

A Translation of the New Edition of the  
*Suśrutasamhitā*

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### Abstract

The [Suśruta Project](#) is producing a new Sanskrit text edition of the *Suśrutasaṃhitā* based on the early Nepalese manuscripts.<sup>1</sup> As we gradually transcribe and edit the manuscripts, we are producing this new translation of the classic work.

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<sup>1</sup> MS Kathmandu KL 699, MS Kathmandu NAK 1-1079, and MS Kathmandu NAK 5-333.

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## The manuscripts and editions used in the vulgate editions by Yādavaśarman Trivikrama Ācārya

Yādavaśarman Trivikrama Ācārya produced three successive editions of the *Suśrutasaṃhitā* with the commentary of Ḍalhaṇa, in 1915, 1931 and 1938. These editions, especially the last, are generally considered the most scholarly and reliable editions of the work, and have been constantly reprinted up to the present day.<sup>2</sup>

The 1915 edition was based on three manuscripts. The 1931 edition used another seven plus two printed editions. For his final 1938 edition, Ācārya used a further three manuscripts.<sup>3</sup> These sources are described as follow, with an overview in Table 1.

### The sources of the 1915 edition

- 1 Calcutta, Royal Asiatic Society. Covers the *sūtra*, *nidāna*, *śārīra* and *kalpa sthānas*.
- 2 Jaipur, Pandit Gaṅgādharaḥṭṭaśarman, lecturer at the Royal Sanskrit University. Covers the *cikitsāsthāna* and the *uttaratantra*.
- 3 Bundi, my great friend the royal physician Paṃ. Śrīprasādaśarman. Covers the *uttaratantra*.

### The sources of the 1931 edition

- 1 Vārāṇasī, professor of literature, the great Gaurīnāthapāṭhaka. With the *Nibandhasaṅgraha*. Covers the *nidānasthāna* and *uttaratantra*.
- 2 Ahmedabad. My friend Sva. Vā. Vaidya Raṇachodālāla Motīlālaśarman. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.
- 3 From the personal library of my great friend Sva. Vā. Vaidya Murārājīśarman. Extremely old. No commentary. Covers the *śārīrasthāna*.
- 4 Pune, BORI library. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.<sup>4</sup>

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2 See also the study of these editions by Klebanov (2021a: §1.2) and Wujastyk (2013b: 143–144).

3 The following account of the sources is paraphrased from Y. T. Ācārya and N. R. Ācārya's own account of his sources (Su 1938: 22).

4 Not one of the three MSS of the *śārīrasthāna* described in H. D. Sharma 1939.

- 5 Pune, BORI library. With the *Nibandhasaṅgraha*. Complete. With some damaged folia.
- 6 Bombay, Asiatic Society. Incomplete.<sup>5</sup>
- 7 Varanasi, the private library of Vaidya Tryambakaśāstrī. Covers the *cikitsāsthāna*. The variant readings of this MS were compiled by Prof.
- 8 A printed edition together with the commentary *Suśrutasaṅgraha* by Professor Hārāṇacandra Cakravārtti. Complete work. This is the 1910 Calcutta edition numbered “t” by Meulenbeld ([HIML: IB, 312](#)).<sup>6</sup>
- 9 A printed edition of the first 43 chapters of the *sūtrasthāna*, printed in Bengali script, with the commentaries *Bhānumatī*, *Nibandhasaṅgraha*, edited by Vijayaratnasena and Niśikāntasena. This is the 1886 Calcutta edition numbered “g” by Meulenbeld ([HIML: IB, 311](#)).<sup>7</sup>

## The sources of the 1938 edition

- 1 Gwalior, from the library of my great friend Paṃ. Rāmeśvaraśāstrin Śukla. Covers the *sūtra*, *nidāna*, *śārīra*, *cikitsā* and *kalpasthānas*.
- 2 Bikaner, from the library of the Royal Palace, supplied by Paṃ. Candrasekharaśāstrin. Contains the commentary *Nyāyacandrikāpañjikāvyākhyā* by Gayadāsa. Covers the *nidānasthāna*. This is almost certainly MS Bikaner Anup 4390.<sup>8</sup>
- 3 Kathmandu, located in the private library of the Royal Guru Hemarāja Śarman. An extremely old palm-leaf manuscript. Readings from this MS were compiled by Paṃ Nityānandaśarman Jośī and sent to Ācārya. Covers from the beginning of the work to the end of the ninth chapter of the *cikitsāsthāna*. The siglum for this manuscript in footnotes was ता for तालपत्रपुस्तके.

5 Possibly MS Mumbai AS B.I.3 or MS Mumbai AS B.D.109 (Velankar 1925–30: v. 1, # 212 and 213). But both these have the *Nibandhasaṅgraha*. The first covers only the *śārīrasthāna*; the second may be complete, but Velankar calls it only “disorderly.”

6 Bhaṭṭācārya 1910–7.

7 Sena et al. 1886–93.

8 See Dominik Wujastyk, “MS Bikaner AnupLib 4390.” *Pandit*. <<http://panditproject.org/entity/108068/manuscript>>.



each part of the work being supported by only between four and eight manuscripts, excluding the printed editions.

Two sources stand out for their historical importance. The first is no. 3 of 1931, which Ācārya calls “extremely old.” It covered the *śārīrasthāna* only, and unfortunately we know nothing of the later history of this manuscript. The second is no. 3 of 1938, which is one of the important Nepalese manuscripts being considered in the present project. Ācārya’s remarks and references to Hemarājaśarman’s introduction to the *Kāśyapasaṃhitā* allow us to identify this manuscript as MS Kathmandu NAK 5-333.<sup>10</sup> But that manuscript covers the whole work, not just up to the ninth chapter of the *cikitsāsthāna* as Y. T. Ācārya and N. R. Ācārya stated.<sup>11</sup> Perhaps the editors only received collations for this portion of the manuscript and did not know that it was a witness for the whole work.

## The 1939 edition

In 1939, Yādavaśarman Trivikrama Ācārya and Nandakiśora Śarman co-edited an edition of the *sūtrasthāna* of the *Suśrutasamhitā* that was published by the Swami Laxmi Ram ayurvedic centre in Jaipur, and printed at the famous Nirṇayasāgara Press in Mumbai.<sup>12</sup> The text was edited on the basis of the following sources.

### The sources for the *Bhānumatī*

1. A printed edition. Covered the *Bhānumatī* up to chapter Su.sū.40. The siglum was 𑀧 for *mudrita*.<sup>13</sup>


<sup>10</sup> Su 1938: 22; Hemarāja Śarman 1938: 56–57. Discussed by Klebanov (2021a: §1.1, 2.3). See also HIML: IIB, 25–41; Wujastyk 2003b: 161–169.

<sup>11</sup> Su 1938: 22.

<sup>12</sup> Su 1939. The description of the sources below is based on Yādavaśarman T. Ācārya’s remarks in his introduction (pp. 3–4). See also the remarks on this edition by Klebanov (2021b: 7). On the Swami Laxmi Ram centre, see Hofer 2007.

<sup>13</sup> Sena et al. 1886–93. The manuscript on which this edition was based is probably in the library of the Calcutta Sanskrit College, and described in H. Sastri and Gui 1895–1917: v. X.1, which is not available to me. See also HIML: IB, 495, n. 57 for mention of this manuscript. The reference at Rama Rao et al. 2005: 217 to CACL accession number 97 in Bengali script may be this manuscript.





media/Bhanumati-page-11.png

Figure 1: A page of the 1939 *Bhānumatī* edition, showing the variant readings in the footnotes.

2. A manuscript in the India Office Library library provided through the Bhandarkar Oriental Research Institute in Pune.<sup>14</sup> This manuscript covered the *Bhānumatī* b up to the end of the *sūtrasthāna*. The siglum was ह for हस्तलिखित.<sup>15</sup>

### The sources for the *Suśrutasamhitā*

1. A palm leaf manuscript from Hemarājaśarman's personal library.<sup>16</sup> The siglum was ता for ताडपत्र.
2. His own published edition. The siglum was ड for डल्हणसंमतः पाठः.<sup>17</sup>
3. Hārāṇacandra Cakravartī's published edition with his own commentary.<sup>18</sup> The siglum was ह।.

### Evaluation

The main innovation of this publication was to present the only surviving part of the commentary on the *Suśrutasamhitā* by the great eleventh-century medical scholar Cakrapāṇidatta, namely the *Bhānumatī*.<sup>19</sup> A secondary purpose was to present the text of the *sūtrasthāna* as read in MS Kathmandu NAK 5-333, that had recently been brought to the editors' attention. In their judgement, the Kathmandu manuscript presented a text that was closer to what Cakrapāṇidatta had before him than the text according to Ḍalhaṇa. This was the first *Suśrutasamhitā* edition in which Ācārya used sigla to identify the sources from which variant readings were reported, so while it has limitations, it for the first time enables us to get some idea of origins of the text (see Figure 1).

Ācārya noted in his introduction that the manuscripts containing the Ḍalhaṇa's commentary all came together with the root-text of the *Suśrutasamhitā*, and thus the main *Suśrutasamhitā* text reflected the readings

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14 At this time, manuscripts from Britain were routinely lent to scholars in India and vice versa.

15 MS London BL H. T. Colebrooke 908 ([PanditProject #109978](#), consulted on July 03, 2021).

16 I.e., MS Kathmandu NAK 5-333.

17 [Su 1938](#). It is noteworthy that Ācārya refers to his 1938 edition as representing "the Ḍalhaṇa recension."

18 Bhaṭṭācārya 1910–7.

19 [HIML](#): IA, 374–375 and IB, 495–496.

chosen by Ḍalhaṇa. But the manuscripts of the *Bhānumatī* contained the commentary alone, without the root-text, and had many explanations based on different readings of the root-text than those of Ḍalhaṇa. In many of these cases it was hard to know what the text that Cakrapāṇidatta had before him. But Ācārya noted that Cakrapāṇidatta had a text before him that had much in common with the text of the Nepalese manuscript.<sup>20</sup>

There is compelling evidence that Cakrapāṇidatta's *Bhānumatī* commentary once covered the whole text of the *Suśrutasamhitā*.<sup>21</sup> The loss of the rest of the work ranks amongst the greatest disasters in Āyurvedic literature. Remarkably, the whole *Bhānumatī* may still have existed in the early twentieth century. In 1903, Palmyr Cordier reported being privately informed of a complete copy of the work in a personal manuscript collection in Benares.<sup>22</sup>

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<sup>20</sup> Su 1939: 3–4. See discussion by Klebanov (2021b: 7).

<sup>21</sup> HIML: IA, 375.

<sup>22</sup> Cordier 1903: 332.

## Features of the manuscript transmission

### Palaeographical features

- śrita for śṛta.
- ś and s in KL 699.

### Chart of characters

[[[Put a chart from QuickPalaeographer here.]]]

## Sūtrasthāna, adhyāya 1

- 1 Now I shall narrate the chapter on the origin of this knowledge.<sup>23</sup>
  - 2 Now, as is well-known, Aupadhenava, Vaitaraṇa, Aurabhra, Puṣkalāvata, Karavīra, Gopurarakṣita, Bhoja, Suśruta and others addressed Lord Divodāsa, king of Kāśi, the best of the immortals, who was in his ashram surrounded by an entourage of sages.<sup>24</sup>
  - 3 “O Lord, distress arose in our minds after witnessing people thrashing about with cries, assailed by different kinds of pain and injury (*vedanā-bhigāta*), feeling helpless in spite of having friends, because of diseases arising from the body, the mind and external sources.
  - 4 “To quell the illnesses of those who seek happiness and for our own purpose of prolonging life, we desire the science of life (*āyurveda*) that is being taught. Welfare, both in this world and in the next, depends upon it. Therefore, we have come to the Lord in pupillage.”
  - 5 The Lord said to them:  
“Welcome to you! My children, all of you are beyond reproach and worthy to be taught.
  - 6 “As is well known, Ayurveda is the name of what is said to be the subsidiary part of the Atharvaveda. Before creating people, Svayambhū composed it in hundreds of thousands of verses and a thousand chapters and, after observing the short lifespan and low intelligence of people, he presented it again in eight parts.<sup>25</sup>
  - 7 “Surgery, treatment of body parts above the clavicle, general medicine,
- 
- 23 Ḍalhaṇa understood the word “knowledge (*veda*)” as specifically “medical knowledge.” He said that the word “longevity” (*āyur*) had been elided. After this opening statement, later manuscripts and commentaries include the attribution, “as the venerable Dhanvantari stated.” The absence of this statement in the early Nepalese manuscripts is highly significant because it removes the outer narrative frame of the *Suśrutasaṃhitā* (Wujastyk 2013b: 148; Klebanov 2021a: § 3.1.2; Rai 2019; Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021). On the figure of Dhanvatari in medical literature, see [HIML: IA 358–361](#).
  - 24 On these persons, see [HIML: IA 361–363, 369 ff.](#) The authority Bhoja does not appear in the list as published in the vulgate edition ([Su 1931: 1](#)), and was not included in [HIML](#) amongst “authorities mentioned in the *Suśrutasaṃhitā*.” Meulenbeld gathered textual evidence about Bhoja at [HIML: IA 690–691](#). Klebanov (2021b) has discussed these authors in the context of an anonymous commentary on the *Suśrutasaṃhitā* that cites them.
  - 25 Svayambhū is another name for Brahmā, the creator.

- knowledge of spirits, care of children, and the disciplines of antidotes, rejuvenation and aphrodisiacs.
- 8 “Now, a collection of the characteristics of each component of Āyurveda.
- 9 “Among them, [the component] called surgery has the goal of extracting various grasses, wood, stone, dust, iron (?), soil, bone, hair, nails, discharge of pus, malignant wounds and foreign bodies inside the womb, and of determining the application of surgical instruments, knives, caustics and fire by means of sixty definitions.
- 10 “[The component] named the doctrine of treating body parts above the clavicles has the aim of curing diseases situated above clavicles that is, diseases located in ears, eyes, mouth, nose and so on.
- 11 “[The component] called general medicine has the goal of curing illnesses established in the whole body and [diseases] such as fever, tumour, swelling, hemorrhagic disorders, insanity, epilepsy, urinary diseases, diarrhoea and the like.
- 12 “[The component] called knowledge of spirits is for appeasing demons by pacification rites and making food offerings for those whose minds have been possessed by gods, their enemies,<sup>26</sup> Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas,<sup>27</sup> Nāgas and evil spirits that possess children.
- 13 “[The component] called care of children is for bearing children and purifying defects in a wet-nurse’s milk, and curing diseases that have arisen from bad breast milk and demons.
- 14 “[The component] called the discipline of toxicology is for [knowing] the signs of poison from snake and insect bites and for neutralising various combinations of poisons.<sup>28</sup>
- 15 “[The component] called the discipline of rejuvenation is maintaining youth, bringing about a long life and mental vigour and for curing dis-

26 Dānavas. The insertion marks (*kākapadas*) below the text at this point appears to be by the original scribe.

27 The vulgate doesn’t have *vināyakas* but does add *asuras*, probably under the influence of Ḍalhaṇa. Cite Paul Courtright, Ganesha book.

28 The scribal insertion marks (crosses) above the line at this point in MS K appear to be in a later hand and their referent is lost in the damaged part of the folio. Although MSS MS Kathmandu NAK 1-1079 and MS Kathmandu NAK 5-333 include spiders (*lūtā*) and creepy-crawlies (*sarīṣṛpa*) in the list, it does seem that MS K had a shorter list, and the vulgate edition adds rodents (*mūṣika*).

eases.

- 16 “[The component] called the discipline of aphrodisiacs brings about the increase, purity, accumulation and production of semen for those whose semen is minimal, bad, depleted, and dry [respectively] and for inducing an erection.
- 17 “Thus, this Āyurveda is taught with eight components.”  
“Among these [components], tell us which is for whom.”
- 18 They said, “After you have conveyed the knowledge of surgery, teach us everything.”
- 19 He said, “so be it.”
- 20 They then said, “Having considered the view of all of us, when we are unanimous, Suśruta will question you. We too will learn what is being taught to him.”
- 21 He said, “so be it.”
- 22 “Now, as is well-known, the aim of Āyurveda is eliminating the disease of one who have been assailed by disease and protecting the healthy; āyurveda is [that knowledge] in which they find a long life, or that by which long life is known. Learn its best component (i.e., surgery), which is being taught in accordance with tradition, perception, inference and analogy.
- 23 “For this component is first, the most important, because it is referred to first; it cures wounds and joins together the most important thing, Yajña’s head. For, just as it has been said of old, ‘the head that had been cut off by Rudra was joined again by the two Aśvins.’
- 24 “And also, of the eight disciplines of Āyurveda, [surgery] alone is the best because of the quick action of its procedures (*kriyā*), its application of blunt instruments, knives, caustics and fire, and it is common to all disciplines.
- 25 “Therefore, [surgery] is eternal, meritorious, leads to heaven, brings renown, bestows a long life, and affords a livelihood.
- 26 “Brahmā said this, ‘Prajāpati learned it. From him, the Aśvins. From the Aśvins, Indra. From Indra, I. In this world, I will transmit to those who desire it for the benefit of people.’  
[There a verse about this].<sup>29</sup>
- 27 *For, I (i.e., Brahmā) am Dhanvantari, the first god, the remover of old*

29 This is an expansion of the scribe’s abbreviation *bha* for *bhavati cātra ślokaḥ* “There is a verse about this” (sometimes plural).

*age, pain and death of mortals.*

*Having understood surgery, the best of the great knowledge systems, I arrived on earth again to teach it here.*

- 28 In this context, as far as this discipline is concerned, a human being (*puruṣa*) is called an amalgam of the five elements and the embodied soul. This is where procedures (*kriyā*) apply. This is the locus.

Why?

Because of the duality of the world, the world is twofold: the stationary and the moving. Its nature (*ātma*) is twofold, depending on the preponderance of Agni and Soma.<sup>30</sup> Alternatively, it can be considered as being fivefold. The multitude of beings in it are fourfold: they are termed “sweat-born, stone-born, caul-born and egg-born”.<sup>31</sup> Where they are concerned, the human being is the main thing; others are his support. Therefore, the human being (*puruṣa*) is the locus.

- 29 Diseases are said to be the conjunction of the person and suffering (*duḥkha*). There are four of them: invasive, bodily, mental and inherent. The invasive ones are caused by an injury. The bodily ones are based on food, caused by irregularities (*vaiṣamya*) in wind, bile, phlegm and blood.<sup>32</sup>

The mental (*mānasa*) ones, caused by desire (*icchā*) and hatred (*dveṣa*), include: anger (*krodha*), grief (*āśoka*), misery (*dainya*), overexcitement (*harṣa*), lust (*kāma*), depression (*viśāda*), envy (*īrṣyā*), jealousy (*asūyā*), malice (*mātsarya*), and greed (*lobha*).

The inherent (*svābhāvika*) ones are hunger, thirst, old age, death, sleep and those of the temperament (*prakṛti*).

These too are located (*adhiṣṭhāna*) in the mind and body.

Scarification (*lekhana*), nourishment (*bṛṃhana*), purification (*saṃśodhana*), pacification (*saṃśamana*), diet (*āhāra*) and regimen (*ācāra*), properly employed, bring about their cure.

- 30 Furthermore, food is the root (*mūla*) of living beings as well as of strength (*bala*), complexion (*varṇa*) and vital energy (*ojas*). It depends on (*āyatta*) the six flavours (*rasa*). Flavours, furthermore, have substances as their substrate (*āśrayin*). And substances are remedies

<sup>30</sup> See Wujastyk 2004.

<sup>31</sup> This fourfold classification of beings is paralleled with closely-related vocabulary in *Bhelasamhitā* 4.4.4 (Bhela 2000: 206; Bhela 1921: 81).

<sup>32</sup> Note that four humoral substances are assumed here.



- (*oṣadhī*-).<sup>33</sup> There are two types: stationary (*sthāvara*) and moving (*jaṅgama*).
- 31 Of these, there are four types of stationary ones: fruit trees (*vanaspati*), flowering trees (*vrkṣa*), herbs (*oṣadhi*) and shrubs (*vīrudh*).<sup>34</sup> Amongst these, the “fruit trees” have fruit but no flowers.<sup>35</sup> The “flowering trees” have flowers and fruit. The “herbs” die when the fruit is ripe. “Shrubs” put out shoots.
- 32 As is well known, moving remedies are also of four types: those born in in a caul (*jarāyuja*), those born from eggs (*aṇḍaja*), those born of sweat (*svedaja*), and shoots (*udbhid*). Amongst these, those born in a caul include animals (*paśu*), humans, and wild animals (*vyāla*). Birds, creepy-crawlies (*sarīrpa*) and snakes are “born of eggs.” Worms (*kṛmi*), small insects (*kunta*) and ants (*pipīlika*) and others are born of sweat.<sup>36</sup> Shoots include red velvet mites (*indragopa*) and frogs (*maṇḍūka*).<sup>37</sup>
- 33 In this context, among the stationary remedies, skin (*tvak*), leaves (*patra*), flowers (*puṣpa*), fruits (*phala*), roots (*mūla*), bulbs (*kanda*), sap (*kṣīra*), resin (*niryāsa*), essence (*sāra*), oil (*sneha*), and juice extract (*svarasa*)<sup>38</sup> are useful; among the moving remedies pelt (*carman*), hair, nails, and blood (*rudhira*) and so forth.
- 34 And earth products (*pārthiva*) include gold and silver.<sup>39</sup>
- 35 The items created by time (*kālakṛta*) are clusters (*samplava*) as far as
- 
- 33 Pāṇini 6.3.132 provides that the final vowel of the noun *oṣadhi* may be lengthened (→*oṣadhī*) under certain conditions. These conditions require that the word be used in a Vedic mantra and not in the nominative. Neither condition is met in this passage, yet the author uses the form *oṣadhī*. This form is in fact not uncommon in medical literature as well as in epics, purāṇas, smṛtis, and other parts of Sanskrit literature.
- 34 Ca.sū.1.71–72 also describes these four types of medicinal plant in similar terms but with slightly differing names: *oṣadhi* is a plant that ends after fruiting, *vīrudh* is a plant that branches out, *vanaspati* is a tree with fruit, and *vānaspatya* is a tree with fruit and flowers.
- 35 The MSS agree in reading *phalavantyaḥ* “having flowers” which is grammatically non-standard. This form is also found in the *Viṣṇudharmottarapurāṇa* (1.92.27, 1.92.27 *Viṣṇudh.*: 56r).
- 36 The word *kunta*, though marked as “lexical” in most dictionaries, is in fact found in literature, commonly as a compound with *pipīlika*; the compound sometimes seems to be understood a type of ant (*tatpuruṣa* compound) rather than as a pair of insects (*dvandva* compound).
- 37 On *indragopa*, see Lienhard 1978.
- 38 On juice extract (*svarasa*) see CS 1.1.73, 1.4.7; Ḍalhaṇa on 4.10.12 (*Su* 1938: 450).
- 39 The flow of concepts in the treatise seems to be interrupted here.

wind and no wind (*nivāta*), heat and shade, darkness and light and the cold, hot and rainy seasons (*varṣā*) are concerned. The divisions of time are the blink of the eye (*nimeṣa*), a trice (*kāṣṭhā*), minutes (*kalā*), three-quarters of an hour (*muḥūrta*), a day and night (*ahorātra*), a fortnight (*pakṣa*), a month (*māsa*), a season (*rtu*), a half-year (*ayana*), a year (*saṃvatsara*), and yuga (*yuga*).<sup>40</sup>

- 36 These naturally cause accumulation (*sañcaya*), irritation (*prakopa*), pacification (*upaśama*) and alleviation (*pratīkāra*) of the humours (*doṣa*). And they have practical purposes (*prayojanavat*).

[There are verses about this:]<sup>41</sup>

- 37 *This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.*<sup>42</sup>

- 38 *There are two kinds of invasive diseases. Some certainly<sup>43</sup> affect (ni√pat) the mind, others the body. Their treatment (kriyā) is of two kinds too.*

- 39 *For those that affect the body there is physical (śārīravād) therapy, whereas for those that affect the mind there is the collection (varga) of desirable sensory experiences like sound that bring comfort (sukha).*

- 40 Along these lines (*evam*), this brief explanation of the four factors (*caturṣṭaya*) is given:

- human being (*puruṣa*),
- disease (*vyadhi*),
- remedies (*oṣadhi*),
- the time for therapies (*kriyākāla*).

In this context,

- from the mention of the word “human,” the collection of substances that arise from it, such as the elements, and the particulars

40 These units are presented at 1.6.5 ([Su 1938: 24](#)) and discussed by Hayashi ([2017: § 59](#)).

41 See footnote [29](#).

42 On the topic of the “group of four,” the commentator Ḍalhaṇa considers them to be “food, behaviour, earthen products and items created by time.” He refers to the author of the lost commentary entitled *Pañjikā*, and to Jejjāta ([HIML: IA, 372–3, 192](#)). In his view, these early commentators do not agree that the fourfold grouping (*caturvarga*) refers to the quartet of stationary (*sthāvara*), moving (*jaṅgama*), earthen products (*pārthiva*) and items created by time (*kālakṛta*) ([Su 1938: 9a](#)).

43 The text uses an archaic interjection here, *ha*.

(*vikalpa*) of its major and minor parts (*aṅga*) such as skin (*tvak*), flesh (*māṃsa*), ducts (*sirā*), sinews (*snāyu*), bones (*asthi*) and joints (*sandhi*) are meant.

- From the mention of “diseases,” all diseases caused by wind, bile, phlegm, congested humours (*sannipāta*), external factors (*āgantū*) and inherent factors (*svabhāva*) are intended (*vyākhyāta*).
- From the mention of “remedies,” there is the teaching of substances, tastes, potencies, post-digestive tastes.
- From the mention of “procedures (*kriyā*),” therapies (*karman*) such as oiling and excision (*chedya*) are taught.
- From the mention of the word “time,” every single teaching about the times for procedures is meant.

[There is a verse about this:]<sup>44</sup>

41        *This seed of medicine has been declared in brief. Its explanation will be given in one hundred and twenty chapters.*<sup>45</sup>

42        There are one hundred and twenty chapters in five sections (*adhyāya*).<sup>46</sup> In that regard, having divided them, according to their subject matter, into the Ślokaśthāna, the Nidāna, the Śārīra, the Cikitsita and the Kalpa, we shall mention this in the Uttara Tantra.<sup>47</sup>

[There is a verse about this:]<sup>48</sup>

43        *Someone who reads this eternal proclamation of the King of Kāśī, that was declared by Svayambhu, will have good karma on earth, will be respected by kings and upon death will achieve the world of Śakra.*

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44 See footnote 29.

45 This is the number of chapters in the first five sections of the work, namely the *Sūtra*-, *Nidāna*-, *Śārīra*-, *Cikitsā*- and *Kalpa*-sthānas. These have 46, 16, 10, 40 and 8 chapters respectively. The *Uttara Tantra* has 66 chapters.

46 On *viṃśa* in the sense of “greater by 20” see P.5.2.46 *śadantaviṃśateś ca*.

47 The end of this sentence reads oddly. The vulgate edition adds an object: “[we shall mention] the remaining topics [in the Uttara]” which smooths out the difficulty, but this is supported in none of the Nepalese MSS. At the start of the *Uttara Tantra* (**susr-trikamjī**) there is indeed a statement that picks up the point about there being 120 chapters.

48 See footnote 29.

## Sūtrasthāna, adhyāya 2

### Literature

[HIML](#): IA, 204; Preisendanz [2007](#); Wujastyk [2012](#): 82–83, *et passim*.

1

## Sūtrasthāna, adhyāya 28

- 1 Thus, living creatures and their strength, complexion (*varṇa*) and energy (*ojas*) are rooted in food. That (food) depends on the six flavours (*rasa*). Thus, the flavours depend on substance (*dravya*), and substances depend on medicinal herbs. There are two kinds of them (herbs): stationary and mobile.<sup>49</sup>

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49 1.1.28 (Su 1938: 7), tr. P. V. Sharma 1999–2001b: I, 21.

## Kalpasthāna, adhyāya 1

The first chapter of the Kalpasthāna of the *Suśrutasamhitā* addresses the topic of protecting a king from those who would assassinate him using poison. The king's kitchen is presented as the site of greatest vulnerability. The staff in the kitchen must be vetted carefully and watched for signs of dissimulation. The description of the body-language that tells a poisoner (verses 18–25) are engaging and vivid. These verses are closely parallel in sense to a passage in the *Arthaśāstra* that says,

The signs of a poisoner, on the other hand, are as follows: dry and dark look on the face, stuttering speech, excessive perspiration and yawning, trembling, stumbling, looking around while speaking, agitation while working, and not remaining in his place.<sup>50</sup>

Next, the text discusses the signs of poison in toothbrushes, in food, drink, massage oil and other items that are likely to come into physical contact with the king. In passages that are again paralleled in the *Arthaśāstra* the work describes how poisoned food kills insects and crackles in a fire, flashing blue and the reactions of various birds to poison are described.<sup>51</sup>

The work then moves on to the various symptoms experienced by the king after being poisoned, and remedies appropriate to each case. Poison exhibits characteristic signs when added to milk and other drinks.<sup>52</sup> Further forms of poisoning, their symptoms and treatments are described and finally the king is advised to live amongst trusted friends and to protect his heart by drinking various ghee compounds. He should eat the meat and soup made from various animals, including peacock, mongoose, alligator, deer. The chapter ends with the description of an emetic.

### Literature

A brief survey of this chapter's contents and a detailed assessment of the existing research on it to 2002 was provided by Meulenbeld.<sup>53</sup> Translations of

<sup>50</sup> *Arthaśāstra* 1.21.8 (Kangle 1969: 1, 30), translation by Olivelle (2013: 97).

<sup>51</sup> Cf. *Arthaśāstra* 1.21.6, *ibid.*, Olivelle (2013: 96).

<sup>52</sup> Cf. *Arthaśāstra* 1.21.6 again.

<sup>53</sup> HIML: IA, 289–290.

this chapter since 2000 have appeared by Wujastyk (2003b: 131–139), P. V. Sharma (1999–2001b: 3, 1–15), and Srikantha Murthy (2000–2).<sup>54</sup>

More recently, a discussion of the fourth chapter of this section in the light of the Nepalese manuscripts was published by Harimoto.<sup>55</sup> After a close comparative reading of lists of poisonous snakes, Harimoto concluded that, “the Nepalese version is internally consistent while the [vulgate] editions are not.” Harimoto showed how the vulgate editions, had been adjusted textually to smooth over inconsistencies, and gave insights into these editorial processes.<sup>56</sup>

## Manuscript notes

- MS Kathmandu NAK 5-333 has foliation letter numerals, for example on f. 323a, that are similar to MS Cambridge Add. 1693,<sup>57</sup> dated to 1165 CE noted in Bendall’s chart of Nepalese letter-numerals Bendall 1883: Lithograph V, after p. 225

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54 For a bibliography of translations to 2002, including Latin (1847), English (1877), Gujarati (1963) and Japanese (1971), see [HIML](#): IB, 314–315.

55 Harimoto 2011: 101–104.

56 The two editions that Harimoto noted, [Su 1938](#) and [Su 1889](#), present identical texts.

57 Scan at [cudl.lib.cam.ac.uk/view/MS-ADD-01693/1](http://cudl.lib.cam.ac.uk/view/MS-ADD-01693/1).

## Translation

- 1–2 And now I shall explain the procedures for safeguarding food and drink, as were declared by the Venerable Dhanvantari.<sup>58</sup>
- 3 Divodāsa, the king of the earth, was the foremost supporter of religious discipline and virtue. With unblemished instruction he taught his students, of whom Suśruta was the leader.<sup>59</sup>

### [Threats to the king]

- 4–5 Evil-hearted enemies who have plucked up their courage, may seek to harm the king, who knows nothing of it. He may be assailed with poisons by or by his own people who have been subverted, wishing to pour the poison of their anger into any vulnerability they can find.<sup>60</sup>
- 6 Therefore, a king should always be protected from poison by a physician.
- 7 The racehorse-like fickleness of men's minds is well known. And for this reason, a king should never trust anyone.<sup>61</sup>

58 MS H adds in the margin अथ खलु वत्स सुश्रुतः “Now begins Vatsa Suśruta.” This phrase has been copied here by the scribe from the beginning of the *Suśrutasaṃhitā* chapter in the *sūtrasthāna* on the rules about food and drink (1.46.3 (Su 1938: 214)). The scribe presumably felt, not unreasonably, that this section had common subject matter with the present chapter. Further, SS 1.46.3 is the only place in the Nepalese transmission of the *Suśrutasaṃhitā* that names Dhanvantari and integrates him into the narrative of the *Suśrutasaṃhitā* as the teacher of Suśruta.

The mention of Dhanvantari here is the only other time in the Nepalese transmission that this authority is cited as the source of Ayurvedic teaching, and the unique occurrence of this actual phrase, “as was declared by the Venerable Dhanvantari.” See the discussion by Klebanov (2021a: 28–32), who concludes that the earliest recoverable recension of the *Suśrutasaṃhitā* may have had the phrase only at this point and not elsewhere in the work. See the further discussion by Birch, Wujastyk, Klebanov, Parameswaran, et al. (2021).

59 This is a quite different statement from the vulgate which has Dhanvantari as the teacher, and calls him the Lord of Kāśī (*kāśīpati*) (Su 1938: 559). Ḍalhaṇa followed the vulgate but explicitly noted the reading before us with small differences: दिवोदासः क्षितिपतिस्तपोधर्मश्रुताकरः “Divodāsa, the king of the earth, was a mine of traditions about discipline and virtue.”

60 Verses about the use of Venemous Virgins as a weapon do not appear in the Nepalese manuscripts. Cf. Wujastyk 2003b: 81 f., 132. This material is present in the commentary of Gayadāsa.

61 The verb √ śvas is conjugated as a first class root in the Nepalese manuscripts.



- 8–11 He should employ a doctor in his kitchen (*mahānasa*) who is respected by experts, who belongs to a good family, is orthodox, sympathetic, not emaciated, and always busy.
- 12–13 The kitchen should be constructed at a recommended location and orientation. It should have a lot of light,<sup>62</sup> have clean utensils and be staffed by men and women who have been vetted.<sup>63</sup>
- 17–18ab The chefs, bearers (*voḍhāra*), and makers of boiled rice soups and cakes and whoever else might be there, must all be under the strict control of the doctor.<sup>64</sup>
- 18cd–19ab An expert knows people’s body language (*iṅgita*) through abnormalities in voice, movement and facial expression. He should be able to identify a poisoner by the following signs.
- 19cd–23 Wanting to speak, he gets confused, when asked a question, he never arrives at an answer, and he talks a lot of confused nonsense, like a fool. He laughs for no reason, cracks his knuckles and scratches at the ground. He gets the shakes and glances nervously from one person to another. His face is drained of colour, he is grimy (*dhyāma*) and he cuts at things with his nails.<sup>65</sup> A poisoner goes the wrong way and is absent-minded.
- 25–27 I shall explain the signs to look for in toothbrush twigs, in food and drink as well as in massage oil (*abhyāṅga*) and combs (*avalekhana*); in dry rubs (*utsādana*) and showers, in decoctions (*kaṣāya*) and massage ointment (*anulepana*); in garlands (*sraja*), clothes, beds, armour and ornaments; in slippers and footstools, and on the backs of elephants and horses; in nasya (*snuff*), inhaled smoke (*dhūma*), eye make-up (*añjana*), etc., and any other things which are commonly poisoned. Then, I shall also explain the remedy.
- 28 Flies or crows or other creatures that eat a poisonous morsel (*bali*)

Cf.  
Arthaśāstra  
1.21.8.

62 We read महच्छुचिः with the Nepalese manuscripts and against the vulgate’s महच्छुचि. We understand शुचिस् as a neuter noun meaning “light” following Apte (Apte: 1050a).

63 Verses detailing the ideal staff are omitted in the Nepalese manuscripts. Cf. Su 1938: 560; Wujastyk 2003b: 132.

64 The word सौपोदनैकपूषिक “chefs for the boiled rice soups and cakes” is grammatically interesting. The term सूपोदन (as opposed to सूपौदन) is attested in the *Bodhāyanīya-grhyasūtra* 2.10.54 (Shastri 1920: 68). More pertinently, perhaps, सूपौदन is attested in the Bower Manuscript, part II, leaf 11r, line 3 (Hoernle 1893–1912: vol. 1, p. 43).

65 The word ध्याम is glossed by Ḍalhaṇa (in a variant reading) as someone who is the colour of dirty clothes 5.1 (Su 1938: 560).

- served from the king's portion, die on the spot.
- 29 Such food makes a fire crackle violently, and gives it an overpowering colour like a peacock's throat.
- 30–33 After a chukar partridge looks at food which has poison mingled with it, its eyes are promptly drained of colour; a peacock pheasant drops dead. A koel changes its song and the common crane rises up excitedly.<sup>66</sup> It will excite a peacock and the terrified parakeet and the hill myna screech. The swan trembles very much, and the racket-tailed drongo churrs.<sup>67</sup> The chital deer sheds tears and the monkey releases excrement.<sup>68</sup>
- 34cd Vapour rising from tainted food gives rise to a pain in the heart, it makes the eyes roll, and it gives one a headache.<sup>69</sup>
- 35, 36cd In such a case, an errhine and a collyrium that are costus, ??, *spikenard* and honey (*madhus*);<sup>70</sup> a paste of sandalwood on the heart may also provide relief.<sup>71</sup>

66 The verb अर्च्छति “rises up” is a rare form best known from epic Sanskrit (see Oberlies 2003: 212, §7.6.1). The transmitted form क्रौञ्च is obviously a colloquial version of Sanskrit क्रौञ्च. Commenting on 1.7.10 (Su 1938: 31), Ḍalhaṇa interestingly gives the colloquial versions of several Sanskrit bird names, even singling out pronunciation in the specific location of Kānyakubja. For क्रौञ्च he says that people pronounce it कुरञ्ज and कौञ्चि. The form क्रौञ्च is found in Pāli (see Cone 2001: 731, who notes that Ardhmāgadhī has the same form). Elsewhere, Ḍalhaṇa calls the bird क्रौञ्चिर, क्रौञ्चि, and कैचर (1.46.105 (Su 1938: 223), 6.31.154 (Su 1938: 684) and (6.58.44 (Su 1938: 790) respectively).

67 Ḍalhaṇa seemed confused about the racket-tailed drongo (भृङ्गराज). He called it a generic drongo (भ्रमरक), a word that can also mean “bee,” (Dave 1985: 62), and then said that it is like the black drongo (धूम्याट) (for a nice explanation of this name, see Dave 1985: 62–63) and that people call it “the king of birds.”

68 MS Kathmandu KL 699 reads “bull (वृषभ)” for “Chital deer (पृषत).” The latter may perhaps be mistaken for the former in the Newa script, although the reading of MS Kathmandu KL 699 is hard to read at this point.

69 “Tainted” translates उपक्षिप्त. The word’s semantic field includes “to hurl, throw against,” and especially “to insult verbally, insinuate, accuse.” The commentator Ḍalhaṇa glossed the term as, “spoiled food given to be eaten” (विदूषितस्यान्नस्य भोक्तुं दत्तस्य), but he noted that some people read “उखाक्षिप्त” or “thrown into a pan.” Other translators have commonly translated it as “served,” perhaps influenced by Ḍalhaṇa’s “given (दत्त).”

70 The vulgate supplies another phrase and verb at this point that is not present in the Nepalese transmission, but that makes the text flow more easily.

71 **sing-1972empty citation** discussed the difficulties in identifying लामज्ज, a plant cited more often in the *Suśrutasaṃhitā* than in the *Carakasaṃhitā*; Ḍalhaṇa adopted the com-

- 37 Held in the hand, it makes the hand burn, and the nails fall out. In such a case, the ointment (*pralepa*) is [beautyberry](#), [velvet-mite](#), soma and [water-lily](#).<sup>72</sup>
- 38–39 If he eats that food, through inattention or by mistake, then his tongue will feel like a pebble (*aṣṭhīlā*) and it will lose its sense of taste. It stings and burns, and his saliva (*śleṣman*) dribbles out.<sup>73</sup> In such a case, he should apply the treatment recommended above for vapour (*bāṣpa*), and what will be stated below under “toothbrush twigs”.<sup>74</sup>
- 40 On reaching his stomach, it causes stupor (*mūrcchā*), vomiting, the hair stands on end, there is distension, a burning feeling and an impairment of the senses.<sup>75</sup>
- 41 In this case, vomiting must quickly be induced using the fruits of [emetic](#)

mon view that it is a type of *uśīra* or vetiver grass. The grammatical neuter form मधुस् “sweetness” of the Nepalese manuscripts is less common than neuter मधु “honey, sweetness, liquorice.”

- 72 “Beautyberry” (*Callicarpa macrophylla* Vahl.) is one identification of श्यामा, but vaidyas and commentators have different ideas about the plant’s identity (see glossary).

On translating इन्द्रगोप as “velvet-mite,” see Lienhard 1978. Ḍalhaṇa’s remarks show that he had a reading इन्द्रगोपा before him, and he tries to explain इन्द्रा and गोपा as separate plants. But he also says that some people read इन्द्रगोप.

Ḍalhaṇa curiously parsed the name सोमा (f.) out of the compound; this feminine noun is almost unknown to Ayurvedic literature. Some dictionaries and commentators consider it a synonym for गुडूची, others for ब्राह्मी or चन्द्रतरु. Ḍalhaṇa also mentioned that some people think the word refers to the soma creeper (सोमलता), which might explain his choice to take the word as feminine. But the compounded word is far more likely to be सोम (m.), the well-known mystery plant (see Wujastyk 2003b: 76–78, 125). If this can be taken as rue (*Ruta graveolens*, L.), as some assert, one can point to a pleasing passage in Dioscorides where rue plays an antitoxic role: “...it is a counterpoison of serpents, the stinging of Scorpions, Bees, Hornets and Wasps; and it is reported that if a man be anointed with the juice of the Rue, these will not hurt him; and that the serpent is driven away at the smell thereof when it is burned; insomuch that when the weasel is to fight with the serpent she armeth herself by eating Rue, against the might of the serpent” (cited from Potter: 262; not found in Osbaldeston and Wood 2000).

- 73 The word अष्टील is normally feminine. The Nepalese manuscripts read it with a short अ- ending. Gayadāsa noticed that some manuscripts read अष्टील with a short -अ ending (MS Bikaner RORI 5157, f. 5v:7–8) and Ḍalhaṇa reproduced his observation. The vulgate reading “from his mouth (चास्यात्)” is more obvious (*lectio faciliior*), but is not attested in the Nepalese manuscripts.
- 74 Poisoned toothbrushes are discussed in verses 48 ff. below.
- 75 I translate मूर्च्छा in the light of the metaphors discussed by Meulenbeld (2011), that include thickening and losing consciousness.

- nut, bitter gourd, red gourd, and luffa, taken with milk and watered buttermilk, or alternatively with rice-water.
- 42 Reaching the intestines (*pakvāśaya*), it causes a burning feeling, stupor, diarrhoea, thirst, impairment of the senses, flatulence (*āṭopa*) and it makes him pallid and thin.
- 43 In such a case, purgation with the fruit of indigo (*nīlī*), together with ghee, is best. And 'slow-acting poison antidote (*dūṣṭviṣāri*)' should be drunk with honey and curds (*dadhi*).<sup>76</sup>
- 44 When poison is in any liquid substances such as milk, wine or water, there are various streaks, and foam and bubbles form.
- 45 And no reflections are visible or, however, if they can be seen once more, they are distorted, fractured, or tenuous and distorted too.<sup>77</sup>
- 46 Vegetables, soups, food and meat are soggy and tasteless. They seem to go stale suddenly, and they have no aroma.
- 47 All edibles lack aroma, colour or taste. Ripe fruits rapidly rot (*prā√kuth*) and unripe ones ripen.<sup>78</sup>
- 48 When a toothbrush twig has poison on it, the bristles are corroded and the flesh of the tongue, gums and lips swells up.<sup>79</sup>
- 49 Then, once his swelling is lanced, one should rub (*pratisāraṇa*) it with fire-flame bush flowers jambul, mango stones and chebulic myrobalan fruit mixed with honey.<sup>80</sup>
- 50 Alternatively, the rubbing (*pratisāraṇa*) can be done with either the roots of sage-leaved alangium, the bark of blackboard tree or siris seeds.<sup>81</sup>

I'm still unhappy about this verse.

Mention this in the introduction as an example of the scribe knowing the vulgate.

fn about sadyas+

76 The 'slow-acting poison' is discussed at 5.2.25 ff. (Su 1938: 565).

77 Both Nepalese witnesses read विकृत (distorted) twice, which is tautologous. In the first occurrence both read विकृत without proper termination. One might read the sandhi in the second occurrence as or not distorted (*vāvikṛtā*), but this gives no better sense. The scribe of MS Kathmandu NAK 5-333, apparently the original hand, added in the margin the alternate reading "double (*yamalā*)" as in the vulgate. Perhaps the scribe too was troubled by the tautology. It is also evidence that he was aware of a witness with variant readings similar to the vulgate. We emend for grammar but retain the *lectio difficilior*.

78 The root √कुथ "stink, putrify, rot" is apparently known only from its few uses in the *Suśrutasamhitā*.

79 Gayadāsa and Ḍalhaṇa pointed out that "enclosure of a tooth (दन्तवेष्ट)" and "flesh of the tooth (दन्तमांस)" have the same meaning (2.16.14–26 (Su 1938: 331–332)).

80 This recipe is different from the vulgate.

81 The spelling of the name अङ्गोल्ल varies अङ्गोट, अङ्गोठ, अङ्गोल (sing-1972); Ḍalhaṇa noted

- 51ab One should give advice about a poisoned tongue-scraper or mouth-wash (*kavala*) in the same way as for a toothbrush twig.
- 51cd Massage oil that has been laced with poison is slimy, thick and discoloured.
- 52 When the massage oil has been contaminated with poison, boils arise, pain, a discharge (*srāva*), inflammation of the skin, and sweating.<sup>82</sup> And the flesh (*māṃsa*) splits open.
- 53–54 In such a case, sandalwood, *crape jasmine*, *costus*, and *cuscuta* grass, *bamboo leaves*, *heart-leaved moonseed* and *heart-leaved moonseed*, *white clitoria*, *sacred lotus*, and *Indian barberry* should be made into an ointment (*anulepana*) for the patient, who has been sprinkled with cold water. That is also recommended as a drink with the juice and leaves of *wood apple*.<sup>83</sup>
- 55 In the case of a dry rub (*utsādana*), a shower (*parīṣeka*), an infusion, a massage ointment (*anulepana*), or in beds, clothes, or armour, the physician should understand that it is the same as for massage (*abhyāṅga*).<sup>84</sup>
- 56–58 When a comb has poison in it, the hair falls out, the head aches and blood oozes from the follicles (*kha*) and lumps (*granthi*) appear on the head. In such a case, one should repeatedly apply an ointment of black earth soaked with *bear's bile*,<sup>85</sup> ghee, *beautyberry*,<sup>86</sup> *black creeper*, and *amaranth*. Good alternatives are either the fluid extract of cow-dung, or the juice of *jasmine*, the juice of *woodrose*, or household soot.<sup>87</sup>

Bear's bile  
instead of  
deer's bile.

that the form अङ्गोल्ल is a colloquialism (1.37.12 (Su 1938: 161)). The sentence is awkward and we have emended शिरीषमाषक to be a plural, as in the vulgate, rather than the ablative singular of the Nepalese witnesses. We follow Ḍalhaṇa in interpreting the compound to refer to the distinctive bean-like siris seeds, rather than to *mung beans* (5.1.50 (Su 1938: 562)).

82 The feminine स्फोट for “boils” is unattested.

83 This compound could be interpreted as “wood apple juice and *cassia cinnamon*.” Note that this recipe differs from that of the vulgate, which requires urine.

84 See verse 52 above.

85 Ḍalhaṇa comments here that ‘bile is that fluid which goes along inside the tube attached to the liver’ (कालखण्डलग्ननलिकामध्यगतजलं पित्तम्) 5.1.57 (Su 1938: 562).

86 See note 72.

87 The plant identifications in this passage follow Ḍalhaṇa’s glosses, although he noted a difference of opinion on the identity of *woodrose* (lit. “mouse-ear”).

The expression धूमो वागारसंज्ञितः ‘...or the smoke termed “house”’ is commonly interpreted by translators and in Ayurvedic dictionaries as ‘household soot,’ and this does seem to be the meaning, in context. The term was comprehensively discussed by Meulenbeld (2008: 443). Cf. note 179, p. 52.

- 59 If either massage oil for the head, or a helmet for the head, in a wash, turban, or garlands that are contaminated with poison, then one should treat it in the same way as a comb.
- 60–61 When face make-up is poisoned, the face becomes dark and has the symptoms found with poisoned massage oil. It is covered with spots (*kaṇṭaka*) that are like lotus-spots (*padminikaṇṭaka*).<sup>88</sup> In this case, the drink is honey and ghee, and the ointment (*pralepa*) is sandalwood with ghee, curds, honey, **verbena**, **scarlet mallow** and **hogweed**.<sup>89</sup>
- 62–63ab Elephants and the like become ill and they dribble saliva. And the rider gets spots (*sphoṭa*) and a discharge on his scrotum, penis, and rectum. In this case, one prescribes the same therapy as for poisoned massage oil for both the rider and the mount.
- 63cd–65ab When there is poison in snuff (*nasya*) or smoke, the symptom (*liṅga*) is blood coming out of the apertures of the head (*kha*), a headache, a flow of mucus (*kapha*) and impairment of the senses. In such a case, ghee of cows etc., boiled up with their milk and **Himalayan monkshood**, is prescribed, with **henna**, as a cold drink or er-rhine.
- 65cd–66 Flowers lose their fragrance and colour, and wilt. On smelling them, he gets a headache and his eyes fill with water. In this case, the treatment is what was proposed above for vapour (*bāṣpa*) and that which is traditional for face make-up.
- 67–68 When it is in ear-oil, there is degeneration in the ear, and painful swelling. There is also a discharge from the ear and in such a case it needs to be irrigated (*pratipūraṇa*) promptly with ghee and honey. Extracted juice (*svarasa*) of **wild asparagus** and very cold juice of **white cutch tree** are also recommended as something good.<sup>90</sup>
- 69 When poison is mixed in with eye make-up (*añjana*), he gets tears and rheum (*upadeha*), with a burning feeling, pain, faulty vision (*dṛṣṭivi-*

punarnavā  
in the N &  
K MSS

śrita for  
śṛta

explain  
more

88 See the description of this condition at 2.13.40 (**Su 1938**: 323), where the skin on the face is characterized as having pale circular patches that are itchy and have spots.

89 The common plant-name पुनर्नवा is read as पुनर्णवा in both Nepalese witnesses. This unusual form is technically-speaking legal according to Pāṇini 8.4.3, but is not attested in published texts. पुनर्णवा is found rarely in some other Nepalese manuscripts such as the *Brahmayāmala* (a.k.a. *Picumata*, 44.81, transcription thanks to Shaman Hatley), and elsewhere (e.g., in *Gaṇapatiśāstrī* 1920–5: 20, where it is the name of a constellation).

90 The syntax of the Nepalese version is slightly unclear, but the vulgate has smoothed out the difficulties.



- bhrama*), and possibly even blindness.<sup>91</sup>
- 70–71 In this case, one must immediately drink ghee and have it also in an eyewash (*tarpana*) with long pepper. One should have an eye ointment (*añjana*) of the juice of periploca of the woods and have the extract (*niryāsa*) of three-leaved caper, wood apple and periploca of the woods and the flower of marking-nut tree.
- 72–73 Because of poisoned slippers there will definitely be a swelling, numbness (*svāpa*), a discharge (*srāva*) and an outbreak of spots (*sphoṭa*) on the feet. One should clean (*pra√sādh*) footstools together with slippers.
- 74 Ornaments lose their lustre, and they do not shine as they used to. They damage their respective locations with burning, sepsis (*pāka*), and fisting (*avadāraṇa*).<sup>92</sup>
- 75ab One should apply the stated procedure for massage oil (*abhyāṅga*) to poisoned slippers and ornaments.
- 75cd–76 In the case of the affliction (*upasarga*) by poison which has been described above, starting from ‘vapour’ and ending with ‘ornaments,’ the physician should observe the side-effects (*upadrava*) and then prescribe the therapy called the Great Fragrance (*mahāsugandha*) antidote, which I shall describe.<sup>93</sup>
- 77–78ab He should prescribe it in drinks, liniments (*ālepana*), errhines (*nasya*), and in eye ointment (*añjana*). Also, he should use sharp purgatives and emetics. If bleeding is present, he should have the indicated veins pierced.
- 78cd–79ab If either purging nut or a fern is tied on to the King’s wrist, then all food that is mixed with poison will be rendered free of poison.<sup>94</sup>

Medical difference from Sharma.

example where the vulgate clarifies that these should be used separately; appears to be a gloss inserted into the vulgate text.

The two uses of *prāpta* are hard to translate. *prāptāh* → *kṣiprām* is an example of the vulgate banalizing the Sanskrit text to make sense of a difficult passage.

√ *vyadh* not √ *vedh* (also elsewhere and for the ears), causative optative.

91 The term translated as “faulty vision” could also mean “rolling eyes.” “Eye make-up” is normally made of Indian barberry.

92 The reading अवदारुण in MS Kathmandu KL 699 is not attested elsewhere in Sanskrit literature. On “sepsis” for पाक, see Wujastyk 2003b: xlv–xlvi.

93 This antidote is indeed described later, in dramatic terms, at 5.6.14–27 (Su 1938: 581). A recipe with eighty-five ingredients including cow’s bile, it is praised as chief of all antidotes, one that can drag the patient back from the very jaws of death, from even the poisonous fangs of Vāsuki.

94 In early Ayurvedic literature, the plant अजरुहा is mentioned only here and its identity is unknown. It may be a fern of the Nephrodium family, according to Singh and Chuneekar (GVDB: 7). Dalhaṇa, on 5.1.78 (Su 1938: 563), cited a description of the two plants from the little-known authority Uśanas (HIML: IA, 660 et passim) who described अजरुहा as a white root with spots on it that looks like collyrium when it is split; when drunk with sandalwood it causes poison to be digested.

- 79cd–80 He should always keep his heart protected (*hrdayāvaraṇa*) when amongst **people who are not his friends**.<sup>95</sup> Before eating he should drink the kinds of ghee called ‘Invincible’ and ‘Immortal’.<sup>96</sup> He should drink ghee (*sarpiṣ*), honey, curds (*dadhi*), milk (*payas*), or cold water.
- 81 He should consume monitor lizard, peacock, mongooses, **chital deer**, and **blackbuck** too, that destroy poison, and their juices.
- 82 As discerning person should add well-crushed **black creeper**,<sup>97</sup> **liquorice**, and sugar to the meats of **monitor lizard** monitor lizard, mongoose and **blackbuck** too.
- 83 Add sugar and **Himalayan monkshood** to peacock flesh, together with **ginger** And for meat from a **chital deer**, he should add **long pepper**, with **ginger**.
- 84ab **A cold neem** broth with honey and ghee is wholesome too.
- 84cd A discerning person should partake of hard and soft foods that counteract poison.<sup>98</sup>
- 85 If poison might have been drunk, a person who has protected his heart should make himself vomit using long pepper, liquorice, honey, sugar, sugarcane juice and water.

opposite of  
the vulgate  
Same as  
1.8.89  
(As 1980: 79)

The first chapter in the Kalpas.

95 The *Carakasamhitā* described ‘protecting the heart’ as drinking several sweet, oily drinks to surround the heart and keep it safe (6.23.46 (Ca. 1941: 574)). Ḍalhana explained it as taking a number of anti-toxic medicines, including those listed in the present passage, in order to cover or hide (प्रच्छादन) the heart 5.1.79–81 (Su 1938: 563).

96 These ghee compounds are described in later chapters: see 5.2.47–49 (Su 1938: 566) and 5.6.13 (Su 1938: 581).

97 Or some say turpeth.

98 On this expression, see Yagi 1994.



## Kalpasthāna, adhyāya 2

### Introduction

This section begins with several lists of poisonous plants. The Sanskrit names for these plants are mostly not standard or familiar from anywhere in Sanskrit or ethnobotanical literature. It remains a historical puzzle why these particular names are so difficult to interpret. However, we are not the first to encounter these difficulties. In the twelfth century, the learned commentator on the text, Ḍalhaṇa, remarked,

In spite of having made the greatest effort, it has been impossible to identify these plants. In the Himalayan regions, Kirātas and Śabarās are able to identify them.<sup>99</sup>

Ḍalhaṇa also recorded variant readings of these poison names from the manuscripts that he consulted of the lost commentary of Gayadāsa (fl. c. CE 1000). The identities of these poisons have been in doubt for at least a thousand years.<sup>100</sup> Identifications have in many cases been equally impossible for us today.

One path for exploration in this situation is to attempt to reverse-engineer some identifications by considering the known toxic plants of India.<sup>101</sup>

### Translation

- 1 And now I shall explain **what should be known** about stationary poisons.<sup>102</sup>

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99 After *Suśrutasaṃhitā*, *kalpasthāna* 2.5 (Su 1938: 564). From the view of Sanskrit authors, Kirātas and Śabarās were tribal peoples. The eleventh-century author Bhikṣu Govinda, however, cast his treatise as a dialogue with a Kirāṭa king called Madana who was a master of the alchemical art (HIML: IIA, 620).

100 See Wujastyk 2003b: 80–81.

101 Valuable reference sources on Indian plant toxicology in general include Pillay 2013: chs. 10, 11 and Barceloux 2008: parts 1.II, 3 and 4.

102 No reference is made to Dhanvantari (see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021). “Stationary” here is a term contrasted with “moving,” and signifies plants as opposed to animals and insects.

- 3 It is said that there are two kinds of poisons, stationary (*sthāvara*) and mobile (*jaṅgama*). The former dwells in ten sites, the latter in sixteen places.
- 4 Traditionally, the ten are: root, leaf, fruit, flower, bark, milky sap (*kṣīra*), pith (*sāra*), resin (*niryāsa*), the elements (*dhātu*), and the tuber.
- 5 In that context,
- the eight root-poisons are:<sup>103</sup>
    1. liquorice (?),<sup>104</sup>
    2. sweet-scented oleander,<sup>105</sup>
    3. jequirity,<sup>106</sup>
    4. false daisy,<sup>107</sup>
    5. *karatā*,<sup>108</sup> and ending with
    6. leadwort (*vidyutśikhā* → *agni-* or *rakta-śikhā?*)<sup>i</sup>,<sup>109</sup>
    7. country sarsaparilla (?),<sup>110</sup> and

<sup>103</sup> Some South Asian plants with poisonous roots that we would have expected to see in this list include *Croton tiglium*, L., *Calotropis* spp., *Citrullus colocynthus* L. Schrad., and *Ricinus communis* L. (CIPP).

<sup>104</sup> Liquorice eaten in excess can be poisonous, but it is unlikely to be the plant intended here. Singh and Chuneekar (GVDB: 124) noted that the poisonous root mentioned in this passage, “remains to be identified.”

<sup>105</sup> The roots of sweet-scented oleander are highly toxic, as are most parts of the plant (Pillay and Sasidharan 2019).

<sup>106</sup> Jequirity contains a dangerous toxin called Abrin in its seeds and to a lesser extent in its leaves, but apparently not in its roots or bulb. Abrin is not harmful if eaten, but an infusion of the bruised (not boiled) seeds injected or rubbed in the eyes can be fatal (NK: # 6). The dose can be quite small.

<sup>107</sup> The plant is usually called just *bhaṅgurā* without the prefix *su-* “good.” However, there is no reported toxicity associated with *E. prostrata*.

<sup>108</sup> This poisonous root cannot at present be identified. Similar-sounding candidates include *karkaṭaka*, *karaghāṭa* (emetic nut), and *karahāṭa*, but since this is a prose passage, there would be no reason to alter the word to fit a metre. Monier-Williams et al. (MW: 255) cite an unknown lexical source that equates *karāṭa* (mn.) with safflower (*Carthamus tinctorius*, L.), but this plant does not have a poisonous root.

<sup>109</sup> The roots of both rose and white leadwort are very toxic.

<sup>110</sup> The text reads masculine *ananta*, which is not a plant name. Gayī’s commentary on 5.2.5 (Su 1938: 564) noted a variant reading of feminine *anantā* in place of *gargaraka*, earlier in the compound. But the feminine *anantā*, country sarsaparilla, is not a poisonous plant.

i *Plumbago zeylanica* (or *rosea?*), L.; see NK #1966, 1967

## 8. medhshingi,<sup>111</sup>

- the leaf-poisons include:
  - ‘poison-leaf’ (*viṣapatrikā*)<sup>ii</sup>,
  - ‘drum-giver’ (*lambaradā*)<sup>iii</sup>,
  - ??, and
  - big ??;
- the fruits of items like: jequirity (*guñjā*)<sup>iv</sup>, rūṣkara ()<sup>v</sup>, viṣa ()<sup>vi</sup>, and vedikā ()<sup>vii</sup>, are
  - *kumudavati* (*kumadavati*)<sup>viii</sup>,
  - *reṇuka* (?)<sup>ix</sup>,
  - *kurūkaka* (?)<sup>x</sup>,
  - ‘little bamboo’ (*veṇuka*)<sup>xi, 112</sup>,
  - thorn apple (*karambha*)<sup>xii</sup>,
  - ‘big thorn apple’ (*mahākarambha*)<sup>xiii</sup>,

<sup>111</sup> Meulenbeld (1989: 61, n. 3) argued that our text reads a masculine or neuter noun *vijaya*, which never signifies cannabis. However, unlike the vulgate, the unanimous readings of the Nepalese manuscripts give feminine *vijayā*. Nevertheless, even the feminine form only started to signify *Cannabis sativa* L. after the end of the first millennium (Meulenbeld 1989; Wujastyk 2002; McHugh 2021). The *Sauśrutaniḥṣṭu* gives a number of synonyms for *vijayā*, almost none of which have any poisonous parts (Suvedī and Tivārī 2000: 5.77, 10.143). But one of them, *viṣāṇī* (also *meṣaśṛṅgī*), is sometimes equated with *Dolichandrone falcata* (DC.) Seemann (ADPS: 518), a plant used as an abortifacient and fish poison (nadk-1982). This identification is tenuous.

<sup>112</sup> Not poisonous.

ii unknown; see ?

iii unknown; see ?

iv ; see

v ; see

vi ; see

vii ; see

viii unknown; see ?

ix ?; see *Piper aurantiacum* Wall. (NK: #1924) is not poisonous.

x ?; see ?

xi *Bambusa bambos*, Druce?; see NK #307

xii *Datura metel*, L.; see AVS 2.305 (cf. *Abhidhānamañjarī*), NK #796 ff., Potter 292 f., ADPS 132.

xiii *Datura metel*, L.?; see AVS 2.305 (cf. *Abhidhānamañjarī*), NK #796 ff., Potter 292 f., ADPS 132.

- ‘pleaser’ (*nandanā*)<sup>xiv</sup>,
- ‘crow’ (*kāka*)<sup>xv</sup>,
- the flower-poisons include those of:
  - rattan (*vetra*)<sup>xvi</sup>,
  - wild chinchona (*kādamba*)<sup>xvii</sup>,
  - black pepper (*vallīja* → *marica*)<sup>xviii</sup>,
  - thorn apple (*karambha*)<sup>xix</sup>, and
  - big thorn apple (*mahākarambha*)<sup>xx</sup>;
- the seven bark, pith (*sāra*) and resin (*niryāsa*) poisons are:
  - ‘gutboiler’ (*antrapācaka*)<sup>xxi</sup>,
  - ‘blade’ (*kartarīya*)<sup>xxii</sup>,
  - wild mustard (*saurīyaka*)<sup>xxiii</sup>,
  - emetic nut (*karaghāṭa* → *karahāṭa?* → *madana*)<sup>xxiv</sup>,
  - thorn apple (*karambha*)<sup>xxv</sup>,
  - wild asparagus (*nandana* → *bahuputrā?*)<sup>xxvi</sup>, and
  - munj grass (*nārācaka*)<sup>xxvii,113</sup>
- the three milky sap (*kṣīra*)-poisons are:

113 The bark of wild asparagus (*Asparagus racemosus*, Willd.) is toxic.

xiv ?; see ?

xv ?; see ?

xvi Calamus rotang, L.; see AVS 1.330, NK #413

xvii Anthocephalus cadamba, Miq.; see NK #204

xviii Piper nigrum, L.?; see NK #1929; Rā.6.115, Dha.4.85, Dha.2.88

xix Datura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f., ADPS 132.

xx Datura metel, L.?; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f., ADPS 132.

xxi unknown; see ?

xxii unknown; see ?

xxiii Cleome viscosa, L.? (cf. Rā.4.144); see AVS 2.116, NK #615

xxiv Randia dumetorum, Lamk.; see NK #2091

xxv Datura metel, L.; see AVS 2.305 (cf. Abhidhānamañjarī), NK #796 ff., Potter 292 f., ADPS 132.

xxvi Asparagus racemosus, Willd.; see ADPS 441, AVS 1.218, NK #264, IGP 103, IMP 4.249ff., Dymock 482ff.

xxvii Saccharum bengalense, Retz.?; see NK #2184

- purple calotropis (*kumudaghñī* → *arka*?)<sup>xxviii, 114</sup>
- oleander spurge (*snuhī*)<sup>xxix</sup>, and
- ‘web-milk’ (*jālakṣīri*)<sup>xxx</sup>;
- the two element (*dhātu*)-poisons are:
  - ‘foam-stone’ (*phenāśma*)<sup>xxxi</sup>, and
  - orpiment (*haritāla*)<sup>xxxii, 115</sup>
- the thirteen tuber-poisons are:
  - jequirity (*kālakūṭa*)<sup>xxxiii, 116</sup>
  - wolfsbane (*vatsanābha*)<sup>xxxiv</sup>,
  - Indian mustard (*sarṣapa*)<sup>xxxv</sup>,
  - leadwort (*pālaka* → *citraka*)<sup>xxxvi</sup>,
  - ‘muddy’ (*kardama*)<sup>xxxvii</sup>, the

114 The name of this poison, *kumuda-ghñī*, means ‘lotus killer’. In Sanskrit literature, the *kumuda* lotus is associated with the moon, since it blossoms by night. Since the sun causes this lotus to close, it is therefore an ‘enemy’ of the lotus. One of the chief words for the sun, *arka*, is also the name of *Calotropis gigantea*, which indeed has a milky juice which is a violent purgative, poison and abortifacient.

115 Dutt (Dutt: 38–42) conjectured that ‘foam-stone’ may be impure white arsenic obtained by roasting orpiment.

116 The much later (perhaps sixteenth century) alchemical *Rasaratnasamuccaya* of pseudo-Vāgbhaṭa (21.14) says that the *kālakūṭa* poison, here translated as ‘jequirity’, is similar to ‘*kākacañcu*’ or ‘Crow’s Beak’, which is indeed a name for the plant jequirity or *Abrus precatorius*, L., more commonly called *guñjā* (not to be confused with *gañjā*). The black seed-pod is described as having a ‘sharp deflexed beak’ in botanical descriptions, so the Sanskrit name is quite graphic and appropriate. The poisonous scarlet seeds of *A. precatorius* can have a distinct black dot or tip, which could perhaps be translated ‘*kāla-kūṭa*’, or ‘Black Tip’.

The *Rājanighaṇṭupariśiṣṭa* (9.35) gives *kālakūṭaka* as a synonym for *kāraskara*, or *Strychnos nux-vomica*, L., whose seeds are notoriously poisonous.

xxvi *Calotropis gigantea*, (L.) R. Br.; see ADPS 52, AVS 1.341, NK #427, Potter 63

xxix *Euphorbia neriifolia*, L., or *E. antiquorum*, L.; see ADPS 448, AVS (2.388), 3.1, NK #988, IGP 457b

xxx unknown; see ?

xxxi unknown; see ?

xxxii *Arsenii trisulphidum*; see NK v. 2, p. 20 ff.

xxxiii *Abrus precatorius*, L.? Cf. RRS 21.14.; see AVS 1.10, NK #6, Potter 168.

xxxiv *Anonitum napellus*, L.; see AVS 1.47, NK #42, Potter 4 f.

xxxv *Brassica juncea*, Czern. & Coss.; see AVS 1.301, NK #378

xxxvi *Plumbago zeylanica* (indica? rosea?), L.; see Rā. 6.124, ADPS 119, NK #1966, 1967

xxxvii unknown; see ?

- ‘Virāṭa’s plant’ (*vairāṭaka*)<sup>xxxviii</sup>,
- nutgrass (*mustaka*)<sup>xxxix</sup>,
- atis root (*śṛṅgīviṣa*)<sup>xl</sup>,
- sacred lotus (*prapuṇḍarīka*)<sup>xli</sup>,
- radish (*mūlaka*)<sup>xlii</sup>,
- ‘alas, alas’ (*hālāhala*)<sup>xliii</sup>,
- ‘big poison’ (*mahāviṣa*)<sup>xliv</sup>, and
- galls (*karkaṭa*)<sup>xlvi</sup>.<sup>117</sup>

Thus, there are fifty-five stationary poisons.

- 6 There are believed to be four kinds of wolfsbane, two kinds of *mustaka*, and six kinds of Indian *sarṣapa*. But the rest are said to be unique types.

## The effects of poisons

- 7–10 People should know that root-poisons cause writhing (*udveṣṭana*), ranting (*pralāpa*), and delirium (*moha*), and leaf-poisons cause yawning, writhing, and wheezing (*śvāsa*).  
Fruit-poisons cause swelling of the scrotum, a burning feeling and writhing. Flower-poisons will cause vomiting, distension (*ādhmāna*) and sleep (*svāpa*).

117 Leadwort root is a powerful poison. Nutgrass is tuberous, but non-toxic. Atis has highly toxic tuberous roots. Neither sacred lotus nor galls are toxic. The ‘alas, alas’ poison (*hālāhala*) is the mythical poison produced from the churning of the ocean at the time of creation: it occurs in medical texts such as the present one, and commentators identify it with one or other of the lethal poisons such as wolfsbane or jequirity. Agrawal (1963: 126) makes the intriguing suggestion that the word *hālāhala*, possibly to be identified with Pāṇini’s *hailihila* (P.6.2.38), may be of Semitic origin, although his evidence seems uncertain (Steingass (1930: 1506a) cites Persian *halāhil* ‘deadly (poison)’ as a loan from Sanskrit). Mayrhofer 1953–72: iii.585 also cites a claim for an Austro-Asiatic origin for the word.

xxxviii unknown; see ?

xxxix *Cyperus rotundus*, L.; see ADPS 316, AVS 2.296, NK #782

xl *Aconitum heterophyllum*, Wall. ex Royle; see AVS 1.42, NK #39

xli *Nelumbo nucifera*, Gaertn.; see Dutt 110, NK #1698

xlii *Raphanus sativus*, L.; see NK #2098

xliii unknown; see Cf. Soḍhalanighantu p.43 (sub bola) = stomaka = vatsanābha

xliv unknown; see ?

xlvi *Rhus succedanea*, L.; see NK #2136

The consumption of poisons from bark, pith (*sāra*) and resin (*niryāsa*) will cause foul breath, hoarseness (*pāruṣya*), a headache, and a discharge of phlegm (*kapha*).<sup>118</sup>

The milky sap (*kṣīra*)-poisons make one froth at the mouth, cause loose stool, and make the tongue feel heavy.<sup>119</sup> The element (*dhātu*)-poisons give one a crushing pain in the chest, make one faint and cause a burning feeling on the palate.

These poisons are classified as ones which are generally speaking lethal after a period of time.

### 11–17 Symptoms of tuber poisoning

The tuber-poisons, though, are severe. I shall talk about them in detail. With jequirity (*kālakūṭa*)<sup>xlvi</sup>, there is numbness and very severe trembling. With wolfsbane (*vatsanābha*)<sup>xlvi</sup>, there is rigidity of the neck, and the faeces, and urine become yellow.

With *sārṣapa* (*sārṣapa*),<sup>120</sup> the wind becomes defective (*vātavaiguṇya*), there is constipation (*ānāha*), and lumps (*granthi*) start to appear. With leadwort (*pālaka* → *citraka*)<sup>xlvi</sup>, there is weakness in the neck, and speech gets jumbled.<sup>121</sup>

With the one called ‘muddy’ (*kardama*)<sup>xlvi</sup>, there is a discharge (*praseka*), the faeces pour out, and the eyes turn yellow. The ‘Virāṭa’s plant’ (*vairāṭaka*)<sup>1</sup> causes pain in the body and illness in the head. Paralysis

118 At 1.2.6 (Su 1938: 11), Ḍalhaṇa glosses hoarseness (*pāruṣya*) as *vāgrūkṣatā*, “a rough, dry voice.”

119 At 6.54.10 (Su 1938: 773), Ḍalhaṇa glosses loose stool (*viḍbheda*) as *dravapurīṣatā*, “having liquid stool.”

120 *Sārṣapa* would normally mean “connected with mustard,” and excessive consumption of mustard oil can be harmful. However, the *Sauśrutaniḥṣṭu* (156) gives *rakṣoghnā* as a synonym for *sārṣapā*. This can be *Semecarpus anacardium*, L.f., which has some poisonous parts.

121 The verse in the Nepalese version ends with a plural verb that does not agree with the dual of the sentence subject.

xlvi *Abrus precatorius*, L.? Cf. RRS 21.14.; see AVS 1.10, NK #6, Potter 168.

xlvi *Aconitum napellus*, L.; see AVS 1.47, NK #38, Potter 4 f.

xlvi *Plumbago zeylanica* (indica? rosea?), L.; see Rā. 6.124, ADPS 119, NK #1966, 1967

xlvi unknown; see ?

1 unknown; see ?

- of one's arms and legs and trembling are said to be caused by mustaka (*mustaka*).<sup>122</sup>
- 15b With great aconite (*mahāviṣa*) one's limbs grow weak, there is a burning feeling and swelling of the belly.<sup>123</sup>
- 16a With puṇḍarīka (*puṇḍarīka*), one's eyes go red, and one's belly becomes distended.<sup>124</sup>
- 16b With mūlaka (*mūlaka*), one's body is drained of colour and the limbs are paralysed.<sup>125</sup>
- 17a With hālāhala (*Aconite*), a man turns a dark colour (*dhyāma*), and gasps.<sup>126</sup>
- 17b With atis root (*śṛṅgīviṣa*)<sup>li</sup>, one gets violent knots (*granthi*) and stabbing pains in the heart.<sup>127</sup>
- 18a With markāṭa (*monkey*), one leaps up, laughs, and bites.<sup>128</sup>
- 18b-19a Experts have said that one should know that the thirteen highly potent tuber-poisons, which are mentioned here, have ten qualities (*guṇa*).
- 19b-20a The ten are:

-> ativiṣa

Look up  
the ca. ref-  
erence.

- 122 The substitution in MS NAK 5-333 affecting 15cd is caused by an eye-skip to the word *viṣeṇa* in 2.17. *Mustaka* commonly refers to *Cyperus rotundus*, L.; the root is used in āyurveda but is not poisonous. However other dictionaries list *mustaka* amongst serious poisons, for example *Rājanighaṇṭu* (22 v. 42) and *Rasaratnasamuccaya* 16, v. 80. However, its ancient identity is still doubtful.
- 123 The poisonous root great poison (*mahāviṣa*) is not clearly identifiable, although *viṣa* is commonly aconite. Verse 6 above notes that there are several kinds of aconite.
- 124 The word *puṇḍarīka* very commonly means sacred lotus, *Nelumbo nucifera*, Gaertn. The entire plant is edible and cannot be the poison intended here. Singh and Chuneekar (GVDB: 252) noted that this poison is unidentified and that it is also listed as a poison in *Carakasaṃhitā*.23.12.
- 125 The word *mūlaka* very commonly means the radish, *Raphanus sativus*, L. The root is edible and cannot be the poison intended here. Singh and Chuneekar (GVDB: 317) noted that this poison is unidentified.
- 126 Identification of *hālāhala* is uncertain. It may simply be a mythical poison, or its specific identity may have been lost over the centuries. Late *nighaṇṭu*s identify it as *stomaka* = *vatsanābha*, i.e., *Aconitum napellus*, L. (*Soḍhalanighaṇṭu* p.43). Ḍalhaṇa on 5.2.17 (Su 1938: 564) interprets our "gasps" as "the man laughs and grinds his teeth." But this gloss is probably displaced and intended to apply to verse 2.18.
- 127 Singh and Chuneekar (GVDB: 407) noted that *vatsanābha* and *śṛṅgīviṣa* are two different varieties of poisonous Aconites that are difficult to distinguish.
- 128 Singh and Chuneekar (GVDB: 299) said of *markāṭa*, "an unidentified vegetable poison." Cf. Suvedī and Tivārī 2000: v.36 for synonyms that lead to the non-toxic jujube tree.

li *Aconitum heterophyllum*, Wall. ex Royle; see AVS 1.42, NK #39



- dry (*rūkṣa*),
  - hot,
  - sharp,
  - rarified (*sūkṣma*),
  - fast-acting,
  - pervasive (*vyavāyin*),
  - expansive (*vikāsin*),
  - limpid (*viśada*),
  - light, and
  - indigestible.
- 20b Because of dryness, it may cause inflammation of the wind; because of heat it inflames the choler and blood. Because of the sharpness it unhinges the mind, and it cuts through the connections with the sensitive points (*marman*). Because it is rarified it can infiltrate and distort the parts of the body.<sup>129</sup>
- 22 Because it is fast-acting it kills quickly, and because of its pervasiveness it affects one's whole physical constitution (*prakṛti*).<sup>130</sup> Because of its expansiveness it enters into the humour (*doṣa*)s, bodily constituents (*dhātu*)s, and even the impurities. Because it is limpid it overflows, and because it is light it is difficult to treat. Because it is indigestible it is hard to eliminate. Therefore, it causes suffering for a long time.
- 24 Any poison that is instantly lethal, whether it be stationary, mobile, or artificial, will be known to have all ten of these qualities.

## Slow-acting poison

- 25cd–26 A poison that is old or destroyed by anti-toxic medicines, or else dried up by blazing fire, wind, or sunshine, or which has just lost its qualities by itself,<sup>131</sup> becomes a slow-acting poison (*dūṣīviṣa*).<sup>132</sup> Because it has lost its potency it is no longer perceived. Because it is surrounded by phlegm (*kapha*) it has an aftermath that lasts for a very long time.

129 We read the active *vikaroti* with Ḍalhaṇa against the transmitted passive *vikriyeta*, since it must be the parts of the body that are distorted, not the poison.

130 Ḍalhaṇa on 5.2.22 (*Su 1938*: 565) explained this as “takes the form of pervading the whole body (*akhiladehavyāptirūpam*).”

131 Ḍalhaṇa specified that this refers to the ten qualities that are mentioned above (5.2.26 (*Su 1938*: 565)).

132 Ḍalhaṇa cited this verse at 1.46.83 (*Su 1938*: 222) while explaining *dūṣīviṣa*.

- 27 If he is suffering from this, the colour of his stools changes, he gets sourness and a bad taste with great thirst. Stammering and close to death, wandering about, he may feel faint, giddy, and aroused.<sup>133</sup>
- 28 If it lodges in his stomach (*āmāśaya*), he becomes sick because of wind and phlegm; if it lodges in his intestines (*pakvāśaya*), he becomes sick because of wind and choler. A man's hair and limbs fall away and he looks like a bird whose wings have been chopped off.
- 29a–c If it lodges in one of the body tissues such as chyle (*rasa*), it causes the diseases arising from the body tissues, that have been said to be wrong.<sup>134</sup> and it rapidly becomes inflamed on days that are nasty because of cold and wind.
- 29d–31 Listen to its initial symptoms (*liṅga*): it causes heaviness due to sleep, yawning, disjunction (*viśleṣa*) and horripilation (*harṣa*) and a bruising of the limbs (*aṅgamarda*).<sup>135</sup> Next, it causes intoxication from food (*annamada*) and indigestion, loss of appetite (*arocaka*), the condition of having a skin disease (*koṭha*) with round blotches (*maṇḍala*),<sup>136</sup> **dwindling away (*kṣaya*) of flesh**, swelling of the feet, hands, and face, **the fever called *pralepaka***, vomiting and diarrhoea.<sup>137</sup> The slow-acting poison might cause **wheezing, thirst and fever, and it might also cause distension of the abdomen**.
- 32 These various disorders are of many different types: one poison may produce madness, while another one may cause constipation (*ānāha*), and yet another may ruin the semen. One may cause **emaciation**, while another pallid skin disease (*kuṣṭha*).
- 33 Something is “corrupted” by repetitively keeping to bad locations, times, foods, and sleeping in the daytime. Or, traditionally, “corrupting poison” (slow-acting poison (*dūṣī-viṣa*)) is so called because it may corrupt (*dūṣayet*) the body tissue (*dhātu*)s.

133 Similar symptoms of slow-acting poison are described at 2.7.11–13 (Su 1938: 296) in the context of contamination dropsy (*duṣyodara*). This this may explain why the vulgate inserted reference to this disease at this point.

134 The expression *ayathāyathoktān* “stated to be unsuitable” is hard to understand here, but is clearly transmitted in the Nepalese version.

135 Ḍalhaṇa 5.2.30ab (Su 1938: 565) glossed “disjunction” as the loss of function of the joints in regard to movement.

136 The last ailment could perhaps be ringworm.

137 The *pralepaka* fever was described by Ḍalhaṇa, at 6.39.52 (Su 1938: 675), as an accumulation of phlegm in the joints. Its symptoms are described in 6.39.54

#### 34- The stages of toxic shock

- In the first shock of having taken a stationary poison, a person's tongue becomes dark brown and stiff, he grows faint, and panics.
- 35 In the second, he trembles, feels exhausted, has a burning feeling, as well as a sore throat. When the poison reaches the stomach (*āmāśaya*), it causes pain in the chest (*hṛd*).
- 36 In the third, his palate goes dry, he gets violent pain (*śūla*) in the stomach (*āmāśaya*), and his eyes become weak, swollen and yellow.
- 37 In the fourth shock, it causes the intestines and stomach to be exhausted (*sāda*), he gets hiccups, a cough, a rumbling in the gut (*antra*), and his head becomes heavy too.
- 38 In the fifth he dribbles phlegm (*kapha*), goes a bad colour, his ribs crack (*parśvabheda*), all his humours are irritated, and he also has a pain in his intestines (*pakvādhāna*).
- 39a In the sixth, he loses consciousness and he completely loses control of his bowels.
- 39b In the seventh, there are breaks in his shoulders, back and loins, and he stops breathing.<sup>138</sup>

#### Remedies for the stages of slow poisoning

- 40 In the first shock of the poison, the physician should make the man, who has vomited and been sprinkled with cold water, drink an antidote (*agada*) mixed with honey and ghee.
- 41a In the second, he should make the man who has vomited and been purged drink as before;
- 41b on the third, drink an antidote and a beneficial nasal medicine (*nasya*) as well as an eye salve (*añjana*).
- 42a In the fourth, the physician should make him drink an antidote that is salt with a little oil.<sup>139</sup>
- 42b In the fifth, he should be prescribed the antidote together with a decoction (*kvātha*) of honey and liquorice.

<sup>138</sup> Here at 5.2.24 (Su 1938: 566) Ḍalhaṇa glossed *sannirodha* as “complete cessation, i.e., of breath” (*sannirodhaḥ samyānnirodhaḥ, ucchvāsasya iti śeṣaḥ*). The manuscripts all read *skanda* where *skandha* must be intended; this confusion is known from Buddhist Hybrid Sanskrit (Edgerton 1953: 608).

<sup>139</sup> At 6.52.30 (Su 1938: 769) Ḍalhaṇa noted that *sindhu* can be interpreted as salt (*saindhava*).

- 43 In the sixth, the cure (*siddhi*) is the same as for diarrhoea. And in the seventh, he perishes.<sup>140</sup>
- 44 In between any one of these shocks, once the above treatment has been done, he should give the patient the following cold gruel (*yavāgū*) together with ghee and honey, that will take away the poison.
- 45–46 A gruel (*yavāgū*) made of the following items in a stewed juice (*niḥkvātha*) destroys the two poisons: ??,<sup>141</sup> wild celery,<sup>142</sup> velvet-leaf, sunflower,<sup>143</sup> heart-leaved moonseed, myrobalan siris, and selu plum, white siris, the two kinds of turmeric,<sup>144</sup> and the two kinds of poison berry,<sup>145</sup> hogweed, peas, the three heating spices, the two kinds of

<sup>140</sup> The vulgate text here is quite different, recommending that the patient have medicated powder blown up his nose. It may be possible to detect the evolution of the Nepalese अवसीदेत् to the vulgate's अवपीडश्. The vulgate version is hard to construe, and we see Ḍalhaṇa struggling to interpret it in his commentary on 5.2.43ab (Su 1938: 566). This sternutatory is, however, recommended in the Nepalese version at 5.5.30ab (Su 1938: 576), for the seventh shock of poisoning by a striped snake (*rājimat*). It is possible the text migrated from that location to this.

Another difference at this point is that the Nepalese version also does not support the vulgate's passage on the crow's foot (*kākapada*) therapy (Wujastyk 2003b: 145, n.106). The same is the case at 5.5.24 (Su 1938: 575) and the clear description at 5.5.45 (Su 1938: 577), in neither of which is the therapy supported in the Nepalese version. This therapy seems unknown to the Nepalese transmission. Perhaps the therapy migrated into the vulgate *Suśrutasamhitā* from the *Carakasamhitā* 6.23.66–67 (Ca. 1941: 574).

<sup>141</sup> At 4.10.8 (Su 1938: 449) Ḍalhaṇa glossed कोशवती as देवदाली and at 4.18.20 (Su 1938: 472) as कटुकोशातकी, vocabulary pointing to *Cucumis cylindrica*, *Cucumis actangula* or *Luffa echinata*. See glossary under *luffa*.

<sup>142</sup> A plant often cited in *Suśrutasamhitā*, but rarely in *Carakasamhitā* (GVDB: 4). Ḍalhaṇa glossed it here, 5.2.45 (Su 1938: 566), as *ajamodā*, wild celery, but noted that others consider it to be *moraṭa*, rajmahal hemp. There is considerable complexity surrounding the identification of *moraṭa*/*mūrvā* and related synonyms (GVDB: 314–316). Taking *agnika* as a short reference to *agnimantha*, often identified as migraine tree, might be plausible, since that is antitoxic or anti-inflammatory, but such a short reference is not known elsewhere.

<sup>143</sup> At 5.2.45 (Su 1938: 566) Ḍalhaṇa said that this plant has leaves like the *paṭola*, pointed gourd, Singh and Chuneekar (GVDB: 280, 443) argued plausibly that this is a synonym for *arkapuṣpī*, panacea twiner, as Ḍalhaṇa also stated in 1.45.120 (Su 1938: 206), and the leaves of *Holostemma* and *Trichosanthes* are indeed strikingly similar. The appearance of the plant, a creeper with sun-like flowers, fits the name. But there remains much controversy about the identities of these candidates (e.g., ADPS: 195–198).

<sup>144</sup> I.e., turmeric and Indian barberry.

<sup>145</sup> I.e., poison berry and yellow-berried nightshade.

Indian sarsaparilla<sup>146</sup> and water-lily.

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<sup>146</sup> I.e., country sarsaparilla and black creeper.

## The invincible ghee

- 47–49 There is a famous ghee called “Invincible” (*ajeya*). It rapidly destroys all poisons but is itself unconquered. It is prepared with a mash (*kalka*) of the following plants: liquorice, crape jasmine, costus, deodar, peas, Indian madder, cardamom and cherry, cobra’s saffron, water-lily, sugar, embelia, sandalwood, cassia cinnamon, beautyberry, rosha grass, the two turmeric<sup>147</sup>, the two Indian nightshades,<sup>148</sup> the two kinds of Indian sarsaparilla,<sup>149</sup> beggarweed, and heart-leaf sida.

## Curing the ‘slow-acting’ poison

- 50–52 Someone suffering from “slow-acting poison (*dūṣṭviṣa*)” should be well sweated, and purged both top and bottom. Then he should be made to drink the following eminent antidote which removes “slow-acting poison:”  
Take long pepper, rosha grass, spikenard, lodh tree, cardamom, natron, scented pavonia, red chalk, as well as gold, and pondweed.  
This antitoxin, taken with honey, eliminates slow-acting poison. It is called the “enemy of slow-acting poison (*dūṣṭviṣāri*),” and it is not prohibited in other situations.
- 53–54 If there are any other side-effects (*upadrava*), such as fever, a burning feeling, hiccups, constipation (*ānāha*), depletion of the semen, distension, diarrhoea, fainting, skin problems, bellyache (*jaṭhara*), madness, trembling, then one should treat each one in its own terms, using anti-toxic medicines.
- 55 For a prudent person, the slow-acting poison can be cured (*sādhya*) immediately. It is treatable (*yāpya*) if it is of a year’s standing. Other than this, it should be avoided for the person who eats unwholesome things.

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<sup>147</sup> I.e., turmeric and Indian barberry.

<sup>148</sup> I.e., poison berry and yellow-berried nightshade.

<sup>149</sup> I.e., country sarsaparilla and black creeper.

# Kalpasthāna, adhyāya 3

## Introduction

## Translation

- 1 And now we shall explain the rule (*kalpa*) that is the required knowledge about mobile poisons.<sup>150</sup>
- 3 The full explanation about the sixteen carriers (*adhiṣṭhāna*) of the mobile poisons, that have been mentioned by me in brief, will be stated.<sup>151</sup>
- 4 In that context, they are:<sup>152</sup>
  - gaze and breath,
  - teeth, nails, and bites
  - urine and faeces,
  - **menstrual blood**,
  - semen,
  - **tail**,
  - **contact with saliva**,
  - nipping with the mouth (*mu-*
  - khasaṃdaṃśā*),
  - fart (*avaśardhita*),<sup>153</sup>
  - **anus**,<sup>154</sup>
  - bones,
  - bile,
  - bristles (*śūka*), and
  - corpses.
- 5 In that context,

Come back to the issue of “kalpa”. Look up passages in the Kośa.

location of the poison	creatures <sup>155</sup>
in their breath and gaze	divine snakes
in their fangs	the ones on earth <sup>156</sup>

<sup>150</sup> In contrast to stationary, plant poisons. No reference is made to Dhanvantari (see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021).

<sup>151</sup> “Carrier” for base, foundation (*adhiṣṭhāna*) aims to capture the idea that the author will describe the creatures in which poisons inhere.

<sup>152</sup> The content of this section is presented as a table, for clarity for the contemporary reader and mindful of the theoretical issues surrounding notational variation, including the “symbolic rewriting” and the modification of “expressive capacities” discussed by Sarukkai (2016: 321 ff). For further discussion, see Wujastyk 2021a: 81–83.

<sup>153</sup> This interpretation comes from Ḍaḥaṇa on 5.3.4 (Su 1938: 567), but he reads विशर्धित.

<sup>154</sup> Ḍaḥaṇa on 5.3.4 (Su 1938: 567) noted this reading.

<sup>155</sup> Many of these names are mere dubious placeholders.

<sup>156</sup> Ḍaḥaṇa on 5.3.5 (Su 1938: 567) cited the otherwise unknown authority Sāvitra on the topic of poisonous snakes (HIML: v. ???, ???).

<i>location of the poison</i>	<i>creatures</i>
in their nails, mouths and fangs	cats, dogs, monkeys, men ( <i>nara</i> ), <sup>157</sup> crocodiles, frogs, ‘cook-fish’ ( <i>pākamatsya</i> ), <sup>158</sup> monitor lizards, cone snails ( <i>śambūka</i> ), ‘poisonous snakes’ ( <i>pracalāka</i> ), <sup>159</sup> geckos ( <i>gṛhagoḍikā</i> ), <sup>160</sup> four-footed insects and others
in their urine and faeces	lice ( <i>kiṭīpa</i> ), ‘flat insects’ ( <i>piccītā</i> ), ‘orange-dwellers’ ( <i>kaṣāyavāsika</i> ), ‘pepper snakes’ ( <i>sarṣapaka</i> ), ‘angry beetles’ ( <i>toṭaka</i> ), dung beetles ( <i>varcaḥkīṭa</i> ), and ‘pot insects’ ( <i>kauṇḍinya</i> )
in their semen	mice
in their stings ( <i>śūla</i> )	scorpions, ‘earth scorpions’ ( <i>viśvambhara</i> ), wasps ( <i>varaki</i> ), <sup>161</sup> fish, crabs ( <i>uccīṭiṅga</i> ), and ‘wing-scorpions’ ( <i>patravṛścika</i> )
in their saliva, nails, urine, feces, blood, semen and fangs	spiders
in the bites of their mouths	flies, wasps ( <i>kaṇabha</i> ) and leeches
in the bites of their mouths, in their fangs, faces, †, farts, anuses and feces	‘speckle-heads’ ( <i>citraśīrṣa</i> ), ‘lids’ ( <i>śārava</i> ), ‘bellied’ ( <i>kuṣṣita</i> ), ‘wood-enemies’ ( <i>dārukāri</i> ), ‘liquors’ ( <i>medaka</i> ), and ‘darts’ ( <i>śārikā</i> ).

157 Probably dittography from the previous word, monkey (*vānara*). But it is supported in both Nepalese witnesses, so it must go back to an earlier exemplar.

158 MS KL 699 separates the words पाक and मत्स्य with a *daṇḍa*, indicating that the scribe thought they were separate terms. Ḍalhaṇa thought this was a kind of fiery insect (5.3.5 (Su 1938: 567)).

159 *Arthaśāstra* 14.1.14, 23 (Olivelle 2013: 448), where it might also be a chameleon, but the latter are not venomous.

160 The scribe of MS NAK 5-333 noted in the margin that some of his sources read गल-गोडिका, which is the name of a snake known also in the *Carakasamhitā* and elsewhere in literature. Hemacandra’s *Abhidhānacintāmaṇi* (4.364) mentions that गृहगोडिका and गृहगोलिका are synonyms (Rādhākāntā Deva 1876: 691a, *sub māṇikyā*).

161 वरटी is a wasp; वरकि in the Nepalese MSS may be an alternant of this word. Ḍalhaṇa on 5.3.5 (Su 1938: 568) remarked that some interpreted वरकिमत्स्य as two items, “wasp and fish,” others as a single one, “wasp-fish.”



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Table 2: Passage 5, expressed in tabular format.

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- 6 The enemies of the king pollute the waters, roads and foodstuffs in enemy territory. The experienced physician, who has learned how to purify things, should clean up those polluted things.
- 7 Polluted water is slimy and smells of tears.<sup>162</sup> It is covered with froth and covered with streaks. The frogs and fish die, the birds are crazed and, along with the wetland creatures, they wander about aimlessly.
- 8 Men, horses and elephants who swim in it experience vomiting, delusion, fever, swelling and sharp pains.<sup>163</sup> He should try to purify that polluted water, after curing their ailments.
- 9 And so, he should burn axlewood and garjan oil tree, as well as corky coral tree, with crimson trumpet-flower tree and small-flowered crape myrtle and weaver's beam tree, and with golden shower tree and white cutch tree. Then he should sprinkle that ash, cold, on the waters.
- 10–11 And in the same way, putting a handful of the ash in a pot, one may also purify water that one wants.  
If any one of the limbs of cows, horses, elephants, men or women, touch a place on the ground that enemies have spoiled with poison, or a ford or rock or a flat surface, then it swells up and burns and its hair and nails fall out on that place.<sup>164</sup>
- 12 In that situation, he should grind up country sarsaparilla together with all the aromatic items, with alcoholic drinks. And then he should

<sup>162</sup> अश्रु normally means “tears,” but rarely means “blood.”

<sup>163</sup> On the polysemy of elephant/snake (*nāga*), see Semeka-Pankratov 1979.

<sup>164</sup> “Swells up” translates an unclear reading that was probably श्यति, which may be an irregular form of √श्रु श्रा, श्वि (see Whitney 1885: 175–176).

- sprinkle the paths that need to be used with waters mixed with mud.<sup>165</sup>  
**And if there exists another path, he should go by that.**<sup>166</sup>
- 13 When grasses and foods are polluted, people collapse, fall unconscious. And others vomit. They get loose stool (*viḍbheda*) or they die. One should apply to them the therapy as described.
- 14–15 Alternatively, one should wipe various musical instruments with antidotes that remove poison and then play them. What is called the most excellent paste for a musical instrument is **certain minerals**<sup>167</sup> together with **gold and sarsaparilla**, and a portion of of **nutgrass** equal to that, together with the bile called “brown cow”.<sup>168</sup> By the sound of the musical instrument, even terrible poisons that may be present at that place are destroyed.
- 16 If there is smoke or wind that is affected by poison then birds are dazed and fall to the ground. People get coughs, colds, and head illnesses, and acute eye diseases.<sup>169</sup>
- 17 The smoke and air can be purified by putting into the air: **lac, turmeric, Himalayan monkshood, and myrobalan**, with **Himalayan mayapple, costus, cardamom**,<sup>170</sup> and **peas, and beautyberry**.

165 Our “alcoholic drinks” translates सुरा. For a discussion of this term at our period see McHugh 2021: 37–39 *et passim*.

166 Ḍalhaṇa on 5.3.12 (Su 1938: 568) cited a similar reading for the fourth pāda, but with a negative particle, “and if there is no other way, one should go by that.”

167 “Certain minerals” translates तारावितार, the unanimous reading of the Nepalese witnesses. But the meaning of this expression is not clear and may even refer to plants, like the other ingredients. The vulgate reads तारः सुतारः, which is also not very clear. However, Ḍalhaṇa on 5.3.14 (Su 1938: 568) identified these as “silver” and “mercury.” This is highly unlikely to be a correct understanding of the passage. Historically, mercury is not naturally present in the South Asian peninsula (Watt 1889–96: v. 5, 233) and the word पारद that Ḍalhaṇa used is probably a loan-word from Persian (sub *paranda*, *parranda* Steingass 1930: 244b). Mercurial compounds are not reliably attested in South Asia until two or three centuries after the composition of the *Suśruta-saṃhitā* at the earliest. The currently available “śāstric” recension of the *Arthaśāstra* that is datable to 175–300 CE (Olivelle 2013: 29–31) does not mention mercury (*ibid*, 534). See further the study by Wujastyk (2013a: 17, *et passim*).

168 सुरेन्द्रगोप and कुरुविन्द are both uncertain, see index. Ḍalhaṇa’s opinion has been followed here, but it seems fair to say that all commentators were guessing.

169 The syntax of this verse is somewhat loose; the vulgate has regularized it, smoothing out the difficulties.

170

write footnote: don’t repeat  
 ativiṣā; vulgate similar to H.

## The origin of poison

- 18 As it is told, the arrogant demon called Kaiṭabha created an obstacle for lotus-born Brahmā, at the very time that he was creating these creatures.<sup>171</sup>
- 19 Pitiless Fury took a body and burst out of the mouth of furious Brahmā's store of fiery energy.<sup>172</sup>
- 20 He burned that great, thundering, apocalyptic demon. Then, after bringing about the annihilation of that demon, his amazing fiery energy increased.
- 21 And so, there was a sinking down (*viṣāda*) of the Daityas. Observing that, it was named "poison (*viṣa*)" because of its ability to produce a "sinking down."
- 22 After that, the Lord created beings and subsequently made that fury enter into creatures still and moving.
- 23–24 Water that falls from the sky to the earth has no obvious flavour. The savour of the different places it lands on enters into it. In the same way, whatever substance a poison reaches, it establishes itself there and by its nature it takes on that substance's savour.<sup>173</sup>
- 25 Generally speaking, in a poison, all the qualities are really sharp. For this reason, every poison is known to irritate all of the humours.
- 26 Irritated and afflicted by the poison, they leave their natural functions. Poison does not get digested, so it blocks the breaths.<sup>174</sup>
- 27 Breathing is obstructed because its pathway is blocked by phlegm. Even if life continues, a man remains without consciousness.
- 28 Similar to semen, the poison of all angry snakes pervades the whole body, and goes to the limbs like semen because of being stirred up.
- 29 The fang of snakes is like a hook. When it gets there, it sticks inside

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171 At this point, the text seems to make a new beginning to the topic of toxicology, as if starting a new chapter. It is notable that no reference is made here to the famous origin story of poison in the churning of the primal milk ocean; for discussion of the sources of this account, see Bedekar 1967. For reflections on this passage, connecting it with Rudra and the *Śatapathabrāhmaṇa*, see Mānasa-taraṅgiṇī 2019.

172 "Fury" is here anthropomorphised.

173 The scribal emendation in MS Kathmandu NAK 5-333 of नियच्छति to निगच्छति suggests that the scribe had more than one manuscript before him, one of them representing the reading of the vulgate recension.

174 Probably a reference to the five breaths. Ḍalhaṇa referred to winds (वात), but this does not seem correct since it is a reference to humours rather than breaths.

- them. That is why the unagitated poison of a snake is not released.
- 30 Sprinkling with very cold water is traditional for all cases of poisoning, because poison is declared to be extremely hot and sharp.<sup>175</sup>
- 31 Poison in insects is slow and not very hot, having a lot of wind and phlegm. So in cases of insect poisoning, sweating is not forbidden.
- 32cd In cases of a strike or a bite, the poison may, of its own accord, stay there.
- 33–35ab †Having come upon a body,<sup>176</sup> in the case of corpses that have been pierced by a poisoned arrow and bitten by a snake, someone who eats the poisoned flesh of a recent corpse out of carelessness will suffer with illness according to the poison, or even die. And therefore, the flesh of those should not be eaten when they have just died.
- It is admissible after three quarters of an hour, but without the poisoned arrow and the snakebite.
- 35 margin [At this point an Upajāti verse is added in the margin of K but is not fully legible; the version of the text in H is also incomplete and not fully comprehensible.]<sup>177</sup>
- 35.1 †When, in a wound, the poison that is connected with these qualities runs, ...Therefore, everything that is damaged by poison and eaten does not cause death.
- <sup>178</sup>
- 35.1 [śloka in the MSS that aren't in the vulgate. The first line doesn't scan. Witness K adds a part of the start of this in the bottom margin. This material is repeated at 3.39.2 in MS H. ]
- 35cd & 36cd One designates a person who has diarrhoea of feces looking like soot

175 The verb पठ् “is declared, read aloud” here could possibly suggest that the author is working within a written, not oral, tradition.

176 “Having come upon” translates प्रस्थाप्य, which is hard to interpret unless it is a rare form connected with the sense “to see.”

177 *Mādhavanidāna*, 69.20–21 (MN<sub>1</sub>: 480) has verses that are directly parallel to this section:

*darvīkarāṇāṃ viṣam āśughāti sarvāṇi coṣṇe dviguṇībhavanti ajīrṇapittātapapīḍiteṣu bāleṣu vṛddheṣu bubhukṣiteṣu* 20

*kṣīṇakṣate mohini kuṣṭhayukte rūkṣe 'bale garbhavatīṣu cāpi*

*śāstrakṣate yasya na raktam eti rājyo latābhiś ca na saṁbhavanti* 21. This passage is the only occurrence in the ayurvedic text corpus that relates to the Nepalese version of the *Suśrutasamhitā* at this point. This suggests that Mādhavakara (fl. ca. 700, Bengal) knew and used the Nepalese version.

178 At this point, witness H inserts a marginal *Indravajrā* verse about diseases that afflict immoral women.

(*grhadhūma*) with wind,<sup>179</sup> and who vomits foam, as “someone who has drunk poison.”

- 37 Therefore, fire burns a heart that is pervaded by poison. For, having pervaded of its own accord the location of consciousness, it abides.<sup>180</sup>

### Patients beyond help

- 38 Patients who should not be accepted include: those who have been **seen** under a **peepul tree**, in a temple, in a cemetery, at an ant-hill, at dawn or dusk, at a crossroads, in Yama’s direction,<sup>181</sup> under the Great Bear and those who have been bitten in the veins or lethal spots.
- 39 The poison of cobras kills rapidly. During the summer, they all become twice as potent in those who have indigestion, those who are afflicted by bile or wind, old people, children and the hungry.
- 39.1 In those whose who are mad or intoxicated, or who suffer from anxiety, or who are unable to tolerate its various strengths, it becomes sharp. †...
- 3.40cd–3.41 One should reject someone overcome by poison who does not bleed when cut with a knife, where weals do not appear as a result of lashes,<sup>182</sup> or where there is no horripilation because of cold water, † whose mouth is crooked, whose hair is falling out, whose †nose† is exhausted and has a break in their voice.
- 3.42 Someone who is black and red and swollen at the site of the bite, with lockjaw, should be avoided. The same goes for someone who has a solid plug emerge from their mouth and someone who has blood running upwards and downwards.
- 3.43ab The physician should also avoid a person who has their fangs fall out quickly.

179 गृहधूम is not a plant in this context *pace* MW: 362. See the discussion in note 87, p. 29.

180 Ḍalhaṇa said that someone who has died from drinking poison has a heart that cannot be burned because it is pervaded by poison (5.3.37 (Su 1938: 570)). But the sense of the Nepalese MSS is the opposite.

181 याम्ये means “southerly” but Ḍalhaṇa on 5.3.38 (Su 1938: 570) interpreted “in Yama’s direction (*yāmya*)” as “under the seventh asterism.”

182 Ḍalhaṇa, on 5.3.40 (Su 1938: 570), glossed लताभिस् “by means of whips,” as “when the body is struck by whips.”

## Uttaratantra, adhyāya 16 (17 in the vulgate)

### Literature

Survey of this chapter and the existing research on it to 2002: [HIML: IA](#), 305–306.

History of couching in India: Scott 1817; Breton 1826; Jack 1884; Hendley 1895; Elliot 1918; Śāstrī 1940; V. Deshpande 1999; 2000; Wujastyk 2019; Leffler et al. 2020, Wujastyk 2003b: 65–67.

### Translation

- 1 Now I shall explain the counteraction (*pratiṣedha*) of diseases located in the pupil (*drṣṭi*).
- 2 There are three curable (*sādhya*), three incurable (*asādhya*), and six mitigatable (*yāpya*) diseases located in peoples eyes. Among these, three are curable (*sādhya*). Amongst these three, the remedy (*pratīkāra*) has been stated for the one called “seeing smoke (*dhūmadarśin*)”.<sup>183</sup>
- 3–5ab When the eye is inflamed (*vidagdha*) by bile and when it is inflamed by phlegm, one should apply the method for removing bile and phlegm, using nasal medicines (*nasya*), irrigation (*seka*), application of collyrium (*añjana*), liniment (*ālepa*), and medicines cooked in a crucible (*puṭapāka*), together with an eyewash (*tarpaṇa*),<sup>184</sup> but not cutting with a blade (*śāstrakṣata*).<sup>185</sup>  
One should drink ghee (*sarpis*) prepared with the three fruits (*triphalā*) and in the first [case where the problem is bile], and prepared with turpeth (*traivṛta*) in the latter [case, of phlegm].  
And ghee prepared with tilvaka (*tailvaka*) is wholesome in both cases, or else aged ghee on its own.
- 5cd–7ab In a collyrium, these four compounds (*yoga*) are beneficial in both cases:
  - ochre (*gairika*), Sind salt (*saindhava*), long pepper (*kṛṣṇā*) and the black soot (*maṣī*) from cow’s teeth;

where is cutting with a knife related to removing bile or phlegm.

maṣī  
burned charcoal.  
Find refs.

<sup>183</sup> This disease and its cure are described earlier (SS.6.7.39 and SS.6.10.16 (Su 1938: 609 and 614) respectively). The latter part of this verse is hard to construe and the text here may have been altered at an early period.

<sup>184</sup> These therapies are described in SS.6.18 (Su 1938: 633–640).

<sup>185</sup> Dalhaṇa interpreted this as blood-letting (*sirāvedha*), which is discussed in SS.1.14 (Su 1938).

- Cow's flesh (*gomāṃsa*), black pepper (*marica*), siris (*śirīṣa*) and red arsenic (*manahśilā*);
  - stalk (*vr̥nta*) from a wood apple (*kapittha*) with honey (*madhu*);<sup>186</sup>
  - or the the fruits of the velvet bean (*svayaṃgupta*).
- 8 The physician should make a collyrium with ground up metal (*kupyaka*),<sup>187</sup> Asoka tree (*aśoka*), Sal tree (*śālā*), mango (*amra*), beauty-berry (*priyaṃgu*), Indian lotus (*nalina*), blue lotus (*utpala*), together with hareṇu (*hareṇu*), emblic (*āmalaka*), myrobalan (*pathyā*), long pepper (*pippali*). It should be combined with ghee and honey (*kṣaudra*).
- 9–10 Also, when bile and phlegm have developed, the physician should apply hareṇu (*hareṇu*) with the expressed juice (*svarasa*) of the flowers from mango (*amra*) and Jambu (*jambū*) trees. Then this collyrium, matured (*vipakva*) with ghee and honey (*kṣaudra*), should then be applied.
- 10–11ab Filaments (*kiñjalka*) of Indian lotus (*nalina*) and blue lotus (*utpala*), with ochre (*gairika*), and the juice of cow-dung (*gośakṛt*) are a collyrium in the form of a pill (*guḍikā*). This is good for both day and night blindness.
- 11cd–12ab Elixir-salve (*rasāñjana*), honey (*kṣaudra*), ghee, scrambleberry (*tālīśa*), together with gold and ochre, with the juice of cow-dung (*gośakṛt*) are for an eye afflicted with bile.
- 12cd–13 Alternatively, wise physician should first grind together elixir-salve (*śīta*) and stibnite (*sauvīraka*), infused (*bhāvita*) with the blood of birds and animals (*rasa*).<sup>188</sup> Then he mixes it with the bile of a tortoise or with extract of rohu carp (*rauhita*). It should always be used with powdered collyrium to quell the bile.
- 14 Thus, a collyrium of white teak (*kārśmarī*) flowers, liquorice (*madhuka*), tree turmeric (*dārvī*), lodh tree (*lodhra*) and elixir salve (*rasāñjana*) is always good as a collyrium in this case.
- 15 Alternatively, for those who cannot see during the day, this pill (*guḍikā*), with sandalwood, is recommended: salt (*nadīja*), conch shell and

186 Wood apple (कपित्थ) in this verse is ablative singular or accusative plural, neither of which construe obviously.

187 A metal other than gold or silver, according to V. Jośī and N. H. Jośī (1968: 1.217). Perhaps lead, which is used in making contemporary collyrium.

188 This was Ḍalhaṇa's preferred interpretation of *rasa* "juice" in this context. He also noted that some take elixir-salve (*śīta*) to be camphor.



- the three spices, collyrium, realgar (*manahṣilā*), the two turmeric (*ra-jana*)<sup>189</sup> and liver extract (*yakṛdrasa*).<sup>190</sup>
- 16 One should grind up kohl (*srotoja*),<sup>191</sup> and Sind salt (*saindhava*) and long pepper and also hareṇu (*hareṇu*). Such wicks with goats urine are good in a collyrium for night blindness (*kṣaṇadāndhya*).
- 17–18ab Alternatively, in such a case, grind together Indian sarsaparilla (*kālā-nusāriva*)<sup>192</sup> long pepper, dried ginger (*nāgara*) and honey, the leaf of the scramberry (*tālīśapatra*), the two turmeric (*rajana*), a conch shell and liver extract (*yakṛdrasa*). Then shade-dried wicks take away illness (*ruj*).
- 18cd–19ab Wicks made of red arsenic (*manahṣilā*), chebulic myrobalan (*abhayā*), the three spices (*vyoṣa*). Indian sarsaparilla (*sāriva*), cuttlefish bone (*samudraphena*), combined with goat’s milk are good.
- 19cd–21ab One should cook a honey collyrium (*kṣaudrāñjana*) either in the juices of cow’s urine (*gomūtra*), and bile, spirits (*madirā*), liver (*yakṛt*), and emblic (*dhātṛī*) or else in the juice of the liver (*yakṛt*) of something different, or else with the extract of the three fruits (*triphalā*). One of these should be mixed with cow urine, ghee and cuttle fish (*aṇṇavamala*)<sup>193</sup> with long pepper, honey and box myrtle (*kaṭṭphala*). It is placed in sea salt and stored in a bamboo tube.
- 21cd–22 One should cook the liver of a sheep, the ghee of a goat, with long pepper and Sindh salt, honey and the juice of emblics. Then one should store it properly in a catechu box. Prepared thus, the honey collyrium is good.
- 23 Alternatively, a collyrium that is hareṇu (*hareṇu*) mixed with long pepper (*māgadhī*), the bone and the marrow of a goat, cardamom (*elā*) and

189 Turmeric (*Curcuma longa* Linn.) and tree turmeric (*Berberis aristata* DC). The term *rajana* is unusual; the normal term is *rajanī*. *Rajana* occurs in *Suśrutaniḥṣaṇṭu* 158 in the sense of *Ferula asafoetida*, Linn.

190 This verse appears as no. 27 in the vulgate.

191 Glossed by Ḍalhaṇa as a kind of collyrium. Cf. **nadk-1954** and P. V. Sharma 1982: 197–198

192 There are two forms of *sārivā* mentioned widely in Āyurvedic literature, the white and the black. Ideas on the identity of the black form are particularly fluid. See Sivarajan and Balachandran (ADPS: 434–438) for a clear discussion.

193 At SS 6.12.31, Ḍalhaṇa glossed *aṇṇavamala* as cuttlefish bone (*samudraphena*). It may be worth considering whether the unusual term *aṇṇavamala* “ocean-filth” might refer to ambergris.



- liver, together with liver extract, is good for eyes afflicted by phlegm.<sup>194</sup>
- 24 Over a fire, one should cook the liver (*yakṛt*) of a monitor lizard (*godhā*) prepared with entrails (*antra*) and stuffed with long pepper (*māgadhi*). As is well known, liver (*yakṛt*) which is used (*niṣevita*) with collyrium certainly destroys night blindness.
- 25 After preparing both a spleen (*plīhan*) and a liver on a spit, one should eat them both with ghee and oil.<sup>195</sup>
- 25cd–26ab As is well known, there are six diseases that can be alleviated (*yāpya*); in those cases (*tatra*) one should release the blood by bloodletting. And for the sake of wellbeing one should also purge using aged ghee combined (*upahita*) with purgative aids (*aṅga*).
- 26cd–27 When an eye-disease is caused by wind (*pavanodbhava*) they say that castor oil (*pañcāṅgulataila*) mixed with milk is good.<sup>196</sup> In the case of diseases of blood (*śonita*) and bile (*pitta*), one should drink ghee with the three fruits; it is particularly cleansing.<sup>197</sup> In the case of phlegm, a purgative by means of turpeth (*trivṛt*) is recommended. In the case of all three humours, sandal (*sugandhi*) in oil is prepared with it (turpeth).<sup>198</sup>
- 28 In cases of partial blindness (*timira*), aged ghee is recommended. It is good if it is kept in an iron vessel.
- 28cd–29ab One should know that ghee with the three mylobalans is always good, and it is made with what is called periploca of the woods (*meṣaviṣāṇa*).

194 On the identities of *elā* and *hareṇu*, Watt (1908: 511 ff) described the former as “true” or “lesser” or “Malabar” cardamom, *Elettaria cardamomum*, Maton & White. In contrast, the “greater” cardamom is *Amomum subulatum* (that Watt discussed on p. 65) that is commonly used as an inferior substitute for *E. cardamomum*. **sing-1972empty citation** provided an interesting discussion of *hareṇu*, noting that the term refers to two substances, first the *satīna* pulse (*Pisum sativum*, Linn.), and second an unknown fruit such as perhaps a *Vitex*. They noted, “None of the text commentators have attempted to disclose the nature of its source plant,” although Ḍalhaṇa described it as aromatic and identical to *reṇukā* (SS.ci.2.75).

195 We read the locative as if an instrumental; if the locative were intended then it would be the spit that would be coated with oil and ghee.

196 Ḍalhaṇa said that the unexpressed topic of this recipe is partial blindness (*timira*).

197 Blood-bile (*śonita-pitta*, *rakta-pitta*) is a widely-recognized disease in ayurveda, but the compound here is definitely dual, which rules out that interpretation. One would expect blood-bile because the previous verse

198 The expression “the fragrant one in oil (*tailasugandhi*)” is puzzling. The word *sugandhi* has different referents in the *Nighaṇṭu* literature but is not common as a noun in the extant literature. “Sandal” is just one of its possible meanings.

- A man who is suffering from partial blindness should lick the finely-ground three fruits mixed with ghee off his hand (*sapāṇa*).<sup>199</sup>
- 29cd Alternatively, someone afflicted by phlegm should apply them (the three fruits) mixed with oil and steeped (*pragāḍha*) in honey.
- 30 The very best oil, well-cooked with a decoction of cow-dung, is good in cases of partial blindness, taken as an errhine.  
In cases caused by bile, ghee by itself is good, as is oil when it arises from wind and blood.
- 31 And in the case of wind one should apply turpeth (*trivṛt*) based on strong mallow (*atibalā*), and country mallow (*balā*) in an errhine (*na-sya*).<sup>200</sup>  
Ghee which has been extracted from milk cooked with the meat of aquatic creatures and those from marshlands should be prescribed.
- 32 †An enclosed roasting (*puṭākhyā*) with Sindh salt and the product of the meat of a carnivore (*kravyabhuj*) and a deer (*eṇa*), is combined with honey and ghee.<sup>201</sup>  
Fat (*vasā*) from a horse, a vulture, a snake, and a cock (*tāmracūḍa*), combined with mahua (*madhūka*) is always good in a collyrium.†<sup>202</sup>
- 33 Having prepared (*niṣevita*) a collyrium made of kohl (*srotas*) and gradually combine it with juices (*rasa*), milk and ghee.<sup>203</sup>

199 “Off his hand” translates the adverbial *sapāṇam*, an unusual word. Ḍalhaṇa reproduced a reading close to the Nepalese recension but says that Jejjāṭa rejects it and so he also does (**susr-trikamjī**).

200 “Based on” translates *-āśrita* “depending on” which does not construe easily here. The vulgate has *śṛta* “cooked” which makes easier sense but is not supported by the Nepalese MSS.

201 Ḍalhaṇa noted (**Su 1938**: 628a) that *puṭāhvaya* (see verse 35 below) is a synonym for *puṭapāka*, and that the process is described in the *Kriyākalpa* chapter, i.e., **SS.6.18.33–38** (**Su 1938**: 635). On the *puṭa* process in the *Suśrutasaṃhitā*, which is earlier and different than that of *rasaśāstra* literature, see the discussion by Wujastyk (**2019**: 83):

The term ‘enclosed roasting’ (*puṭapāka*) does occur in the *Suśrutasaṃhitā* in the context of eye treatments, but designates a method of obtaining juice from substances by wrapping them in leaves pasted with earth and cooking the bolus on charcoal to finally extract a juice.

202 This verse contain irresolvable difficulties. There are no significant variants in the Nepalese MS transmission, but the text is ungrammatical. The vulgate reads substantially differently but we have nevertheless made some emendations in line with it and read the verse as two sentences.

203 Ḍalhaṇa specified that the juices are meat soups of various animals (**Su 1938**: 628).

- For thirty days, this collyrium is put in the mouth of a black snake that is covered with kuśa grass (*kuśa*).
- 34 Next, a collyrium that is milk containing long pepper (*māgadhī*), lye (*kṣāraka*) and Sindh salt (*saindhava*) that has been repeatedly prepared with the mouth of a black snake, is good in the case of bloodshot blindness (*rāgin timira*).<sup>204</sup>
- 35 They say that ghee may be produced from that and combined with sweet herbs is good as an errhine for eye-diseases caused by bile. And here, an eyewash (*tarpaṇa*) is good that is a combination that is the flesh of wild animals taken hot (*puṭāhvaya*).<sup>205</sup>
- 36 And realgar (*manaḥśilā*) mixed with elixir salve (*rasāñjana*) and honey is a liquid collyrium (*dravāñjana*) which is, in this case, combined with mahua (*madhūka*).<sup>206</sup>
- Alternatively, experts on this say that finely ground blue vitriol (*tuttha*) extracted from a gold mine is the “same collyrium (*samāñjana*)”.<sup>207</sup>
- 37 Conch mixed with equal parts of sheep’s horn and stibnite (*añjana*) removes the impurity of the glassy opacity (*kāca*) because of the application of collyrium (*añjana*).<sup>208</sup>
- The extracts (*rasa*) produced from aflame of the forest (*palāśa*), Rohīta tree (*rohīta*),<sup>209</sup> mahua (*madhūka*), ground with the supernatant layer (*agra*) of the spirits (*madira*) is applied.
- 38 Alternatively, one should cook an errhine with cuscus grass (*uśīra*), lodh tree (*lodhra*), the three fruits (*triphalā*), beauty berry (*priyaṅgu*)

204 Ḍalhaṇa described this blindness as a type of *kāca* disease caused by wind (**susr-trikamji3**). The expression “bloodshot blindness” is an attempt to capture the idea of a blind eye that is dyed or coloured (not colour-blindness). This verse is quite different from the vulgate and also syntactically challenging.

205 The expression taken hot (*puṭāhvaya*) is a guess.

206 The expression liquid collyrium (*dravāñjana*) is only known from Ḍalhaṇa’s comments on 6.17.11ab (Su 1938: 626). The recipe in the present collyrium is different from that discussed by Ḍalhaṇa.

207 On *tuttha*, which may also be identified with zinc oxide or as crushed sea-urchin shells, see Falk (1991: 112 ff.); zinc oxide is a component of skin-balms but is not recommended for application in the eyes themselves. The expression “same collyrium (*samāñjana*)” is a hapax legomenon glossed inexplicably by Ḍalhaṇa as “a collyrium with an equal amount of fermented barley” (*tulyasauvīrāñjana*) (Su 1938: 628).

208 The ablative “from collyrium” is hard to construe, but Ḍalhaṇa used this term and phrase in his commentary on 6.17.41ab (Su 1938: 629).

209 Probably *Soyimida febrifuga* A. Juss.

to pacify eye diseases caused by phlegm.<sup>210</sup>

One should apply smoke of the bark of embelia (*vidaṅga*), velvet leaf (*pāthā*), white siris (*kinihī*), and desert date (*iṅgudī*); and cuscus grass (*uśīra*) alone.

- 39 A ghee that is cooked (*bhāvita*) from a decoction of a non-flowering tree (*vanaspati*)<sup>211</sup> as well as turmeric (*haridrā*) and spikenard (*nalada*) is good in a eyewash (*tarpaṇa*).

Alternatively, one may have an enclosed roasting (*puṭapāka*) done with arid-land animals (*jāṅgala*)<sup>212</sup> and a plentiful amount of long pepper (*māgadha*), Sindh salt and honey.

- 40 A treatment (*kriyā*) with realgar (*manahśilā*), the three spices, conch, honey, along with Sindh salt, green vitriol (*kāsīsa*) and elixir salve (*rasāñjana*).<sup>213</sup>

They say that an elixir salve (*rasāñjana*) combined with myrobalans, treacle and dried ginger is good.<sup>214</sup>

- 41 Alternatively, a collyrium that has been prepared many times in the eight types of urine<sup>215</sup> is put into water with the three fruits. Having stored it in the mouth of a nocturnal creature (*niśācara*)<sup>216</sup> one should place it in a conch (*salilotthita*) for two months.<sup>217</sup>

- 42 One should apply that collyrium together with the flowers of mahua (*madhūka*) and horseradish tree (*śigru*) when [the disease] is caused by all [the humours].

But alternatively, all treatments apply when blood is the cause. The procedure that removes bile is good when there is blue dot cataract

210 Ḍalhaṇa invoked a general rule (*paribhāṣā*) to indicate that this mixture should be cooked with sesame oil.

211 These are fig trees. The *Sauśrutaniḥṣaṇṭu* (252) specifies the Uḍumbara. Cf. the classification in CS.1.1.71–72, 1.8, *et passim*.

212 On this term, see SS.1.35.42 (*Su 1938*:157) and the discussion by Zimmermann (1999: 25–31).

213 Ḍalhaṇa glossed treatment (*kriyā*) specifically as inspissation (*rasakriyā*) (*Su 1938*:629).

214 We emend *hite* to *hitam*, against the MSS.

215 See SS *mūtravarga*

216 Ḍalhaṇa glossed nocturnal creature (*niśācara*) as “vulture,” although elsewhere in the *Suśrutasaṃhitā* it is more commonly interpreted as a spirit or demon. In the present context, following verses 33 and 34, it is probably a snake.

217 We interpret “water-born (*salilotthita*)” as “conch” in line with *jalodbhava*, but the term is uncertain.

- (*mlāyin*).<sup>218</sup>
- 43 For one who has a humour, the physician should consider the rule in all humoral cases and then smear the ointment on the face.<sup>219</sup>  
The treatment that is good for removing watery eye (*syanda*) should be properly applied in all these humoral cases, according to the individual.<sup>220</sup>
- 44 The physician should not employ substances in errhines etc., when the humours intensify, and also when disease spreads. And further, in the *Kalpa*, there is a good deal more said about collyriums, and that should be considered and then applied.<sup>221</sup>
- 45 Someone who uses matured ghee, the three fruits, wild asparagus (*śa-tāvarī*), as well as mung beans (*mudga*), emblic and barley has nothing to fear from cases of severe blindness (*timira*).
- 46 Blindness is dispelled by milk prepared with wild asparagus or in emblics, or again cooked barley (*yavaudana*) followed by the water of three fruits with plenty of ghee.
- 47 When there is bloodshot blindness (*rāgiṇi timire*), the wise physician should not cut a vein. A humour injured (*utpīḍita*) by the instrument rapidly destroys vision.
- 48 Non-bloodshot blindness (*araga timira*) in the first layer (*paṭala*) is treatable. And bloodshot blindness (*rāgiṇi timire*) in the second layer, with difficulty. And in the third layer it can be mitigated (*yāpya*).<sup>222</sup>
- 49 I shall explain the therapy for success when there is a cataract (*liṅga-nāśa*) caused by phlegm. It may be white, like a full moon, an umbrella, a pearl (*muktā*) or a spiral (*āvarta*).
- 50 Or it may be uneven, thin in the middle, streaked or have excessive shine (*prabha*). A humour (*doṣa*) in the pupil may be characterized as being painful or having blood.<sup>223</sup>

Check out these refs.

meaning of kalpa

218 The vulgate follows Ḍalhaṇa in glossing *mlāyin* as *parimlāya*. The description of this condition at SS.6.7.27–28 appears to refer to “blue dot” or “cerulean” cataract. √*mlai* derivatives can mean “dark” or “black.”), which is normally a different ailment.

219 The vulgate edition omits part of this verse (ab) combining earlier and later passages.

220 The term watery eye (*syanda*) refers to the specific disease *abhiṣyanda*. See SS.6.6.5, 1.46.51, etc.

221 Ḍalhaṇa noted that *Kalpa* means the Uttaratantra adhyāya 18 (Su 1938: 633 ff).

222 Although the text says with difficulty (*kṛcchra*), the implication is that it is untreatable (*asādhya*) (cf. 6.17.2 (Su 1938: 625) above). The three categories, treatable, untreatable and possibly mitigated are standard categories of triage.

223 In the vulgate, and in parallel passages in the AS, the reading “it may be (*bhavet*)” is

51–52 At a time that is neither too hot or too cold, the patient who has been oiled and sweated is restrained and seated, looking symmetrically at his own nose.

The wise physician should separate (*muktvā*) two white sections from the black part (*kr̥ṣṇa*) and from the outer corner of the eye (*apāṅga*). Then he should press (*pīḍ-*) properly into the eye,<sup>224</sup> at the naturally-occurring (*daivakṛte*) opening (*chidra*) with a probe (*śalākā*) made of copper or iron, with a tip like a barley-corn, held by a steady hand with the middle finger, forefinger and thumb, the left one with the right hand and the other one contrariwise.

When the piercing is done properly, there is the issue of a drop of liquid and a sound.<sup>225</sup>

55 The expert should moisten the exact place of piercing with a woman's breast-milk. Then he should scratch the circuit of the pupil (*dr̥ṣṭimaṇḍala*) with the tip of the probe (*śalākā*).<sup>226</sup>

56 Without injuring, gently pushing the phlegm in the circuit of the pupil against the nose, he should remove it by means of sniffing (*ucchiṅgana*).<sup>227</sup>

57 Whether the humour is solid (*styāna*) or liquid (*cala*), one should apply sweating to the eye externally, with leaves (*bhaṅga*) that remove wind, after fixing the needle (*sūcī*) properly.<sup>228</sup>

58 But if the humour cannot be destroyed or if it comes back, one should apply the piercing (*vyadha*) once again, with appropriate oils and so on.

59 Now the pupil (*dr̥ṣṭi*) shines like the sun (*hari*) in a cloudless sky; then,

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replaced with the negative “if, then not (*na ced*)” (cf. utt.17.1–3 (*As* 1980: 712)). These characteristics are then read as conditions that preclude surgery; for the Nepalese recension, they are simply descriptions of the appearance of a cataract.

224 We understand the locative *nayane* as the place of pressing; other interpreters take it as an accusative dual. The idea is that the eye is held steady by the surgeon.

225 Ḍalhaṇa remarked on 6.17.61ab (*Su* 1938: 630) that when the piercing is not correctly done, blood issues and there is no sound.

226 The anatomy of the eye is described in 6.1.14–16 (*Su* 1938: 596). The disks or *maṇḍalas* are the circuits or disks of the eye.

227 Ḍalhaṇa described sniffing (*ucchiṅgana*) at 6.19.8 (*Su* 1938: 641), clearly intending inward sniffing.

228 We interpret *bhaṅga* as leaves, following the usage elsewhere in this sthāna 4.32.9, 6.11.5 (*Su* 1938: 513, 614) where *bhaṅga* means shoots (*pallava*). A similar procedure is described at 6.17.25 (*As* 1980: 716a), where sweating of the eye is done by means of the leaves of a castor-oil plant.



- when objects become visible, one may slowly remove the probe (*śa-lākā*).<sup>229</sup>
- 60 Having smeared ghee on the eye, one should cover it with a bandage. Then, he must lie down supine in a house free from disturbances.<sup>230</sup>
- 61 At that time, he should not belch, cough, sneeze, spit or shiver. Afterwards there should be restrictions (*yantraṇā*) as in the case of someone who has drunk oil.<sup>231</sup>
- 62 Every three days one should wash it with decoctions (*kaṣāya*) that remove wind. After three days, one should sweat the eye externally because of the danger of wind.
- 63 Having restrained himself in this way for ten days he should thereafter take a beneficial regimen (*karma*) that clears the pupil (*dṛṣṭi*) and also he should take light food in measure.

### [Complications]

- 64 When there is a misshapen eyeball (*vilocana*), the eye may fill because of the release of blood from a vein.<sup>232</sup>  
A hard probe leads to shooting pain (*śūla*), a thin to unsteadiness of the humours (*doṣapariplava*),<sup>233</sup>
- 65 a thick-tipped probe leads to a large wound, and a sharp one may cause harm in many ways; a very irregular one may cause a discharge of water, a rigid (*sthirā*) one brings about a loss of function (*kriyāsaṅga*).<sup>234</sup>

229 There are many problems with the MS readings and interpretation of this half-verse. We have inferred “sky” and emended from “free from the point (*agramukta*)” to “free from clouds (*abhramukta*)”. The latter meaning is supported (in different words) by the vulgate and occurs elsewhere in Sanskrit literature.

230 Ḍalhaṇa explained disturbances specifically as dust, smoke, drafts and sunlight 6.17.67 (*Su* 1938: 631a).

231 Ḍalhaṇa glossed “restrictions (*yantraṇā*)” as having a controlled diet and the other restrictions appropriate to someone who is taking oil as a preparation before further therapy (6.17.68 (*Su* 1938: 631)). These restrictions are also described at 6.18.28 (*Su* 1938: 635) and 1.16.25cd (*Ah* 1939: 249).

232 The condition of “misshapen eye” is referred to briefly in 6.61.9 (*Su* 1938: 800), where Ḍalhaṇa glossed it as “bent brow and eye (*vakrabhrūnetra*).” The vulgate’s reading of “with blood (*śonitena*)” is easier to construe.

233 There is a medically significant difference here from the vulgate, which reads “a rough (*khara*) probe” not a “thin” probe.

234 This translation of loss of function (*kriyāsaṅga*) is given on the basis of Ḍalhaṇa’s gloss of *kriyāsaṅgakarī* at 3.8.19 (*Su* 1938: 382) as “causing the destruction of actions such

66 Therefore, one should make a good probe that is free from these defects.

### [Characteristics of the probe]

The probe should be eight finger-breadths long and in the middle it is wrapped with thread and is as thick as a thumb joint. It is shaped like a bud at both ends (*vaktra*).

67 A commendable probe should be made of silver, iron or gold (*śātaku-mbhī*).<sup>235</sup>

### [Complications]

Redness, swelling, lumps, driness (*coṣa*), bubbling (*budbuda*),<sup>236</sup> pigs' eye (*sūkarākṣitā*),<sup>237</sup> irritation (*adhimantha*), etc. and other diseases arise from faults in the piercing,

69–70 or even from bad behaviour. One should treat them each accordingly. Listen to me once again about compounds for painful red eyes.

Red chalk (*gairikaḥ*), Indian sarsaparilla (*śārīvā*), panic grass (*dūrvā*), and ghee ground with barley.

71 This face ointment is to be used for quelling pain and redness. Or else it may be taken combined with the juice of citron (*mātuluṅga*) with sesame gently fried, mixed with white mustard (*siddhārthaka*).<sup>238</sup> This is immediately beneficial when someone is looking for relief.

72 A paste with *Holostemma* (*payasyā*),<sup>239</sup> Indian sarsaparilla (*śārīvā*), cassia cinnamon (*patra*), Indian madder (*mañjiṣṭhā*), and liquorice

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as moving (*gamanādikriyāvināśakarī*)."

235 The vulgate reads "copper (*tāmra*)" in place of "silver."

236 Ḍalhaṇa glossed "bubbling (*budbuda*)" as "prolapse (*māṃsanirgama*) that looks like bubbles."

237 The expression "pigs' eye" appears to be a *hapax*. It was glossed as "downward vision (*adhodṛṣṭitva*)" by Ḍalhaṇa.

238 On the adverbial use of gently (*mṛdu*), see Gombrich 1979.

239 The identity of *payasyā* is debated (sing-1972), and was already in doubt at the time of Ḍalhaṇa but likely candidates may be those suggested by Ḍalhaṇa, who suggests either *arkapuṣpī* or *kṣīrakākoli*, that may be *Holostemma adakodien* Schult. and *Leptadenia reticulata* (Retz.) Wight & Arn. (ADPS: 195-196). The *Sauśrutanighaṇṭu* glosses it as *kṣīrikā* or *arkapuṣpikā* (Suvedī and Tivārī 2000: v. 307).



- (*madhukair*) stirred with goat's milk, pleasantly warmed, is said to be healthy.<sup>240</sup>
- 73 Alternatively, it can be made in this way with Himalayan cedar, Himalayan cherry (*padmaka*) and dried ginger. Or, in the same way, with grapes, liquorice and the Lodh tree mixed with Sindh salt.
- 74 Alternatively, goats' milk with the Lodh tree, Sindh salt, red grapes and liquorice, cooked, should be used in irrigation because it removes pain and redness.
- 75 Having cooked it with liquorice, water-lily, and costus, mixed with grapes (*drākṣā*), lac (*lākṣā*), white sugar (*sitā*), with wild asparagus, Hare Foot Uraria (*pr̥thakparṇī*),<sup>241</sup> nutgrass (*mustā*), liquorice, Himalayan cherry (*padmaka*), and Sindh salts, one should apply it [irrigation] gently warm.
- 76cd–77ab Ghee that has been cooked in four times the amount of milk that has itself been cooked with drugs that destroy wind.<sup>242</sup> This has an admixture of cottony jujube (*kākolī*) etc., should be prescribed in all treatments.<sup>243</sup>
- 77cd–78ab If pain does not end in this way, one should administer blood-letting to the vein of someone who has previously been oiled and sweated. Then the wise physician should apply cauterization in the advised manner.<sup>244</sup>
- 78cd–80ab Now listen to two excellent collyriums for making the pupils clear. After grinding the flowers of perploca of the woods (*meṣaśṛṅga*), siris (*śirīṣa*), axelwood (*dhava*) royal jasmine (*jātī*), pearl and beryl (*vaiḍūrya*) with goat's milk, one should put it in a copper pot for seven days.
- 80cd–81 Having made it into wicks (*vartti*), the physician should apply it as a collyrium. Alternatively, one should make kohl (*srotoja*), coral (*vi-druma*), cuttlefish bone (*phena*), and realgar (*manaḥśilā*) and peppers

or a dual?

240 The expression “stirred with goat's milk (*ajākṣīrārdita*)” is difficult. It may be connected with the rare root *ard* documented by Whitney (1885: 15). Cf. *√ard gatau* (*Dhātupāṭha* 1.56).

241 Suvedī and Tivārī 2000: 18.

242 Ḍalhaṇa mentioned that these drugs include Deodar (*bhadradāru*) and other wind-destroying drugs. The *vātasamśamana* group is listed in *Suśrutasaṃhitā sūtrasthāna* 1.39.7.

243 Ḍalhaṇa noted that this would include errhines, ointments, etc.

244 The vulgate reads *vāpi* for *cāpi*, so Ḍalhaṇa saw blood-letting and cautery as alternatives, not a sequence of treatments. Ḍalhaṇa listed the places that cauterization may be applied, such as the brow, forehead, etc.

into wicks as before. One should apply these wicks, which are good in a collyrium, to steady the pupil.

- 82 I shall again discuss the foremost collyriums at length in the *Kriyākalpa* section. Those various methods may be applied here too.

## Uttaratantra, adhyāya 38

### Introductory remarks

**Summary of the Content** The chapter talks about various diseases of the female reproductive system and, in doing so, combines both aspects that go into a representation of diseases in āyurvedic literature: signs, symptoms and pathogenesis (*nidāna*), on the one hand, and medical treatment (*cikitsā*), on the other. In chapters of the *Uttaratantra*, these two aspects are sometime dealt with in two different chapters *X-vijñānīya* and *X-pratiṣedha*. There are, however, many examples where this distinction is not made.

**Placement of the Chapter** While in [Su 1938](#) the current chapter is found at the end of the section on paediatrics (*Kumāratantra*, or *Kumārabhṛtya* as this section is styled in MS Kathmandu KL 699), in the Nepalese version, this is chapter 6.58, and it is chapter 23 of an entirely different section, namely, the *Kāyācikitsā*.

Several things are noteworthy in this regard:

- In the placement of the vulgate, this chapter follows upon 6.37 *Grahotpatti* (6.35 in the Nepalese version), a chapter that talks about the origination of nine demons (*graha*) that are responsible for all children's diseases described in previous chapters of the *Kumāratantra*. In this way, the current chapter retains the general focus on the child bearing (*kaumārabhṛtya*), but, at the same time, marks a change to a distinct, less mystical approach to the topic at hand (that could originate in a cultural milieu different from that of the preceding eleven chapters). Ḍalhaṇa explained how the chapter fits its context in the following way ([Su 1938](#): 668b):

It is appropriate that, for the sake of treating the disorders of the female reproductive system, the chapter called “Countermeasures Against Disorders of the Female Reproductive System” is taught immediately after the chapter called “The Origination of Demons (*graha*).” It is because (1) there is an explicit mention of the word “*yoni*” in the statement “born in the womb (*yoni*) of animal and human” [in SS.6.37.13bc] and because (2) the disorders

of the female reproductive system are the causes for the inborn disorders of children.<sup>245</sup>

- In the placement of the Nepalese version, *Yonivyāpatpratiṣedha* is preceded by 6.56 *Mūtrāghātapratiṣedha* (6.58 in [Su 1938](#)) and 6.57 *Mūtrakṛcchrapratiṣedha* (6.59 in [Su 1938](#)), two chapters dealing with the diseases of the urinary tract. The current chapter carries on with the topic of diseases that affect genitalia. In its Nepalese version, the chapter opens with two verses that explain the reasons for treating the particular set of diseases. These lack any reference to the inborn disorders of children, mentioned by Ḍalhaṇa, and instead highlight the importance of curing female diseases for the satisfaction of male partner.
- SS.1.3 in both [Su 1938](#) and the Nepalese version lists the chapter at the place where it is found in the vulgate (Cf. Sū.3.37ab: *naigameṣacikitsā ca grahotpattih sayonijāh*).
- Parallel chapters in the *Aṣṭāṅgasamgraha* and the *Aṣṭāṅghṛdayasamhitā* form a part of the *Śalyatantra* section of each text.

**Parallels** The current chapter is parallel in its content to *Aṣṭāṅgasamgraha* 6.38 and 6.39 as well as *Aṣṭāṅghṛdayasamhitā* 6.33 and 6.34 (*Guhyarogavijñāna* and *Guhyarogapratiṣedha* respectively).

A close literary parallel to the first part of the chapter is found in *Mādhavanidāna* (MN<sub>3</sub>) 62, or at least its version printed in Y. T. Ācārya (MN<sub>3</sub>: 361). The readings of the MN<sub>3</sub> as it stands now usually side with the vulgate version rather than with the Nepalese. In addition to the basic text, there are several valuable pointers made in the *Madhukośa*, an early commentary on the MN<sub>3</sub>. This part of the text is authored by Śrīkaṇṭhadatta, who was most like a direct student of Vijarakṣita. The latter wrote the first part of the *Madhukośa*, up to chapter 32, and, what is more, can be dated to the late eleventh or early twelfth centuries.<sup>246</sup>

Another most interesting parallel is found in *Carakasamhitā* 6(Ci).30.

<sup>245</sup> Ḍalhaṇa on SS.6.38.1: *grahotpattyadhyāyanantaram 'tityagyonim mānuṣam ca' iti vacanena yoner nāmasamkīrtanāt kumārajanmavikārakāraṇatvāc ca, yonivyāpaccikitsitārtham yonivyāpatpratiṣedhādhyāyārambho yuyjate [...]*

<sup>246</sup> Meulenbeld [1974b](#): 22–26.

## Translation

- 1 And now I shall explain the countermeasures against disorders of the female reproductive system (*yonivyāpat*).<sup>247</sup>
- \*3 Since for good men, a woman is the most pleasurable thing, therefore a physician should diligently attend to the diseases located in the female reproductive system (*yonī*), because he is entirely devoted to it (that is, to curing these diseases) for the sake of (people's) happiness.<sup>248</sup>
- \*4 A corrupted female reproductive system (*yonī*) cannot consume semen (*bīja*), and therefore, the woman cannot take a fetus (that is, become pregnant). She gets severe prolapses (*arśas*), abdominal lump (*gulma*) and similarly many other diseases (*roga*).

**Philological Notes** The first two verses (2 and 3) in the Nepalese version are written in a classical variety of the *upajāti* metre:

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In content, they are only approximately parallel to three hemistichs in *anuṣṭubh* metre found in [Su 1938](#). The latter verses lack the apologetic explanation concerning the reasons for this chapter being taught.

- \*5 Humours (*doṣa*), wind (*vāta*), etc., corrupted due to faulty medical treatment (*mithyopacāra*),<sup>249</sup> sexual activity, fate, and also defects

<sup>247</sup> On this broad understanding of the term *yonī*, see **das-orig**

<sup>248</sup> As our translation indicates, the sentence construction does not allow an unambiguous identification of who or what is the referent of the pronoun *tad* in the compound form *tadadhīna* 'devoted to it.' Our current understanding is that *tad* refers to the 'most pleasurable thing' mentioned in pāda a. It could, however, also refer to 'them,' that is, the 'good men.'

<sup>249</sup> In our translation of the compound *mithyopacāra*, we decided for the technical meaning of the term *upacāra*, that is, 'medical application' or 'treatment.' The combination *mithyā+upa-√car* is attested several times in medical literature. At least once, at CS Vi.3.38, it is given an explicit commentarial gloss (by Cakrapāṇidatta): "*mithopacaritān iti asamyak cikitsitān*". In the SS ([Su 1938](#)), it is used once in Ut.18.30, where it refers specifically to the wrong application of irrigation (*tarpaṇa*) and putapāka (*putapāka*), both of which are mentioned in the previous verse. Another use of the compound in a seemingly conforming meaning is found in a citation from Bhoja's text quoted by Gayadāsa at SS Ni.5.17: "*śvitram tu dvividhaṃ proktaṃ doṣajam vṛṇajam tathā / tatra mithyopacārād dhi vṛṇasya vṛṇajam smṛtam / / ...*". In contrast to this, the parallel verse in [Su 1938](#) = CS Ci.30.7 = [MN<sub>3</sub>](#) 62.1 reads *mithyācāra* 'wrong conduct'. All comment-

(*doṣa*) of menstrual blood (*ārtava*) and semen (*bīja*), produce various diseases in the female reproductive organ (*yoni*). These 20 diseases are taught here distinctly and one by one along with their treatment (*bheṣaja*), causes (*hetu*) and signs (*cihna*).

**Philological Notes** The Nepalese version of the SS continues here with 3 hemistichs in classical *upajāti* metre (see the syllabic pattern above). On the other hand, [Su 1938](#) contains two complete verses (4 hemistichs) in the *anuṣṭubh*. Three final hemistichs are found verbatim in CS Ci.30.7cd–8. It is very likely that these verses were borrowed from the CS into SS (and not the other way around), because CS Ci.30.7cd = SS Ut.38.5ab says that the 20 kinds of diseases were already taught in the Collection of Diseases (*rogasaṃgraha*). In the context of the SS, this reference does not make any sense and is left uncommented by Ḍalhaṇa. In case of the CS, however, Cakrapāṇidatta explains that this reference points back to CS Sū.19, a chapter that does, in fact, list all the diseases dealt with in later sections of the text. 20 diseases of female reproductive system (*yoni*) as mentioned in Sū.19.3.

The above three hemistichs in *anuṣṭubh* are also repeated in [MN<sub>3</sub> 62.1–2ab](#). Given that all following verses stem from the SS, it is likely that [MN<sub>3</sub> 62.1–2ab](#) too was incorporated into the text from the SS (and not its original location in the CS).

\*6.1 Because of wind (*vāta*), female reproductive organ (*yoni*) becomes:

1. udāvartā (*udāvartā*),
2. called Infertile (*vandhyā*), and
3. Sprung (*plutā*),
4. Flooded (*pariplutā*), and
5. Windy (*vātalā*).

\*6.2 And because of choler (*pitta*), occur:

1. With bloodloss (*raktakṣayā*),
2. Vomiting (*vāminī*), and

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ators (Cakrapāṇidatta on the CS, Śrīkaṇṭhadatta on the [MN<sub>3</sub>](#), and Ḍalhaṇa on the SS) explain that the wrong conduct stands here specifically for unwholesome diet. The parallel in AH Ut.33.28 = AS Ut.38.34 plainly reads *duṣṭabhojana* ‘corrupted food’ instead.

3. Causing a Fall (*sraṃsanī*),
4. Child-murderess (*putraghnī*), and also
5. Bilious / Choleric (*pittalā*).

\*7.1 And because of phlegm (*kapha*) occur:

1. Extremely Excited (*atyānandā*),
2. Protuberant (*karṇinī*), and
3. & 4. two Caraṇī (*caraṇī*), and
5. other Phlegmatic (*śleṣmalā*).

\*7.2 And similarly there are other (kinds of morbid female reproductive system) involving all *doṣas*:

1. Impotent (*śaṇḍhī*),
2. With testicles (*aṇḍīnī*),
3. two Huge (*mahatī*),
4. With a needle-like opening (*sūcīvaktrā*),
5. Sarvātmikā (*sarvātmikā*).

## Editions and Abbreviations

Ah 1939	Kuṁṭe, Aṇṇā Moreśvara, Navare, Kṛṣṇaśāstrī, and Parādkar, Hariśāstrī (1939) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, श्रीमदरुणदत्तविरचितया सर्वाङ्गसुन्दराख्यया व्याख्यया, हेमाद्रिप्रणीतया आयुर्वेदरसायनाह्वया टीकया च समुल्लसितम् = <i>The Astāṅgahṛidaya</i> (6th edn., Mumbayyām: Nirṇayasāgara Press), <a href="https://nirṇayasāgara.org/ark:/13960/t3tt6967d">ark:/13960/t3tt6967d</a> .
Anup	<i>Anup Sanskrit Library.</i>
Apte	Apte, Vaman Shivaram (1992), <i>The Practical Sanskrit-English Dictionary</i> (Kyoto: Rinsen Book Company), ISBN: 4-653-00038-7; Reprinted from Gode and Karve 1957–9.
AS	<i>Asiatic Society.</i>
As 1980	Āṭhavale, Anaṁta Dāmodara (1980) (ed.), <i>Aṣṭāṅgasan̄grahaḥ. Śrīmad Vṛddhāvāgbhaṭaviracitaḥ Induvyākhyāsahitaḥ</i> (Pune: Maheśa Anaṁta Āṭhavale, Śrīmad Ātreya Prakāśanam), <a href="https://nirṇayasāgara.org/ark:/13960/t9773bb9z">ark :/13960/t9773bb9z</a> .
Bhela 1921	Mookerjee, Ashutosh, and Ananta Krishna Shastri, Vedantabisharad (1921) (eds.), <i>The Bhela Samhita. Sanskrit Text</i> (Calcutta: University of Calcutta), <a href="https://nirṇayasāgara.org/ark:/13960/t3sv3157j">ark:/13960/t3sv3157j</a> ; Based on two copies made of the Thanjavur codex unicus (MS Thanjavur TMSSML 10773, Burnell 1880: 63–4, P. P. S. Sastri 1933: #11085).
Bhela 2000	Krishnamurthy, K. H. (2000), <i>Bhela-saṁhitā. Text with English Translation, Commentary and Critical Notes</i> (Haridas Ayurveda Series, 8; Varanasi: Chaukhambha Visvabharati).
BL	<i>British Library.</i>



Ca. 1941	Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणान्निवेशेन प्रणीता, चरक-ढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता (3rd edn., Mumbayyām: Nirnaya Sagara Press), <a href="https://nirnayasangraha.org/ark:/13960/t48q2f20n">ark:/13960/t48q2f20n</a> .
HIML	Meulenbeld, Gerrit Jan (1999–2002), <i>A History of Indian Medical Literature</i> , 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.
IOLR	Eggeling, Julius, et al. (1887–1935), <i>Catalogue of the Sanskrit Manuscripts in the Library of the India Office</i> (London: Secretary of State for India), <a href="https://nirnayasangraha.org/ark:/13960/s2kbbk5zcrg9">ark:/13960/s2kbbk5zcrg9</a> .
KL	<i>Kaiser Library</i> .
MN <sub>1</sub>	Ācārya, Yādavaśarma Trivikrama (1920) (ed.), महामतिश्रीमाधवकरप्रणीतं माधवनिदानम् श्रीविजयरक्षित-श्रीकण्ठदत्ताभ्यां विरचितया मधुकोशाख्यव्याख्यया, श्रीवाचस्पति-वैद्यविरचितया आतङ्कदर्पणव्याख्याया विशिष्टांशेन च समुल्लसितम् = <i>Mādhavanidāna by Mādhavakara with the Two Commentaries, Madhukosha by Vijayarakshita &amp; Shrikanthadatta and Ātankadarpaṇa by Vāchaspati Vaidya</i> (1st edn., Bombay: Nirnaya Sagara Press), <a href="https://nirnayasangraha.org/ark:/13960/t9z08jn5j">ark:/13960/t9z08jn5j</a> .
MN <sub>3</sub>	Ācārya, Yādavaśarma Trivikrama (1932) (ed.), महामतिश्रीमाधवकरप्रणीतं माधवनिदानम् श्रीविजयरक्षित-श्रीकण्ठदत्ताभ्यां विरचितया मधुकोशाख्यव्याख्यया, श्रीवाचस्पति-वैद्यविरचितया आतङ्कदर्पणव्याख्याया विशिष्टांशेन च समुल्लसितम् = <i>Mādhavanidāna by Mādhavakara with the Two Commentaries, Madhukosha by Vijayarakshita &amp; Shrikanthadatta and Ātankadarpaṇa by Vāchaspati Vaidya</i> (3rd edn., Bombay: Nirnaya Sagara Press), <a href="https://nirnayasangraha.org/ark:/13960/t66452x0h">ark:/13960/t66452x0h</a> ; Reprinted Varanasi: Chowkhambha, 1986.

MW	Monier-Williams, Monier, Leumann, E., Cappeller, C., et al. (1899), <i>A Sanskrit-English Dictionary Etymologically and Philologically Arranged, New Edition</i> (Oxford: Clarendon Press); 1970 reprint.
NAK	<i>National Archives of Kathmandu.</i>
NCC	Raghavan, V., et al. (1949-), <i>New Catalogus Catalogorum, an Alphabetical Register of Sanskrit and Allied Works and Authors</i> , 39 vols. (Madras University Sanskrit Series; Madras: University of Madras); v.1: revised edition, 1968. Searchable at <a href="https://vmlt.in/ncc/">https://vmlt.in/ncc/</a> .
NGMCP	NGMCP (2014), "Nepal-german Manuscript Cataloguing Project. Online Title List and Descriptive Catalogue," Universität Hamburg and Deutsche Forschungsgemeinschaft, <a href="#">URL</a> .
RORI	<i>Rajasthan Oriental Research Institute.</i>
Su 1889	Bhaṭṭācāryya, Jīvānanda Vidyāsāgara (1889) (ed.), सुश्रुतः. सूत्र-निदान-शारीर-चिकित्सा-कल्पोत्तर-तन्त्र-कल्पित आयुर्वेद. भगवता धन्वन्तरिणोपदिष्टः सुश्रुतनामधेयेन तच्छिष्येण विरचितः (3rd edn., Calcutta: Saratī Press), <a href="ark:/13960/t1nh6j09c">ark:/13960/t1nh6j09c</a> ; HIMAL: IB, 311, edition b.
Su 1915	Ācārya, Yādavaśarma Trivikrama (1915) (ed.), सुश्रुतसंहिता, सुश्रुतेन विरचिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = <i>The Sushrutasaṃhita of Sushruta, the Nibandhasaṅgraha Commentary of Shri Dalhaṇāchārya</i> (Mumbayyām: Nirṇayasāgaramudrāyantrālaye), <a href="ark:/13960/t3sv0mt50">ark:/13960/t3sv0mt50</a> , accessed 29/07/2020; HIMAL: IB, 312 edition *v.
Su 1931	Ācārya, Yādavaśarma Trivikrama (1931) (ed.), सुश्रुतसंहिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, महर्षिणा सुश्रुतेन विरचिता, सूत्र-निदान-शारीर-चिकित्सा-कल्पस्थानोत्तरतन्त्रात्मकः. आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = <i>The</i>

*Sushrutasamhitā of Sushruta with the Nibandhasaṅgraha Commentary of Shree Dalhaṇāchārya* (2nd edn., Mumbayyām: Pāṇḍuraṅga Jāvajī at the Nirṇaya-sāgaramudrāyantrālaye), [ark : / 13960 / t9j41sg94](https://nirayam.org/ark:/13960/t9j41sg94), accessed 09/06/2020; [HIML](https://nirayam.org/HIML): IB, 312 edition \*v.

Su 1938

Ācārya, Yādavaśarma Trivikrama, and Ācārya, Nārāyaṇa Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्य-विरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press), [ark : / 13960 / t09x0sk1h](https://nirayam.org/ark:/13960/t09x0sk1h); [HIML](https://nirayam.org/HIML): IB, 313, edition cc ('the vulgate').

Su 1938<sup>2</sup>

Ācārya, Yādavaśarma Trivikrama, and Ācārya, Nārāyaṇa Rāma (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यप-ञ्जिकाव्याख्यया च समुल्लसिता (Vārāṇasī: Caukhambhā Kṛṣṇadāsa Akādāmī); Reprint of the third, 1938 edition (Su 1938).

Su 1939

Ācārya, Yādavaśarma Trivikrama, and Śarman, Nandakiśora (1939) (eds.), सुश्रुतसंहितायाः सूत्रस्थानम्. श्रीचक्रपाणिदत्तविरचितया भानुमतीव्याख्याया समेतम् = *Sushrut-saṁhitā (sūtra Sthān) with Bhānumatī Commentary by Chakrapāṇi Datta with Introduction by Gaṇanāth Sen* (Śrīsvāmi Lakṣmīrāma Nidhi Granthamālā = Shri Swāmī Lakshmi Rām Trust Series, 1; [Jaipur]: Śyāmasundara Śarman), [ark : / 13960 / t54g0d12m](https://nirayam.org/ark:/13960/t54g0d12m); Printed at the Nirṇayasāgara Press, Bombay.

Su 1945

Ācārya, Yādavaśarma Trivikramācārya, and Ācārya, Nārāyaṇa Rāma (1945) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संवल्लिता = *the Suśrutasamhitā of Suśruta with Various Readings, Notes and Appendix etc.* (Mumbāi:

	Nirṇayasāgarākhyamudraṇālaye), <a href="https://nirṇayasagarakhyamudraṇālaye.iiitrr.ac.in/ark:/13960/t8kd4jh7n">ark :/ 13960 / t8kd4jh7n</a> .
TMSSML	<i>Tanjore Maharaja Serfoji Saraswati Mahal Library.</i>
Viṣṇudh.	Śarman, Madhusūdana, and Śarman, Mād-havaprasāda (1912) (eds.), <i>विष्णुधर्मोत्तरपुराणम्</i> = [Viṣṇudharmottarapurāṇa] (Mumbai: Khemarāja Śrīkṛṣṇadāsa at the Śrīveṅkaṭeśvara Steam Press), <a href="https://nirṇayasagarakhyamudraṇālaye.iiitrr.ac.in/ark:/13960/t6qz6fr23">ark :/ 13960 / t6qz6fr23</a> ; Lithograph format. Edited on the basis of a manuscript belonging to the astrologer Śudhākaraśarman of the Varanasi Sanskrit Pāṭhaśālā.

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Potter <sub>rev</sub>	Wren, R. C., Williamson, Elizabeth M., and Evans, Fred J. (1994), <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> (Saffron Walden: C. W. Daniel Company Ltd.); Reprint of revised 1988 edition.
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## Glossary and Index of Medical Substances

amaranth ( <i>taṇḍulīyaka</i> ) <i>Amaranthus hypochondriacus</i> , L. See King 321, <a href="#">NK</a> : v. 1, #144, <a href="#">Potter<sub>rev</sub></a> : 15. Cf. <a href="#">AVS</a> : v. 1, 121, <a href="#">29</a>	<a href="#">46, 50</a>
axlewood ( <i>dhava</i> ) <i>Anogeissus latifolia</i> (Roxb. ex DC.) Wall. ex Guill & Perr. See <a href="#">AVS</a> : v. 1, 163 f, <a href="#">Chopra</a> , <a href="#">GIMP</a> : 20, <a href="#">49</a>	beautyberry ( <i>śyāmā</i> ) <i>Callicarpa macrophylla</i> , Vahl. See <a href="#">AVS</a> : v. 1, 334, <a href="#">NK</a> : v. 1, #420, <a href="#">27, 29</a>
bamboo leaves ( <i>veṇupatrikā</i> ) <i>Bambusa bambos</i> , Druce. See <a href="#">NK</a> : v. 1, #307, <a href="#">29</a>	beggarweed ( <i>aṃśumatī</i> ) <i>Desmodium gangeticum</i> (L.) DC ( <a href="#">Dymock</a> : v. 1, 428, <a href="#">GJM1</a> : 602, <a href="#">NK</a> : v. 1, #1192; <a href="#">ADPS</a> : 382, 414 and <a href="#">AVS</a> : v. 2, 319, 4.366 are confusing), <a href="#">46</a>
beautyberry ( <i>priyaṅgu</i> ) ← <i>śyāmā</i> . <i>Callicarpa macrophylla</i> , Vahl. See <a href="#">AVS</a> : v. 1, 334, <a href="#">NK</a> : v. 1, #420. Some say also <i>Setaria italica</i> Beauv. <a href="#">GVDB</a> : 263–264. See also <a href="#">GVDB</a> : 413,	bitter gourd ( <i>alābu</i> ) <i>Lagenaria vulgaris</i> , Seringe. See <a href="#">NK</a> : v. 1, #1419, <a href="#">28</a>
	black creeper ( <i>pālindī</i> ) <i>Ichnocarpus frutescens</i> , (L.) R.Br. or <i>Cryptolepis buchanani</i> , Roemer & Schultes. See <a href="#">AVS</a> : v. 3, 141, 3.145, 3.203, <a href="#">NK</a> : v. 1,

- #1283, 1210, **ADPS**: 434, 29, 32, 45, 46  
blackboard tree (*saptachada*) *Alstonia scholaris* R. Br. **GVDB**: 420, 28  
blackbuck (*hariṇa*) *Antelope cervicapra*, L. See **BIA**: 270 **IW**: 95, 165, *et passim*, 32  
cardamom (*elā*) *Elettaria cardamomum*, Maton. See **AVS**: v. 2, 360, **NK**: v. 1, #924, **Potter<sub>rev</sub>**: 66, 46, 50  
cassia cinnamon (*patra*) *Cinnamomum tamala*, (Buch.-Ham.) Nees. See **AVS**: v. 2, 84, **NK**: v. 1, #589, 29, 46  
certain minerals (*tārāvītāra*) Unknown. It is not even certain that these are minerals. The variant reading in the vulgate, *tāraḥ sutāraḥ* was glossed by Ḍalhaṇa on 5.3.14 (**Su** 1938: 568) as follows *tāro rūpyaṃ, sutāraḥ pāradaḥ*, “tāra means silver; sutāra means mercury.”, 50  
chebulic myrobalan (*haritakī*) *Terminalia chebula* Retz. **GVDB**: 466, 28  
cherry (*elavālu*) *Prunus cerasus*, L.?. See **BVDB** 58, **NK**: v. 1, #2037, **GVDB**: 58, 46  
chital deer (*prṣata*) *Axis axis*, Erxleben. See **BIA**: 292, **IW**: 93, 32  
cobra’s saffron (*nāgapuṣpa*) → nāgakeśara. *Mesua ferrea*, L. See **NK**: v. 1, #1595, **GVDB**: 220, 46  
corky coral tree (*pāribhadra*) *Erythrina suberosa* Roxb. See **GVDB** 245, 49  
costus (*kuṣṭha*) *Saussurea costus*, Clarke. See **NK**: v. 1, #2239, 29, 46, 50  
country sarsaparilla (*anantā*) *Hemidesmus indicus*, (L.) R. Br. See **ADPS**: 434, **AVS**: v. 3, 141–5, **NK**: v. 1, #1210. But see **GVDB**: 13 for complications that may suggest that it is to be equated with *sārivā*, which may sometimes be *Cryptolepis* or *Ichnocarpus frutescens* R. Rr. (**GVDB**: 429–431), 34, 45, 46, 49  
crape jasmine (*tagara*) *Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schultes. See **GJM1**: 557, **AVS**: v. 5, 232. Synonym of ???. But some say *Valeriana jatamansi*, Jones See **GVDB**: 173–174 for discussion (and charming comments on brain liquid testing). Some say *tagara* is Indian rose-bay or Indian valerian, but there remain many historical questions about the ancient and regional identities of this plant See, e.g., **AVS**: v. 5, 334, 29, 46, 117  
crimson trumpet-flower tree (*pāṭalā*) *Stereospermum chelonides*, (L. f.) A. DC. See **GJM1**: 573, **AVS**: v. 5, 192 ff, **ADPS**: 362 f, **AVS**: v. 3, 1848 f, **IGP** 1120, **Dymock**: v. 3, 20 ff, 49  
cuscus grass (*uśīra*) *Andropogon murcatus*, Retz. Also “vetiver grass.” See **NK**: v. 1, #180, 29  
deodar (*bhadradāru*) *Cedrus deodara*, (Roxb.ex D.Don) G. Don. See **AVS** 41, **NK**: v. 1, #516, 46  
embelia (*viḍaṅga*) *Embelia ribes*, Burm. f. See **ADPS**: 507, **AVS**: v. 2, 368, **NK**: v. 1, #929, **Potter<sub>rev</sub>**: 113, 46  
emetic nut (*madana*) *Randia dumetorum*, Lamk. See **NK**: v. 1, #2091, 27  
false daisy (*subhaṅgurā*) (*su*)bhaṅgura = *bhṛṅga*? *Eclipta prostrata* (L.) L. See **GVDB**: 288, 34  
fern (*ajaruhā*) *Nephrodium* species **GVDB**: 7, uncertain. Perhaps *Christella dentata* (Forssk.) Brownsey & Jermy, which is reported to have folk applications against skin diseases in India, 31  
fire-flame bush (*dhātakī*) *Woodfordia fruticosa* (L.) Kurz. See **AVS**: v. 5, 412, **NK**: v. 1, #2626, 28  
garjan oil tree (*aśvakarṇa*) *Dipterocarpus turbinatus* Gaertn. f. See **GVDB**: 28, **Chopra**, **GIMP**: 100, 49  
giant potato (*kṣīravīdārī*) possibly → *kṣīraśukla*. *Ipomoea mauritiana*, Jacq. See **ADPS**: 510, **AVS**: v. 3, 222, **AVS**: v. 3, 1717 ff, 117–119  
ginger (*mahaṣadha*) *Zingiber officinale*, Roscoe. See **ADPS**: 50, **NK**: v. 1, #2658,

- IGP: 1232, 32  
gold (*hema*) gold, 46  
gold and sarsaparilla (*surendragopa*)  
Unknown. Ḍalhaṇa on 5.3.15  
(Su 1938: 568) glossed *surendra* as  
“gold” and *gopā* as “Indian  
sarsaparilla.” He also noted other  
opinions that *surendra* was “Tellicherry  
bark”, 50  
golden shower tree (*rājadruma*) *rājadruma*  
= *āragvadha*. *Cassia fistula* L. See  
GVDB 37, 49  
heart-leaf sida (*balā*) *Sida cordifolia*, Linn.  
See ADPS: 71, NK: v. 1, #2297, 46  
heart-leaved moonseed (*amṛtā*) → *guḍūcī*.  
*Tinospora cordifolia*, (Willd.) Hook.f.  
& Thoms.?. See ADPS: 38, NK: v. 1,  
#2472, 624, Dastur #229, 29, 44  
heart-leaved moonseed (*somavallī*)  
*Tinospora cordifolia* (Thunb.) Miers.  
GVDB: 456. Likely, but uncertain, 29  
henna (*madayantikā*) *Lawsonia inermis*, L.  
See AVS: v. 3, 303, NK: v. 1, #1448,  
Potter<sub>rev</sub>: 151, 30  
Himalayan mayapple (*vakra*)  
*Podophyllum emodi*, Wall.  
(NK: #1971). But perhaps a synonym of  
crape jasmine and ?? (GVDB: 354), 50  
Himalayan monkshood (*ativiṣā*)  
*Aconitum heterophyllum* Wall.  
GVDB: 12, NK: v. 1, #39. Also “atis  
roots”, 30, 32, 50  
hogweed (*punarnavā*) *Boerhaavia diffusa*,  
L. See ADPS: 387, AVS: v. 1, 281,  
NK: v. 1, #363, 30, 45  
Holostemma creeper (*jīvantī*) →  
*sūryavallī*? *Holostemma ada-kodien*,  
Schultes. See ADPS: 195, AVS: v. 3, 167,  
NK: v. 1, #1242, AVS: v. 3, 1619, 118  
Indian barberry (*añjana*) → *rasañjana*,  
*dāruharidrā*. *Berberis aristata*, DC.  
Dymock: v. 1, 65, NK: v. 1, #335,  
GJM1: 562, IGP: 141, 31  
Indian barberry (*dāruharidrā*) *Berberis*  
*aristata*, DC. See Dymock: v. 1, 65,  
NK: v. 1, #685, GJM1: 562, IGP 141,  
45, 46  
Indian barberry (*kālīyaka*) → *dāruharidrā*,  
*añjana*. *Berberis aristata*, DC. See  
Dymock: v. 1, 65, NK: v. 1, #685,  
GJM1: 562, IGP: 141, 29  
Indian ipecac (*payasyā*) Uncertain.  
Possibly *Tylophora indica* (Burm.f.)  
Merr. Perhaps a synonym of *panacea*  
twiner, giant potato, purple roscoe,  
and plants like asthma plant and Gulf  
sandmat (GVDB: 237–238). Also  
“curds” when not a plant, 118  
Indian madder (*mañjiṣṭhā*) *Rubia*  
*cordifolia*, L. See IGP, Chopra,  
GIMP: 215, GVDB: 289, 46  
Indian sarsaparilla (*sārivā*) → *anantā*.  
*Hemidesmus indicus*, (L.) R. Br.  
ADPS: 434, AVS: v. 3, 141–5, NK: v. 1,  
#1210; and black creeper, *pāṇḍī*.  
*Ichnocarpus frutescens*, (L.) R.Br. or  
*Cryptolepis buchanani*, Roemer &  
Schultes AVS: v. 3, 141, 3.145, 3.203,  
NK: v. 1, #1283, 1210, ADPS: 434, 45,  
46, 117  
jambul (*jambū*) *Syzygium cumini*, (L.)  
Skeels. See ADPS: 188, NK: v. 1, #967,  
Potter<sub>rev</sub>: 168, Wujastyk 2003a, 28  
jasmine (*mālatī*) *Jasminum grandiflorum*,  
L. See NK: v. 1, #1364, 29  
jequirity (*guñjā*) *Abrus precatorius*, L. See  
AVS: v. 1, 10, NK: v. 1, #6, Potter<sub>rev</sub>: 168,  
34  
lac (*lākṣā*) *Kerria lacca* (Kerr.). See  
GJM1: 445, NK: v. 2, #32. Watt  
(1908: 1053–1066) is characteristically  
informative, and is definite about the  
antiquity of lac in India, 50  
liquorice (?) (*klītaka*) *Glycyrrhiza glabra*,  
L.? GVDB: 123–124 discuss the many  
difficulties in identifying this plant, 34  
liquorice (*madhuka*) *Glycyrrhiza glabra*, L.  
See AVS: v. 3, 84, NK: v. 1, #1136, 32, 46  
lodh tree (*lodhra*) *Symplocos racemosa*,  
Roxb. See GJM1: 597, ADPS: 279 f,

- NK: v. 1, #2420. Singh and Chuneekar (GVDB: 351–352) notes that there are two varieties, *S. racemosa*, qualified as śāvara, and *S. crataegoides* Buch.-Ham. for *paṭṭikā lodhra*, 46
- long pepper (*māgadha*) *Piper longum*, L. See NK: v. 1, #1928; but cf. AVS: v. 3, 245, 31
- long pepper (*pippalī*) *Piper longum*, L. See ADPS: 374, NK: v. 1, #1928, 32, 46
- luffa (*koṣṭakī*) = *koṣātakī*. *Luffa cylindrica*, (L.) M. J. Roem. or *L. acutangula*, (L.) Roxb. ADPS: 252–253, NK: v. 1, #1514 etc. GVDB: 121, 28, 44
- mango (*āmra*) *Mangifera indica* Linn. GVDB: 37, 28
- marking-nut tree (*bhallātaka*) *Semecarpus anacarium*, L. See NK: v. 1, #2269, AVS: v. 5, 98, 31
- medhshingi (*vijayā*2) *Dolichandrone falcata* (DC.) The *Sauśrutaniḥaṇṭu* gives a number of synonyms for *vijayā* (Suvedī and Tīvārī 2000: 5.77, 10.143). But one of them, *viśāṇī* (also *meśāśṛṅgī*), is sometimes equated with *Dolichandrone falcata* (DC.) Seemann (ADPS: 518; GVDB: 373 f, a plant used as an abortifacient and fish poison (NK: #862), 35
- migraine tree (*agnimantha*) *Premna corymbosa*, Rottl. See AVS 1927, ADPS: 21, NK: v. 1, #2025, AVS: v. 4, 348; GJM1: 523: = *P. integrifolia/serratifolia*, L, 44
- milk-white (*kṣīraśuklā*) An unidentified plant. GVDB: 126: see purple *roscoea* and giant potato, 119
- monitor lizard (*godhā*) *Varanus bengalensis*, Schneider. See *Book of Indian Reptiles*, 58, 32
- mung beans (*māṣaka*) *Phaseolus mungo* Linn. GVDB: 308, 29
- myrobalan (*abhayā*) *Terminalia chebula*, Retz. See ADPS: 172, NK: v. 1, #2451, Potter<sub>rev</sub>: 214, 44, 50
- natron (*suvarcikā*) Sodium carbonate. NK: v. 2, #45. Ḍalhaṇa identifies *suvarcikā* with svarjikṣāra 4.8.50 (Su 1938: 441), 46
- nutgrass (*kuruvinda*) Unknown. Ḍalhaṇa on 5.3.15 (Su 1938: 568) glossed the term as **nutgrass**, but noted other opinions that it was a whetstone or a very special metallic gem. Singh and Chuneekar (GVDB: 108) added that it could be a variety of rice, *ṣaṣṭika dhānya*, 50
- nutgrass (*mustā*) *Cyperus rotundus*, L. See ADPS: 316, AVS: v. 2, 296, NK: v. 1, #782, 118
- panacea twiner (*arkapuṣpī*) → *arkaparṇī*, *Tylophora indica* (Burm. f.) Merr. GVDB: 23–24. Maybe identical to **Indian ipecac**, **giant potato** and similar sweet, milky plants. See GVDB: 24, 127, 238, 441, 443 for discussion. For discussion in the context of **Holostemma creeper**, see ADPS: 195 and AVS: v. 3, 171. The etymology of the name suggests *Helianthus annuus* Linn., but this plant is native to the Americas, 45, 117
- peas (*hareṇu*) *hareṇu* = *satīna*. *Pisum sativum*, L. Singh and Chuneekar (GVDB: 419–420, 467–468) notes that two plants are usually meant under this name, but there is no agreement on the identity of the second, 45, 46, 50
- peepul tree (*aśvattha*) *Ficus religiosa*, L. See ADPS: 63, 53
- periploca of the woods (*meśāśṛṅga*) *Gymnema sylvestre* (Retz.) R. Br. See AVS: v. 3, 107, NK: v. 1, #1173, 31
- plants like asthma plant and Gulf sandmat (*kṣīriṇī*) various milky plants, perhaps including *Euphorbia hirta* Linn. (asthma plant) and *E. microphylla* Heyne (Gulf sandmat) (GVDB: 127), 117
- pointed gourd (*paṭola*) *Trichosanthes*



- dioica, Roxb. [GVDB: 232–233, 44](#)
- poison berry (*br̥hatī*) *Solanum violaceum*, Ortega. See [ADPS: 100, NK: v. 1, #2329, AVS: v. 5, 151, 45, 46](#)
- pondweed (*paripelavā*) Normally a neuter noun. Singh and Chuneekar ([GVDB: 238, 264–265, 409](#)) argued that *plava* and *śaivāla* are the same thing, and may be either *Zannichellia palustris*, L., or *Potamogeton pectinatus*, L. [46](#)
- purging nut (*mūṣikā*) *Jatropha curcas*, L. See [AVS: v. 3, 261, NK: v. 1, #1374, 31](#)
- purple roscoe (*kṣīrakākolī*) [GVDB: 89](#) notes that many physicians use *Roscoeia procera* Wall. in this context. But the identification is uncertain. Possibly connected to [milk-white](#) or [giant potato.](#), [117, 118](#)
- rajmahal hemp (*moraṭa*) → *mūrōi*, *Marsdenia tenacissima* (Roxb.) Wight et Arn. Good discussion at [GVDB: 314–316, 324, 44](#)
- red chalk (*gairika*) *gairika*, [46](#)
- red gourd (*bimbī*) *Coccinia indica*, W. & A. See [PVS 1994.4.715; NK: v. 1, #534, 28](#)
- rosha grass (*dhyāmaka*) *Cymbopogon martinii* (Roxb.) Wats. See [AVS: v. 2, 285, NK: v. 1, #177, 46](#)
- sacred lotus (*padma*) *Nelumbo nucifera*, Gaertn. See [NK: v. 1, #1698, 29](#)
- sage-leaved alangium (*aṅkollā*) *Alangium salvifolium* (Linn. f.) Wang. [GVDB: 5–6, 28](#)
- sandalwood (*candana*) *Santalum album*, L. See [ADPS: 111, NK: v. 1, #2217, 46](#)
- scarlet mallow (*bandhujīva*) *Pentapetes phoenicea*, L. [NK: #1836, GVDB: 268, 30](#)
- scented pavonia (*bālaka*) *Pavonia odorata*, Willd. See [ADPS: 498, NK: v. 1, #1822, 46](#)
- selu plum (*śelu*) *Cordia myxa*, L. non Forssk. See [GJM1: 529 \(2\), IGP: 291b, cf. AVS: v. 3, 1677 f; cf. AVS: v. 2, 180 \(C. dichotoma, Forst.f.\), NK: v. 1, #672 \(C. latifolia, Roxb.\), 45](#)
- siris (*śirīṣa*) *Albizia lebbek*, Benth. See [AVS: v. 1, 81, NK: v. 1, #91, 44](#)
- siris seeds (*śirīṣamāṣaka*) *Albizia lebbek*, Benth. See [AVS: v. 1, 81, NK: v. 1, #91, 28](#)
- small-flowered crape myrtle (*sidhraka*) *Lagerstroemia parviflora* Roxb. See [GVDB: 432, 49](#)
- spikenard (*māṃsī*) *Nardostachys grandiflora*, DC. See [NK: v. 1, #1691, 46](#)
- spikenard (*nalada*) → *māṃsī*. *Nardostachys grandiflora*, DC. See [NK: v. 1, #1691, 26](#)
- sugar (*sitā*) Ḍalhaṇa makes this equation at 1.37.25 ([Su 1938: 162](#)), [46](#)
- sunflower (*sūryavallī*) → *ādityavallī*, *sūryamukhī*, *Helianthus annuus* Linn. [GVDB: 35, 443, 44](#)
- sweet-scented oleander (*aśvamāraka*) *Nerium oleander*, L. See [ADPS: 223, NK: v. 1, #1709, 34](#)
- Tellicherry bark (*kuṭāja*) *Holarrhena pubescens* Wall. ex G. Don, with *Wrightia tinctoria* and *W. arborea* considered [GVDB: 101–102, ADPS: 267–270, 117](#)
- three heating spices (*tryūṣaṇa*) *śuṇṭhī* (Dried ginger) *Zingiber officinale*, Roscoe. [ADPS: 50, NK: v. 1, #2658, AVS: v. 5, 435, IGP 1232, pippalī \(long pepper\) \*Piper longum\*, L. \[ADPS: 374, NK: v. 1, #1928, and marica \\(black pepper\\) \\*Piper nigrum\\*, L. \\[ADPS: 294, NK: v. 1, #1929, 45\\]\\(#\\)\]\(#\)](#)
- three-leaved caper (*varuṇa*) *Crataeva magna* (Lour.) DC. See [AVS: v. 2, 202; cf. NK: v. 1, #696, 31](#)
- turmeric (*haridrā*) *Curcuma longa* Linn. [GVDB: 465, 45, 50](#)
- turmeric (*rajanī*) *Curcuma longa*, L. [ADPS: 169, AVS: v. 2, 259, NK: v. 1, #750, 46](#)
- velvet-leaf (*pāṭhā*) *Cissampelos pariera*, L. See [ADPS: 366, NK: v. 1, #592, GJM1: 573, AVS: v. 1, 95; cf.](#)

- AVS: v. 2, 277, 44  
 velvet-mite (*indragopa*) *Kerria lacca* (Kerr.). Lienhard 1978, 27  
 verbena (*phañjī*) *Clerodendrum serratum*, L. See AVS: v. 2, 121, ADPS: 87, 30  
 watered buttermilk (*udaśvit*) MW: 183, 28  
 water-lily (*utpala*) *Nymphaea stellata*, Willd. See GJM1: 528, IGP 790; dutt, NK: v. 1, #1726, 27, 45, 46  
 weaver's beam tree (*muṣkaka*) *Schrebera swietenoides*, Roxb. See AVS: v. 5, 88, Lord, NK: v. 1, #2246, 49  
 white clitoria (*śvetā*) → *giryāhvā*. *Clitoria ternatea*, L. See AVS: v. 2, 129, NK: v. 1, #621, 29  
 white cutch tree (*somavalka*) *Acacia polyacantha*, Willd. See AVS: v. 1, 30, IGP 7, GJM1: 602, AVS: v. 2, 935; pace NK: v. 1, #1038, 30, 49  
 white siris (*kiñihī*) *Albizia procera*, (Roxb.) Benth. See GVDB 98, NK: v. 1, #93, 45  
 wild asparagus (*bahuputrā*) → *nandana*? *Asparagus racemosus*, Willd. See ADPS: 441, AVS: v. 1, 218, NK: v. 1, #264, IGP: 103, AVS: v. 4, 2499 ff, Dymock: v. 3, 482 ff, 30  
 wild celery (*agnika*) → may be *bhalātaka*, *lāṅgalī*, *ajamodā*, *morāṭa*, or *agnimantha*, GVDB: 4. Uncertain, 44  
 wild celery (*ajamodā*) *Apium graveolens*, L., 44  
 wood apple (*kapittha*) *Limonia acidissima*, L. See AVS: v. 3, 327, NK: v. 1, #1021, 29, 31  
 woodrose (*mūṣikakarṇī*) *Jatopha curcas*, L. AVS: v. 3, 261, 1[#1374]NK. GVDB: 317; ADPS: 23–25 discuss this issue well, 29  
 yellow-berried nightshade (*kṣudrā*) *Solanum virginianum*, L. See ADPS: 100, NK: v. 1, #2329, AVS: v. 5, 164, 45, 46



# Appendix

## On digital critical editions

- Price, Kenneth M. (2013), “Electronic Scholarly Editions,” in Ray Siemens and Susan Schreibman (eds.), *A Companion to Digital Literary Studies* (Chichester, UK: John Wiley & Sons, Ltd), 434–50. doi: [10.1002/9781405177504.ch24](https://doi.org/10.1002/9781405177504.ch24), URL, accessed 04/07/2021.  
A survey of the field in 2013, with a focus on the presentation of electronic texts rather than on critical editing as such.
- Moureau, Sébastien. (2015), “The Apparatus Criticus,” in Alessandro Bausi et al. (eds.), *Comparative Oriental Manuscript Studies: An Introduction* (Hamburg: Tredition), 348–52, ISBN: 978-3-7323-1768-4, URL, accessed 04/07/2021.  
Useful discussion about the *apparatus criticus* in general, and an evaluation of the plus and minus points of positive and negative apparatuses.
- Burghart, Marjorie (2016), “The TEI Critical Apparatus Toolbox: Empowering Textual Scholars through Display, Control, and Comparison Features,” *Journal of the Text Encoding Initiative*, 10/Issue 10. doi: [10.4000/jtei.1520](https://doi.org/10.4000/jtei.1520).  
Discussion of a software tool, including the handling of positive and negative apparatus. Makes the assumption that online displays are notational variants only.
- Burghart, Marjorie (2017), “Textual Variants,” in Marjorie Burghart et al. (eds.), *Digital Editing of Medieval Texts: A Textbook* (DEMM), URL, accessed 04/07/2021.  
Discussion of how to express various kinds of apparatus in TEI.
- Bausi, Alessandro, et al. (2015), *Comparative Oriental Manuscript Studies. An Introduction* (Hamburg: Tredition). doi: [10.5281/ZENODO.46784](https://doi.org/10.5281/ZENODO.46784).  
A huge book that disappointingly says nothing at all about Sanskrit manuscripts. Nevertheless there are many interesting case studies and remarks applicable to the Indian manuscript tradition.
- Roelli, Philipp (2020) (ed.), *Handbook of Stemmatology* (Berlin: De Gruyter). doi: [10.1515/9783110684384](https://doi.org/10.1515/9783110684384).  
A major collection of studies. The materials on Sanskrit manuscripts is unfortunately influenced by some inadequate recent studies on

the *Mahābhārata*. Nevertheless, the volume remains important for its many studies of general method and theory.

## Todo list

■ Cf. Arthaśāstra 1.21.8. . . . .	25
■ I'm still unhappy about this verse. . . . .	28
■ Mention this in the introduction as an example of the scribe knowing the vulgate. . . . .	28
■ fn about sadyas+ . . . . .	28
■ Bear's bile instead of deer's bile. . . . .	29
■ punarṇavā in the N & K MSS . . . . .	30
■ śrita for śṛta . . . . .	30
■ explain more . . . . .	30
■ Medical difference from Sharma. . . . .	31
■ example where the vulgate clarifies that these should be used separately; appears to be a gloss inserted into the vulgate text. . . . .	31
■ The two uses of prāpta are hard to translate. prāptāḥ → kṣipraṃ is an example of the vulgate banalizing the Sanskrit text to make sense of a difficult passage. . . . .	31
■ √ vyadh not √ vedh (also elsewhere and for the ears), causative optative. . . . .	31
■ opposite of the vulgate Same as 1.8.89 (As 1980: 79). . . . .	32
■ -> ativiṣa . . . . .	40
■ Look up the ca. reference. . . . .	40
■ Come back to the issue of "kalpa". Look up passages in the Kośa. . . . .	47
■ write footnote: don't repeat ativiṣā; vulgate similar to H. . . . .	50
■ where is cutting with a knife related to removing bile or phlegm. . . . .	54
■ maṣī burned charcoal. Find refs. . . . .	54
■ find ref. . . . .	60
■ Check out these refs. . . . .	61
■ meaning of kalpa . . . . .	61
■ or a dual? . . . . .	65

