











THE INDO-ASIATIC ORIGIN OF G3Š, THE ANCIENT EGYPTIAN NAME FOR THE WILD SUGAR CANE (*SACCHARUM SPONTANEUM* L.)


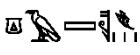





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ABSTRACT

This article establishes unprecedented connections between the Ancient Egyptian term g3š, usually translated as 'rush' and 'reed' with various cognates in different Indian languages qualifying the Kans grass (*Saccharum spontaneum*). Hence confirming the link made by Loret in 1904 between g3š and that very species, as well as presenting a clear case of a late plant transhumance eastwards to Egypt as the centre of origin of the Kans grass is clearly identified by botanists as being Indo-Asiatic. The article ends by questioning the reasons of the arrival of the Kans grass in Egypt nearly two millenia before its related species, the sugar cane (*Saccharum officinarum*).

In Ancient Egyptian the term  g3š is commonly translated as 'rush' or 'reed'.² The second determinative  (M2) representing an 'herb' confirming its botanical connection and the qualitative plural strokes  indicating the generic reference of the 'herb' in question with others of a similar kind, as is often the case for plant names or parts. Whereas the first determinative  (T19) represents a 'harpoon' indicating that what is qualified may also have connections with a functional material of use and seemingly 'hunting', perhaps more precisely 'fishing'; but as we shall see this is misleadingly not the case here.³ The remaining three signs constitute the phonetic part of the term, hence 'g' + '3' + 'š', to be read 'gAsh'. Despite Täckholm's reference to the term as 'old',⁴ which usually refers to the Old Kingdom or earlier, the TLA⁵ in fact shows that it is attested only a few times since the XIXth dynasty (c. 1302-1198 B.C.), for example in the Ramesside papyrus Anastasi.⁶ The term is also attested in the following variants:  g3š with the determinatives omitted;  g3ši with an additional *i*, perhaps a genitive;  g3si where the *3* is omitted, a common feature of the later periods where *3* is softened or confused with the full vowel 'a', and therefore becomes invisible as full vowels are not expressed in the hieroglyphic script; Ptolemaic  kš where the full vowels 'a' and probably 'i' are not expressed (as should be) and

where 'g' shifts to a harder 'k'. A writing very close to the Demotic version of g3š, i.e. gš and probably derived from it. Then comes  ks, with the above mentioned harpoon, which is much less an abbreviation of  without the phonetic signs, than a clever shift following the harder pronunciation with a 'k' by using the very pronunciation 'ks' of the harpoon sign; here in a variant T20 of T19. Hence it is finally no surprise to see g3š/gš/ks expressed as an ultimate reduced abbreviation  kš, where the full vowel 'a' is not apparent and which pronounced as k[a]s. i.e. 'kas', or simply as g3š/k[a]š i.e. 'gAsh' or 'kash' as , or even , were probably simplified abbreviated conventions of a well known botanical term. The latter suggestion being comforted by the fact that the term survived in Coptic as  i.e. 'kash', or even  i.e. 'kesh', through one of these dialectical shifts commonly seen in that language.

As early as 1904 Victor Loret, through a remarkable argumentation of botanical logics, connected g3š with a precise aquatic plant species *Saccharum spontaneum* var. *aegyptiacum* L. (*Poaceae*) commonly known as 'Kans grass', 'wild sugar cane' or 'fodder cane'. The Kans grass is a tall perennial reaching on average 3 to 5 m., sometimes reaching six. and with a plume like panicle,⁸ resembling from a distance the common phragmite (*Phragmites australis* (Cav.) Trin. ex Steud. = *Phragmites communis* L.). The

Codex⁹ indicates that Greiss identified stems of this species from predynastic El Omari and presented also under the synonymous *S. biflorum* 5th dynasty culms and a 5/6th dynasty reed portion from Gebelein and Saqqarah respectively. Thereafter an unexpected absence of finds is seen until the Late Period where a C¹⁴ of a spikelet in the possession of the Staatliche Sammlung Agyptischer Kunst Museum of Munich revealed a 524-264 B.C. time period. This find being thereafter followed by a few Graeco-Roman finds of various provenance. This marking void is puzzling and although the archaeobotanical record may be incomplete, one may wonder if Greiss's early identifications could not refer to another species.¹⁰ This not only because they were curiously presented under two different basionyms (*S. spontaneum* and *S. biflorum*) but also because if *g3š* is, as Loret suggested, *S. spontaneum* var. *aegyptiacum* than not linguistic attestations is known since the New Kingdom as has just been discussed.

The relation between the term *g3š* and the Kans grass is in fact a central issue and the main purpose of the present study. In this respect the author may provide additional and previously unseen evidence to consolidate Lorets's suggestion by pointing out for a start that the Ancient Egyptian name for *S. spontaneum* i.e. *g3š* is nearly phonetically exactly the same in Bengali: '*kasb*' [কাস],¹¹ and identical with Ptolemaic Δ k[a]š, i.e. '*kasb*'. In Oriya, another Indian language spoken in West Bengal and many other areas, *S. spontaneum* is named '*kāśatandi*' [କାଶତଣ୍ଡି], where the same root '*kās*' may be recognized, whereas in Hindi it is '*kāms*' [काम्स] or '*kaans*' [कांस];¹² the latter Hindi name being clearly a cognate of 'Kans', and therefore of '*kasb*'. Hindi '*kas*'¹³ is equally found, and like the previous terms is most likely derived from ancestral Sanskrit '*kāśa*'¹⁴ '*kaasaa*'¹⁵ or '*kAzaka*' [काशक],¹⁶ with another 'a'-type of vowel as second phoneme where Ancient Egyptian precisely indicates it in *g3š* [gAS] with Δ , the so called 'aleph'. Of great interest is finally the again alternative Hindi name '*kansi*'¹⁷ which is also reminiscent of the variant Δ Δ = Δ *g3ši*, i.e. '*gashi*'.¹⁸

From this, the arising question of whether it is Ancient Egyptian '*kasb*' which is at the origin of its Indian counterparts, or

the reverse, is easily resolved. The centre of origin of *Saccharum spontaneum* is indeed clearly identified by botanists to be in Asia. More precisely, *S. spontaneum* L. is a polymorphic species believed to have evolved in India.¹⁹ It is therefore clear that the species spread eastwards from Asia to the Mediterranean, and that it reached Egypt at some point. There the void in the archaeobotanical record combined to the late appearance in the vocabulary of Ancient Egyptian '*g3š*' can suggest that this event took place during the New Kingdom, but at this stage this is but a mere conjuncture which the archaeological and linguistic records may in the future show to be such or not. This question is however of importance as *S. spontaneum* is now more firmly believed to be at the origin of the evolution of the 'sugar cane', i.e. *S. officinarum*, via cross breeding with another species *S. robustum*.²⁰

There we touch the history of sugar and its introduction in Egypt which is said not to have taken place before the time of the Islamic conquest, hence around A.D. 641. This may be so but the further question now arising is how, or perhaps even why, did the wild sugar cane, i.e. *S. spontaneum* reach Egypt more than 1850 years before did sugar cane, i.e. *S. officinarum*? Since the production of sugar from *S. spontaneum* seems a complex but not impossible chemical process,²¹ and aside from a possible natural weed spread, Kans grass has been used for centuries for an array of medicinal purposes in the Indian subcontinent. Its uses ranging from treating skin disorders or healing wounds, treating indigestion, to relieve biliousness or painful joints, as a purgative and even as an aphrodisiac, among many other uses. Hence if some plant parts were brought to Egypt and traded on the shelf with other foreign pharmacopeia, than some panicles could have seeded locally after being dropped or after being placed as home decorations in view of the very aesthetic not least exotic beauty of the species' white panicles. And since *S. spontaneum*, as it names betrays, is a very invasive grass which spreads extensively in disturbed areas, the rest is easy to imagine.²² The point is that if this species spread on its own as many intrusive ruderals do, than its name would probably not have been the same in India and Ancient Egypt; and hence trade, for whatever reason,²³ may here be suspected.

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NOTES

- ¹ Director, Armenian Egyptology Centre (AEC), 7th Floor the Rectorate, Yerevan State University, Alex Manoogyan 1, Yerevan 375049, Armenia. vartavan@ysu.am or egyptology@ysu.am. The author is most grateful to Mr Eric Guichard, London (UK), for the more than adequate working conditions and assistance he provided the author for the realisation of the present research and article during his stay in London in March-April 2014. He also wishes to deeply thank Mrs Cynthia Balfour Trail, Woodsboro, Maryland (USA) for providing some of the means necessary to travel to England for the same purpose.
- ² Wb 5, 156.8-12.
- ³ Particularly as the author could not find relations of *g3š* with such activities in the epigraphic record. *G3š* was used by Ancient Egyptians for mat making, baskets and other such purposes.
- ⁴ Täckholm and Drar 1941: 490.
- ⁵ Thesaurus Linguae Aegyptiae (Berlin-Brandenburg Academy of Sciences): <http://aaww.bbaw.de/tla/index.html>.
- ⁶ Anastasi IV: 13 10-11 (TLA DZA 30.632.020), etc...
- ⁷ Vycichl, 1983: 91
- ⁸ Täckholm and Drar 1941: 486-488.
- ⁹ Codex = Vartavan, Arakelyan and Asensi Amóros 2010: 210.
- ¹⁰ Records for the common phragmite (*Phragmites australis*) for example are overall uninterrupted from the Late Paleolithic to Coptic times. See Codex: 183-184.
- ¹¹ Also in Bengali: '*kansb*'. See: <http://www.flowersofindia.net/catalog/slides/Kans%20Grass.html>.
- ¹² See: <http://www.hort.purdue.edu/newcrop/cropfactsheets/kans.html>. Also: <http://www.flowersofindia.net/catalog/slides/Kans%20Grass.html>
- ¹³ See: <http://www.hort.purdue.edu/newcrop/cropfactsheets/kans.html>.

- ¹⁴ See: http://useful_english.cnacademic.com/232089/kans
- ¹⁵ See for other cognates in various other Indian languages: <http://venetiaansell.wordpress.com/2010/10/10/kasha-grass/>.
- ¹⁶ See: <http://spokensanskrit.de/index.php?tinput=kAzaka&direction=SE&script=HK&link=yes&beginning=0>
- ¹⁷ See: <http://www.hort.purdue.edu/newcrop/cropfactsheets/kans.html>
- ¹⁸ This may again simply be caused by the expression of a genitive of some kind (appurtenance, location, etc...) . Thereafter the term spread in Arabic as '*gasaba*', '*kasabat*' ('g' to 'k' shift as in Ancient Egyptian, unless directly derived from AE/Coptic dialects) or '*Asaba*' (Vycichl, 1983: 91).
- ¹⁹ Mukherjee, 1957. See also Täckholm and Drar 1941: 491.
- ²⁰ Al-Janabi, 1993: 1259. Täckholm stated long ago: '*There is no evidence that the 'noble' or true sugar cane is now found anywhere in a wild state, though its recognised home is apparently India, where its cultivation has been practised since remote times*' (Täckholm and Drar 1941: 491).
- ²¹ See Kataria and Gosh, 2011. Whether ancient civilizations would have discovered such enzymatic process, or an equivalent, to extract sugar from the Kans grass is an interesting question and one which could bear many consequences in economic history.
- ²² '*Cultivators dare not leave their lands fallow, even for a single year, for the ground would be immediately occupied by rank kans grass*'. Encyclopedia Britannica XVII: 234/2.
- ²³ The Medical Papyrus of Berlin (IV, 5 - 8) records medicinal uses of *g3š* (Loret, 1904: 153).