
DOI: 10.14746/linpo.2023.65.2.4

Angas-Sura etymologies XIII

Gábor Takács

Department of Classical Philology, University of Łódź (UŁ)

Lexicographical Library of Afro-Asiatic Root Research at Balatonederic (LLAARR)

Member of the Associazione Internazionale di Studi sul Mediterraneo e l'Oriente, Roma (ISMEO)

gabtak@datatrans.hu | ORCID: 0000-0002-2466-6451

Abstract: Gábor Takács, *Angas-Sura etymologies XIII*. The Poznań Society for the Advancement of Arts and Sciences, PL ISSN 0079-4740, pp. 83-102

The paper as part of a long-running series is devoted to the etymological analysis of a new segment (namely that with initial dental *d-) of the Angas-Sura root stock, a small group of modern languages remotely and ultimately akin to pharaonic Egyptian and the well-known Semitic languages or Twareg in the Sahara etc. Doing so, I wish to continue the noble tradition initiated by J.H. Greenberg (1958), the founding father of modern Afro-Asiatic comparative linguistics (along with I.M. Diakonoff), who was the first scholar ever to have established by Neo-Grammarian the methods regular consonantal correspondences between Angas-Sura (AS) and ancient Egyptian in his pioneering (painfully isolated) paper on the ancient trichotomy of the word-initial labials in both branches. Nowadays our chances in following this path are substantially more favourable being equipped with our gigantic comparative root catalogue system of the Egyptian etymologies ever published (ongoing since 1994) and of the Afro-Asiatic parental lexical stock (ongoing since 1999). This series of papers represents the author's ongoing project for an etymological dictionary of the Angas-Sura languages comprising their entire Afro-Asiatic cognacy.¹

Keywords: comparative-historical linguistics, Afro-Asiatic, Chadic languages, African linguistics, ancient Egyptian, Semitic studies, phonological reconstruction, consonantism, etymology

Introduction

The languages of the Angas-Sura (AS) group are spoken between the South-Eastern Plateau and the Benue river, Plateau State of Nigeria, by about 200.000 people in the estimation of H. Jungraithmayr (1981: 407). The Angas-Sura language group belongs to the West Chadic

¹ At this point, I specially express my cordial thanks to Prof. Krzysztof Tomasz Witczak (Department of Classical Philology, University of Łódź) for encouraging and supporting me to successfully apply for the ARR grant of his home university, in the frames of which this old project of mine (since 1998) is recently being carried out.

subbranch (cf. e.g. Jng. 1981: 407-408; Stolbova 1987: 31; JI 1994 II viii) of the Chadic branch, which, in turn, represents part of the great Afro-Asiatic (Semitic-Hamitic) language family (or phylum), which is divided into six equipotential cognate branches: Semitic, Egyptian, Berber, Cushitic, Omotic, Chadic.

The best inner classification of the Angas-Sura group was suggested by C. Hoffmann (1971; 1975 MS: 2), who assumed Gerka to have been the first member split off from the group. The remaining group falls into three subgroups: (1) **Northern**: Angas, (2) **North-Eastern**: Sura (Mwaghavul), Mupun, Chakfem-Mushere Chip, Jorto, Kofyar, (3) **Southern**: Kanam (Koenoem), Pyapun(g), Tal, Montol, Goemai (Ankwe). On the basis of my own research on comparative AS phonology, I (Takacs 2004: xxi-xxxix; 2005: 47-52, §IV) stated that the phonological isoglosses confirm the correctness of Hoffmann's inner classification. Henceforth, I use the following (slightly modified) inner grouping: (1) **Gerka**, (2) **Angas**, (3) **Suroid** languages (falling further on in two clusters: 3.1. Sura-Mupun vs. 3.2. Kofyar-Mushere-Chip according to the isoglosses of the complex AS *g^y-), (4) **Goemaoid** languages (Kanam/Koenoem, Pyapun/Pyapung, Tal, Montol, Goemai). Most recently, on the basis of his own field research on several (hitherto unrecorded) AS languages starting from 2012, R.M. Blench² put forward an extended vision of an as full set of daughter languages as possible in a sketchy model, without anyhow demonstrating their peculiarities and the underlying lexicostatistical scores, along the following clusters: (1) Yiwom, Goemai, "Talic" (Pyapung, Tal, Koeneem), (2) Miship, (3) "Pan cluster": Jakato, Jibyal, Nteng, Bwol, Jipal, Kwalla, Doemak, Mernyang, (4) Mwaghavul, Mupun, Takas, (5) Mushere, Chakfem (?), (6) Ngas, Bølnøng. Many of these alleged languages are so far either unrecorded or their sporadic wordlists are insufficient. Since the British field researcher, working mostly with "one-shoot" sessions,³ has so far failed in elaborating a new comprehensive comparative phonology and lexicon first according to the standards of scholarship and has apparently missed to present the linguistic evidence or even the argumented outlines of his new vision are hidden to us, it is perhaps wiser to stick to the already firmly established frames of the 2004 grouping for the time being.

The phonological and lexical reconstruction of the Angas-Sura group had only been partly elaborated in minor segments⁴ before the first comparative lexicon of the Angas-Sura

² Cf. Blench & Bulkaam 2019a Bln., 3, Figure 1; 2019b Jkt., 3, Figure 1; 2019c Jbl., 3, Figure 1; 2019d Nteng, 4, Figure 1: "The Central West Chadic languages".

³ E.g., Blench & Bulkaam 2019a Bln., 1: "The wordlist was collected as a 'one-shot' exercise and the transcription must therefore be regarded as preliminary."; Blench & Bulkaam 2019d Nteng, 1: "The village of Nteng was visited by the first author and Raymond Dawum on the 9th of December, 2017, and a basic 500 word list was elicited."

⁴ Thus, J.H. Greenberg (1958) surveyed the Angas-Sura roots beginning with labials pointing out the original labial triad *b - *p - *f inherited from Afro-Asiatic. O.V. Stolbova devoted two studies to the subject, using basically the Angas (Foulkes 1915, Ormsby 1913-4) and Sura (Jungraithmayr 1963) lexicons for the comparison adducing some additional data from Chip, Montol, Gerka (collected and published by Jungraithmayr 1965). In 1972, she proposed a historical-comparative survey of the Proto-Angas-Sura consonant system in the light of some illustrative lexical material (2-3 exx. for each correspondence). In her 1977 paper, O.V. Stolbova presented 256 lexical roots and Proto-Angas-Sura reconstructions accompanied by a brief sketch of vowel correspondences. C. Hoffmann (1975 MS) offered a phonological (both consonantal and vowel) reconstruction of the Proto-Angas-

group has been completed (Takács 2004)⁵. Now, on the basis of this synthesis (by far not yet complete, of course as most recently further AS languages have emerged from the obscurity of their unrecorded status), it has become fundamentally plausible to systematically deal with the external cognates of the Angas-Sura lexical stock also both inside its gigantic Chadic kindred and in the remote branches of the Afro-Asiatic macrofamily. The series “Angas-Sura etymologies”⁶ is contributing to outlining the so far unknown background of Angas-Sura lexical stock primarily with new lexical parallels. In this issue of my series, the new external correspondences of some of the Angas-Sura (AS) roots with initial *z- are discussed, collected mostly during the most recent of my research on the Afro-Asiatic root stock with initial dentals in my Afro-Asiatic root library (Ederics).

Some peculiar elements of the Afro-Asiatic background of the Angas-Sura historical consonantism

- A general devoicing of the voiced PAA stops in the Auslaut of the AS stems is a recent development. There are but a handful of records of older final *-b#, *-d#, and hardly any for *-g# (cf. Takács 2004: xxv-xxvi, xxxi, resp.). Sometimes the devoicing of plosives may be observed even in other positions too under conditions that cannot be precisely known as yet.

-Goemai level (on the basis of Goemai, Mernyang, Sura, and Angas) through 248 lexical roots. The West Chadic historical phonology by Stolbova (1987: 240-244) also contains a separate list of some 64 Proto-Angas roots.

⁵ I express my best thanks for the constant and many-sided unselfish support yielded for my work by the great Chadicist, Prof. Herrmann Jungreithmayr (Institut für Afrikanische Sprachwissenschaften, J.W.Goethe-Universität, Frankfurt a/M). I am greatly indebted also to the Alexander von Humboldt-Stiftung (Bonn) for facilitating my research stay at Frankfurt a/M (1999-2000, 2002) as well as for funding the publication costs of the Angas-Sura comparative lexicon together with the OTKA (Hungarian National Scientific Research Fund, project nr. D 45976). I express my deep gratitude to the City Hall of Székesfehérvár (Hungary) for its “Lánczos-Szekfű” prize granted almost twenty years ago for an early phase of my research on the Afro-Asiatic background of the Angas-Sura lexicon, which I eventually began back in Sept. 1998 during my research at the Haifa University (funded by the OSI at Prague, which is gratefully acknowledged also in this place) with the guidance of the late Prof. A. B. Dolgopolsky (1930-2012), may his memory be blessed, one of the greatest Afro-Asiatic or Semito-Hamitic comparativists of all times.

⁶ The first part (AS roots with initial *b-) appeared in *Lingua Posnaniensis* 46 (2004), 131-144. The second one (AS *b-) in *Rocznik Orientalistyczny* (Warsaw) 57/1 (2004), 55-68. The third issue (AS *p-) in *Lingua Posnaniensis* 48 (2006), 121-138. The fourth part (AS *f-) has been published in *Folia Orientalia* 47/2 (2011), 273-289. The fifth part (AS *m- in monoconsonantal roots) in the *Cahiers Caribéens d'Egyptologie* (Schoelcher, Martinique) 13-14 (2010), 137-142. The sixth part (rest of AS *m-) was originally scheduled for *Rocznik Orientalistyczny* 74/1 (2021), but this paper has so far not been completed and submitted, which I had earlier unfortunately overlooked, so the word on its appearance in that RO issue was misrecorded by my mistake in this footnote of my previous communications on AS, for which I must apologize here. I plan to fill up this gap later. The seventh one (AS *d-) was published in *Lingua Posnaniensis* 62/3 (2020), 95-120. The eighth part (AS *d-) in *Folia Orientalia* 57 (2020), 321-354. The ninth part (AS *t-) in *Lingua Posnaniensis* 63/1 (2021), 53-72. The tenth part (AS *z- + Ø, labials, dentals, velars) in *Lingua Posnaniensis* 64/1 (2022), 73-96. The eleventh part (AS *z- + nasals) in *Lingua Posnaniensis* 64/2 (2022), 49-76. The twelfth part (AS *z- + liquids) in *Lingua Posnaniensis* 63/2 (2021), 56-75.

- Labials basically reflect the original AA triad of *b, *p, *f as demonstrated by J.H. Greenberg (1958) and manifold corroborated by V.M. Illič-Svityč (1966: 9, 14-15), O. V. Stolbova (e.g., 1996: 15, §I.1.), and G. Takács (2001: 55; 2011: 148-152 etc.).
- AS ${}^*V\gamma V-$ < either an AA root medial “laryngeal” or a velar or a semi-vowel, i.e., where the $-C_2-$ of AA ${}^*\sqrt{C_1C_2C_3}$ was either ${}^*-h/\gamma/h/\gamma-$ or ${}^*-g/k/\gamma/h-$ or ${}^*-w/y-$, but sometimes it is just epenthetic without a consonantal precedent (cf. Dolgopolsky 1982: 32-36).
- Original AA pharyngeals (${}^*\gamma$, ${}^*\hbar$) and laryngeals (${}^*\gamma$, *h) were mostly preserved in the Inlaut as AS ${}^*-\gamma-$ (above). In the Anlaut, normally, AA ${}^*\gamma-$ and ${}^*\gamma-$ > AS zero, while AA ${}^*\hbar-$ and ${}^*h-$ > either AS ${}^*h-$ or zero. In the Auslaut, they mostly disappeared, but sometimes they developed in the contrary way, i.e., AA ${}^*\hbar-$ and ${}^*h-$ may have resulted in AS ${}^*k\#$.
- Final AS ${}^*-\eta$ – beside being a natural result of an older nasal (*m , *n) + velar, of course – otherwise usually derives from the contraction of an AA medial nasal (${}^*-m-$ or ${}^*-n-$) + lost AA pharyngeal (${}^*\gamma$, ${}^*\hbar$) or laryngeal (${}^*\gamma$, *h), cf. already Illič-Svityč 1966: 33, fn. 11.

AS ${}^*z-$ + liquids (continued)

- 417. AS *zēl (> *zel ~ var. ${}^*zol?$) “saliva” [GT]: Bəlnəng nzeel [${}^*[n]zē:l]$ “saliva” [Blench & Bulkaam 2019a Bln., 10], Mupun zēel “saliva” [Frj. 1991: 69], Kofyar zel ~ zēl “saliva”, cf. ók zēl “to spit” (ók “1. to spit, 2. blow out”) [Netting 1967: 31, 46], Mushere nzol (sic: -o-) “1. mucus, 2. sticky slimy substance produced by mucous membrane, 3. to draw saliva like okro soup (sic!)” [Diyakal 1997 MS: 173], Jakato zeel [${}^*[zē:l]$ “1. saliva; 2. spittle” [Blench & Bulkaam 2019b Jkt., 11], Chip zel (sic: short -e-) “saliva” [Kraft], Jibyal zeel [${}^*[zē:l]$ “1. saliva; 2. spittle” [Blench & Bulkaam 2019c Jbl., 9], Goemay zēl (sic: short -e-) “saliva flowing from the mouth when one is asleep” [Sirlinger 1937: 284] (AS: Takacs 2004: 422). The AS stem appears perfectly isolated in Chadic.⁷ Its cognacy (???) with CCh.: Gisiga tazlay (unless [tažay]?)⁸ “saliva” [Gerstmann 1979 quoted in JI 1994 II 279] is highly doubtful. The closest AA cognate appears in an isogloss derivable from a NAA ${}^*\sqrt{h}z1$ “1. milk, 2. mucus”, primarily perhaps ${}^*„secretion“$ (?)⁹ [GT], cf. OEg. traces of *hz3 [regular < *hz1] attested in this semantic domain¹⁰ > MEg. $hz3$ “1. Schleim (des menschlichen und tierischen

⁷ H. Jungraithmayr (either in JS 1981: 216 or in JI 1994 II 278-279) did not list such a root and its reflexes. O.V. Stolbova (CLD III 124-127) too missed any mention of this root.

⁸ This word (and no other whatsoever) for “Speichel” was not listed in the Gisiga lexicon by J. Lukas (1970), which, however, appears to have a few cases of nouns with tV- prefix in Gisiga, cf. taps ~ tapas “1. Sonnenhitze, 2. Tageslicht”, teš (tetl) “Knochen”, teš (tetl) “Ei”, təlar “Termite(nhügel?)”, tipirek “Morgen”. Neither H. Jungraithmayr (JI 1994 II 278-279) has any acceptable Chadic cognate, albeit he ranked this very form “B” just like the forms displaying a root $\sqrt{h}z$ in the Mafa-Mada group where I fail to see the phonological match.

⁹ Eventually related to PAA ${}^*\sqrt{h}z1$ “to secrete” [GT]? Cf. Sem.: MSA ${}^*\sqrt{h}z1$: Jibbalí $h\acute{z}z1$ “to separate from one’s parents and take one’s share of the family property”, $h\acute{z}zé1$ “isolation” [Johnstone 1981: 122], Mehri $h\acute{z}z1$ “to put aside, seclude, isolate (as e.g., a leper, a mangy camel)” [Johnstone 1987: 198]. For the semantic shift cf. IE ${}^*meuk-$ (var. ${}^*meug-$): Latin $mūcus$ “Schleim”, Greek $\mu\acute{u}\gamma\alpha$ “1. Schleim, 2. Nase” vs. OIndic $muñc-áti$ ~ $muc-áti$ “befreit, läßt los”, Avestan $fra-muxti-$ “Losbinden” (IEW 744) or Hung. $váladék$ “secretion” < $válni$ “to get separated”.

¹⁰ Cf. OEg. hz (perhaps *hz3 with usual defectiveness of -3) “Teig (zum Brotbacken)” and $hz3.w$ (pond detetrminative) “ein Gewässer (am Himmel)” (ÄWb I 886). Ch. Ehret (1995: 388, #798) miscompared this root

Körpers) (Med., NK Mag.), 2. Teig o.ä. (OK-): 2.1. eigtl. vom Teig beim Brotbacken, 2.2. in offizineller Verwendung, u.a. *hz3 n* “w3.jt gegorener Teig” (Wb III 160, 6-7) = “1. milk (CT I 168), 2. mucus (pap. Kahun, pap. Ebers), 3. dough” (MK, Med., FD 177) = “1. Pflanzenschleim, 2. Schleim (von Tieren)” (GHWb 560) = “milk, flood (?)” (CT, DCT 355-356)¹¹ > LEg. *hz3* “1. bread dough, 2. efflux, 3. mucus” (PL 675) ||| Sem.: probably MSA **ħz̥l*: Jibbali *ħózól* “to separate from one’s parents and take one’s share of the family property”, *ħézél* “isolation” [Johnstone 1981: 122] = *ħózól* “s’établir par ses propres moyens, ayant pris sa part du bien familial” [DRS], Mehri *ħəzūl* “to put aside, seclude, isolate (as e.g., a leper, a mangy camel)” [Johnstone 1987: 198] = “mettre à part, à l’écart (du monde), isolater, mettre en quarantaine” [DRS] (MSA: DRS 855, HZL2). For AS-Eg.-MSA see Takács 2001: 79; 2011: 155.

A whole set of homorganic root varieties (several items with a root extension **ħ*)¹² appears in such a disturbing abundance within the semantic domain of diverse bodily secreta that one must doubt in an eventual cognacy of all of them (at any rate, our root above is certainly related to the roots described under entries no. 417.1, 417.3, 417.6) and so they must be carefully distinguished for further research as follows:

417.1. NAA **ħz̥lh* “milk” [GT] > SBrb.: EWlmd. *a-zla*, pl. *a-zla-t-ān* & Ayr *a-zla*, pl. *ə-zla-t-ān* “premier lait après le colostrum (tout blanc, avec peu de crème, dure env. une semaine après la délivrance; chez la femme et l’animal; le premier lait ne se boit que il ne se met jamais dans la bouillie)” [PAM 2003: 886] ||| Sem. **ħdlh*: Class. Ar. *dullāh-* “lac aqua mixtum” [Freytag 1837: 205a, not listed in Lane and BK] = *dullāh-* “lait mêlé d’eau” [GD 954] = *dullah-* [DRS] of disputed verbal derivation (namely, Ar. *dalahā* (*Lisan*) and *dalahā* (*Qamus*) “mélanger le lait avec l’eau” [Rabin] = “to mix milk with water” [Leslau]),¹³ cf. also varieties like *darah-* “délayé d’eau (lait)” [DRS 341] vs. *mu-dallaq-* “lait délayé de

with Sem.: Ar. *hazhāz-* “flowing abundantly”, Eg. *ħz.t* “water-jar”, PCu. **ħāz-* “flow of water”, C/ECh. *-*dk* “saliva” < AA *-*ħāz-* “flow (n.)”.

¹¹ The sense “milk” was presumably the theonym *ħz3.t* “a cow-goddess” (Urk. IV 238:14, FD 177) was derived from.

¹² Presumably identical to the CAA indicator of the nominal class of body parts (cf. Takács 1997).

¹³ Le Comte de Landberg (GD 1031-1032) rendered this word ambiguously: “Ce thème ne se trouve que dans le *Qāmoūs* ... C'est probablement une prononciation pour” *darah-* “délayé d'eau (lait)” [DRS 341] (only attested in the *Qāmūs*) derived from a verbal root he regarded as “un élargissement de” biliteral **ħdr-* whose “sens est proprement répandre, saupoudrer.” Eventually, he affiliated *dullāh-* with *mu-darraq-* “délayé dans d'eau (lait)” [DRS 342] which “est aussi une épithète du lait baptisé d'eau. Les deux finales ح et ق peuvent donc provenir de l'endurcissement de la troisième de مذر، sans qu'il y ait besoin d'y voir une troisième lettre empruntée à une autre racine” where he joined “aussi le synonyme” *mu-dallaq-* “lait délayé de beaucoup d'eau” [BK I 780]: “ce n'est là qu'une permutation des sonores, et ne me paraît avoir rien à faire à ذلق ...” He must certainly be right in relating *dullāh-*, *darah-*, *mu-darraq-*, *mu-dallaq-* as stemming from some common source irrespective of the phonological alternations. Set in the context of a supposed match of Hbr. *d-* and Ar. *d-*, Ch. Rabin (1970: 292, #11) attached Ar. *dalahā* (*Lisan*) and *dalaha* (*Qamus*) “mélanger le lait avec l’eau” [Rabin] = “to mix milk with water” [Leslau], even if with reservations (“on peut se douter s'il y a une connection avec ...”), to the reflexes of Sem. **ħz̥lh* “1. to pour out” [GT] (on which cf. fn. 93 in this paper) as well as to those of Sem. **ħdlh* [Ward 1962: 397-398, #1] = **ħdlh* “to trouble water” [GT pace DRS 263-264] (on which as part of a large family of homorganic root cf. Takács 2021: 377, #538 and 2022: 187, #592.6). Such a hypothetic interrelationship of these three distinct Sem. roots would require to be more thoroughly demonstrated.

beaucoup d'eau" [BK 780] vs. mu-darraq- "délayé dans d'eau (lait)" [DRS 342], probably related to Dathina dalah "1. jeter, verser, (de là:) 2. vanner, 3. (fig.) déballer, déverser", daliḥ "se jeter, se verser, se couler" [GD 953] (Ar.: GD 953-954 and 1031-1032 adopted in DRS 333: isolated in Sem.).

417.2. NAA *√clk “scum (???)” [GT]: Eg.: unattested *q3k¹⁴ < *√clk yielding Dem. q3h (sic: -h for h) “Schaum” vs. d3k “Speichel” (DG 673:1-2, resp.) = d3k “spittle” vs. d3h “foam” (CED 323) = d3k ~ d3h “Schaum, Speichel” (KHW 440) > Coptic (S) ϩωϩ (m) “spittle” (CD 796b) = “Speichel, Geifer” (KHW 440) ||| Sem.: Ar. šilak- “matière liquide qui sort des pis des brebis avant le colostrum”, ṣallaka II “serrer le pis d'une chameele avec une ficelle, pour empêcher son petit de la tête” [BK I 1364].

417.3. PAA *√sl(h), presumably *sil(h)- “(to produce) (sour?) milk (?)” [GT], attested in CCh.: (???) Lame sélén “sève épaisse sécrétée par un arbre, sp.” [Sachnine 1982: 423] ||| ECu. *sill-V “first milk of cow” [GT]: LECu.: Arbore sill-a “first milk of cow” [Ehret 1987: 59, #228]¹⁵ | HECu.: Burji sill-i and Gedeo (Darasa) sill-a “first milk” [Hudson 1989: 99] ||| SBrb. *√sly (with *-y < *-h)¹⁶ “to curdle (of milk)” [GT]: Ahaggar e-sli “1. être caillé, être mêlé de caillots (le sujet étant du lait), se cailler, 2. (p.ext.) être épais (être consistant, peu liquide) (le sujet étant du miel)” [Foucauld 1951-2: 1827], EWlmd. & Ayr ə-sləy “1. être caillé, se cailler (lait), 2. (Ayr) fig.: être amer (par de, propos), 3. (Ayr) ne pas se maquiller (nouvelle veuve, en signe de deuil)”, Ayr ə-ssəlay “1. lait caillé (lait laissé jusqu'à ce qu'il soit caillé), 2. babeurre (lait dont on a extrait le beurre)” [PAM 2003: 721] ||| Sem.: Ar. ?islīh- “1. espèce de plante dont l'usage fait donner aux chameaux beaucoup de lait, 2. écume, 3. lait sans écume” [BK I 1120] = ?islīh- “a certain plant, the pasturing upon which cause the milk of the camels to become abundant or a certain kind of tree or shrub that has this effect or a certain herb or leguminous plant, of those that are slender and soft, growing in the winter, that causes the camels to void sulāh- (or thin excrement) when they eat much of it or a certain herb, resembling the rochet, growing upon tracts of sand such as are termed ḥuqqūf- or a certain kind of plant, growing conspicuously in plain or soft tracts having a thin and delicate leaf and a pericarp stuffed with grains or seeds like those of the poppy, which is one of the plants of the rain of the spring and which causes the cattle to void sulāh-” [Lane 1402].

¹⁴ This assumption on an ancient Egyptian etymon is in disagreement with the so far current theory on the etymology of our Demotic-Coptic word that J. Osing (NBÄ 194 and 723-724, n. 851) explained from a hypothetic LEg. *t̪lh(j/y) “Schaum, Geifer, Speichel” he identified with a certain LEg. tl̪ (syllabic writing: t̪lhj) “eine unbestimmte Substanz (neben Wachs und Material zur Herstellung von Farben)” (Macadam 1949 I, inscription VI 13) which he eventually derived from an unattested LEg. verbal root *tl̪ > Coptic (S) ϩωϩ “schmieren, tünchen”. The Late Egyptian root, in turn, was affiliated (in NBÄ 723-724, n. 851) with Hbr. √tl̪ “tünchen” as a NWSem. loanword by assuming a secondary evolution of -k < -h. In addition, ignoring the LEg. data, W. Westendorf (KHW 440) sought a direct connection to Coptic (S) ϩωϩ “beschmieren”, which certainly displays a distinct root.

¹⁵ LECu.: Arbore sill-a “first milk of cow” was equated by Ch. Ehret (1987: 59, #228) with Bed. sil “spittle” [Ehret] < PCu. *sil- “to trickle” [Ehret] = to emit some phlegm” [GT], which was then combined by Ch. Ehret (1995: 159, #218) with his Sem. *√sly “placenta, afterbirth” and even Eg. snh.t “phlegm” (in fact, just an s-caus. of nh) < AA *-sil- “to run out (of fluid)”.

¹⁶ Where the Berber shift of *-y < NAA *-h is regular as pointed out by W. Vycichl (1992).

417.4. PAA *√*sl* “(fluid?) excreta” [GT] > CCh.: Mbara sàlày (m) “excrément” [TSL 1986: 276] || ECu. *säl- “Kuhfladen” [Sasse 1976: 126] = *säl- “cow dung” [Sasse 1979: 32; 1982: 164]: LECu. *säl- [Black]: Somali sál-o “dung of small size” [Black, so also Dlg.] = sál-o “dung” [Ehret], Oromo fäl-ti [Sasse: f regular < *s], Konso sál-l-ā “fresh cattle dung”, säl- “to cover with dung” [Black: -l-l- < *l-t-] = säl- “mit Kuhmist bestreichen” [Sasse] (LECu.: Black 1974: 100) | HECu. *sall-o “dung of cow” [Leslau 1988: 199 with further data; Hudson 1989: 54, 420]¹⁷ | Gollango säl- “mit Dung bestreichen (z.B. Hauswand)”, säl-té “Exkremente des Rindes” [AMS 1980: 220, 240] || SCu. *sálo+ “dung of large animals” [Ehret] = *sálo [Dlg.]: Ma'a ki-sálo “1. mud, 2. dung of large animals” [Ehret 1980: 326, #59] (Somali-Ma'a: Ehret l.c.; Cu.: Blažek 1994 MS Bed., 32) || (?) Eg. sr [< *sl?] “Schmutz” (GR, Wb IV 191, 14) || Sem.: Ar. √*slh* (root extension **h*) > I salahā “he voided his excrement or ordure or thin excrement, said of a bird: it muted or dinged”, salh- and sulāh- “excrement, ordure or dung or such as is thin, of any dung, thin excrement”, sulāh- also “a looseness or flax of thin excrement from the bowels: diarrhoea”, salah- “rain water in pools left by torrents” [Lane 1402] = I salahā “1. rendre les excréments, faire caca (se dit de l'homme)”, salh- “eau de pluie ramassée dans un réservoir et stagnante”, sulāh- “caca, excréments (humains) surtout liquides” [BK I 1120] = salh- “excréments”, salāh-at- “(désigne une roche sur laquelle urinent les boucs sauvages quand ils sont en rut et qui alors devient noire comme de la poix)” [Dozy I 671-672]. For Cu.-Eg.: Dlg. 1987: 200, #38.¹⁸ Mbara-Ar.: CLD III 78, #237 (with further vague Ch. comparanda).¹⁹

417.5. PAA *√*čl* “to excrete” [GT] > HECu. *čil- “to defecate” > *čil-o “excrement” [Hudson]²⁰ = PCu. (sic, in fact, just ECu.) *čAl- “кал, навоз” [Dlg.]²¹ = “feces” [Skinner].²² Sidamo čilō [Cerulli]²³ = čilo “excrement” [Moreno apud Dlg., so also Gasparini and Yri apud Hudson], Gedeo čilo “excrement” [Hudson], Hadiya číro [PB apud Dlg.] = čiro “excrement” [Hudson],²⁴ Kambatta činu “excrement” [Hudson], Burji čila [Sasse] = čila

¹⁷ For the phonologically vague Burji reflex see the suggestion by H.-J. Sasse (1982: 164) from HECu. *säl- “cow dung”.

¹⁸ The SCu.-LECu.-Eg. match was equated by A.B. Dolgopolsky (l.c.) directly with Sem. *tall- “mud, dirt” with a question-mark, although the Southern Cushitic evidence (where the distinction of Cu./AA *s vs. *č has been retained, cf. Takács 2001: 83-85; 2011: 124-125) clearly speaks for *s- here.

¹⁹ Compared O.V. Stolbova (CLD l.c.) to other supposed reflexes of her PCh. *sVI- “1. (to render) excrements, 2. stink” [Stolbova] > ECh.: Mawa saalanj “puer, sentir” [Jng.] | Jegu šilw- “Notdurf verrichten (to render excrements)” [Jng.] and also with PCh. *swVI- “to fall” (derivative?) [Stolbova] > WCh.: Mushere es-šwul “dysentery” (es “faeces”) [Diyalak quoted by Takács 2004: 328] || ECh.: WDangla sôllè “to fall (several obj.)” [Fédry].

²⁰ Combined by Ch. Ehret (2000 MS: 222, #2048) directly with Eg. sr “dirt” in spite of the irregular Eg. s- vs. HECu. *č-.

²¹ Based by A.B. Dolgopolsky (l.c.) solely on the ill-founded comparison of the HECu. data with Somali reflex of ECu. *säl- “cow dung”, which represent two distinct ECu. roots.

²² Affiliated by N. Skinner (1992: 356) with ECu. *säl- “feces”, Ar. usar- (sic) “retention of urine”, Ch. reflexes of *čUr- “urine” [GT].

²³ Even in spite of being puzzled about its č- (as “неясно”) miscompared by V.M. Illič-Svityč (1971: #50) with NOm.: Wolamo šyā, Badditu šišē baselessly derived from *čir/l-t- as reflexes of his Nostratic *čiru “гной, жижа”.

²⁴ The Hadiya reflex (with its secondary -r- < *-l-) was miscompared in the HSED #486 with Eg. sr, Mokilko siiri, Burji sera, which, as we can see below, display a distinct root.

“excrement” [Hudson] (HECu.: Dlg. 1973: 192; Hudson 1989: 48, 59) ||| NAA *√č(h)l ~ *√čl(h) “to urinate” [GT] > SBrb.: EWlmd.-Ayr ă-zlu, Ayr ə-zlu “uriner debout”, EWlmd.-Ayr a-žala, pl. i-žala-t-ăń “jet d’urine (des animaux, p.ex., du chien)” [PAM 2003: 916] ||| Sem.: MSA: Harsusi ḍehāl, Jibbali ḍahal, Mehri ḍēhal “uriner (homme)” (MSA: Johnstone 1977: 30; 1981: 48; 1987: 83; DRS 1127-1128: isolated in Sem.).

417.6. SAA *√čl, perhaps *čil- “saliva”, perhaps < **SAA** **√čl “to secrete (esp. phlegm, either milk or mucus?)” [GT], cf. WCh.: Dera yilek < *sile-k (?) [y regular < *s] “saliva” [Newman 1970: 48, fn. 27: “the final *k* is a non-productive ‘body part’ suffix”] || CCh.: Buduma číluluu (-ū) “Speichel” (cf. Kanuri télelè) [Nachtigal apud Lukas 1939: 95] = čílulú “saliva” [Cyffer] (isolated in Ch.: JI 1994 II 279) ||| Bed. sil “Speichel, Geifer” [Reinisch 1895: 198] = sīl “saliva” [Roper 1928: 232] = sil “spittle” [Ehret 1987: 59, #228].²⁵ The primary verbal root, sg. like PAA *√čl,²⁶ may have been retained by ECh. *čVI- “to separate” [GT]: WDangla tyólè “2. ‘désunir, disperser’” [Fédry 1971: 232], EDangla tyòliyē “décoller, dépecer, enlever la peau” [Dbr.-Mnt. 1973: 321] | Masmaje čelli “éplucher” [Alio 2004: 281, #38] ||| (?) Eg. srj (if -r- < *-l-) “(Köpfe) abtrennen” (PT: in an old ritual, Wb IV 192, 10) and/or snj (if -n- < *-l-) “jem. vom (m°) Bösen erlösen” (PT, Wb IV 156, 5).

417.7. PAA *√čl “to excrete” [GT] > PCh. *√člw “to defecate” [GT] > CCh.: Buduma (Yedina) nžélaau “faeces” [Nachtigal apud JI] via secondary voicing effect of n- < *nčelaw [GT] || ECh.: Jegu šilw- (šilwa, šilaw)²⁷ “Notdurf verrichten” [Jng. 1961: 117]²⁸ (Ch.: JI 1994 II 129: isolated in Ch.) ||| Sem.: Ar. biradical *√tl “to excrete” [GT] > √tl I “8. rendre, jeter des excréments (se dit des bêtes à sabot non fendu)”,²⁹ √tlh > I talaħa “1. rendre des excréments liquides (se dit de l’espèce bovine au printemps)”, talaha “être sali d’ordures”, talada “1. rendre des excréments liquides (se dit de l’éléphant)”, √tlt > I talaħa “1. rendre des excréments liquides (se dit de l’espèce

²⁵ Equated by Ch. Ehret (1987: 59, #228) with LECu.: Arbore sill-a “first milk of cow” < PCu. *sil- “to trickle” [Ehret] = to emit some phlegm” [GT], which was then combined by Ch. Ehret (1995: 159, #218) with his Sem. *√sly “placenta, afterbirth” and even Eg. snh.t “phlegm” (in fact, just an s- caus. of nh) < AA *-sil- “to run out (of fluid)”.

²⁶ For the semantic shift cf. IE *meuk- (var. *meug-): Lat. mūcūs “Schleim”, Greek μύξα “1. Schleim, 2. Nase” vs. OIndic muñc-áti ~ muc-áti “befreit, lässt los”, Avestan fra-muxti- “Losbinden” (IEW 744) or Hungarian váladék “secretion” < válni “to get separated”.

²⁷ Jegu šE- may, of course be positionally palatalized < *sE- in most of the instances, but, in some cases, it seems to reflect ancient Ch./AA *č- too, cf. Jegu ſee “zwei” [Jng.] < PCh./AA *√čr “2” [GT] (discussed by G. Takács 2011: 183), which seems to be corroborated by the revealing circumstance that Buduma has a pre-nasalized palatal affricate nž- that is supposed to have been voiced from *č- due to its direct contact in the cluster with n- (just as in ancient Eg.).

²⁸ The Jegu word was compared by O.V. Stolbova (CLD I.c.) to other supposed reflexes of her PCh. *sVI- “1. (to render) excrements, 2. stink” [Stolbova] > ECh.: Mawa saalan “puer, sentir” [Jng.] || CCh.: Mbara sàlāy (m) “excrément” [TSL 1986: 276] and Ar. √slħ “rendre les excréments” [BK I 1120], for which see entry no. 417.4 above.

²⁹ Cf. Ar. tall-at- “mud that is taken out from the bottom of a well” derived by A.B. Dolgopol'sky (I.c.) from his Sem. *tall- “mud, dirt” [Dlg.] in comparison with Syr. talil “pollutus, contaminatus”, tallel “polluit” contaminated in his view with Syr- talil “humidus”, tallel “humefecit” < Sem. *√tl “to flow”.

bovine, du chameau, des enfants), 2. jeter sur qqn. des excréments liquides, en salir qqn.”, talt- “excréments liquides” [BK I 231, 234, resp.], Dathina $\sqrt{\text{ntl}}$ “fienter (cheval)” [GD 2743].

A root variety with *-r as C₂ and with the same vacillation of a voiced vs. voiceless PAA *Anlaut* (*z- vs. *c-) is also known.

417.8. NAA * $\sqrt{3r}$ “some phlegm” [GT] > SBrb.: Ahaggar tə-hîr-ət, pl. ti-hîr-t-în [GT: h regular < *z] “mucosité de l’oeil” [Prasse 1969: 66, #366: < * $\sqrt{?rh_1?}$ ³⁰] ||| Sem.: MSA * \sqrt{vzr} > Mehri zərwōr, Jibbali zoror, Harsusi zeror “bave, salive, crachat” (MSA: DRS 805: isolated in Sem.). Cf. NBrb.: Qabyle \sqrt{zr} > e-zzer “1. couler, 2. aller au fond”, me-zzer “1. dépôt, 2. fond d’un liquide”, u-zzur “être répandu, éparpillé”, a-zuzzer “sorte de soupe de semouler” [Dallet 1982: 952-953].

417.9. PAA * \sqrt{cr} “to excrete” [GT] > Sem.: Ar. (root ext. *-h) saraħa I “3. rendre les excréments, 4. jaillir avec violence (se dit de l’urine)”, VII “3. couler librement et s’introduire en coulant (se dit, p.ex., de l’eau)” [BK I 1078-1079] ||| Eg. sr “Schmutz” (GR, Wb IV 191, 14) ||| SBrb.: Wlmd. tə-ziri (n-tə-dis-t) [Brb. *z < *c?] “dysenterie” [A. Basset apud Prasse] ||| Bed. sār (m) “contents of stomach of slaughtered animals” [Roper 1928] ||| HECu.: Burji sīr- “to have diarrhoea”, sīrr-a “diarrhoea”³¹ vs. ser-a and sarr-a (unless < *sāl-)³² “excrements of horned cattle” [Sasse 1982: 164-165] = sarr-a, ser-a “dung of cattle” [Hudson 1989: 54] (Cu.: Blažek 1994 MS Bed., 32; 2020: 89) ||| CCh.: Makeri sero “dirt” [Allison 2005 quoted in CLD] ||| ECh.: Mokilko sīrī “excrement” [Jng. 1990: 174]. For Eg.-Burji-Mokilko: HSED #486 and Eg.-Ch. in CLD III 99-100, #333.³³

417.10. SBrb. * \sqrt{srr} [PAM]:³⁴ Ayr i-ṣrar (\approx EWlmd. i-kfay) “être frais (lait)”, a-ṣrir (m) “sorte de gomme (d’un arbre du Niger méridional; sert de remède contre il rhume des enfants)” [PAM 2003: 737] may display an *r variety to the match of CCh.: Lame sēlē “sève épaisse sécrétées par un arbre, sp.” [Sachnine 1982: 423] ||| ECu. *sill-V “first milk of cow” [GT] discussed above (entry no. 417.3).

³⁰ Puzzled about the etymology of the Ahaggar, K.-G. Prasse (l.c.) wondered if it is “peut-être id(entique). à” Wlmd. tə-ziri (n-tə-dis-t) “dysenterie” [A. Basset], which points towards a relationship with the root family of Eth.-Sem. * \sqrt{vzry} : Tna. zarāyā “couler doucement (eau)”, zara “eau qui coule doucement, ruisseau”, Tigre zara, Argobba, Harari zār “rivière”, (?) Gafat zārāyā “rosée” (ES: DRS 796, ZRY6) vs. Eth.-Sem. * \sqrt{zrr} : Amharic tā-żarrārā “être dilué, mélangé à l’eau”, żārrār alā “sortir avec force (liquide)”, Tigrinya zārār bālā “couler, ruisselet, dégouliner”, Gurage žāra amānnā “mélanger un peu de lait avec beaucoup d’eau (faire žāra)” (ES: DRS 805, ZRR11) ||| Ch. *(n)-zVr- “to drip” [CLD III 140, #535].

³¹ Derived by Ch. Ehret (2000 MS: 116-117, #1551) from his AA *-sū/īr- “to leak out”.

³² Derived by H.-J. Sasse (1982: 164) from HECu. *sāl- “cow dung”. Semantically fully legitimate, albeit phonologically obscure.

³³ Most recently, O.V. Stolbova (CLD l.c.) left out Burji from her Eg.-Makeri-Mokilko comparison, which she extended onto some further semantically vague Chadic *comparanda* explained from her PCh. *sVr- “dirt, excrements” in her entry no. 333.

³⁴ The emphatization of s- in EWlmd.-Ayr appears to be non-phonemic (such words are listed in the PAM under s-). Thus, its semantically tempting comparison with, e.g., Sem.: Ar. ṣāħara I “faire bouillir le lait jusqu’à ce qu’il devienne ṣāħīr-at-”, ṣāħīr-at- “lait chauffé par l’immersion d’une pierre rougie au feu, que l’on boit en y ajoutant du beurre et de la farine”, ṣūħār- “1. sueur (chez les chevaux), 2. fièvre” [BK I 1313-1314] *eo ipso* falls out (let alone for its entirely different root meaning having to do with the heat).

417.11. SAA * $\sqrt{s}w/yr$ “nasal mucus” [GT]³⁵ > CCh.: Daba sérí “rhume, morve, crachat (CLD: sniffles, spittle)” [Lienhard & Giger 1982 apud CLD, not found in Mouchet 1966] || WCh.: PSuroid *si-s^wōr ~ *si-s^yōr (in partial reduplication) “nasal mucus” [GT] = *(cV)-cVw/yVr (sic: *c-) “slime” [CLD]: Sura ššwóř “Rotz, dicker Schleim” [Jng. 1963: 83], Mushere ššiyor “running nose”, an ku ššiyor “I have running nose” [Diyakal 1997 MS: 377] (AS: Takacs 2004: 328-329; Daba-AS: CLD III 155, #630 with further, albeit semantically dubious, Ch. cognates)³⁶ || ECu. *si/urn- (root ext. *-n?) “Nasenschmutz, Rotz” [Sasse 1976: 127] = *si/urn- “nasal mucus” [Sasse 1979: 32; Ehret 1991: 219] || Eg. srj.t³⁷ (spitting mouth determinative) “Krankheitserscheinung, ob: Husten?” (Med., Wb IV 192-193) = “cough” (FD 235) = “Husten (Verbindung mit Schleimstoffen)” (WMT 773-774) = “Husten” (Westcar, GHWb 728; ÄWb II 2281b).

417.12. PAA * $\sqrt{\chi}r$ “to (e)je(c)t, pour out some bodily secretion (milk, urine, excreta etc.)” [GT], a root variety with a glottalized initial sibilant, attested in PCh. *čVr- “to pour into” [CLD II 215, #990] > i.a., CCh.: Paduko čira [cira] “jaillir” [Jarvis-Lagona 2005 quoted in CLD], cf. also ECh.: EDangla déeré [déré] “1. se gonfler (de lait), 2. se dresser” [Dbr.-Mnt. 1973: 92], WDangla dààrè “se gonfler de lait (seins)” [Fédry 1971: 204] || NOM.: a semantically obscure, albeit phonologically perfect match (???)³⁸ || HECu. *tūr- (tr. vb.) “to milk” [Hudson 1989: 99] || NBr.: Qabyle \sqrt{zr} : i-zir “jet de lait sortant de la mamelle”, ti-ziri “gorge de lait prise au sein” [Dallet 1982: 955] || SBr.: EWlmd.-Ayr te-żāre, Ayr te-żārāy “jet de liquide qcq., p.ex. jet de lait sortant d'une mamelle” [PAM 2003: 923] vs. EWlmd.-Ayr żārr-ät “1. jaillir (liquide qcq.), 2. être lancé en jet (liquide / lumière / balles)”, Ayr żārr-ät “1. jet d'urine, 2. diarrhée avec tranchées gastriques” [PAM 2003: 923] vs. EWlmd. żerəgg-ät [-VggV- < *-VwwV-?]³⁹ “jaillir, sortir brusquement (pierre/balle)” [PAM 2003: 925] || Sem.: Ar. zarā “1. couler (eaux), 2. avoir la diarrhée” [BK I 1313; DRS col. 1133a: isolated in Sem.]. Ch.-Ar.: CLD II 215, #990.

417.13. In PAA * $\sqrt{\chi}r$ “to flow (esp. of blood?)” [GT], we can see its root variety with a lateral sibilant *Anlaut* (Sem. *d- < AA *č-), cf. PCh. *čVr- (*č'-) “to suck” (any relation to #366, *č'VrV “blood-sucker”? [CLD II 117, #349], PCh. *čVrV (*č') “to spit, to expectorate” (derived < “to pour” or < “to suck”? [CLD II 117, #349.a], PCh. *čVrV (*č') “liquid”, as

³⁵ One wonders if the underlying verbal root (sg. like PAA * \sqrt{sw}/yr “to secrete nasal mucus” [GT]?) has eventually an etymological connection to Sem.: Akk. wuššuru D (factive) stem “lâcher, laisser aller”, wuššurtu “affranchissement” [DRS 648, WSR2].

³⁶ The semantically convincing Daba-Suroid match was equated by O.V. Stolbova (CLD III 155, #630) with cognates some other derived from her PCh. *cVr- “to clean nose” [CLD]: WCh.: Bole siru “to inhale through the nose” [GAB in CLD] || ECh.: Lele sir “se moucher” [WP 1982 quoted in CLD] (Stolbova: “Lele rather belongs to this root, than to Ch *č'Vr-, CLD II N 257”) | DM *sĒr- “to blow one's nose” [GT]: Migama séeró (sééré, séráá) “se moucher” [JA 1992: 123], Bidiya siir (siirí, siirèn) “se moucher” [AJ 1992: 114], WDangla siirè “se moucher” [Fédry 1971 quoted in CLD], EDangla siiré “sich die Nase putzen (clean one's nose)” [Ebobisse 1979; 1987 quoted in CLD].

³⁷ Eg. IIIae inf. roots are supposed to regularly correspond to IIae w/y ones in Sem./Brb. (cf. Vycichl 1953).

³⁸ Cf. perhaps Dizi *čür- “to wash” [GT after Bender 2003: 219, #144]?

³⁹ The shift of *ww > gg occurs also in southern Twareg according to Prof. M. Kossmann (kind p.c. on 10 March 2023).

vb. “to pour” [CLD II 120, #361], PCh. *^çVrV (*^çl-) “pus” [CLD II 120, #365],⁴⁰ CCh.: PKotoko *^çVrV (*^çl-) “blood-sucker, leech” [CLD II 121, #366] ||| Sem.: Ar. [√]drw > ḍarā I “1. (said of a vein:) it shed blood, it quivered and gushed with blood or made a sound by reason of the blood coming forth, 2. (said of a wound:) it ceased not to flow (with blood)”, also [√]dry > ḍarā I “(said of a vein:) it flowed and ran (with blood)” [Lane 1789c] = [√]drw > ḍarā I “1. saigner (se dit d'une plaie ou d'une artère coupée), 2. couler” [BK II 25] = [√]dry “fliessen” [Levy 1924 IV col. 218b]. Ch.-Ar.: CLD II 120, #361.

417.14. NAA *[√]ç/ç/çr(C₃) (perhaps *-w/g^w?) “some resinous fluid substance issuing from some kind of tree” [GT], perhaps deriving from either of the AA roots discussed in the preceding entries (nos. 417.13 and 417.13?), supposed to be retained by: SBrb. *[√]zrg/w (???) > EWlmd.-Ayr ta-żärägg-at [-VggV- < *-VwwV-?]⁴¹ (adj.vb.) “gomme d'adäras⁴² liquide (durcie elle s'appelle tayəlbas)” [PAM 2003: 925] (isolated in Berber,⁴³ of an uncertain Berber etymological background)⁴⁴ ||| Sem. *[√]trw “sorte de baume” [DRS] = *s/t/đVrw- (???)

⁴⁰ Hence, e.g., i.a. ECh.: DM *dyir- “pus” [GT]: EDangla ḏyirà (m.gen.) “le pus” [Dbr.-Mnt. 1973: 99], WDangla dyírà (pl.) “pus” [Fédry 1971: 250], Bidiya ḏyirà (m) “pus” [AJ 1989: 73].

⁴¹ The shift of *ww > gg occurs also in southern Twareg, e.g., in the imperfective forms of [√]CwC verbs, according to Prof. M. Kossmann (kind p.c. on 10-11 March 2023).

⁴² By having checked a bit further, Prof. M. Kossmann (kind p.c. on 11 March 2023) has stated: “The resin in question is a well-known fumigation (bdellium), and (at least traditionally) widely traded. Adaras trees are mainly found in the Sahel zone (where they originate), and not present in the mountains.”

⁴³ Seems isolated in Twareg (not found in Nehlil 1909; Foucauld 1951-2 or in WSKT I 797 and II 330-331): “Everything looks like the noun is a relatively recent derivation, unique to Niger. It is evidently not used in Ahaggar, which has different terms - and if it had existed, Foucauld would have known. Heath has different words for bdellium too, and the only noun derivation in Mali from z'rgg-t has a very different meaning.” Irrespective of such an assessment of his, even M. Kossmann (kind p.c. on 11 March 2023) was surprised by the lack of its mention in the WSKT: “I find it unexpected that Ritter doesn't mention it, but this may be because he could not confirm its existence with his spokespeople (it could also just be a very rare omission).” M. Kossmann seems convinced by the inner Berber evidence that it can hardly be a primary noun: “I would say that the chances that the term is old in this meaning are extremely low. ... Interestingly, the terms for the resin (fluid and solidified) seem to be all different according to the dialects, while the name of the tree is found all over Tuareg. Not sure what to make of this – I would have expected a trade commodity to be more homogenous in its lexical expression than a tree (even though trees are very stable lexemes in Tuareg).”

⁴⁴ In the PAM, l.c., it is treated as a fem. verbal adjective of the homophonous verbal root which, if it was once applied also for the gum issuing from the stem, may/might be reasonable, although this is not the case, cf. EWlmd. żərägg-at “jaillir, sortir brusquement (pierre/balle)” [PAM 2003: 925]. Supporting this idea, M. Kossmann (kind p.c. on 11 March 2023) stated: “the ‘pop out’ verb from which it seems to be derived, ... is at least pan-Tuareg.” At any rate, our verbal root in question is indeed cognate to SBrb.: Ahaggar żeregg-et “1. percer, commencer à paraître, poindre, jaillir, paraître en partie, sortir en partie, paraître au dehors en sortant vivement (en partie ou en totalité) (se dit, p.ex., du soleil, de la lune, d'une étoile qui commencent à paraître à l'horizon, d'une montagne, d'un arbre, d'un homme, d'un animal, d'une chose qcq. qui commencent à poindre à l'horizon; d'un piquet qu'on enfonce dans un mur qui point de l'autre côté); d'un clou qu'on enfonce dans une planche qui point de l'autre côté; d'une pierre d'un mur qui dépasse l'allinement des autres et sort en partie du mur; de l'os d'un bras ou d'une jambe cassés qui sont en partie du bras ou de la jambe; du noyau d'un fruit mûr qui, par suite de pression, sort en partie du fruit; d'une épine entrée dans la main, du pus d'un abcès, qui, par suite d'une pression, paraissent au dehors en sortant vivement partiellement ou totalement; d'objets qui sont dans un sac et dont une extrémité en sort un peu, soit par un trou du sac, soit par sa bouche), 2. (p.ext.) ‘être percant (le sujet étant la voix d'une personne ou d'un animal)” [Foucauld 1951-2: 1990] = żərägg-at [Delheure] || NBrb.: Qabyle zrireg (sic: plain z-) “couler, filer rapidement sur une surface lisse” [Dallet 1982: 957] | Mzab ə-zrag (sic: plain z-) “poindre, paraître au dehors en sortant vivement, jaillir”, a-zrag, pl. i-zrag-an “rejet, petite proéminence qui pousse au bout

[GT]: Macro-Canaanite *ṣ/zurw- “(storax, liquidambar, resin of) *Styrax officinalis* L.” [GT pace Löw et al.]⁴⁵ vs. Arabian *ḍa/irw- “(mastix, resin of) *Pistacia lentiscus* L.” [GT],⁴⁶

d’une tige, bouton, bourgeon” [Delheure 1984: 254], Wargla zəṛṛəg “1. jaillir, couler en jet fort, 2. (p.ext.) uriner avec force” [Delheure 1987: 397]. But cf. perhaps Ahaggar é-zereğ (-ğ) nom d’un arbrisseau” [Foucauld 1951-2: 1991]. Its resemblance to Ar. ṣārūğ- “1. chaux vive, 2. mélange de chaux vive et d’arsenic” [BK I 1328] = “quick lime, and the mixtures thereof; with which ars plastered watering-troughs, or tanks, and baths etc.” [Lane 1675a] is illusory this latter term being a Persian loanword (arabicized from cārū).

⁴⁵ Attested by Ug. ȝrw “(a commodity listed after ‘barley’ & ‘oil’, but in a new section after a scribal line beside nbt ‘honey’)” [Gordon 1965: 407, #1057] = (alphabetic) ȝrw vs. (in syllabic transcription, i.e., EA 48:8) /ȝurwu/ (?) or /ṣurwu/ (?) “(aromatic) resin” [Huehnergard 1987: 131] = ȝrw “bálsamo (‘resina de estorache?’)” [DLU 552-553] = ȝrw “(die botanische Identifikation ... ist nicht zu eruieren)” [Sima 2000: 270] = ȝrw “balsam, storax resin (?)” [DUL 1006], Amarna Akk. (occurred so far solely in EA 48:8, on which Huehnergard 1987: 131: “the Ugaritic provenance of EA 48 is likely, but not certain”, DLU 552: “procedencia probable: Ugarit”; DUL 1006 also: “probl. from Ugarit”) ṣurwa “balm (probably storax)” [CAD § 261] = karpatu riqqu ZU-ur-wu “jar of aromatic substance: resin” (it is likely that ZU-ur-wu does not actually gloss Akk. riqqu, but rather qualifies it, specifying the precise substance) [Huehnergard 1987: 131] = ṣurwa “a herb” [KB 1055] = √ṣry₂ > šúzu²-ur-wa “balm, balsam” [DNWSI 975 pace Nielsen, Knauf, Vitestam] = ZU-ur-wa “(die botanische Identifikation ... ist nicht zu eruieren)” [Sima 2000: 270], Hebrew šōrī “balsamisches Harz, eine Spezerei von Rauchwerk” [Levy 1924 IV col. 218b] = “1. (seit Luther durch Mastix unrichtig wiedergegeben, stattdem:) Storax, der heutige flüssige Liquidambar (*Styrax officinalis* L., aus diesem Baume, der vorzüglich in Syrien wächst, fliest ... ein sehr wohlriechendes, balsamisches Harz, das angezündet die würzigsten Düfte aushaucht; der wervolle Saft von šōrī ist grün wie Eselsmilch und wird von Betrügern mit dieser verfälscht, oder lieber mit Eselstalg), 2. wohlriechende Harzarten überhaupt, Balsam” [Löw FJ 1928 I 196, 1924 III 389-390] = “genus balsami” [CR 1931: 227b] = šōrī ~ šērī (probably primary noun) “(not?) mastic (but balsam, since mastic from Chios was first known only in the Hellenistic Period)”, cf. šērī (PN of a Levite from the clan of Jeduthun) “mastic balsam” [KB 1055] = šōrī (sic: -ō- for -ō-) “(Bedeutung nicht eindeutig geklärt:) entweder *Commiphora opobalsamum* (L.) Engl. (Stol 1970: 50ff.) oder *Liquidambar orientalis* L. (Zohary) (da ... στύπαξ > latin storax, styrax den zuletzt genannten bezeichnet und aus einer nordwestsemitischen Sprache entlehnt wurde; ist die Bestimmung von Zohary vorzuziehen; die falsche Identifikation mit Mastix, dem Harz von *Pistacia lentiscus* L. ... beruht einzig auf dem Vergleich mit dem arab. *dirwun*)” [Sima 2000: 269-270, fn. 37] and MHebrew šōrī “ein wohlriechendes Harz” [Dalman 1922: col. 367b] = “Harz” [Levy 1924 IV col. 218b] = “resin, balsam” [Jastrow 1950: col. 1301a] = “a fragrant resin” [KB 1055] | Syriac ḗarwā “1. fructus pini, 2. cortex cedri, 3. μάκηρ / macir” [Brockelmann 1928: col. 637b] = “(die Bedeutung ist offenbar recht unklar) περὶ μάκερος” [Sima 2000: 270, fn. 38].

⁴⁶ Cf. OSA drw “genus arboris odoriferae (a fragrant tree), *Pistacia lentiscus*” [CR 1931: 227b (as glossed in English by Biella)] = “mastic balsam” [as quoted in KB 1055b referring to Müller 1963: 314 without OSA rendering] = drw “encens” [Avanzini 1980: col. 235b] = ḍrw (written on on incense burners) “1. an aromatic resin or fruit used as incense, 2. incense burner (specifically for ḍrw incense?”) [Biella 1982: 436] = (Sabaic) ḍrw “kind of aromatic (sorte d’aromate)” [SD 42] = (Qatabanian) ḍrw “balsam, aromatic resin or fruit used as incense” [Ricks 1989: 140] = “wahrscheinlich das Mastix genannte Harz von *Pistacia Lentiscus* L. [*Terebinthus Lentiscus* (L.) Moench] oder das Chios-Terpentin genannte Harz von *Terebinthus Lentiscus* L. (beide kämen für Südarabien nur als Importwaren in Frage), wenig wahrscheinlich ist *Salvia merjamie* [= *S. nudicaulis* Vahl var. *nubia*] (Labiatae)” [Sima 2000: 269 pace Hager quoted in fn. 31-32], Ar. ḏarw- and ḍirw- “fruit du lentisque, fruit de l’arbre kamkām-” [BK II 25] = ḏarw- and also ḍirw- “a species of tree of sweet odour, with the wood of which the teeth are rubbed and cleansed, and the leaves of which are put into perfume (the places of its growth are mostly in El-Yemen; some say that the ḍirw- is the butm- or terebinth-tree or the fruit thereof; when a girl rubs and cleanses her teeth with a stick of the tree called ḍirw-, the saliva with which the stick is moistened from her mouth is like honey)” [Lane col. 1790a] = ḍirw- “*Pistacia Lentiscus* L., Mastixstrauch (Lentiscusharz des Baumes ḍirw ... fliest elastisch aus, schwarz wie Pech)” [Löw FJ I 197] = ḏa/irw- “fruit of the gum tree (*Pistacia Lentiscus*)” [Müller 1962: 75 quoted by Biella l.c. and Ricks l.c.] = ḍirw- “lentisque” [Dozy II 9] = ḏarw- “a type of sweet-smelling tree” [KB 1055] = ḍirw- “(die Angaben der arabischen Lexikographen ... sind widersprüchlich, weisen aber doch eindeutig auf einen Baum oder Strauch hin, der wahrscheinlich als *Pistacia lentiscus* L. ... oder *Pistacia terebinthus* L. ... zu identifizieren ist (der vielzitierte Vers des Nābīga al-Ğādī X 5 ..., der von den ḍirw-Bäumen von Baraqiš und

perhaps both derivable < CSem. *ṣ/t/dVrw- “resinous matter issuing from some tree” [GT]⁴⁷ of disputed etymology⁴⁸ (Sem.: Huehnergard 1987: 131; KB 1055; DLU 552-553; Sima 2000: 269-270; DUL 1006; DRS 1132, ṭrw). The unity of the Canaanite (with *z-?) vs. Arabian terms (with d-), that has been accepted and maintained as granted by most of the authors dealing with this term (quoted partly herein), was firmly denied by A. Sima (2000: 269-270, also fn. 38) regarding the disagreement of Syriac ṣ-⁴⁹ ≠ Ar. d- as decisive (explained by some as the sign of being borrowed of the former),⁵⁰ let alone for the anomaly (?) of Ug. z-⁵¹ (he

Haylān spricht, ist völlig fantastisch (keine der fraglichen Pistacia-Arten wächst in Südarabien!) und trägt zur Sache nichts bei, hatte aber zur Folge gehabt, dass *dirwun* in dieser Bedeutung von den arabischen Lexikographen fälschlich als im Jemen beheimatet angesehen wurde” [Sima 2000: 269, fn. 34], Modern Yemeni Ar. ḏa/orw “aromatic shrub” [Rossi 1940: 311 quoted by Biella l.c., so also Nielsen 1986: 18, 61-62 and Crone 1987: 62-65 quoted by Ricks l.c.] = ḏarw (ein Baum) “ein einfacher wohlriechender Strauch, der kein Harz liefert, vielleicht ... eine Bezeichnung für den batām-Baum, der aber in der Qaṭabān-Gegend kein Harz liefert (wir hätten dann zwei verschiedene Pflanzen unter ḏarw zu verstehen)”, ḏirw “Pflanze, liefert Brennholz, ist *Salvia nudicaulis* Vahl” [Glaser apud Behnstedt 1993: 130-131] = ḏarw “*Salvia merjamiae* Forssk.” [Al-Hubaishi & Müller-Hohenstein 1984: 202 apud Behnstedt] = ḏa/orw “aromatischer Strauch, als Medizin gegen Herzschmerzen benutzt (aromatic shrub used as a medicine against heart pains)” [Deboo 1989: 52] = ḏarū, ḏarw, ḏirw “die *Salvia nudicaulis* (sic: -cal-) (d.h. S. merjamie)” [Sima 2000: 269, fn. 34].

⁴⁷ Although he has named no reconstructed form for this Semitic term, in the testimony of his statements, J. Huehnergard (1987: 131-132) may have been bearing in mind apparently sg. like *ḍurw- as the underlying etymon: on the basis of the OSA and Ar. data, on the one hand, he assumed that “the initial consonant was originally ḏ”, whereas in the light of the Ug.-Hbr. reflex, he supported “the *qul* pattern” (as opposed to the *ḳaṭl- one in Syr.-Ar.).

⁴⁸ There has been no agreement on the (common) origin of the Semitic term, where “la correspondance n'est pas régulière” (DRS col. 1132b), which would *eo ipso* suggest borrowing. Still, J. Levy (1924 IV col. 218b) linked the Hebrew reflex with Ar. √dry “fliessen”. M. Jastrow (1950: col. 1301a), in turn, derived it from MHbr. √ṣry and PBAram. √ṣr “to split, tear” which allowed him literally rendering the noun as “that which runs through cracks”. The ambiguous assumption of the CAD (§ 261), that the Amarna “Akkadian” “word may be Hurrian, as the letter EA 48 suggests, hence possibly *surwa*, but the WSem. etymology seems plausible”, which was not based on any direct etymological evidence, testifies to the perfect failure of the *communis opinio* in determining whether it was “WSem. or foreign word”. J.C. Biella (1982: 436) linked the OSA-Ar. term to Ar. ḏāra “to bleed”, which is incorrect as Ar. √dwr I: ḏāra denotes “1. nuire, faire du mal à qqn.” etc. [BK II 45]. By the way, J. Huehnergard (1987: 131) listed the EA 48:8 form among syllabically written Ugaritic words. KB (l.c.) has yielded hardly anything on this puzzle of origins beside an uncritically adopted comparison to Ar. ḏara? “to bleed”, which is unprecise as Ar. ḏara? (in its stem VII) denotes “être tué, égorgé”, while only √dṛw > ḏarā I “1. saigner (se dit d'une plaie ou d'une artère coupée), 2. couler” [BK II 16 and 25, resp.]. Prof. J. Huehnergard (kind p.c. on the 15 March 2023) too, is reserved as to having two homophonous Semitic “resin” etyma: “It is an interesting idea to split the attested forms into two lemmata with different referents, but I cannot judge whether it is a correct idea (!).”

⁴⁹ A. Sima (2000: 270, fn. 38) categorically confirmed that, as is well-known, “Die syrische Form mit ṣ kann nicht auf *dṛw zurückgehen, sondern ist wahrscheinlich über die hebräische Vorlage der Peschitta ... aus dem Hebräischen entlehnt”. He doubted R.C. Steiner's (1977: 149-151) theory on that “in bestimmten phonetischen Umgebungen *d im Aramäischen zu ṣ verschoben wurde. Seine Beispiele sind im einzelnen von sehr unterschiedlicher Evidenz, im Fall von syr. ṣarwā überzeugen sie mich nicht.” Prof. J. Huehnergard (kind p.c. on the 15 March 2023) too “would disagree with Sima ... concerning Steiner's suggestion that Proto-Semitic *ṣ (d) > Aramaic ṣ when the root contains r — there are many examples.”

⁵⁰ J. Huehnergard (1987: 131): the Syriac reflex “is presumably a loanword” since “cognates in Arabic (*da/irw*) and Sabaean (*dṛw*) indicate that the initial consonant was originally ḏ ...”; following J. Blau (1970: 59-60), also A. Sima (2000: 270, fn. 38): the Syr. word was borrowed from Hbr.

⁵¹ The Sem. etymon with the supposed *d, in the hypothesis of J. Huehnergard (1987: 131-131), “should yield Ugar. /ṣurwul/, an equally possible normalization of the syllabic writing. It is possible, if rather unlikely, that

left untouched), and the different botanical identification. Highly noteworthy is in this context Ar. *vṣrb* I: ḫariba “1. boire du lait aigre, 2. manger de la gomme”, IV “donner du lait aigre à boire à qqn., VIII “préparer du lait aigre en mettant petit à petit du lait doux dans un autre lait aigre”, ḫarb- “1. lait doux auquel on a mêlé du lait aigre, 2. lait aigre, 3. espèce de gomme rouge qui coule de l’arbre ṭlh (sorte d’acacia)”, ḫarab- “1. lait aigre, 2. espèce de résine rouge qui coule de l’arbre ṭlh” [BK I 1327].

417.15. PAA *v̥čr “to jet (of some fluid issuing from body)” [GT] > PCh. *čUr- “to urinate” [GT]⁵² > WCh.: Daffo-Butura sār “urinieren”, Bokkos šáá (sic: no -r) “Urin, Blase”, Sha zōh [-h/° regular *-r]⁵³ “Urin” (Ron: Jng. 1970: 146, 220, 289) || CCh.: PMasa *čor “to urinate” [GT]:⁵⁴ Masa-Bongor čò:rà (p. 125) = čō:rà (p. 147) “uriner”, čórā (présent inaccompli), čòrá (parfait, narrative), čörāwā (passé simple) [Jng. 1971/2 MS: 125, 147], Gizey/Wina čór zùmùr, Masa čór zùmùr, Ham čór súrùm, Musey čoo súmúú, Lew čór súmùr, Marba čór súmùr “uriner” [Ajello et al. 2001: 55] || ECh.: Kwang kó-čör [Jng.], Kwang-Mobu kò-žóor [Jng.] | Lele čòdor [Garrigues in JI] | Sokoro sóóri [Lukas] (Ch.: JI 1994 II 334-335; Skinner 1992: 356) || NBrb.: Shilh ḫərš “to urinate”, i-ṣərš-in (pl.) “urine” [Skinner] || Sem.: Ar. ḫarra I “1. faire sourdre l’eau (se dit de la source), 2. avoir et donner beaucoup de lait (se dit des femelles), 3. faire jaillir abondamment un torrent d’eau, de sang, da paroles (se dit d’un nuage, d’un coup de lance, de la bouche)”, ḫarr- “1. abondant en eau, qui en verse ou fait jaillir par torrents (nuage, source) ayant le canal du pis large (se dit des femelles) etc.” [BK I 220]. Shilh-Ch.: Skinner 1992: 356.⁵⁵

*

/surwul/ is in fact the underlying Ugar. form, and that z in alphab. ȝrw is in both instances the result of intervocalic voicing (in sandhi ...).”

⁵² The Chadic root has striking a areal match in Niger-Kordofanian/Congo, cf. the parallels listed by J.H. Greenberg (1963: 159).

⁵³ As it has been abundantly demonstrated by H. Jungraithmayr (1966).

⁵⁴ That Masa *č is the regular match of Sem. *t < AA *č we can ascertain about it also from the isogloss of PMasa *čo/Ar “1. to rise” [GT]: Musey čól, Lew čól, Marba čól “(se) lever” [Ajello et al. 2001: 33], Lame cár (ts-) “1. se lever, 5. + wá (?á sū) se révolter, s’énérer, se fâcher contre qqn.” [Sachnine 1982: 398], Zime-Dari cár (ts-) “se lever”, cár wá “s’énérer” (litt.: “lever + tête”) [Cooper 1984: 25] || Sem.: Ar. ḫwr I ṭára “1. être soulevé et se répandre dans l’air (se dit de la poussière, des nuées de sauterelles), 2. s’élèver (se dit du tumulte), 3. fondre sur qqn., assaillir avec colère et impétuosité, 4. se déclarer et paraître à la surface du corps (se dit des pustules, de la moiteur)”, II “1. soulever, exciter (la poussière), allumer la guerre, faire naître le tumulte, 2. faire lever les chameaux couchés à terre” etc. [BK I 241] || MSA (from Ar.): CJibbali ṭórəh “revolution” [Johnstone 1981: 286], Mehri ṭáwrah and Ejibbali ṭáwrah “rebellion” [Johnstone 1987: 419] etc. < PAA *v̥čwr “to (up)rise” [GT]. Or cf. CCh.: Lame cár (ts-) “3. être abondant, bien donner, bien produire (pour une récolte), 7. + ?ír (oeil) a) s’enrichir, prospérer, réussir dans la vie, b) ressusciter” [Sachnine 1982: 398] || WCh.: Hausa čár “emphasizes fullness of vessel”, čárčár “fullness of a vessel or bag with grain or with any solid sold by measure, 2. (adv.) in full” [Bargery 1934: 151] = čárčár “brimful, in full, complete” [Abraham 1962: 133] | Suroid *čár ~ *čér “many, much” [GT]: Sura čár “Kopflast vermehren” [Jng. 1963: 61], Kofyar kóe-čér “many” [Netting 1967: 18] (Suroid: Takács 2004: 47) || Eg. wrs “1. mächtig, stark (gegenüber Feinden), 3. reich (sein an) usw.” (OK-, Wb I 360-361) || Sem.: Ar. ḫwr I: ṭára “1. être nombreux (se dit des hommes, des bestiaux, etc.), 2. être plus riche en troupeaux, 3. rendre nombreux”, ṭariya “être riche, posséder beaucoup de troupeaux ou d’autres biens” [BK I 222] < presumably PAA *v̥čr “to be numerous” [GT].

⁵⁵ Affiliated by N. Skinner (1992: 356) with ECu. *sāl- “feces”, Ar. usar- (sic) “retention of urine”, Cu. (sic) *v̥cl “feces”.

Abbreviations of languages and other terms

(A): Ahmimic, AA: Afro-Asiatic (Afrasian, formerly: Semito-Hamitic), Akk.: Akkadian, Amh.: Amharic, Ar.: Arabic, Aram.: Aramaic, AS: Angas-Sura, Ass.: Assyrian, (B) Bohairic, Bab.: Babylonian, BAram.: Biblical Aramaic, BD: Book of the Dead, Bed.: Bed'awye (Beja), Bln.: Bølnøng, BM: Bura-Margi, BN: Bade-Ngizim, Brb.: Berber (Libyo-Guanche), BT: Bole-Tangale, C: Central, CAA: Common AA, Can.: Canaanite, Ch.: Chadic, Cpt.: Coptic, CT: Coffin Texts, Cu.: Cushitic, DB: Daffo-Butura, Dem.: Demotic, DM: Dangla-Migama, E: East, EA: Amarna letters, Eg.: Egyptian, ES: Ethio-Semitic, Eth.: Ethiopian, Eth.-Sem.: Ethio-Semitic, (F): Fayyumic, GR: Ptolemaic and Roman period, H: Highland (in Cushitic), Hbr.: Hebrew, Hgr.: Ahaggar, IE: Indo-European, IL: Institute of Linguistics, irreg.: irregular, JAram.: Jewish or Judeo-Aramaic, Jbl.: Jibyal, Jkt.: Jakato, JPAram.: Jewish Palestinian Aramaic, KK: Kera-Kwang group, L: Late, L: Low(land), LP: Late Period, M: Middle or Medieval, Mag.: magical texts, Math.: mathematical papyri, Med.: medical texts, MK: Middle Kingdom, MM: Mafa-Mada group, MSA: Modern South Arabian, MT: Mubi-Toram, N: New, N: North, NE (or NEg.): New Egyptian, NK: New Kingdom, NS: Nilo-Saharan, O: Old, OK: Old Kingdom, Om.: Omotic, OSA: Old South Arabian, OT: Old Testament, P: Proto-, PB: Post-Biblical, PT: Pyramid Texts, reg.: regular, S: South, (S): Sahidic, Sab.: Sabaic, Sem.: Semitic, Syr.: Syriac, TA(ram).: Aramaic of Talmud, Tna.: Tigrinya, Ug.: Ugaritic, W: West, (E)Wlmd.: (East) Tawllemmet, Y: Young(er).

Abbreviations of author names

Abr.: Abraham, AJ: Alio & Jungraithmayr, Alm.: Alemayehu, AMS: Amborn, Minker, Sasse, Apl.: Appleyard, BK: Bieberstein Kazimirsky, Brt.: Barreteau, CR: Conti Rossini, Ctc.: Caïtucoli, Dbr.: Djibrine, Dlg.: Dolgopol'skij, DM: Drower & Macuch, EEN: Ehret, Elderkin, Nurse, FH: Farah & Heck, Frj.: Frajzyngier, Ftp.: Fitzpatrick, GAB: Gimba, Ali, Madu Bah, GB: Gesenius & Buhl, GT: Takács, Ibr.: Ibriszimow, IL: Institute of Linguistics, IS: Illič-Svityč, JA: Jungraithmayr & Adams, JI: Jungraithmayr & Ibriszimow, Jng.: Jungraithmayr, Jns.: Johnstone, JS: Jungraithmayr & Shimizu, KB: Koehler & Baumgartner, KM: Kießling & Mous, Mnt.: Montgolfier, Nct.: Nachtigal, NM: Newman & Ma, NZ: Naït-Zerrad, OS: Orel & Stolbova, PAM: Prasse, Alojaly, Mohamed, PH: Parker & Hayward, RB: Rapp & Benzig, TG: Takács, TSL: Tourneux, Seignobos, Lafarge, WP: Weibegué & Palayer.

References

- Abraham, R.C. 1962. *Dictionary of the Hausa language*. 2nd edn. London: University of London Press.
- Ajello, R. & Karyo, M. & Melis, A. & Dobio, Ou. 2001. *Lexique comparatif de six langues tchadiques centrales (Gizey, Ham, Lew, Marba, Masa, Musey)*. Pisa: Edizioni Plus, Università di Pisa.
- ALC 1978 = Angas Language Committee (in Cooperation with Nigeria Bible Translation Trust). 1978. *Shèk nkary kè shàktok mwa nđən Ngas. Ngas–Hausa–English dictionary with Appendix showing some features of Ngas grammar*. Jos, Nigeria: Nigeria Bible Translation Trust.
- Al-Hubaishi, A.A. & Müller-Hohenstein, K. 1984. *An introduction to the vegetation of Yemen*. Eschborn: GTZ.
- Alio, Kh. 2004. Préliminaires à une étude de la langue kajakse d'Am-Dam, de Toram du Salamaat, d'ubi du Guéra et de masmaje du Batha-est. In Takács, G. (ed.), *Egyptian and Semito-Hamitic (Afro-Asiatic) studies in memoriam Werner Vycichl*, 229–285. Leiden: E. J. Brill.
- Alio, Kh. & Jungraithmayr, H. 1989. *Lexique bidiya*. Frankfurt am Main: Vittorio Klostermann.
- Allison, S. 2005. *Makary Kotoko provisional lexicon*. Yaoundé, Cameroun: SIL.
- Amborn, H. & Minker, G. & Sasse, H.-J. 1980. *Das Dullay: Materialien zu einer ostkuschitischen Sprachgruppe*. Berlin: Reimer Verlag.
- Avanzini, A. 1980. Glossaire des inscriptions de l'Arabie du Sud II (?-h) (Quaderni di Semitistica 3). Firenze: Istituto di Linguistica e di Lingue Orientali, Università di Firenze.
- ÄWb I = Hannig, R. 2003. *Ägyptisches Wörterbuch I. Altes Reich und Erste Zwischenzeit* (Hannig-Lexica 4). Mainz am Rhein: Verlag Philipp von Zabern.

- ÄWb II = Hannig, R. 2006. *Ägyptisches Wörterbuch II. Mittleres Reich und Zweite Zwischenzeit*. Bde. I-II (Hannig-Lexica 5). Mainz am Rhein: Verlag Philipp von Zabern.
- Bargery, G.P. 1934. *A Hausa-English dictionary and English-Hausa vocabulary compiled for the Government of Nigeria*. London: Oxford University Press, Humphrey Milford.
- Behnstedt, P. 1993. *Glossar der jemenitischen Dialektwörter in Eduard Glasers Tagebüchern (II, III, VI, VII, VIII, X)*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
- Bender, M.L. 2003. *Omotic lexicon and phonology*. Carbondale: SIU Printing / Duplicating, Southern Illinois University.
- Biberstein Kazimirski, A. de. 1860. *Dictionnaire arabe-français*. Tomes I-II. Paris: Maisonneuve et C^{ie}.
- Biella, J.C. 1982. *Dictionary of Old South Arabic*. Chico: Scholars Press at Harward.
- Black, P.D. 1974. *Lowland East Cushitic: Subgrouping and Reconstruction*. New Haven: Yale University. (Doctoral dissertation).
- Blau, J. 1970. *On pseudo-corrections in some Semitic languages*. Jerusalem: The Israel Academy of Sciences and Humanities.
- Blažek, V. March 1994. *Toward the position of Bed'awye within Afroasiatic (An analysis of the body parts terminology)*. MS. Köln. 49 p.
- Blažek, V. 2020. An excerpt from the comparative and etymological dictionary of Beja: Anatomical lexicon. *Folia Orientalia* 57. 25-125.
- Blench, R. 2013. *Ywom wordlist*. Draft circulated for comment. Circulation draft. This printout: September 10, 2013.
- Blench, R. 2019. *Tal-English-Tal dictionary*. December 2019 version.
- Blench, R. & Bulkaam, M. 2017. *Ethnozoology of the Tal, Chadic-speakers of west-central Nigeria*. Circulation draft. This version: Cambridge, 12 July 2017.
- Blench, R. & Bulkaam, M. 2019a. *Belnəng, an undocumented Chadic language of Central Nigeria*. Circulation draft. This printout: Jos, November 11, 2019.
- Blench, R. & Bulkaam, M. 2019b. *Jakato, an undocumented language of Central Nigeria Language*. Circulation draft. This printout: Jos, October 19, 2019.
- Blench, R. & Bulkaam, M. 2019c. *Jibyal, an undocumented language of Central Nigeria*. This printout: Jos, October 19, 2019.
- Blench, R. & Bulkaam, M. 2019d. *Nteng, an undocumented Chadic language of Central Nigeria*. This printout: Jos, October 19, 2019.
- Brockelmann, C. 1928. *Lexicon syriacum*. 2nd edn. Halle: Max Niemeyer.
- Burquest, D.A. 1971. *A preliminary study of Angas phonology* (Studies in Nigerian Languages 1.) Zaria: Institute of Linguistics; Kano: Centre for the Study of Nigerian Languages.
- CAD = *The Assyrian dictionary of the Oriental Institute of the University of Chicago*. Since 1956. Glückstadt & Chicago: J.J. Augustin, The Oriental Institute of the University of Chicago.
- CD = Crum, W.E. 1939. *A Coptic dictionary*. Oxford: Oxford University Press.
- CED = Černý, J. 1976. *Coptic etymological dictionary*. London, Cambridge: Cambridge University Press.
- CLD II = Stolbova, O.V. 2007. *Chadic lexical database*. Issue II. *Lateral fricatives t, ḥ, ḥ with Semitic, Egyptian and South Cushitic parallels*. Moscow–Kaluga: Polygraphiya (sic: -ph-).
- CLD III = Stolbova, O.V. 2009. *Chadic lexical database*. Issue III. *Sibilants and sibilant affricates s, z, c, ç, č, č̄*. Moscow: Institut Vostokovedenija.
- Conti Rossini, K. 1931. *Chrestomathia arabica meridionalis epigraphica edita et glossario instructa*. Roma: Istituto per l'Oriente.
- Cooper, K.N. 1984. *Lexique zime-français: Vùn tàří*. Sarh (Tchad): Centre d'Études Linguistiques.
- Crone, P. 1987. *Meccan trade and the rise of Islam*. Princeton: Princeton University Press.
- CT = Buck, A. de. 1935-1961. *The Egyptian Coffin Texts*. Vols. I-VII. Chicago: The University of Chicago Press.
- Dallet, J.-M. 1982. *Dictionnaire qabyle-français: Parler des At Mangellat (Algérie)*. Paris: SELAF (Société d'études linguistiques et anthropologiques de France).
- Dalman, G.H. 1922. *Aramäisch-neuhebräisches Handwörterbuch zu Targum, Talmud und Midrasch*. Frankfurt am Main: J. Kaufmann Verlag.
- DCT = Molen, R. van der. 2000. *A hieroglyphic dictionary of Egyptian Coffin Texts*. Leiden: E.J. Brill.
- Deboo, J. 1989. *Jemenitisches Wörterbuch: Arabisch-Deutsch-Englisch*. Wiesbaden: Harrassowitz.
- Delheure, J. 1984. *Dictionnaire mozabite-français*. Paris: Société d'Études Linguistiques et Anthropologique de France (SELAF).

- Delheure, J. 1987. *Dictionnaire ouargli-français*. Paris: Société d'Études Linguistiques et Anthropologique de France (SELAF).
- DG = Erichsen, W. 1954. *Demotisches Glossar*. Koppenhagen: Ejnar Munksgaard.
- Diyakal, Ph. 1997. *Mushere-English dictionary*. Collection of words carried out by Mr. Ph. I. Diyakal started on September 10th, 1997 under the supervision of Herrmann Jungreithmayer (Univ. of Frankfurt). MS. 390 p.
- Djibrine, B.A.Z. & Montgolfier, P. de (etc.). 1973. *Vocabulaire dangaléat: Kawa dayla*. (Place & publisher not indicated).
- DLU I = Olmo Lete, G. del & Sanmartín, J. 1996. *Diccionario de la lengua ugarítica*. Vol. I. ?(a/i/u)-l. Barcelona: Editorial AUSA.
- DLU II = Olmo Lete, G. del & Sanmartín, J. 2000. *Diccionario de la lengua ugarítica*. Vol. II. m-ż. Barcelona: Editorial AUSA.
- DNWSI = Hoftijzer, J. & Jongeling, K. 1995. Dictionary of North-West Semitic inscriptions. Parts 1-2. Leiden: E.J. Brill.
- Dolgopol'skij, A.B. 1973. *Sravnitel'no-istoričeskaja fonetika kušitskih jazykov*. Moskva: Nauka.
- Dolgopolsky, A. 1982. Chadic-Semitic-Cushitic: Epenthetic -γ- in Sura in the light of Hamito-Semitic comparative linguistics. In Jungreithmayer, H. (ed.), *The Chad languages in the Hamito-Semitic-Nigritic border area: Papers of the Marburg Symposium (1979, Berlin)*, 32-46. Berlin: Dietrich Reimer Verlag.
- Dozy, R. 1881. *Suppléments aux dictionnaires arabes*. Tomes I-II. Leiden – Paris: E. J. Brill – Maisonneuve.
- DRS = Cohen, D. *Dictionnaire des racines sémitiques ou attestées dans les langues sémitiques*. Fascicules 1-2 (1970-1976), Paris & La Haye: Mouton. Fascicule 3-(1993-): Leuven: Peeters. [With continuous pagination.]
- DUL = Olmo Lete, G. & Sanmartín, J. 2003. *A dictionary of the Ugaritic language in the alphabetic tradition*. Part One [?(a/i/u)-k]. Part Two [l-z]. Leiden: E.J. Brill.
- EA = Knudtzon, J. 1915. *Die El-Amarna-Tafeln*. Bde. I-II. Leipzig: J.C. Hinrichs'sche Buchhandlung.
- Ebobisse, C. 1979. *Die Morphologie des Verbs im Ost-Dangaleat (Guera, Tschad)*. Berlin: Dietrich Reimer Verlag.
- Ebobisse, C. 1987. *Les verbaux du dangaléat de l'est (Guera, Tchad): Lexiques français-dangaléat et allemand-dangaléat*. Berlin: Dietrich Reimer Verlag.
- Ehret, Ch. 1980. *The historical reconstruction of Southern Cushitic phonology and vocabulary*. Berlin: Dietrich Reimer Verlag.
- Ehret, Ch. 1987. Proto-Cushitic reconstruction. *Sprache und Geschichte in Afrika* 8. 7-180.
- Ehret, Ch. 1991. The consonant inventory of Proto-Eastern Cushitic. *Studies in African Linguistics* 22(3). 211-275.
- Ehret, Ch. 1995. *Reconstructing Proto-Afroasiatic (Proto-Afrasian): Vowels, tone, consonants, and vocabulary*. Berkeley – Los Angeles, California: University of California.
- Ehret, Ch. 2000. (Additions to the Afroasiatic reconstructions.) MS. Los Angeles, California. 585 p.
- FD = Faulkner, R.O. 1962. *A concise dictionary of Middle Egyptian*. Oxford: Clarendon Press.
- Fédry, J. (avec la collaboration de Khamis, J. & o/Nedjei, M.). 1971. *Dictionnaire dangaleat (Tchad)*. Lyon: Afrique et Langage. (Thèse de 3^{ème} cycle, Institut National des Langues et Civilisations Orientales.)
- FJ I-IV = Löw, I. 1967. *Die Flora der Juden*. Bde. I-IV. Hildesheim: Georg Olms Verlagsbuchhandlung. [Reprographischer Nachdruck der ersten Auflage: 1924-1934, Wien: A. Kohut Memorial Foundation Inc.]
- Foucauld, Ch. de. 1951-2. *Dictionnaire touareg-français, dialecte de l'Ahaggar*. Tomes I-IV. Paris: Imprimerie Nationale de France.
- Foulkes, H.D. 1915. *Angass manual: Grammar, vocabulary*. London: Kegan Paul, Trench, Trübner and Co.
- Frajzyngier, Z. 1991. *A dictionary of Mupun*. Berlin: Dietrich Reimer Verlag.
- Freytag, G.W.F. 1837. *Lexicon arabico-latinum ex opere suo maiore in usum tironum excerptum*. Halis Saxonum: apud C.A. Schwetschke et filium
- GB = Gesenius, W. (bearbeitet von Buhl, F.). 1962. *Hebräisches und aramäisches Handwörterbuch über das Alte Testament*. Unveränderter Neudruck der 1915 erschienenen 17. Auflage. Berlin–Göttingen–Heidelberg: Springer-Verlag.
- GD = Landberg, Le Comte de. 1920, 1923, 1942. *Glossaire daïnois*. Tomes I-III. Leiden: E.J. Brill.
- Gerstmann, J. 1979. *Gisiga wordlist*. MS. Misiliya, Cameroon. (Quoted after JI 1994 II.)
- GHWb = Hannig, R. 1995. *Grosses Handwörterbuch Ägyptisch-Deutsch (2800-950 v. Chr.)*. Mainz: Verlag Philipp von Zabern.
- Gochal, G. 1994. *A look at Shik Ngas*. Jos: Jos University Press.
- Gordon, C.H. 1965. *Ugaritic textbook*. Roma: Pontificium Institutum Biblicalum.
- Greenberg, J.H. 1958. The labial consonants of Proto-Afro-Asiatic. *Word* 14. 295-302.

- Hellwig, B. 2000. *Goemai – English – Hausa dictionary*. MS. Draft. Printed out on 20 August 2000. 42 p.
- Hoffmann, C. 1971. On the classification of Nancere. *Journal of West African Languages* 8(1). 5-12.
- Hoffmann, C. 1975. Towards a comparative phonology of the languages of the Angas-Goemai group. MS. University of Ibadan, faculty seminar on 19 March 1975. 32 p.
- HSED = Orel, V.É. & Stolbova, O.V. 1995. *Hamito-Semitic etymological dictionary*. Leiden: E.J. Brill.
- Hudson, G. 1989. *Highland East Cushitic dictionary*. Hamburg: Buske.
- Huehnergard, J. 1987. *Ugaritic vocabulary in syllabic transcription* (Harvard Semitic Studies 32). Atlanta: Scholars Press.
- IL = Institute of Linguistics. 1972. *Bauchi Area survey report presented by N. Campbell and J. Hoskison*. MS. Zaria.
- IEW = Pokorny, J. 1959. *Indogermanisches etymologisches Wörterbuch*. Bd I. Bern–München: Francke Verlag.
- Illie-Svityč, V.M. 1966. Iz istorii čadskogo konsonantizma: Labial'nye smyčnye. In Uspenskij, B.A. (ed.), *Jazyki Afriki: Voprosy struktury, istorii i tipologii*, 9-34. Moskva: Nauka.
- Illie-Svityč, V.M. 1971. *Opyt sravnjenija nostratičeskikh jazykov (semitohamitskij, kartvel'skij, indoevropejskij, ural'skij, dravidijskij, altajskij)*. Vvedenie. *Sravnitel'nyj slovar'* (b-К). Moskva: Nauka.
- Jarvis, E. & Lagona, N. 2005. *Podoko provisional lexicon*. Yaoundé, Cameroun: SIL. (www.sil.org/africa/)
- Jastrow, M. 1950. *A dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic literature*. Vol. I: 2-k. Vol. II: 1-t. New York: Pardes Publishing House Inc.
- Johnstone, T.M. 1977. *Ḩarsūsi lexicon*. London: Oxford University Press.
- Johnstone, T.M. 1981. *Jibbāli lexicon*. London: Oxford University Press.
- Johnstone, T.M. 1987. *Mehri lexicon*. London: University of London.
- Jungraithmayr, H. 1961. Beobachtungen zur tschadohamitischen Sprache der Jegu (und Jonkor) von Abu Telfan (République du Tchad). *Afrika und Übersee* 45. 95-123.
- Jungraithmayr, H. 1962. *Wörterbuch der Angas-Sprache*. MS. Marburg.
- Jungraithmayr, H. 1963. Die Sprache des Sura (Maghavul) in Nordnigerien. *Afrika und Übersee* 47. 8-89, 204-220.
- Jungraithmayr, H. 1965. Materialen zur Kenntnis des Chip, Montol, Gerka und Burrum (Südplateau, Nordnigerien). *Afrika und Übersee* 48. 161-183.
- Jungraithmayr, H. 1966. Die Laryngale ḥ und ḫ im Scha (Süd-Plateau, Nordnigerien). *Afrika und Übersee* 49. 169-173.
- Jungraithmayr, H. 1970. *Die Ron-Sprachen. Tschadohamitische Studien in Nordnigerien*. Glückstadt: Verlag J.J. Augustin.
- Jungraithmayr, H. 1971-1972. *Masa (Bongor) lexicon*. MS. Marburg an der Lahn.
- Jungraithmayr, H. 1981. Inventaire des langues tchadiques. In Manessy, G. (ed.), *Les langues dans le monde ancien et moderne*, I. *Les langues de l'Afrique subsaharienne*, 407-413. Paris: Éditions du Centre National de la Recherche Scientifique.
- Jungraithmayr, H. 1990. *Lexique mokilko*. Berlin: Dietrich Reimer Verlag.
- Jungraithmayr, H. & Adams, A. 1992. *Lexique migama*. Berlin: Dietrich Reimer Verlag.
- Jungraithmayr, H. & Ibriszimow, D. 1994. *Chadic lexical roots*. Vol. I. *Tentative reconstruction, grading, distribution and comments*. Vol. II. *Documentation*. Berlin: Dietrich Reimer Verlag.
- Jungraithmayr, H. & Shimizu, K. 1981. *Chadic lexical roots*. Vol. II. *Tentative reconstruction, grading and distribution*. Berlin: Verlag von Dietrich Reimer.
- KB = Koehler, L. & Baumgartner, W. 1994-2000. *The Hebrew and Aramaic lexicon of the Old Testament*. Vols. I-V. Leiden: E.J. Brill.
- KHW = Westendorf, W. 1977. *Koptisches Handwörterbuch*. Heidelberg: Carl Winter Universitätsverlag.
- Lane, E.W. 1863-93. *An Arabic-English lexicon*. Vols. I-VIII. London–Edinburgh: Williams and Norgate.
- Leslau, W. 1988. Observations on Sasse's vocabulary of Burji. *Afrika und Übersee* 71. 177-203.
- Levy, J. 1924. *Wörterbuch über die Talmudim und Midraschim nebst Beiträgen von Heinrich Leberecht Fleischer*. Zweite Auflage mit Nachträgen und Berichtigungen von Lazarus Goldschmidt. Bde. I-IV. Berlin & Wien: Benjamin Harz Verlag.
- Lienhard, R. & Giger, M. 1982. *Petit lexique daba-foulfouldé-français*. Yaoundé: Société Internationale de Linguistique.
- Löw, I. 1967. *Die Flora der Juden*. Bde. I-IV. Hildesheim: Georg Olms Verlagsbuchhandlung. [Reprographischer Nachdruck der ersten Auflage: 1924-1934, Wien: A. Kohut Memorial Foundation Inc.]
- Lukas, J. 1939. Die Sprache des Buduma in Zentralen Sudan. *Abhandlungen für die Kunde des Morgenlandes* 24(2).

- Lukas, J. 1970. *Studien zur Sprache der Gisiga (Nordkamerun)*. Hamburg: Verlag J.J. Augustin.
- Macadam, M.F.L. 1949. *The temples of Kawa. I. The inscriptions*. Oxford: published on behalf of the Griffith Institute (Geoffrey Cumberlege for the Griffith Institute), Ashmolean Museum, by Oxford University Press.
- Mouchet, J. 1966. *Le parler daba: Esquisse grammaticale précédée d'une note sur l'ethnie daba, suivie de lexiques daba-français et français-daba*. Yaoundé: R.E.C.
- Müller, W.W. 1962. *Die Wurzeln mediae und tertiae Y/W im Altsüdarabischen*. Tübingen: Universität zu Tübingen. (Doctoral dissertation.)
- Müller, W.W. 1963. Altsüdarabische Beiträge zum hebräischen Lexikon. *Zeitschrift für die Alttestamentliche Wissenschaft* 75(3). 304-316.
- NBÄ = Osing, J. 1976. *Die Nominalbildung des Ägyptischen*. I-II. Maiz/Rhein: Verlag Philipp von Zabern.
- Nehlil, (first name unavailable). 1909. *Étude sur le dialecte de Ghat*. Paris: Éditions Ernest Leroux.
- Netting, R.M. 1967. *Kofyar Vocabulary*. MS.
- Newman, P. 1970. Historical sound laws in Hausa and Dera (Kanakuru). *Journal of West African Languages* 7(1). 39-51.
- Nielsen, K. 1986. *Incense in ancient Israel*. Leiden: Brill.
- Ormsby, G. 1912-1913 & 1913-1914. Notes on the Angass language. *Journal of the Royal African Society* 12 (1912-1913). 421-424 & 13 (1913-1914). 54-61, 204-210, 313-315.
- Osing, J. 1976. *Die Nominalbildung des Ägyptischen*. I-II. Mainz/Rhein: Verlag Philipp von Zabern. = NBÄ q.v.
- PL = Wilson, P. 1997. *A Ptolemaic lexicon: A lexicographical study of the texts in the Temple of Edfu*. Leuven: Peeters.
- Prasse, K.-G. 1969. *A propos de l'origine de h touareg (tahaggart)*. Det Kongelige Danske Videnskabernes Selskab. Historisk-filosofiske Meddelelser 43(3).
- Prasse, K.-G. & Alojaly, Gh. & Mohamed, Gh. 1998. *Lexique touareg-français*. Copenhague: Museum Tusculanum Press, Université de Copenhague.
- Prasse, K.-G. & Alojaly, Gh. & Mohamed, Gh. 2003. *Dictionnaire touareg-français (Niger)*. Copenhagen: Museum Tusculanum Press, University of Copenhagen.
- Rabin, Ch. 1970. La correspondance d'hébreu - d'arabe. In Cohen, D. (ed.), *Mélanges Marcel Cohen*, 290-297. Paris: Mouton.
- Reinisch, L. 1895. *Wörterbuch der Bedawye-Sprache*. Wien: Alfred Hölder Verlag.
- Ricks, S.D. 1989. *Lexicon of inscriptional Qatabanian*. Roma: Editrice Pontificio Istituto Biblico.
- Roper, E.-M. 1928. *Tu Beḍawie: An elementary handbook for the use of Sudan government officials*. Hertford: Stephen Austin & Sons.
- Rossi, E. 1940. Vocaboli sud-arabici nelle odierne parlate arabe del Yemen. *Rivista degli Studi Orientali* 18. 299-314.
- Sachnine, M. 1982. *Dictionnaire lamé-français: Lexique français-lamé*. Paris: SELAF.
- Sasse, H.-J. 1976. Weiteres zu den ostkuschitischen Sibilanten. *Afrika und Übersee* 59. 125-142.
- Sasse, H.-J. 1979. The consonant phonemes of Proto-East-Cushitic (PEC). *Afroasiatic Linguistics* 7(1). 1-67.
- Sasse, H.-J. 1982. *An etymological dictionary of Burji*. Hamburg: Helmut Buske Verlag.
- SD = Beeston, A.F.L. & Ghul, M.A. & Müller, W.W. & Ryckmans, J. 1982. *Sabaic dictionary (English-French-Arabic). Dictionnaire sabéen (anglais-français-arabe)*. Louvain-la-Neuve/Beyrouth: Peeters/Librairie du Liban.
- Sima, A. 2000. *Tiere, Pflanzen, Steine und Metalle in den altsüdarabischen Inschriften: Eine lexikalische und realkundliche Untersuchung*. Wiesbaden: Harrassowitz Verlag.
- Sirlinger, E. 1946. *An English-Goemay dictionary*. Jos, Nigeria: Prefecture Apostolic of Jos.
- Skinner, N. 1992. Body parts in Hausa: Comparative data. In Ebermann, E. & Sommerauer, E.R. & Thomanek, K.É. (eds.), *Komparative Afrikanistik: Sprach-, geschichts- und literaturwissenschaftliche Aufsätze zu Ehren von Hans G. Mukarovský anlässlich seines 70. Geburtstags*, 345-357. Wien: Afro-Pub.
- Steiner, R.C. 1977. The case for fricative-laterals in Proto-Semitic (American Oriental Series 59). New Haven: American Oriental Society.
- Stolbova, O.V. 1972. Soglasnye verhnezapadnočadskih jazykov: Genetičeskie sootvetstvija. In Makaev, É.A. (ed.), *Istoriko-tipologičeskie i sinchronno-tipologičeskie issledovaniya (na materiale jazykov raznyh sistem)*, 179-187. Moskva: Institut Jazykoznanija Akademii Nauk SSSR.
- Stolbova, O.V. 1977. Opyt rekonstrukcii verhnezapadnočadskih kornej. In *Jazyki zarubežnogo Vostoka: Sbornik statej*, 152-160. Moskva: Nauka.

- Stolbova, O.V. 1987. Sravnitel'no-istoričeskaja fonetika i slovar' zapadnočadskikh jazykov. In Porhomovskij, V.Ja. (ed.), *Afrikanskoe istoričeskoe jazykoznanie: Problemy rekonstrukcii*, 30-268. Moskva: Nauka.
- Stolbova, O.V. 1996. *Studies in Chadic comparative phonology*. Moscow: "Diaphragma" Publishers.
- Takács, G. 1997. The common Afrasian nominal class marker *ḥ. *Studia Etymologica Cracoviensia* 2. 241-273.
- Takács, G. 2001. Towards Proto-Afro-Asiatic phonology: Ancient remnants in South Cushitic, Angas-Sura, and North Bauchi. *Rocznik Orientalistyczny* 54(2). 55-125.
- Takács, G. 2004. *Comparative dictionary of the Angas-Sura languages*. Berlin: Dietrich Reimer Verlag.
- Takács, G. 2005. A comparative dictionary of the Angas-Sura languages. In Mengozzi, A. (ed.), *Studi Afroasiatici: XI Incontro Italiano di Linguistica Camito-Semitica. Afro-Asiatic Studies: 11th Italian Meeting of Afro-Asiatic Linguistics*, 43-55. Milano: Francoangelli.
- Takács, G. 2011. *Studies in Afro-Asiatic comparative phonology: Consonants*. Berlin: Dietrich Reimer Verlag.
- Takács, G. 2021. Some Berber etymologies XIV. *Études et Documents Berbères* 45-46. 341-395.
- Takács, G. 2022. Some Berber etymologies XV. *Études et Documents Berbères* 47. 163-205.
- Tourneux, H. & Seignobos, Ch. & Lafarge, F. 1986. *Les Mbara et leur langue (Tchad)*. Paris: Société d'Études Linguistiques et Anthropologiques de France.
- Urk. IV = Sethe, K. & Helck, W. 1927-1958. *Urkunden der 18. Dynastie*. Hefte 1-16 (1927-1930). Hefte 17-22 (1955-1958). Berlin: Akademie-Verlag.
- Vycichl, W. 1953. Über eine Klasse ägyptischer Verbum ult. j. *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 53. 373-377.
- Vycichl, W. 1992. Die pharyngalen Laute ḥayin und ḥā im Berberischen. In Ebermann, E. & Sommerauer, E.R. & Thomanek, K.É. (eds.), *Komparative Afrikanistik: Sprach-, geschichts- und literaturwissenschaftliche Aufsätze zu Ehren von Hans G. Mukarovsky*, 383-386. Wien: Afro-Pub.
- Ward, W.A. 1962. Some Egypto-Semitic etymologies. *Orientalia NS* 31. 397-412.
- Wb = Erman, A. & Grapow, H. 1957-1971. *Wörterbuch der ägyptischen Sprache*. 2nd edn. Vols. I-V. Berlin: Akademie--Verlag.
- Weibegué, Ch. & Palayer, P. 1982. *Lexique lele-français*. Sarh, Tchad: Centre d'Études Linguistiques.
- WMT = Deines, H. von & Westendorf, W. 1961-1962. *Wörterbuch der medizinischen Texte*. Bde. I-II. Berlin: Akademie-Verlag.
- WSKT = Ritter, H. 2009. *Wörterbuch zur Sprache und Kultur der Twareg*. Bd. I. *Twareg – Französisch – Deutsch: Elementarwörterbuch der Twareg-Hauptdialekte in Algerien, Libyen, Niger, Mali und Burkina Faso mit einer Einführung in Sprache und Schrift, Poesie und Musik, Orientierung und Zeitrechnung*. Bd. II. *Deutsch – Twareg. Wörterbuch der Twareg-Hauptdialekte in Algerien, Libyen, Niger, Mali und Burkina Faso mit einer Darstellung von Phonologie, Grammatik und Verbalsystem*. In Zusammenarbeit mit Prasse, K.-G. Wiesbaden: Harrassowitz Verlag.