)“ [Schjellerup 69].

Greek [stéphanos] „wreath, crown“ (< [stépho] „to surround“).

A shift of meaning from one circular royalty symbol to another?

4. Delphinus

Sum. *mulšaḥ* „perhaps Delphinus“ [Reiner-Pingree] („pig“).

Akk. *mulšaḫû* „Schwein“ = Delphinus [Weidner 79]; *šaḫû(m)* (sum. Lw.?) „Schwein; ein Fisch“ [AHw 1133] („pig“, a kind of fish).

Greek [delp^hín], [delp^hís] „dolphin“.

If the identification is correct, the original constellation name could have been „pig-fish“, to which dolphin, with its pig-like snout, corresponds quite well.

5. Perseus

Sum. *mulmar.tu* [Hunger-Pingree] („western (land)“).

Akk. *mulAmurru(m)* „Weststern = Perseus“ [AHw 46] („western (land)“).

Greek [perseús].

A highly hypothetic link is that Perseus' expedition for the Gorgon's head is claimed to be to the Extreme West.

6. Saturnus

Sum. *saḡ.uš* „longlasting, constant“ and the echoing Akkadian and Aramaic terms (see I.13) could have influenced the Greek choice of deity

related to this particular planet: [krónos] by its association with [k^hrónos] „time“.

7. Triangulum

Sum. *mul ġišapin* [Hunger-Pingree] („plow“).

Akk. *epinnu(m)* [Reiner-Pingree; AHw 229].

Greek [trígōnon] „triangle“.

In the Mesopotamian plow, the plow-beam, the share and the fastening peg form a triangle which would account for the Greek name.

III. Lexical borrowing

1. Libra

(see also I.8 and IV.5)

Sum. *mulzi.ba.an.na* „The Scales“ [Hunger-Pingree]. Attested as a constellation name only; the Sumerian term for balance is *ġišrín*.

Akk. *zibānītu* (unbekannter Herkunft) „Sternbild Waage, Libra“ [AHw 1523], *zi.ba.ni.tu₄* [Hunger-Pingree] („type of scale or balance“). This is one of the few cases where an Akkadian term is attested not in a syllabary only, but in a text.

zibānû the constellation Libra, Sum. lw. [CAD, Z, 100].

Akk. «*zibānītu* ... „provided with **zibana*“ (possibly dual). The latter word (probably a Kulturwort) is preserved as a Sumerogram in Hitt. ZI.BA.NA, phonetically written ZÉ.PA.NA... The relationship of the word **zibana* to Ugar. *mznm*, Heb. *mōznayim* and Arabic *mizānun*, as well as to Syr. *zeban* „to buy“, etc., remains problematical» [CAD 100].

Cf., however, Mandaic *zabanita* „scales, balances“ [Drower-Macuch 156], which may of course be a loan from Akkadian, and also common Aramaic *zbn* „to buy“ [Kaufman 112-113] (Mandaic „to buy, to sell, to barter“) and Arabic *zbn* „vendre en bloc (les fruits d'un arbre)“, (dial.) *zabūn* „client, chaland“ [Belot 285]. As for its broader connections, cf.

Egyptian dbn „weight of about 91 grammes; general term for weight of balance“ [Faulkner 311]. Whether „there may be some ultimate connection“ [Kaufman, note 408] with the common Semitic **mi-wzan* „scales“ or there may not, the somewhat unusual correspondence of Semitic **z* – Egyptian *d* is paralleled in Semitic **wzn* „to weight“ – Egyptian (Old Kingdom) *wdn* „schwer sein“, *wdnw* „Gewicht des Waagelotes“ [Erman-Grapow I,390].

In this context, both the Akkadian *zibānītu* and the reconstructed **zibana* are very likely to be of Semitic origin, hence an Akkadian loan in Sumerian as a constellation name, not vice versa as usual. A possible explanation of this rare case is given in IV.5.

2. Mercurius

Akk. *d/mul/te muštarīlu* (< *muštarī+ilu*) „Merkur (ar. *muštarī* leuchtend, Jupiter)“ [AHw 686].

While the word's division suggested by AHw is quite reasonable, no matter if the second element, *ilu*, should be understood as „god“ or regarded as some old formant (we are indebted to Dr. P.-R. Berger for his argumentation for the latter possibility), the resemblance to Arabic *muštarī* is striking. This form is an active participle meaning „acheteur“ [Belot 371] eventually derived from the verb *šarā* „acheter, vendre“ [ibid.]; the meaning „leuchtend“ cited by AHw is, as far as we know, not attested, though there is a homonymous verb „briller souvent (éclair)“ which could prompt Prof. von Soden the above interpretation.

The Akkadian **muštarī* is, unlike the Arabic *muštarī*, not motivated, which, on purely formal grounds, would suggest a borrowing from Arabic to Akkadian, no matter what historical and cultural implications, possibly through a third language.

The situation is still more intricate in view of the fact that *muštarī* „buying“ (and selling – see the verb *šarā*), i.e. „trading“, is in Arabic a name of the planet Jupiter, not of Mercurius to whose function as a trading god in the Roman tradition it fully corresponds, while the same word was presumably borrowed to Akkadian as a name of Mercurius. Does that mean that the Arabic term would originally refer to Mercurius

and, besides having been source of the Babylonian name, shaped the Roman deity or its prototype into a trader through some astronomical notion?

3. Orion

Sum. *mul/d*_u*ṣ*.*rí*.in (α Cassiopejae?) der sonst nie begegnende Name
*m*_u*ṣ*.*rí*.in vielleicht eine seltene Bezeichnung des Orion
[Weidner 80]; „ein Adler, als Sternbild“ [AHw 1430] („eagle“).

Could Sumerian *u*₅.*rí*.in (or [o].*rí*.in?) be eventually the source of the unmotivated Greek [ōríōn]? Cf., however, the spelling *ḥu*.*rí*.in [AHw 1430] (*ḥu* is probably a scribal misspelling here) and *ú*/*u*₅.*rí*.in [ibid.]; according to [Lieberman 203] *ú* should be interpreted as [u] opposed to *u*, *ù* and *u*₄ [o].

IV. Folk etymology

1. Aquarius

Sum. *mulgu*.*la* [Hunger-Pingree] („(the) great (one)“)

Hebrew *dālī*, *dālī* „bucket; Aquarius“ [Jastrow 310].

Syrian 1.: *dawlā* „situla; sidus aquarii“ [Brockelmann 145]. 2.: *ʿašed mayʿ* „aquarii sidus“; *ʿešad* „effudit, profudit“ [Brockelmann 52] („pouring water“).

Arabic 1.: *ʿal-dalw* „le Seau“ [Schjellerup 185] („the bucket“). 2.: *sākib ʿal-māʿ* „le Verseau“ [ibid.] („pouring water“).

Geʿez *dəlw*, *dalāwi*, *dalw* „Aquarius“ < Arabic [Leslau 133].

Hausa Guga „Bucket“ [Hiskett 174].

Greek [hydrok^hóos] „pouring water“.

Latin Aquarius „water-carrier“.

The transformation, if there was any, of „the Great One“ into „the Bucket“ in Hebrew-Aramaic-Arabic and later into „the One Pouring/Carrying Water“ (cf. a similar „personalization“ in I.2 and 3) might be explained by the following assumption: the Sumerian constellation name, the meaning of which had been forgotten, was

mistaken („misetymologized“) for its closest homonym in Akkadian, namely *gullu* (Ugaritic *gl*, Hebrew *gullā*) „Schale, Becken“ [AHw 297], hence the notion of „bowl, bucket“ in later traditions.

2. Arcturus

Sum. *mul*šū.pa [Hunger-Pingree].

(?)Akk. 1.: *šūpû* „Arcturus“ [Labat n 61]. If the identification holds water, the Akkadian term meaning „bright, shining, clear“ (< *wapûm* „deutlich gemacht, herrlich“ [AHw 1281] with a sound Semitic etymology, cf. Hebrew *yāpā* „beautiful“, Syrian *p’y* „to shine, be beautiful“) is likely what the Sumerian name was derived from; cf. the remark in [Hunger-Pingree 125] on the same proposal by A. L. Oppenheim. 2.(?): *mul*namru „Arcturus“ [Labat n 354] („shining“).

Arabic *’al-simāk ’al-rāmiḥ* [Kunitzsch 20]: „... the ancient ind-A name for α Boo... ‘the Lance-bearing *simāk*’ (the meaning of *simāk* is uncertain)“.

This appears to be a case of folk etymology: *simāk* is in fact formed after the Past Participle Passive pattern of the verb *samaka* „to be high, elevated“ [Belot 342], while *rāmiḥ* is the Present Participle Active of *ramaḥa* „to flash (of lightning)“ [ibid. 269], probably echoing the Akkadian epithets if they really refer to Arcturus.

Hausa Su „Fishing“ = Arabic *al-simāk* [Hiskett 173]: the Arabic means „the Fish“.

Another case of folk etymology: *simāk*, which we tend to understand as „elevated, posted high“, coincides with the plural of *samak* „fish“.

3. Aries

Sum. *mul*.lúḥun.ḡá [Hunger-Pingree] („hired man“).

Akk. *mul*agru(m) „Sternbild ‚Mietling‘ = Aries, Widder“ [AHw 16], („hired man“).

Hebrew *ṭālā* „lamb, Aries“ [Alcalay 870].

Syrian *’emārā* „agnus; aries (zodiaci)“ [Brockelmann 26] („lamb“).

Arabic 1.: ' *al-kabš* „the Ram“, ind-A and sci-A [Kunitzsch 18].

2.: ' *al-ḥamal* „the Lamb“; seems to belong to those zodiacal constellation names already known in ind-A times [ibid.].

Ge'ez *ḥamal*, *ḥaml* „ram, a sign of the Zodiac“ <Arabic [Leslau 232].
Greek [κρίός] „ram“.

We wonder if the ram, or lamb, of the later cultures, could spring into being through misinterpretation of the Akk. *agru* or rather *agrūtu* (spB lú*a-gar-ru-ú-tu* „Mietling“ [AHw 16] as (*a*)*gurratu* „Mutterschaf“ [AHw 299].

4. Capricornus

Sum. *mul**suḥur*.*máš*^{ku₆} [Hunger-Pingree] („goat-fish“).

Akk. *mulšuhurmāšu* „(sum.Lw.) Ziegenfisch, Sternbild Capricornus“ [AHw 1055] („goat-fish“).

Hebrew *gədī* „kid, young animal; the Capricorn“ [Jastrow 211].

Syrian *gadyā* „hoedus, nomen sideris“ [Brockelmann 104] („kid“).

Arabic ' *al-ḡady* „the kid, Capricorn“ [Kunitzsch 24].

Hausa *Dan akuya* „Kid“ [Hiskett 174].

Greek [αἰγόκερως] lit. „goat-horn“.

The notion of a goat-fish (sustained by its depiction on kudurru-stones) later demystified into a Semitic „kid“ should have originated not in the ancients' fanciful visions but in their etymological imagination. In Sumerian, *suḥur* with the determinative *ku₆* for fish means a kind of carp-fish, „ein Großkarpfen“ [AHw 880], while *suḥur.maš.ku₆* is „ein prächtiger Karpfen“ [Salonen, 170], *maš/máš* meaning „beträchtlich, prächtig, sehr bunt“ [AHw 132] and *ku₆*, „Fisch“ [Salonen 142]. We assume that what the constellation's original name meant was a certain kind of carp-fish. But it was another meaning of *maš/máš*, „Bock, Böcklein“, [Heimpel 239] that gave rise to the „goat“-component, the whole name having developed eventually into „the goat-fish“ causing to existence a corresponding image.

5. Libra

(see I.8, III.1 and I.14)

Sum. 1.: *mul*zi.ba.an.na. 2.: zi.ba.an.na si *mul*ġír.tab „The Scales, the horn of the Scorpion“ [Hunger-Pingree 33].

Akk. 1.: *zibānītu(m)*. 2.: *zibānītu qaran zuqāqīpi* „The Scales, the horn of the Scorpion“ [Hunger-Pingree 33].

Arabic 1.: *mīzān* „balance, Balance (constellation)“. 2.: *'al-zubānayān* „the Two Claws (of the Scorpion)“; previous to Greek influence, the ind-Arabs used this name for the lunar mansion marked by α and β Lib. (Obviously related etymologically to Babylonian *zibānītu*... also marked by α and β Lib.) [Kunitzsch 43].

Greek 1.: [*k^hēlai*] „claws (of a scorpion)“. 2.: [*zygós*] „balance; yoke; lever“.

The two names of the same constellation, „the Scales“ and „the Horn (or Claws) of the Scorpion“ pose a grave problem in view of an evident phonetic coincidence between Akkadian and Arabic forms. Arabic *zabāniyā* (*'al-'aqrab*) „les cornes (du scorpion)“ [Belot 285] appears a semantically motivated derivation of the root *zbn* meaning something like „back side parts“: Arabic *zabana* „donner une ruade à qn.“, *inzabana* „s'éloigner, se mettre à l'écart“, *zaban* „côté, place à l'écart“ [ibid.] < Semitic: Ge'ez *zabān* „back, back part, tail“, Tigre, Tigrīñña *zəban* „back“ [Leslau 631-2], Mandaic *zbanīta* „some horned creature“ [Drower-Macuch 161]. The same consonantal and, partly, vocalic composition of Akkadian *zibānītu* and Arabic *zabāniyā* or *zubānayān* originating from different Semitic roots is no doubt a chance coincidence, or typical homonymy, resulting in another complicated case of folk etymology creating new ideas and images.

The one explanation we can propose is that this part of the Scorpion was originally called „the horn of the Scorpion“ in Sumerian, from which it passed to Akkadian and later Arabic and Greek. Of the Arabic name for it, *zabāniyā/zubānayān*, Babylonians became aware, and, for some reason or other, this constellation name, whose meaning was unknown to them, was so important that it required interpretation in Akkadian. It was found in the closest Akkadian homonym, *zibānītu*, and thus came to mean „the Scales“. If our explanation is acceptable, this is how a new constellation, Libra, came into existence; the Akkadian name was later echoed by the neighbours. Whatever exotic this process might appear, it accounts for no

original Sumerian term for Libra and its borrowing from Akkadian. Another explanation is that there was once another Akkadian *zibānītu* (or a similar form), not attested in the known texts, meaning „the horn of a scorpion“ being a cognate of Arabic *zabāniyā*, which had been the original name of the constellation later misinterpreted by the Babylonians as „the scales“, a homonymous term.

6. Lyra

Sum. *mulūz* [Hunger-Pingree] („she-goat“).

Akk. *mulenzu(m)* „Ziege, Sternbild Lyra“ [AHw 221-2] („she-goat“).

Arabic *'al-'iwaz* „l'Oie, la Lyre“ [Schjellerup 75], *'iwazz-at* [Belot 16] „oie“ („goose“). This may be an interpretation by ancient Arabs of Sumerian *ūz* „she-goat“, which they mistook for *uz* „duck, goose“ [Bauer 498: „Ente, Hausgans“].

7. Pegasus, Equus

Sum. *aš.iku* [Hunger-Pingree], *aš.gán* [Reiner-Pingree] („field“).

Akk. *mulikū(m)* „Pegasus (sum. Lw)“ [AHw 370] („(measure of) field“).

Hebrew *ha-ssūs ha-mə'ōpēp* „Pegasus, winged horse (also in astronomy)“ [Alcalay 741].

Arabic *'al-faras 'al-'aẓam* „the biggest horse“ [Belot 1024].

Greek [*híppos*] „horse“.

The misinterpretation of Babylonian – or Sumero-Akkadian, if the reading (*aš*).*iku* is correct – *ikū* by Greeks, probably as early as in the Mycenaean period, as „horse“, cf. linear B *i-qo* „horse“ < Indo-European **ek'wo*, the form that should have rendered something like *iku/eku/iko/eko* in any other centum Indo-European language, which also might have happened to be a mediator for this folk etymology.

The other name of Equus, Pegasus, is also worth attention. The western fish of Pisces with some of the western part of Pegasus was called *sim.maḥ* in Sumerian and *šinūnūtu* in Akkadian (the latter attested in *Mul.Apin*), both meaning „the Swallow“ [Reiner-Pingree; Hunger-Pingree]; the Sumerian term literally means „big swallow“. In Sumerian, *sim* (also *šim*, Emesal *še.en*, *še.na*) means „swallow“ when used with the

determinative mušen for birds and a kind of fish („Schwalbenfisch“) when with the determinative ku₆ for „fish“. In Akkadian, there is a related masculine form *sinūnu* „swallow-fish“. The Sumerian s/šim/n is very likely to make the first, borrowed, element of the Akkadian *sinūnu/šinūnūtu* (borrowed, in its turn, into Syrian as *sənūnītā* and Arabic as *sunūnū* „swallow“), the second being *nūnu* „fish“ of Semitic origin. We assume that the name of the constellation was „the Swallow-fish“ rather than „the Swallow“ both in Sumerian and Akkadian, which accounts for its name, „Pisces/the Fish“, in later cultures. (Piscis austrinus was called ku₆ in Sumerian and *nūnu* in Akkadian both meaning „fish“ [Reiner-Pingree]).

What was meant by a swallow-fish is most likely a flying-fish, out of all birds most of all resembling a swallow. If it is true, the image of a winged horse could have been a kind of „mythologization“ of a much more earthly or rather sea creature; or at least the constellation name „Flying-Fish“ could have contributed to equipping the Greek Híppos with wings, i.e. transforming it into Pégasos.

8. Sagittarius

Sum. *mul/dpa.bil.saḡ* [Hunger-Pingree]. Being a deity's name the word to be read *pa.bīl.saḡ* means „grandfather“ or any male elderkin (a related form, *pa.bīl.ga*, is „Großvater, Onkel“ [INIM KIENGI 784]).

Hebrew *qaššāt* „archer; Sagittarius“ [Jastrow 1433].

Syrian *kašāṭā* „sagittarius (sidus)“ [Brockelmann 349-350].

Arabic 1.: *'al-qaws* „the Bow“, the ind-A constellation name [Kunitzsch 51]. 2.: *'al-rāmī* „the Archer“ (sci-A) [ibid.; also Schjellerup 175].

Ge'ez *qaws* „arc, n. of the Zodiac“ <Arabic [Leslau 456].

Hausa 1.: *Baka* „Bow“ [Hiskett 174]. 2.: *Jin dadi* „Feeling good“ [ibid. 173]. An obvious folk etymology, or misinterpretation, of the Arabic *'al-na'ā'im* „the Ostriches“, the name of several stars belonging to Sagittarius, mistaken for a term derived from *na'ama* „to be well-off“ or *na'ima* „to rejoice at“.

Greek [toksótēs] „archer“.

Latin *Sagittarius* „archer“.

We wonder whether the Sumerian name of the constellation, if realized as „elderkin“, could have been translated into Semitic, probably Aramaic, as „elder, presbyter“ – cf. Syrian *qaššā*, *qaššīšā*, Mandaic *qašiš(a)*, Arabic *qass* (*qissīs* is rather a Syrian loan), Ge‘ez *qas* (while *qasis* is considered a Syrian loan), Tigrīñña *qāšši*, Tigre *qāš*, Amharic *qes*, *qays*, all meaning „presbyter, priest, elder“ < Semitic **qass-*/, later misinterpreted as a nearly homonymic „bow“: Akkadian *qaštu*, Hebrew *qāšāt*, Syrian *qeštā*, Arabic *qaws*, Ge‘ez *qast*, all < Semitic **qaws(-at)-*.

9. Ursa

Syrian *‘eglā* „vitulus; nomen stellarum duarum in corpore ursi minoris“ [Brockelmann 509]. The name's motivation causes our suspicions in view of the same consonantal root in Syrian: *‘āgālātā* „currus, plaustrum; nomen sideris ursi minoris“ [Brockelmann 510], which is an echoing of the Mesopotamian name for Ursa/Currus (see I. 17). Arabic *‘al-farqadān*, „the Two Calves“, the ind-A asterism name for β and γ UMi [Kunitzsch 58], is very likely a translation of Syrian *‘eglā*.

* * *

We are most thankful to Dr. G. Kurtik, who consulted us on the history of astronomy, Dr. M. Gorelik for the information about armoury, Svetlana Burlak for the Greek data and etymologies, Katya Medvedeva for some of the Hebrew star-names, and Professors David Pingree, Simo Parpola, Hermann Hunger, Igor Diakonoff and Sergei Starostin for reading and remarking on the manuscript.

Abbreviations

AHw	<i>Akkadisches Handwörterbuch</i> . Unter Benutzung des lexikalischen Nachlasses von Bruno Meissner bearbeitet von Wolfram von Soden. Wiesbaden 1965-1981.
Alcalay	R. Alcalay, <i>The Complete Hebrew-English Dictionary</i> . Tel-Aviv-Jerusalem 1965.
Bauer	J. Bauer, <i>Altsumerische Wirtschaftstexte aus Lagaš</i> . Rom 1972.
Belot	J. B. Belot, <i>Vocabulaire arabe-français à l'usage des étudiants</i> . Beyrouth 1929.
Borger	R. Borger, <i>Assyrisch-babylonische Zeichenliste</i> . Neukirchen/Vluyn 1978.
Brockelmann	C. Brockelmann, <i>Lexicon Syriacum</i> . Halis Saxonum 1928.
CAD	<i>The Assyrian Dictionary of the Oriental Institute of the University of Chicago</i> . Chicago 1961-.
Drower-Macuch	E. S. Drower, R. Macuch, <i>A Mandaic Dictionary</i> . Oxford 1963.
Erman-Grapow	A. Erman, H. Grapow, <i>Wörterbuch der ägyptischen Sprache</i> . Bde. 1-6. Berlin 1957.
Faulkner	R. O. Faulkner, <i>A Concise Dictionary of Middle Egyptian</i> . Oxford 1962.
Foucauld	Ch. de Foucauld, <i>Dictionnaire touareg-français</i> . Paris 1951.
Heimpel	W. Heimpel, <i>Tierbilder in der sumerischen Literatur</i> . Rom 1968.

- Hiskett M. Hiskett, „The Arab Star-Calendar and Planetary System in Hausa Verse“, *Pulletin of the School of Oriental and African Studies*, University of London, Vol. XXX, Part 1, 1967.
- Hunger-Pingree H. Hunger, D. Pingree, *MUL.APIN. An Astronomical Compendium in Cuneiform*. Archiv für Orientforschung, Beiheft 24, Wien 1989.
- INIM KIENGI B. Hübner, A. Reizammer, *INIM KIENGI. Sumerisch-Deutsches Glossar*. Marktredwitz 1985-6.
- Jastrow M. Jastrow, *A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic literature*. New York-Berlin 1926.
- Kaufman S. Kaufman, *The Akkadian influences on Aramaic*. Chicago 1974.
- Kunitzsch P. Kunitzsch, T. Smart, *Short Guide to modern star names and their derivations*. Wiesbaden 1986.
- Labat R. Labat, *Manuel d'épigraphie akkadienne*, Paris 1948.
- Leslau W. Leslau, *Comparative Dictionary of Ge'ez (Classical Ethiopic)*. Wiesbaden 1987.
- Lieberman S. J. Lieberman, „The Phoneme /o/ in Sumerian“, *AOAT* 203, Neukirchen/Vluyn 1979, S. 21-28.
- Pingree-Walker D. Pingree, Ch. Walker, „A Babylonian Star-Catalogue: BM 78161“, *A Scientific Humanist. Studies in Memory of Abraham Sachs*. Philadelphia 1988, S. 313-322.
- Reiner-Pingree E. Reiner, D. Pingree, *Babylonian Planetary Omens: Part Two. Enuma Anu Enlil, Tablets 50-51*. Malibu 1981.

- Reiner-Pingree Tablet 63 E. Reiner, D. Pingree. *Babylonian Planetary Omens: Part One. Enuma Anu Enlil, Tablet 63: The Venus Tablets of Ammisaduga*. Malibu 1975.
- Sachs A.J. Sachs, „A Late Babylonian Star Catalog“, *JCS* 6, 1952, S. 146-150.
- Salonen A. Salonen, *Die Fischerei im alten Mesopotamien nach Sumerisch akkadischen Quellen*. Helsinki 1970.
- Schjellerup *Description des étoiles fixes composée au milieu du dixième siècle de notre ère par l'astronome persan ABD-AL-RAHMAN AL-SÛFI, avec des notes par H.C.F.C. Schjellerup*. St.Petersburg 1874.
- Vycichl W. Vycichl, *Dictionnaire étymologique de la langue copte*. Leuven 1983.
- Waerden B. L. van der Waerden, *Science Awakening, II. The Birth of Astronomy*. Leiden-New York 1974.
- Weidner E.F. Weidner, „Fixsterne“, *RIA*, Bd. 3, Lief. 1+2, 1957/59, S. 72-82.

GRAZER MORGENLÄNDISCHE STUDIEN

3

Die Rolle der **Astronomie** in den Kulturen Mesopotamiens

Beiträge zum
3. Grazer Morgenländischen Symposium
(23.–27. September 1991)

herausgegeben von Hannes D. Galter

