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Pahlavi <mycwls> = *Adiantum capillus-veneris* L.: Ethnobotany, Etymology, and Iranian Cultural History*

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In this article I shall proceed from a consideration of the mysterious Pahlavi plant-name <mycwls>, which, after discussion of various contingent matters, I shall identify as *Adiantum capillus-veneris* L. The Zoroastrian Book Pahlavi word <mycwls> (transliterating the ambiguously valent consonantal spelling) occurs among the other names of plants in *Greater Bundahišn* (GB) 16A (my own citation of this text follows the edition of Pakzad 2005). To my knowledge the word has hitherto received two different explanations, neither of which provides an adequate botanical identification.

The more recent is the identification by Gignoux (2010: 168), who transcribes <mycwls> as *miḵwars* and equates the word with the well-attested *miḵūg*, translating 'lentille'. No independent evidence for <mycwls> as 'lentil' is offered here, nor is any explanation of the last letters of the word given.

However, in the other article treating <mycwls>, Shapira (2005: 82), whose explanation of the first part of the word differs from Gignoux's, proceeded in consideration of a series of associations of various plants with the *Sīrōza* (*Sīh-rōzag*, *Sīh rōzag*) canon of thirty days presided over by divinities. For <mycwls>, Shapira, operating with its association with the day-name *Gōš*, translates and comments, "'Urine-hairs': *mēzwars* – *Gōš*. The identification is unclear. . . . My translation is based on the association with *Gōš*, the deified Bull, whose urine is still used by Zoroastrians in their rituals". Shapira obviously takes <-wls> as Pahl. *wars* 'hair', and further has in mind the bull's urine (Pahl.

gōmēz) used as a medium of cleansing. A minor objection to seeing in the alleged **mēzwars* a Pahlavi noun **mēz* 'urine' is that while Pahlavi has *mēzišn* 'urine' = 'urination' from the verb stem *mēz-*, there is no noun **mēz*; *mēz* in *gōmēz* reflects the second part of the Avestan loanword *gao-maēza-*. Furthermore, a compound *'urine-hair', if 'that whose hair is characterized by urine', would both constitute an odd name for a plant, and be unlikely as a bridge between an at best tangential function of an earthly bull and a reference to a "deified Bull".

But the idea that *Gōš* denotes a "deified Bull" is wrong, although it had been set forth by illustrious Iranists. Bartholomae (1910: 508 III), under (*gav-*) *aēvō.dāta-* i.e. 'the Uniquely Created Bull', lists what he regards as the divinized Bull *par excellence*, the "Urrind dessen Seele (*urvan-*) erscheint", and cites among the attestations for this *Sīrōza* 2.14, *Yasna* 16.4, and *Sīrōza* 1.14, i.e. the passages referring to the 14th day of the 30-day month. Subsequently Boyce (1984: 19) repeats Bartholomae's view and assigns the day *Gōš* to the "Ox-soul".

Old Iranian *gaw-* is 'bovine', either 'cow' or 'bull'. Thereby, *ceteris paribus*, for the above passages cited by Bartholomae one may translate *gəuš hudāñhō uruuan-* ambiguously as 'soul of the Beneficent Bovine' at *Sīrōza* 2.14 and *Y.* 16.4, and *gəuš tašan- gəuš uruuan-* 'the Fashioner of the Bovine, the Soul of the Bovine'. However, it is clear from *Y.* 29.1–2, in which *gəuš uruuan-* and *gəuš tašan-* first appear, we must translate *gəuš* as 'of the Cow', since *Y.* 29.2b' has *hīm xšaiiantō*

'(Ye) ruling *Her*', referring back to the bovine of Y. 29.2a". Concatenating with Y. 29.1 *gəuš uruuan-* is Y. 29.5 *mā uruūā gəušcā aziīā* 'my soul and [that of] the pregnant Cow' (see further Schwartz 2003: 215–26 *et passim* on *gəuš uruuan-*, *gəuš tašan-*, their meanings and contexts). In effect, the bovine of Y. 29 (and Y. 28) is an *Urkuh*. It may be concluded that <mycwls> has nothing to do with urine, and that *Gōš* does not refer to a deified "Bull", and thus bull's urine as used for cleansing is irrelevant for the phytonym.

In *Sīrōza* 1.14 and 2.14, the Cow is associated with the female divinity *Druuāspā*, who presides over flocks and herds of livestock, and conversely *Yašt* 9, which is dedicated to *Druuāspā*, is sometimes referred to as *Gōš Yašt*. These facts accord with an association which is Old Avestan: *Yasna Haptaŋhāiti* 39.1 links *gəuš uruūānēm tašanəm* 'the Soul of the Cow (and) Her Fashioner' to *uruunō pasukanəm* 'the souls of small livestock'. Furthermore, *gəuš tašan-* is translated as *gōspand tāšēnidār*, whereby *gəuš* corresponds to *gōspand*; the passage is associated with *Sīrōza* 2.14 through *gau- huḏāh-* 'the Beneficent Cow' occurring in both (referring to provision of milk). Cf. also the translation of Av. *gau- pouru.sarəda-* as Pahl. *gōspand purr-sardag* e.g. at *Sīrōza* 2.12 and elsewhere, and the many other instances of Av. *gau-* rendered as *gōspand*.

The latter data go with the sense of *Vidēvdād* 21.1 *gaospənta-* 'sacral bovine' (Old Iranian **gau-swanta-*) as a substitute for a bovine in sacrificial ritual, sheep having become the most important livestock in the realm of West Iranian economics. The reflex, Pahl. *gōspand*, means both 'cow' and 'sheep'; Pers. *gūspand*, *guspanḏ*, *gūsfand*, *gusfand*, and Kumzari *gusen* mean 'sheep'. It emerges that Pahl. *Gōš* is the day of the mythic Cow, and is associated with sheep as well as cattle, and livestock in general. This fact will figure below in the botanical identification of <mycwls>.

Before returning to the identification of <mycwls>, some preliminary observations are in order. The introduction of *GB* 16A, 'And it also says, every flower (*gul*) has its own *Amahrespand*', is problematic because the actual list includes plants other than flowers, mentions many more divinities than the canonical seven *Amahrespands*, and although the next incipit 'And it says (*gōwed*)' should refer to the Avesta, it is clear that some of the plants listed have names and basic habitats outside the East Iranian Avestan world,

e.g. the Egypto-Semitic *sōsan* 'lily' and the Indic *čampak/g* 'champaca' for the *Amahrespands* *Xordād* and *Amurdād*. Now, the *Sīrōza* canon of a thirty-day month goes back to the Young Avesta, which, with its synthesis of Gathic and non-Avestan divine entities, entered the Artaxerxid court, resulting in the Empire-wide promulgation of a new calendar, which embodies this synthesis, as reflected by such local variants as (to cite an example relevant to our topic) the representation of the Avestan day-name *gəuš huḏāŋhō* 'of the Beneficent Cow' by Parthian <gwzdh>, Bactrian *γωρτο*, Khwarezmian <γwšt>, and (minus the adjective) Pahl. <gwš>, i.e. *Gōš*.

Moreover, rather than speak of the relevant plants each having one specific divinity, it is more accurate to say that after the formation of a canon of thirty days named after divinities, various plants were assigned to divinities of the thirty-day month. In addition, the assignment of plant to divinity is complicated by the fact that Ahura Mazda is represented not only by the first day, but as Creator (Av. *Daδuuā* > Pahl. *Dai*) by the eighth day, which precedes that of *Ātar*; by the fifteenth day, which precedes that of *Miθra*; and by the twenty-third day, which precedes that of *Daēnā*. These days of the Creator are called in Pahlavi respectively (with *pad* = 'nearby') *Dai pad Ādur*, *Dai pad Mihr*, and *Dai pad Dēn*.

Toward explaining the connections of the plants, including <mycwls> with the day-divinities, in *GB* 16A, Shapira notes formal similarities to explain what he calls "ethnopoetic thinking". His clearest and most convincing examples involve similarities of linguistic form. Such homology is found elsewhere in the *GB*; one may cite e.g. *GB* XVIII.2 *az wēnīg wēnōg* 'from the nose [of the slain Uniquely Created Bull arose] the lentil/vetch' (cf. *Zādspram* III.46). Shapira adduces formal similarities to explain *ādargōnag* 'anemone' (lit. 'fire-colored'): *Ādur* 'Fire', the fourth day; *šāhesprahm* 'royal basil' (from *šāh* 'king', cf. Gr. *βασιλικόν basilikón* 'basil'): *Šahrēwar* (*šahr* 'dominion, rule'), the ninth day; and *wādrang ī bōy* 'fragrant lemon balm': *Wād* 'Wind', the nineteenth day.

In some instances features other than sound must have been involved. The aforementioned cosmogonic association of *wēnīg* 'nose': *wēnōg* 'lentil, vetch' is followed by an aetiology which is visually based: From the blood there arose the source of wine, the grapevine. Similarly perhaps

in the *GB* plant list, phonic association would account for *hērīg ī surx* 'red iris': *Srōš* vs. a visual association several items later, *hērīg ī zard* 'yellow iris': *Rām*, i.e. the day of the Avestan god Vaiiu, the beginning and end of whose liturgy respectively stress his golden appurtenances: He has a golden throne, golden carpet, and golden canopy (*Yašt* 15.2) and golden garments, weapons, and equipment (*Yašt* 15.54).

Furthermore, we have a contrast in equivalences between *wādrang* 'citron': *Dai pad Ādur* and *wādrang ī bōy* 'fragrant lemon balm': *Wād*. The latter phrase points to the role of wind in the dispersal of the fragrance (*bōy*), so that we have a realistic dimension in the equation. The real situation attending a plant is obvious for *nīlōpal* 'lotus': *Ābān* 'the Waters'. As we shall see, the realia of <mycwl> explain its connection with *Gōš*, which clinches the botanical identification.

While Shapira's suggestion for <mycwl>, *mēzwars* with *mēz* *'urine', is not convincing, the morpheme *-wars* 'hair' calls for further consideration as preliminary to explaining <myc>. In fact, *-wars* appears in the Pahl. phytonym *gāwars*, 'sorghum, giant millet'. I take the synonymous Pahl. *gahl*, Pers. *gāl* from **gāwarθā-*, with Old Persian **θ* for **s*; **-āwar-* > **-ār-* as in Parthian *adyāwar*, Pahlavi *ayār* 'helper'; and **-ārθ-* (> **-āhl-*, **-āl* as OPers. **hamārθa-* 'having the same goal' > Pahl. *hamahl*, Pers. *hamāl* 'companion'. Cognates exist in East and West Iranian languages for 'millet, *Panicum italicum*'; see in detail Morgenstierne (1938: 23 and index, 37*; 1940: 139 = 1973: 169; and 1962: 206 = 1973: 206). I derive their etymon **gāwarsā-* from **gaw-warsā-* 'bovine hair' (for the second element, cf. MPers. *wars*, Sogd. *wars*, Pashto *wušt*, etc. 'hair'). Given that yaks are herded in Tajikistan and Afghanistan (and of course in Nepal, where millet is also cultivated in the hills and mountains), one can understand **gaw-warsā-* as based on the plant's resemblance to the thick, ropy hair of the yak, or, since the domestic yak (*Bos grunniens*) is mated with ordinary cattle (*Bos mutus*), the reference may be to a hairy hybrid of the two species. Note that *GB* XVII.5 speaks of the 'blackhaired bovine (*gāw ī siyā mōy*) with yellow knees' as chief representative of bovines.

What we now need for <mycwl> is a name with *-wars* 'hair' for a plant associable with *Gōš* (the day-divinity patron of livestock, including sheep). Pahl. <myc> is in fact attested for *miš* (= Pers.

muž) 'eyelash, eyelid'; thus <mycwl> amounts to 'hair of an eyelash/eyelid'. This accords well with names for *Adiantum capillus-veneris* L., the black maidenhair fern, in reference to this fern's clumps of wiry, shiny black rachides. In the extensive entry on this plant in the 1st cent. C.E. Greek work *De Materia Medica*, attributed to Pedanius Dioscurides, IV 134 (Wellmann 2004: 279–81), we not only find Greek names referring to this fern's "hair", e.g. *πολύτριχον polútrikhon* 'many-haired' (whence also Modern Greek for 'black maidenhair fern') and *τριχομανές trikhomanés* 'hair-crazy', i.e. 'wild with hair' (cf. Arab. *ša'r al-γūl* 'hair of the *γūl*' and *ša'r al-jinn* 'hair of the *jinn*', of which West Arm. *diwajar* 'demon's mane' is a calque for the same fern), *καλλίτριχον kallítrikhon* 'pretty-haired', but also a name approaching the proposed meaning of the Pahlavi: Latin (in Greek letters) *supercilium terrae* 'the earth's eyebrow'. For the latter, cf. Arab. *ša'r al-'arḍ* 'hair(s) of the earth' = 'black maidenhair fern'. In the Iranian realm, allusion to hair in naming *Adiantum capillus-veneris* is also found for Shirazi *parī-gīs* 'fairy locks, fairy tresses, fairy hair'.

An additional datum in Dioscurides, IV 134, about our fern leads the way to the conclusive botanical identification of <mycwl>/<mišwars>. After noting that this fern grows wild in various moist places, Dioscurides records one purposeful cultivation: *Φυτεύεται δ' ἐπ' ὠφέλεια προβάτων ἐν ταῖς μάνδραϊς* 'It is planted in pens for the benefit of sheep'. This 'benefit' should be the prevention or cure of disease among the sheep, since Dioscurides was concerned with medicinal plants. Fronds of *Adiantum capillus-veneris* are in fact used in present-day Italian folk-veterinary medicine administered to livestock (Uncini Manganelli et al. 2001: 172, Table 1; Viegi et al. 2003: 233, Table 1). In addition, two Iranian researchers from the University of Gilan, reporting on the same fern's phytochemicals, traditional uses and pharmacology (Ansari and Ekhlasi-Kazaj 2012), conclude (p. 19): "Many of these secondary metabolites [of *Adiantum capillus-veneris* L.] have been found to possess interesting pharmacological activities and some have served as cures for human and livestock diseases." All this agrees with the presidency of *Gōš* over livestock, and corroborates the identification of <mycwl> = *mišwars* as the black maidenhair fern.

There remains for explanation the most common designation for the fern in question. Classical

Persian has *par(-i) Siyāvaš(ān)* or *par(-i) Siyāvuš(ān)* whence, with expected vocalic equivalents, the usual Modern Persian form. In the modern minor languages of Iran we find Gilaki *par-syāvaš*, and for the greater area of Isfahan, Borjian reports Jarquye *par-siāwoš*, Gaz and Sedeh *par-siāvaš*, Zefre *pār-siāvoš*, Qohi *par-siāweš*, Kamandān *gol-par-siāveš*, and Jidi *par-e θiāvaš*. Cf. also the Southern Kurdish *siyāwaxšī* for the same fern. While *par* 'feather' for a fern has such parallels as the cognate Gr. *πτερίς pteris*, Lat. *pinnula*, and Eng. *fern* itself, what must be accounted for is the attribution to the epic hero Siyāvaš (Siyāvuš, Siyāvaxš). By contrast, more comprehensible is *xūn-i Siyāva/uš(ān)* 'blood of S.' for a plant, Eng. *dragon's blood*, which yields a red resin and dye. For this there was an identification with the mythical tall, leafy, redolent plant which grew from the soil upon which the blood of the slain *Siyāvaš/Siyāvuš* was shed, described in memorable detail in the *Šāhnāma* (ed. Khaleghi-Motlagh II: 375, lines 2513–15).

The naming of the fern after the hero can be explained as follows: Allusion to the black rachides of this fern is found in such names for it as Arabic *sāq al-'aswad*, Turkish *baldırıkara* 'having black leg(s)'. Reference to both the blackness and the hair-like appearance is not only found in Eng. *black maidenhair fern*, but also combined in Greek *ἔβενότριχον ebenótrikhon* 'having ebony hair(s)', given among our fern's Greek names by Dioscurides, and the French *capillaire noir*. One may reconstruct a Pahlavi equivalent **siyāwars* 'having black hairs' alongside *mišwars*, with Pahlavi having had more than one term for our fern, as did Greek, Arabic, etc.

In Persian, where Pahlavi *wars* 'hair' survived only marginally as *gurs*, both *mišwars* and **siyāwars* were no longer properly intelligible, but while *mišwars* disappeared, **siyāwars* was renamed via the similar-sounding *Siyāvaxš*, *Siyāvaš*, *Siyāvuš*. The independently named *xūn-i Siyāva/uš(ān)*, although referring to another plant, may have influenced the formation of *par-i Siyāva/uš(ān)*, where *-ān* is an attributive suffix. Thereby Persian 'feather of Siyāvaš' replaced Pahlavi *mišwars* 'eyelid-hairs' as the name for the black maidenhair fern, *Adiantum capillus-veneris L.*

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