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In what may possibly be my last communication to a field of study which has meant much to me across the years, I have thought it might be entertaining if we engaged in a little game – a serious game and in part a learned(?) game, but a game nevertheless. The rules are that, from the starting-point of an initial text, some word or idea is carried forward into a following text, and so accordingly from one text to another, until, in the end all is linked together by words or other association into a single 'chain'. The hidden agenda, so to speak, behind the game is that this procedure allows there to be a discussion of some miscellaneous and unconnected ideas which could not otherwise be presented within a unified or coherent scheme. While many, or even all, of the texts may be already known to the reader, all are thought to contain some medical or botanical aspect worthy of comment.

So we begin this 'Journey through the Prescriptions' with a simple recipe for ear drops. The texts are:

A = R. Labat, RSO XXXII (1957), p. 112, A0 6774, ii, 11-13; and

B = BAM 503, ii, 53' (previously AMT 35/2, ii, 1).

DIŠ NA GEŠTUG^{II}-*šú* KÚ.MEŠ-*šú neš-ma-a he-e-si* Ì.GIŠ ^{giš}*dup-ra-nu*^{a}
SÍG.ŠID SUD 1-*tum* 2-*šú u*^{b} 3-*šú ana* ŠÀ GEŠTUG^{II}-*šú* GAR-*an*

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^{a} So A; B: [GIŠ.DU]B.RA.AN ^{b} B: omits

Translation

'If a man has frequent earache and has trouble in hearing, sprinkle a wad of wool with oil of Syrian juniper, and insert once, twice or three times (a day) into his ears.'

On two grammatical points, the writing 1-*tum* in the second line evidently represents OB *ištētum* or *ištītum*, cf. AHw 400, under *ištē/inû(m)* (but not registered in CAD I/J 278f. under *ištēnâ*); and it seems still uncertain whether SUD should be read *tasallah* or *tusallah*, see CAD S 87, under 5 b). Otherwise, attention may be drawn to *duprānu* as a western-growing juniper, probably *Juniperus drupacea*, the Arabic *difrān*, Syriac *dafrānā,* Ugaritic *dprn*, Mari *daparānu* and *daprānu*, cf. DAB 279, AHw 162, and CAD D 189f. The tree is native to the Syria-Lebanon region, whence the term 'Syrian juniper' may be used with the authority of Townsend and Guest, *Flora of lraq*, II, 90. However, as is well known, more than one species of juniper grew within the botanical horizons of the Mesopotamian world, and *duprānu* and *burāšu* and its berries *kirkirānu*, are usefully discussed together in Postgate's 'Trees and timber in the Assyrian texts', *Bulletin on Sumerian Agriculture*, vol. VI, 1992, pp. 180f. That study is important because it draws attention to the difficulty that, while it is attractive to regard the *burāšu* as the tall juniper, *Juniperus excelsa*, for the NA historical texts – still today 'in the mountains of

Lebanon and on the Hermon' the *Juniperus excelsa* 'is known locally as brotha'[1] – it is rather the smaller, 'bushy' juniper, *J. oxycedrus*, which provided the *kirkirānu* berries of the medical texts. The difficulty may probably be best explained by suggesting that, at some time (unknown), a change in the referent of *burāšu* did actually take place, so that the term came to refer to either tree. To the modern mind this might seem confusing, but in fact as we pass on to our first link in our envisaged 'chain', there is yet a third term, even ŠIM.ŠEŠ = *murru*, which has a place in the argument.

The text of our interest is BAM 578, iii, 7-9, previously published by Küchler, BKBM Pl. XVIII, 7-9. As tabulated here, it represents the first six lines of a long text on jaundice, for which some thirty daily(?) recipes are in fact prescribed. The text reads as follows:

DIŠ NA SU-*šú* SIG_7[a] *pa-nu-šú* SIG_7[b]

ši-hat UZU TUK.*MÉŠ[c] *a-mur-ri-qa-nu* MU.NI

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3 ŠIM.LI(*burāšu*) SÚD *ina* KAŠ NAG

ŠIM.ŠE.LI (*kirkirānu*) SÚD *ina* KAŠ NAG

5 ŠIM.ŠEŠ (*murru*) SÚD *ina* KAŠ NAG

SUHUŠ GIŠ.NAM.TAR NITÁ *šá* IM.SI.SÁ

šá GURUN NU.ÍL SÚD *ina* KAŠ NAG

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[1] Yehuda Feliks, *Nature and Man in the Bible: Chapters in Biblical Ecology* (The Soncino Press, London and Jerusalem, 1981), p. 110.

[a] Probably to be read *aruq* [b] Probably to be read *arqū*

[c] The small 'a'-sign written after TUK (see copy) is in all probability a small MÉŠ originally omitted by error and thereafter squashed rather awkwardly into its narrow space. The reading *irtanašši* offered by Edith Ritter, AS 16, 306, 3', a', is in line with this proposal.

Translation

'If a man's skin has become yellow, his face is yellow, and he has a degree of wasting of the flesh, the 'yellow disease' is its name.

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3 Crush to a powder (the dried leaves? of) juniper; he shall drink them in beer.
Crush juniper berries; he shall drink them in beer.
5 Crush the 'bitter juniper' (berries); he shall drink them in beer.
Crush the root of a north-facing (juniper) mistletoe which bears no fruit; he shall drink it in beer.'

The above translation involves two new identifications of which we take *murru* first. As is well known, Köcher himself did not believe that *murru*, at least in the medical texts, expressed 'myrrh' as commonly so rendered. CAD likewise, although not AHw, expresses its doubts on the matter outside of tanning and scented oil contexts, on which see the explanatory note in CAD M/2, 222, probably written by Oppenheim. I also have long accepted this position, but here, positively, would suggest that a further species of juniper may originally have been involved – Chakravarty, *Plant Wealth of Iraq*, p. 312, states that worldwide 'about 60' species of juniper have been recorded, and lists three

for Iraq. In support of the proposal it is firstly important to note that Hh III, 99-103, could uphold the association; after Landsberger's edition in MSL V, p. 101, the lines read:

giš-šim-li	*bu-ra-šu*
giš-šim-še-li	*kiš-ki-ra-an-ni*
giš-šim-še-li-UD	〃 *bu-ra-ši*
giš-šim-dup-ra-an	*dup-ra-an-ni*
giš-šim-šeš	*mur-ru*

Additionally, *murru* and *burāšu* come not uncommonly together in the medical texts, as in BAM 124, iii, 9; STT 96, 23; Labat, RA 53 (1959), 2, 7, and their leaves are found together as fumigants in certain ritual texts, as STT 242, 23 (namburbi). As to the 'bitter' aspect of *murru* if it should be as here suggested, this will be familiar in the taste of gin, a word in fact which is ultimately derived from the French genièvre, old Fr. genèvre, 'juniper'.

In discussing now the fourth line of our text, the identification proposed is admittedly advanced as something of an experiment. But to my mind the weak case that by *pillû* the mandrake was of concern has been unduly protracted. Landsberger indeed in his *Date Palm and its By-products*, p. 51, note 183, objected that *Mandragora officinalis* is a plant native to South Europe and North Africa, and is not found in Iraq or Syria. Stol, however, *Birth in Babylonia and the Bible*, p. 57, note 61, says confidently that 'this is not true', but his two examples could be thought, on the one hand, to be speculative, and, on the other, to refer only to Palestine. That the mandrake is not listed by Chakravarty in his *Plant Wealth of Iraq* strongly supports Landsberger's position.

The point that GIŠ.NAM.TAR = *pillû* is found in Hh III (lines 425ff.) which is concerned with trees and not with the plants of Hh XVII, means that there has somehow to be a tree connection despite the common writing with the determinative Ú.

In fact if the *pillû* was, as now proposed, a species of mistletoe, this could readily solve the problem of the GIŠ versus Ú determinatives. But what suggested the idea at the research stage was that, after Townsend and Guest, Flora of Iraq 2 (1966), 91, *J. oxycedrus* and other species of juniper are subject to a kind of small mistletoe, *Arceuthobium oxycedri*, which would fit appropriately into the supposed juniper context of the cited text. Moreover, this parasite 'often kills the branch on which it has gained a hold,' even sometimes 'the whole host shrub,' so one may explain why the Sum. ^{d}nam-tar as a deity or demon concerned with death before the natural time, should anciently have been deemed appropriate in the naming of the plant.

A further point that has to be considered is that the plant may or may not bear fruit, an aspect of the matter which disqualifies the mandrake completely. In support of the former case is a line from the Assyrian Dream Book[2] which concerns a person who, in a dream, 'eats the fruit of a *pillû*-plant,' GURUN GIŠ.NAM.TAR KÚ. For the opposite situation which is more common the latest reference from Uruanna is Ú GIŠ.NAM.TAR NITÁ : Ú GURUN NU [T]UKU[3], thus explaining the entry of the left-hand column in terms of a 'plant that has no fruit'. A spray of mistletoe without berries I

[2] See A. Leo Oppenheim, *The Interpretation of Dreams in the Ancient Near East* (The American Philosophical Society, Philadelphia, 1956), the full text being given on p. 318, lines x+8ff., with a translation (perhaps not altogether convincing in its third line) on p. 273.

[3] From Wiseman and Black, Literary Texts from the Temple of Nabû, CTN IV (1996), No. 192, rev. iii, 57.

have myself seen in a western variety of the plant, although unfortunately I have not the botanical knowledge to explain why this was so.

But a text which cannot be avoided is the title and first line of the 3-column 'Assyrian Vademecum', soon to be available in the edition of the esteemed editors of this Journal.[4] The line reads:

Ú NAM.TAR NITÁ = Ú ZÚ.GIG.GA.KE$_4$ = *ana muhhi* ZÚ-šú GAR-*nu*

there being a variant reading for the end of the line from CT 14, 23, K.9283, 9, of Ú ZÚ.MUŠ : ina ZÚ-šú GAR-an. Introducing an appropriate new element into the translation, the line is thought to mean:

> '(The leaves of) the 'male' mistletoe: a plant for sore teeth, (var.) against the 'tooth worm': to be placed, (var.) you shall place, over his teeth (or, literally, his tooth).'

For this rendering one would need to argue that, if the fruits or berries are not of concern, then the only alternative must be the leaves – but these would indeed be suitable for the condition. As may be seen in illustrations of the plant,[5] the 'leathery', lance-shaped leaves of the mistletoe are found commonly in pairs at the end of their stalks, and this could possibly have suggested their use for the teeth. More significantly, the leaves have been described as 'usually evergreen' (I B K Richardson in Heywood, *op. cit.*), so that this somewhat misguided treatment would have been available for all times of the year.

[4] Annie Attia and Gilles Buisson, forthcoming in this journal, issue 19 (2012).

[5] As in V H Heywood (Consultant editor) *Flowering Plants of the World* (Oxford University Press, 1978), p. 174, under *Loranthaceae*.

We have yet to confront the matter of a 'north-facing' mistletoe. It could be said, firstly, that in a way this supports the identification, because while it is difficult to visualise what might have been meant by a north-facing plant or tree, a north-facing mistletoe *on* a tree one may readily conceive. But what would be the point of this requirement of the text? The answer, I believe, may be found in Reiner's study of *Astral Magic in Babylonia*,[6] where there is a long section on the importance of gathering plants at night or *ša* ^{d}UTU NU IGI.BAR, 'which the sun has not seen.' However, a mistletoe facing north would, for the northern hemisphere, also satisfy this requirement, and indeed, on p. 37 with note 150, Reiner cites an unpublished medical text from Emar which specifically concerns the root of a *pillû*-plant that, on pulling out, 'the sun has not seen.'

I have not solved all the problems concerning GIŠ.NAM.TAR = *pillû* but I will attempt – at some risk, perhaps – to resolve one of them. It concerns the line from Uruanna III (line 41 in my MS edition) which equates the plant with AŠ GE_6 PAP.HAL ANŠE, or, omitting the difficult AŠ, 'a black mark (or, tuft of hair) on the hind legs of a donkey' – for further references see CAD S 240f. under *ṣulmu*, 1 b), and AHw 880, under *purīdu*, 6). What is thought here to be the meaning,[7] regards the 'black spot' or 'hair' when seen on the legs of a donkey as (not unsuitably) an ominous sign, perhaps even signifying that death or injury might come to the rider. In this case the point of

[6] In full, Erica Reiner, *Astral Magic in Babylonia*, Transactions of the American Philosophical Society, vol. 85/4 (Philadelphia, 1995), pp. 36ff.

[7] The text as cited may be interpreted either as an example of Köcher's "Decknamen", or perhaps more likely as expressing "un terme populaire", see the interesting and latest discussion by Pascal Attinger, "La médecine mésopotamienne", JMC Nos. 11 and 12, pp. 15f., with notes 20-22.

comparison would be to the *pillû*, or (supposedly) 'mistletoe', as a plant that could bring death or injury to its host tree.

We now pass on in our linking system to a text which also involves the root of the mistletoe, its 'haustorium' as it is botanically called, if the identification is correct.

The texts concern difficult childbirth. They are

A = AMT 67/1, iv, 12-14.

B = BAM 248, iv, 19-21.

They read, the style and line numbering being in accordance with A:

12 *ana* KIMIN (= DIŠ.MUNUS *ina* Ù.TU[a] *uš-tap-šiq*) SUHUŠ GIŠ.NAM.TAR NITÁ *ša* IM.SI.SÁ SÚD *ina* Ì.GIŠ HE.HE

13 7-*šú ana muq-qal-pi-ti pa-pan*[b] SÀ-*šá* ŠEŠ-*ma* KIMIN (= *ár-hiš* Ù.TU)

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14 *ana* KIMIN Ú.GEŠTIN KA_5.A SÚD *ina* KAŠ *la pa-tan* NAG-*ma* ... KIMIN

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[a] From A: B; Ù.TU-*ma* [b] Text of B: A, erroneously GIM (so copy)

Translation

'Alternatively, (if a woman has difficulty in giving birth), bray a north-facing root of 'male' mistletoe, mix in sesame oil, rub in seven times in a downward direction over the lower part of her abdomen, and (she will quickly give birth).

Additionally(?), bray solanum berries ('fox grapes') and give her to drink in beer on an empty stomach..., and (she will quickly give birth).'

These are familiar prescriptions, and in general need no comment here except perhaps to recall that from the Sum. la-ra-ah = *pušqu* 'dystocia',[8] the condition must extend far backwards in time and well beyond historical sources.

But we first address the question as to what is meant by 'difficult childbirth'. Marten Stol in his learned treatise on Birth in Babylonia cites several passages on page 132 of malpresentation being a problem, which has certainly to be accepted as one aspect of the condition. To this Scurlock and Andersen[9] in their chapter on 'Obstetrics and Gynecology', and especially in the section of this entitled 'Small pelvis or large baby' (pp. 270ff.), define another. In fact through the good offices of Edith Ritter who many years ago introduced me to Dr Alex Tulsky of Chicago, I can pass on a slightly more detailed interpretation of what may have been involved. He suggested that difficult childbirth in ancient times may indeed have often occurred as the result of the mother having a deformed pelvis, to which condition such features as poor diet, deficiency disease and osteomalacia may have contributed. The result of this deformity is that the space between the pubic symphysis (or pubic bones) and the spinal column is narrowed, making parturition difficult.

As for the treatments which the text offers, the prescription for difficult childbirth of GEŠTIN.KA$_5$.A = *karan šēlebi*, literally, 'fox (or, fox's) grapes' (but not "Fuchswein", as AHw 447), may be of interest. Its identification as Solanum berries and

[8] From M Civil, 'Medical commentaries from Nippur', JNES 33 (1974), p. 331.

[9] *Diagnoses in Assyrian and Babylonian Medicine* (University of Illinois Press, Urbana and Chicago, 2005).

the plant itself, *Solanum nigrum*, was made by Thompson, DAB 142f., on the basis of the Arab. *inab al-dhi'b*. This proposal is supported by Hooper and Field, *Useful Plants and Drugs of Iran and Iraq* (Chicago, 1937), 172, who cite also the Arabic *inab ath-thalab*, the latter word being cognate with Akk. *šēlebu*. If thus to be identified, Solanum berries may well have been effective. An ageing dictionary which I often use, namely, *Gould's Medical Dictionary*, fifth edition (Blakiston, Philadelphia and Toronto, 1941) writes under 'Solanum' on p. 1279, that 'a fluid extract from the fresh berries is recommended in epilepsy, tetanus and convulsions of pregnancy... It is also used as an abortifacient.' That Babylonian medicine appears to have discovered already the truth of this latter statement one may think to be quite extraordinary.

The reference to the root, *šuršu*, of the mistletoe – I am building, I hope properly, on the earlier findings concerning this – is, however, a more difficult matter to comment upon with accuracy. Richardson in the *Flowering Plants of the World* as earlier mentioned, states that the plant has no economic uses 'except for its decorative and symbolic value.' The Babylonians, I believe, saw things differently, accepting that all plants had some purpose, the sheer range of the plants used in the medical texts being of some witness to this opinion. But would the *pillû* root really serve some purpose? Richardson (again) states that 'the root often branches considerably within the host', and I cannot think that the pounding or braying of this would produce much or anything in the way of a liquid extract. Why, in any case, should the root of the 'male' mistletoe be considered different from that of the 'female' variety – both are listed in KADP 36, i, 38 (see also CAD P, 377, under 3', end).[10] I do not know the answer,

[10] The one instance of *pillû zikar u sinniš* known to me is in a text cited by Erica Reiner, *Astral Magic in Babylonia*, 37, note 150, but Landsberger refers to '*pillû* (male and female)' in his *Date Palm* monograph p.51, n. 183.

unless perhaps the *šuršu* of a plant might sometimes consist of both its root and its central stem. The fact that there appears to have been no term for this in the medical sources may perhaps be relevant, but there would still be much to explain.

I end the section with a brief note on DIŠ KIMIN, still commonly, but I believe poorly, translated as 'If ditto'. After Köcher's important observation given in the *Inhaltsübersicht* to his BAM IV (page xxxii), KIMIN or KI.MIN translates into Akkadian as *ašar šanim-ma*, or literally, 'in the second place.' Since with such a rendering DIŠ as *šumma*, 'if', would not be suitable, a reading *ana ašri šanim-ma* (or *šanê*) would seem to be what the sense requires. The phrase could then be freely rendered as either 'alternatively' or 'additionally', it being left to the translator's judgment as to which, in a given instance, would be thought appropriate. In a recent study (cf. presently) I notice that Nils Heeßel and Farouk Al-Rawi accept the validity of reading *ana* KIMIN, but it is a pity they translate this as 'in order to ditto', which cannot be right.

We pass on in the next leg of this winding 'journey' to a text which still concerns childbirth at a pre-natal period. The single text is BAM 240, obv. 30', which, with a necessary emendation, reads as follows:

DIŠ MUNUS MIN (= Ù.TU)-*ma* LI-DUR-*sa*[a] DUH-*at*[b] IR *a-la-ka*

la i-kal-la NA_4.$PEŠ_4$ *tur-ár* †*ina* Ì EŠ†[c] *ana* IGI ŠUB

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[a] Akk. *abunnas-sa* [b] Akk. *paṭrat* [c] Explained below

Translation

'If a woman is about to give birth, but her cord has been (prematurely) released so that she cannot hold back the flowing of her (amniotic) fluid, dry (her) pregnancy stone over a fire, re-anoint with oil and reposition it in front (of the cord).'

In its reconstructed form, the prescription which is set down above has not hitherto been known, and this for the following reason. It is referred to in Scurlock and Andersen, *Diagnoses*, under 12.123 on page 282 but is not translated at the end of the line, while the previous prescription, that is, BAM 240, obv. 29', which is presented under 4.27 and 10.73 (see respectively pages 95 and 221f.), is also left untranslated at the end of the line. These omissions were unavoidable because neither text, in its received form, makes any sense at all – unless one interchanges the 'SÚD' of line 30' with the '*ina* Ì EŠ' of line 29', which then restores good sense to both lines.

The concern, accordingly, of our newly appearing text is with the not uncommon condition of prolapse of the umbilical cord with an associated rupture of the membranes of the amniotic sac. This condition is not serious, and today as in earlier times calls for no action medically. Interestingly, however, one learns from the ancient response to the condition that a woman might wear her pregnancy stone, the *aban erê*, until the very moment of giving birth. To be noted is the use of the logogram IR, elsewhere *zūtu* or *zu'tu*, 'sweat', 'perspiration', to express the liquor amnii; one might have expected A.KAL = *hīlu*, discussed by M. Civil, MSL IX, p. 84f. The sense of *ana pāni*(IGI) at the end of the prescription is probably made secure by the *ana* IGI LI.DUR-*šá* at the end of the line following (obv. 31').

From the previous text concerning a woman whose waters have prematurely broken we pass on to discuss 'water(s)' of another kind. The subject of this section is in fact *mê kasî*, literally '*kasû* water', but *kasû* itself and the Sum. gazi will feature prominently in a complicated argument. We shall not, therefore, in this instance be presenting an initial text.

But why, it may be asked, should the discussion begin with *mê kasî* when *kasû* itself may be deemed of first importance? It is because one cannot, in the writer's opinion, identify one without the other, and it is felt that this is one of the reasons why previous proposals have run into uncertainty. An interpretation of *mê kasî* as simply an 'extract of *kasû*' is thus thought to be inadequate as an acceptable translation.

The Dictionaries as a starting point provide many references for *mê kasî*, but many others could now be added. It is found for instance in BAM 398, rev. 34', and *ibid.* rev. 46', in prescriptions for paralysis, stroke (*mišittu*) and *rimûtu* which I have always taken to mean 'ataxia' (Köcher: Muskelschwäche). It occurs frequently in the eye texts, as in BAM 515, i, 11, and BAM 516, i, 60', also 516, ii, 29. And further examples are seen in the first two prescriptions of the Sippar text published by Heeßel and Al-Rawi,[11] which offer treatment for a head condition, KÚM/IZI *qaqqadi*. From these and other references it might seem that we should properly accord *kasû*-water an identity of its own in the medical texts.

We may next take up the story of *kasû* the plant, or more accurately the seeds of the plant – like *sahlû* as '*sahlû*-seeds' – for which the mentioned Heeßel and Al-Rawi article (p. 236) supplies all the necessary references. These need not, therefore, be

[11] In full, 'Tablets from the Sippar Library XII: a medical therapeutic text', *Iraq* LXV (2003), p. 225.

repeated here. But the most important of the identifications which have been suggested for *kasû*, begins with the proposal of Landsberger in AfO 18, 337f., that 'mustard' was so indicated. Central to this idea is a Sumerian text copied by Chiera (the reference is given), in which, amusingly(?), a luckless person is described as one who, 'If he finds some meat can find no gazi, if he finds some gazi can find no meat.' This idea had one special merit. It focussed attention on *kasû* as a 'meat spice', and indeed in the carminative and spice section of KADP 36, col. 5, *kasû* (line 31) finds company with *kamūnu*, 'cumin' (line 28),[12] *zībû*, 'black cumin' (line 21), *nēnû*, 'mint'[13] (line 22), and *salhû*, 'cardamine' or 'cress' (line 29).[14]

However, not long afterwards Landsberger's proposal was seen to be upset (partially) by a notice of Civil's which was communicated by Landsberger in JCS 21, 152, note 70, under a) and b). This note states that, from 'Civil's Dialogue' researches, gazi 'keine Pflanze ist, sondern ein Mineral, ähnlich Salz, etwa Salpeter.' For this conclusion a *Vorläufer* was to be seen in Oppenheim's *Eames Collection*, 7.

I have not myself read any explanation of this engaging problem. It could, however, be tentatively suggested that *originally* (say in the 3rd millennium) gazi indeed denoted a mineral of the salt variety, in which bracket the Sum. mun-gazi and the plural mun-gazi-hé-a conceivably belonged. The later stones known as *aban kasê* and the

[12] Arabic *kammun*, from which Chakravarty, p. 174, believes the name is derived. See also my "Cryptogams" article in JMC No. 6, 2005, section 5, which upholds the now recognised distinction between *kamūnu* 1, 'cumin', and *kamūnu* 2, 'fungus'.

[13] As originally identified by Landsberger, and supported in JNES 64/1, 2005, pp. 50f.

[14] Or so probably, despite Köcher's misgivings that the description of *sahlû* in *šammu šikin-šu* does not appear to accord with cress. See positively the references given in CAD S 65. In general it is instructive to compare the KADP 36, v, entries with the plants given in BAM 44, 7'-10', and its duplicates BAM 165, ii, 1'-6', and BAM 413, rev. 2'-5'.

related Sum. na_4-gazi-SAR and na_4-gug-gazi-SAR, refer no doubt to stones or marbles flecked with the carnelian and brown(?) *kasû* colours, and have probably nothing to do with the line which we are pursuing.

There comes a change and the custom ceases. Either from domestic or economic reasons or from some other reason beyond our knowing, gazi as a 'mineral meat spice' fell supposedly into disuse, and employing the same word (much as in the case of *murru* suggested earlier), *kasû* as a 'vegetable meat spice' took its place. In any event, we proceed now with *kasû*, the vegetable spice.

Was it in fact 'mustard'? Doubts have been raised over *mê kasî* as "Senfwasser", AHw 455, under *kasû*, 2 b), and indeed the later AHw-based *Concise Dictionary of Akkadian* questions this. If it is of any relevance I can myself vouch for the fact that mustard today has no prominence in the Middle East, and it does not appear on hotel dining tables.

The identification proposed here is that *kasû* was 'dill', or more properly 'dill fruits' or 'dill seeds' – if thus we may interpret its plural form. The plant is listed in botanical sources under *Anethum graveolens* L, or as *Peucedanum graveolens* L, a synonym. It is not found in the extant volumes of *Flora of Iraq* – the series is unfortunately incomplete – but Chakravarty gives a long account of it in his *Plant Wealth of Iraq*, pp. 31f. *Gould's Medical Dictionary* lists the plant under *Anethum* (from the Gk. *anaithein*, 'to burn up', and so 'to be pungent' as said of seeds), and defines its seeds and fruits as 'aromatic, carminative and stimulant.'

But dill produces 'dill water', which brings us back now to our starting point. Medically this is known as *aqua anethi*, and it derives from infusing the fruits in water. These fruits have 'a characteristic pleasant odour and an agreeable taste' (Chakravarty,

p. 32), and he writes that the water is given as a cordial drink to women after confinement. It would thus seem that the fruits or seeds of *kasû* would well qualify as an ingredient in the long tradition of beer-making, which is one of the principal requirements for the identification.

Medically, however, dill and dill water were used for a wide variety of conditions – *kasû* like much else was in no way disease-specific – and no argument for the identification derives therefore from its medical use. Dill water, on the other hand, is of some assistance, in that, being much used as a vehicle for the emulsifying of dry ingredients – these had commonly to be 'kneaded' (*lâšu*, or specifically *talâš*) – a certain quantity of water, as opposed to plant essences, would surely have been required.

Another term that may be discussed is *qalûti*, or 'roasted' as applied to seeds (indeed no other part of a plant can be realistically so treated). An old example of this comes from Labat's edition of a Louvre text published in RA 53 (1959), where *qēm/sikat kasê qalûti* in line 10 means suggestively 'the flour of roasted dill seeds.' More recently, *kasû qalûtum*, written GAZI.SAR BIL-*tum*, occurs as the first ingredient in § 36 of the new Sippar text referred to in note 11. As for this roasting, such action at least with barley was doubtless carried out to dehusk the grain, but perhaps another reason should be sought in the case of dill seed.

But I am acquainted with roasted dill seeds in another and different connection. In the early days of the present research I asked an Iranian colleague, Dr Mehdi Moshiri, if dill was today used as a meat spice in his country or in the Middle East. His answer was to invite me to a dinner in which the roast chicken prepared by his wife had

been generously sprinkled with dill seed. Thus mustard has a strong rival contender for understanding the Sumerian text discussed by Landsberger.

I add a botanical note. The word of our interest is not written Ú GAZI but almost invariably GAZI.SAR, and the use of this SAR, however properly to be read, seems largely confined to the class of cultivated as opposed to wild plants. The best evidence for this conclusion derives from Hh XVII, (see MSL X, pp. 79ff), where the first half of the Tablet concerns grasses, rushes and wild plants; in the second half where, from line 245 the SAR entries begin, the concern of the text is with cultivated plants, largely vegetables and herb/spices. As for dill, this today is cultivated 'on an extensive scale in South Europe and Western Asia' (Chakravarty, p. 31), and 'in Iraq it is cultivated as a cold-weather crop.' From such a statement and in the absence of any geographical locations, we may be assured that wild forms of the plant are not found in the country today. Thus from the writing of GAZI.SAR, or for Sumerian texts more properly gazi.SAR, the same must have held true for antiquity also.

Thus I submit the case that *kasû* and *mê kasî* be newly seen as the equivalent for our modern times of 'dill' and 'dill water'.

The next link in my literary game connects still with 'water' and in this case with *mê bīni*, or 'tamarisk water'. The source to be used is an eye text, first translated, although incompletely, by Thompson in PRSM Hist. XIX/3 (1926), p. 47. To the best of my knowledge it has not been published since. It does not appear in the magisterial volume of Jeanette Fincke[15] or in the *Diagnoses* of Scurlock and Andersen, but doubtless

[15] *Augenleiden nach keilschriftlichen Quellen*: *Untersuchungen zur altorientalischen Medizin* (Königshausen und Neumann, Würzburg, 2000).

because the verb GIG or *marāṣu* as 'to be sick' or 'to be sore' is too imprecise to be implicated in a meaningful discussion.

The simple text is AMT 14/3, 6 (not recopied by Köcher). It reads:

[DIŠ NA IGI^{II}-šú][16] *mar-<ṣa>* A GIŠ.ŠINIG UD 20 KÁM IGI^{II}-*šú*

LUH^{a}-*ma* A GIŠ.ŠINIG 3-*šú* TU$_5$-*ma* T[I-*uṭ*]

---

^{a} Prob. Akk. *imessi* rather than *temessi* (see translation)

Translation

'[If the eyes of a man] are sore, he shall wash his eyes for twenty days with tamarisk water, bathing them three times (a day) with the water – so he will re[cover].'

The above prescription, presumably for some minor or 'non-specific' eye trouble,[17] indicates in its second part what the Babylonian physician might anciently have used as a simple collyrium for the eyes. Against the proposal of CAD B, 241, that the sap of the tree was concerned, one may think rather that the lotion was made by infusing dried tamarisk leaves in water (as for a tea), the patient being then required to bathe his eyes with this in a way not greatly different from the modern practice with witch hazel. In

[16] Unless to be written phonetically as *i-na-šú*.

[17] On the opening phrase itself as the title of a sub-series now seen to have comprised 4 Tablets, see Attinger, JMC Nos 11-12 (2008), pp. 26f.

line 8 of the same text there is a reference to *mê* ^{giš}*bīni ša ina išāti šaknu*, so it is seen that the tamarisk water was generally to be warmed before use. Apart from the soothing effect of such water, its heat would also have assisted in the breakdown of the leaf fibres.

'Tamarisk water' would have been mildly astringent because of the tannin content of the leaves, and perhaps often effective. I am not able to comment adequately on the large number of applications that would seem to have been necessary.

The previous text has mentioned 'leaves', and it is with leaves that we journey on. Leaves in fact seem to have made an uncertain entrance into the medical texts. Indeed, concerned as we are with the Sum. pa and the later lexical entries of PA = *aru* and *artu*, it must have been on an unpropitious day that CAD A/2, 311, defined *aru* as 'frond, leaf of the date palm.' The truth is that *aru* may refer to the leaf of any tree, and *artu* in some sense serves as the plural of this. The leaves of fruit trees in the medical texts are commonly defined by a preceding PA, but the obvious reason for this was the necessity for distinguishing the leaves from the fruits. The tree GIŠ.ŠINIG, 'tamarisk', is also found occasionally with the informative PA, but in this case perhaps to distinguish the leaves from the gall-nuts (written NUMUN GIŠ.ŠINIG). In BAM 124, i, 42-44, eight trees are listed in the prescription, each with an initial PA, and it may be of interest if we here take a closer look at this text. The condition treated is that of *muruṣ kabbarti*, a foot condition, which may also be further examined. The three lines of the text read as follows:

42 *ana* KIMIN PA GIŠ.Ú.GÍR PA GIŠ.DÍH PA ^{giš}*šu-ši* PA GIŠ.GI.ŠUL.HI

43 PA GIŠ.HAŠHUR PA GIŠ.PÈŠ PA GIŠ.NU.ÚR.MA PA GIŠ.GIŠIMMAR TUR[a]

44 HÁD.DU GAZ *ina* ZI.DA HE.HE *ina* <A.GAZI.SAR>[b] *ina* ŠEN.TUR *tara-bak* LÁ

---

[a] Akk. *suhuššu* [b] Inserted on the authority of the immediately preceding and succeeding prescriptions, lines 41 and 46.

Translation

'Alternatively, leaves of acacia, of *baltu*-thorn, of liquorice, of *qān šalali*, of crab-apple, of fig, of pomegranate and of a young date-palm, you shall dry, grind small, mix with flour, decoct into a saucepan <with dill water>, and bind on.'

This all-leaf prescription – and almost an all-logogram prescription! – is interesting for the reason that it is unusual to find in a remedy comprising many ingredients that all are of one kind; even five-ingredient prescriptions commonly select two categories from the choice of plants, roots, seeds and aromatics. However, the condition to be treated will require a longer note.

The condition of *muruṣ kabbarti* which is the concern of the text is discussed by Scurlock and Andersen under 'Fungal Diseases' (*Diagnoses*, pp. 78ff.), and is identified by them as Mycetoma, or Madura foot. I believe the proposal to be mistaken. As the writers knew, I have myself written about Mycetoma of both the head and foot,

publishing this under the title 'The Sāmānu disease in Babylonian Medicine.'[18] My case still stands. The single objection – if it is indeed that – which the writers have advanced against the identification on their p. 695, note 240, is hardly sufficient to overthrow what I regard as its positive merits. For my part, I believe that the new proposal fails without any evidence in the offered texts for the discharge from the skin of the characteristic red granules (in particular) and the thorns, *ṣillê*, which cause this.

Turning now to the verb *kabāru* as applied to the foot, and especially to the condition of *šēpē kabbarātu*, a reference to this will be found in section 8 of my 'Cryptogams' paper, under 'Some medical associations'. *Muruṣ kabbarti* belongs to the same family. The verb in question means 'to be hard and thick' (even as *ṭebû* means 'to rise up and go', and *našû* 'to lift up and bring or carry away'). And as the matter was explained to me by Dr Ranam Al-Ghazi now of Cambridge, the condition of 'thickened feet' arises 'when continued pressure on the foot over a period of time causes an accumulation of keratin to form in the skin.' If the disease of *muruṣ kabbarti* is to be regarded as more serious, which it probably was, then a possible explanation could be that the sole of the foot has become infected through some crack or break in the hardened skin. A further complication is seen in the phrase *ši-kìn* GIG-*šú* GE_6, or freely, 'the disease (or, the diseased area?) has a black appearance.' This phrase in fact completes the KIMIN clause from col. i, line 33, of our cited text, BAM 124, i, 42. It could mean that there was a haemorrhage or some varicose trouble where the black area is seen.

It is illuminating, finally, to notice that more than thirty prescriptions are devoted to the *kabbartu* conditions in the first two columns of BAM 124. Perhaps one

[18] See JNE5 Vol. 53/2, 1994, pp. 111-115.

should learn from this that, in days of inadequate footwear and when long-suffering feet had often to serve the traveller for every journey, keratosis was far more prevalent among the communities of the times than is the case today.

In this eighth and final link of my medical miscellany I turn again to discuss leaves. They should have, I believe, a more dominant place in our studies than is generally accorded them. Landsberger in his *Date Palm and its By-products*, pp. 16f., set us on the right path with his notes on *aru* and related themes; but leaves often have an implied existence where no PA or corresponding word for them is written in the text.

One may approach this silence in several ways. There are, of course, words such as *hassu*, 'lettuce', and *nēnû*, 'mint', where the plant itself consists essentially of leaves. There are terms like *bīnu*, 'tamarisk leaves', or *burāšu*, 'juniper leaves', where one feels that, if any other part was intended, the appropriate term would have been mentioned. Even such a plant as the "marsh-apple", *hašhūr abi*, whose flowers were beautiful (cf. the bed-head reference in CAD H 139, under (c), and AHw 334, the last entry under *hašhūru(m)*), and which may perhaps be seen as the (closed) water-lily or lotus – an idea which, if the truth be told, owes much to Claude Monet's paintings of his lily pond at Giverny! – must mainly have involved the leaves which have a far longer service life than any flower.

But a different argument may be considered. In many prescriptions where plants, not otherwise defined, are to be brayed (*s/zâku*), or finely crushed (*hašālu*), before emulsifying and bandaging, one could think that the dried leaves of a plant would be more suitable than any other part to meet this requirement. If there might be any doubt about their state as being 'dead', then they were to be 'dried' before use, as indeed is to

be seen in the HÁD.DU = *tubbal* of the text last mentioned, BAM 124, i, 44. In pursuing this general idea, my picture of the bowls or pots of the "apothecary's shelf-list" as required by KADP 36, is that, more than anything else, they would have been filled with dead or dying leaves. There is an obvious economic advantage in using leaves rather than the whole plant, and suitably dead leaves would have been available for use all the year round. Only occasionally were they to be used as *arqus-su*(*-nu*), 'while still green.'

There is one strange and unsuspected source that I bring to my aid in this literary adventure. In the *Book of Revelation*, the last book of the New Testament, the writer in an apocalyptic vision is shown a pure river which sparkles like crystal. On each side of this river there stands a 'tree of life', whereof it is said (chap. xxii, verse 2) that

'the leaves of the trees are for the healing of the nations.'

The line perhaps has not before this time been properly understood, but acceptably may stand as some confirmation of the 'leaf therapy' of ancient Mesopotamia, still flourishing among the people of other lands in the first century AD.

And with this important concept, my reader, for your kind consideration I take my leave of you. Fare thee well.

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