

A Translation of the New Edition of the *Suśrutasaṃhitā*

Jason Birch Dominik Wujastyk Andrey Klebanov

Draft of 17th November 2022
© Jason Birch and Dominik Wujastyk



© Dominik Wujastyk. I am distributing this pre-publication draft under a
Creative Commons Attribution-ShareAlike 4.0 International License.
For details, see <http://creativecommons.org/licenses/by-sa/4.0/>

Contents

The manuscripts and editions used in the vulgate editions by	
Yādavaśarman Trivikrama Ācārya	4
The sources of the 1915 edition	4
The sources of the 1931 edition	4
The sources of the 1938 edition	5
Evaluation	5
The 1939 edition	7
The sources for the Bhānumatī	7
The sources for the Suśrutasaṃhitā	7
Evaluation	9
Features of the manuscript transmission	10
Palaeographical features	10
Chart of characters	10
Sūtrasthāna, adhyāya 1	11
Sūtrasthāna, adhyāya 2	18
Literature	18
Sūtrasthāna, adhyāya 16	19
Sūtrasthāna, adhyāya 28	27
Kalpasthāna, adhyāya 1	28
Literature	28
Manuscript notes	29
Translation	30
[Threats to the king]	30
Kalpasthāna, adhyāya 2	39
Introduction	39
Translation	39
The effects of poisons	44
Symptoms of tuber poisoning	44
Slow-acting poison	47
The stages of toxic shock	48

Remedies for the stages of slow poisoning	49
The ‘invincible’ ghee	51
Curing the ‘slow-acting’ poison	51
Kalpasthāna, adhyāya 3	52
Introduction	52
Translation	52
Uttaratantra, adhyāya 16 (17 in the vulgate)	56
Literature	56
Translation	56
[Complications]	65
[Characteristics of the probe]	65
[Complications]	65
Uttaratantra, adhyāya 38	68
Introductory remarks	68
Translation	69
Editions and Abbreviations	73
References	76
Botanical Reference Works	112
Glossary and Index of Medical Substances	113
On digital critical editions	102

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

Yādavaśarman Trivikrama Ācārya produced three successive editions of the *Suśrutasamhitā* 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.¹

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.² 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 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Covers the *śārīrasthāna*.³
- 5 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Complete. With some damaged folia.

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

2 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).

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

- 6 Bombay, Asiatic Society. Incomplete.⁴
- 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 *Suśrutasandīpanabhāṣya* by Professor Hārāṇacandra Cakravārtti. Complete work. This is the 1910 Calcutta edition numbered “t” by Meulenbeld (HIML: IB, 312).⁵
- 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).⁶

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. Candraśekharaśāstrin. Contains the commentary *Nyāyacandrikāpañjikāvyākhyā* by Gayadāsa. Covers the *nidānasthāna*. This is almost certainly MS Bikaner Anup 4390.⁷
- 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 Jośi 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 त for तालपत्रपुस्तके.

Evaluation

Estimates show that there are approximately 230 extant manuscript witnesses for the *Suśrutasamhitā*.⁸ Many of these manuscripts cover only one or more or

- 4 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.”
- 5 Bhaṭṭācārya 1910–7.
- 6 Sena et al. 1886–93.
- 7 See Dominik Wujastyk, “MS Bikāner AnupLib 4390.” *Pandit*. <<http://panditproject.org/entity/108068/manuscript>>.
- 8 This figure is arrived at by summing the MSS mentioned in NCC and in the NGMCP. The real figure could be many scores higher.

Manuscripts (●) and print editions (○)															
edition sthāna	1915			1931									1938		
	1	2	3	1	2	3	4	5	6	7	8	9	1	2	3
sū.	●							●	?		○	○ ⁽¹⁻⁴³⁾	●		●
nī.	●			●				●	?		○		●	●	●
śā.	●				●	●	●	●	?		○		●		●
cī.		●						●	?	●	○		●		● ⁽¹⁻⁹⁾
ka.	●							●	?		○		●		
utt.		●	●	●				●	?		○				

Table 1: The sources of Yādavaśarman T. Ācārya's three vulgate editions.

its chapters. Nevertheless, this is an order of magnitude more evidence than was considered by Ācārya for his vulgate editions.

While the descriptions provided by Ācārya of his source materials seems at first to be moderately comprehensive, Table 1 reveals the real paucity of textual basis for these editions. Apparently, fifteen manuscripts were consulted. However, we quickly find that two of the sources were other people's printed editions, and one of those covered less than a quarter of the work. That reduces the manuscript base to 13 manuscripts. Ācārya does not appear to have seen two of the manuscripts at all, having been sent collations prepared for him by others (7 of 1931 and 3 of 1938). Thus, Ācārya's final edition was based on the personal consultation of eleven manuscripts. One of them, no. 6 of 1931, remains mysterious. Only a single manuscript covers the whole of the *Suśrutasamhitā*, no. 5 of the 1931 edition. Manuscript 1 of 1938 is the next most complete, but it omits the *uttaratantra*, which comprises a third of the work. Manuscript 1 of the 1915 edition is next, but it still omits both of the longest chapters, and thus offers less than half the work. For the rest, the evidence is spotty, with 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 man-

uscript as MS Kathmandu NAK 5-333.⁹ 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.¹⁰ 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.¹¹ 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 मृ for *mudrita*.¹²
2. A manuscript in the India Office Library library provided through the Bhandarkar Oriental Research Institute in Pune.¹³ This manuscript covered the *Bhānumatī* b up to the end of the *sūtrasthāna*. The siglum was ह for हस्तलिखित.¹⁴

The sources for the Suśrutasamhitā

1. A palm leaf manuscript from Hemarājaśarman's personal library.¹⁵ The siglum was ता for ताडपत्र.

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

10 Su 1938: 22.

11 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.

12 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 CSCL accession number 97 in Bengali script may be this manuscript.

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

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

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



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

2. His own published edition. The siglum was ड for डल्हणसंमतः पाठः.¹⁶
3. Hārāṇacandra Cakravartī's published edition with his own commentary.¹⁷
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*.¹⁸ 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 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.¹⁹

There is compelling evidence that Cakrapāṇidatta's *Bhānumatī* commentary once covered the whole text of the *Suśrutasamhitā*.²⁰ 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.²¹

16 Su 1938. It is noteworthy that Ācārya refers to his 1938 edition as representing "the Ḍalhaṇa recension."

17 Bhaṭṭācārya 1910-7.

18 HIML: IA, 374-375 and IB, 495-496.

19 Su 1939: 3-4. See discussion by Klebanov (2021b: 7).

20 HIML: IA, 375.

21 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.²²
- 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.²³
- 3 “O Lord, distress arose in our minds after witnessing people thrashing about with cries, assailed by different kinds of pain and injury (*vedanābhīghāta*), 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.²⁴
- 7 “Surgery, treatment of body parts above the clavicle, general medicine, knowledge of spirits, care of children, and the disciplines of antidotes, rejuvenation and aphrodisiacs.

22 Ḍalhana 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.

23 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.

24 Svayambhū is another name for Brahmā, the creator.

- 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,²⁵ Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas,²⁶ 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.²⁷
- 15 “[The component] called the discipline of rejuvenation is maintaining youth, bringing about a long life and mental vigour and for curing diseases.
- 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.”

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

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

27 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 (*sarīrpa*) in the list, it does seem that MS K had a shorter list, and the vulgate edition adds rodents (*mūṣika*).

- ”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].²⁸
- 27 *For, I (i.e., Brahmā) am Dhanvantari, the first god, the remover of old 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

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

the moving. Its nature (*ātmaka*) is twofold, depending on the preponderance of Agni and Soma.²⁹ Alternatively, it can be considered as being five-fold. The multitude of beings in it are fourfold: they are termed “sweat-born, stone-born, caul-born and egg-born”.³⁰ 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.³¹

The mental (*mānasa*) ones, caused by desire (*icchā*) and hatred (*dveṣa*), include: anger (*krodha*), grief (*āśoka*), misery (*dainya*), overexcitement (*harṣa*), lust (*kāma*), depression (*viṣāda*), 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 (*lekhaṇa*), nourishment (*br̥ṇhaṇa*), 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 (*oṣadhī*).³² There are two types: stationary (*sthāvara*) and moving (*jaṅgama*).
- 31 Of these, there are four types of stationary ones: fruit trees (*vanaspati*), flowering trees (*vṛkṣa*), herbs (*oṣadhi*) and shrubs (*vīrudh*).³³ Amongst these,

29 See Wujastyk 2004.

30 This fourfold classification of beings is paralleled with closely-related vocabulary in *Bhela-saṃhitā* 4.4.4 (Bhela 2000: 206; Bhela 1921: 81).

31 Note that four humoral substances are assumed here.

32 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.

33 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.

the “fruit trees” have fruit but no flowers.³⁴ 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 a caul (*jarāyujā*), those born from eggs (*aṇḍajā*), those born of sweat (*svedajā*), and shoots (*udbhīd*). Amongst these, those born in a caul include animals (*paśu*), humans, and wild animals (*vyāḷa*). Birds, creepy-crawlies (*sarīrpa*) and snakes are “born of eggs.” Worms (*kṛmi*), small insects (*kunta*) and ants (*pipīlika*) and others are born of sweat.³⁵ Shoots include red velvet mites (*indragopa*) and frogs (*maṇḍūkā*).³⁶
- 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*)³⁷ are useful; among the moving remedies pelt (*carman*), hair, nails, and blood (*rudhira*) and so forth.
- 34 And earthen products (*pārthiva*) include gold and silver.³⁸
- 35 The items created by time (*kālakṛta*) are clusters (*samplava*) as far as 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 (*muhūrta*), a day and night (*ahorātra*), a fortnight (*pakṣa*), a month (*māsa*), a season (*rtu*), a half-year (*ayana*), a year (*saṃvatsara*), and yuga (*yuga*).³⁹
- 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:]⁴⁰

- 34 The MSS agree in reading *phalavantyāḥ* “having flowers” which is grammatically non-standard. This form is also found in the *Viṣṇudharmottarapurāṇa* (1.92.27, 1.92.27 *Viṣṇudh.*: 56r).
- 35 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).
- 36 On *indragopa*, see Lienhard 1978.
- 37 On juice extract (*svarasa*) see CS 1.1.73, 1.4.7; Ḍalhaṇa on 4.10.12 (Su 1938: 450).
- 38 The flow of concepts in the treatise seems to be interrupted here.
- 39 These units are presented at 1.6.5 (Su 1938: 24) and discussed by Hayashi (2017: § 59).
- 40 See footnote 28.

- 37 This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.⁴¹
- 38 There are two kinds of invasive diseases. Some certainly⁴² 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 (*catuṣṭaya*) 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 (*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.

41 On the topic of the “group of four,” the commentator Ḍaḥaṇa 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 Jejjāṭa (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).

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

- [There is a verse about this:]⁴³
- 41 *This seed of medicine has been declared in brief. Its explanation will be given in one hundred and twenty chapters.*⁴⁴
- 42 There are one hundred and twenty chapters in five sections (*adhyāya*).⁴⁵ 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 Uttaratantra.⁴⁶
- [There is a verse about this:]⁴⁷
- 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.*

43 See footnote 28.

44 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 *Uttaratantra* has 66 chapters.

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

46 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 *Uttaratantra* (**susr-trikamjī**) there is indeed a statement that picks up the point about there being 120 chapters.

47 See footnote 28.

Sūtrasthāna, adhyāya 2

Literature

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

1

Sūtrasthāna, adhyāya 16

- 1 Now we shall expound the method for piercing the ear.⁴⁸
- 2 One may pierce a child's ears for the purpose of preserving and decorating. On renowned days, half days, hours and constellations during the first half of the sixth or seventh lunar month, the physician should sit the boy, who has received a benediction (*kṛtamaṅgala*) – blessings pronounced (*svastivācana*)⁴⁹ – and is being pacified, on the lap of a wet-nurse.⁵⁰ Then, having pulled his ear with the left hand, he should use his right hand to pierce the ear straight through at a naturally occurring cleft.⁵¹ For a boy, do the right ear first; for a girl, do the left one. Use a needle on a thin ear; an awl (*ārā*) on a thick one.⁵²

48 The topic of piercing the ear (*karṇavyadha*) is not discussed in the *Carakasamhitā* (HIML: IB, 326, n. 175), but it is mentioned in some texts that followed the *Suśrutasamhitā*, such as the *Kaśāpyasamhitā* (HIML: IIA, 30). Also, the instrument for piercing the ear is described in the *Aṣṭāṅgahrdayasamhitā* 1.26.26 (Ah 1939: 153). In the versions of the text known to Ḍalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125), the heading of this chapter is *karṇavyadha-bandhavidhi* ('the method of piercing and joining the ear'), instead of the Nepalese version's *karṇavyadhavidhi*. The topic of *karṇabandha* is discussed in passages 17–20 of the Nepalese version. However, it appears that only subsequent redactors reflected its importance by including it in chapter headings. The Nepalese version also omits the opening remark on Dhanvantari that appears in subsequent versions. For a discussion of the frame story in the Nepalese version, see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021. Ḍalhaṇa (Su 1938: 76) and Cakrapāṇidatta (Su 1939: 125) state that only the ears of healthy people should be pierced, and they quote Bhoja to affirm this: 'When piercing the ears of children who are free of disease at these times, their ear flaps and apertures, as well as limbs, increase' (for the Sanskrit, see Su 1938: 76).

49 The syntax here is unclear. The expression *svastivācana* may have been a gloss inserted into the text at an earlier period to clarify *maṅgala*. But as it stands, it is not syntactically connected to the rest of the sentence. In the versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76), the words are united in a compound that reads more naturally.

50 The versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76) have the additional compound *kumāradharāṅke* ('on the lap of one who holds the child') after *dhātṛyaṅke*. The gender of *kumāradhara* is made clear by Ḍalhaṇa's gloss 'a man who holds the child'. Also, both versions add *bālakṛīḍanakaiḥ pralobhya* ('having enticed with children's toys') to indicate that the child should be enticed with toys to stay on the assistant's lap. According to Ḍalhaṇa on 1.16.3 (Su 1938: 76), the toys include replica elephants, horses, bulls and parrots. Ḍalhaṇa further mentions that others read *bhakṣyaviśeṣair vā* ('or by special treats') before *bālakṛīḍanakaiḥ*.

51 The versions of 1.16.3 of Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76) add *ādityakarāvabhāsite* to clarify that this naturally occurring cleft is illuminated by sunshine.

52 Ḍalhaṇa on 1.16.3 (Su 1938: 76) clarifies that the awl is a shoe-maker's knife for piercing leather.

- 3 If there is excess blood or pain one should know that it was pierced in the wrong place. The absence of side-effects is a sign that it has been pierced in the right place.⁵³
- 4 In this context, if an ignorant person accidentally pierces a duct (*sirā*) there will be fever, burning, swelling (*śvayathu*), pain, lumps (*granthi*), paralysis of the nape of the neck (*manyāstambhā*), convulsions (*apatānaka*), headache or sharp pain in the ear.⁵⁴
- 5 Having removed the wick (*vartī*) in the hole because of the aggravation of humours or a culpable piercing,⁵⁵ one should smear it with a paste of the roots of barley, liquorice, Indian madder (*mañjiṣṭhā*), and the castor oil tree (*gandharvahasta*), thickened with honey and ghee. When it has healed well, one should pierce it again.
- 6 One should treat the properly-pierced ear by sprinkling it with raw sesame oil. After every three days one should apply a thicker wick (*vartī*) and sprinkle oil right on it.⁵⁶
- 7 Once the ear is free from humours or side-effects, one should loosen it with a light dilator (*pravardhanaka*) in order to enlarge it.⁵⁷

53 At this point, MS Kathmandu KL 699 is missing a folio, so the rest of this chapter is constructed on the basis of witnesses MS Kathmandu NAK 5-333 and MS Kathmandu NAK 1-1079.

54 This passage is significantly augmented in 1.16.4 of Cakrapāṇidatta's version (Su 1939: 126) and 1.16.5 of Ḍalhaṇa's (Su 1938: 77) to outline the specific problems caused by piercing three ducts called *kālikā*, *marmikā* and *lohitikā*. In fact, the order of the problems mentioned in the Nepalese version has been retained in the other versions and divided between each duct. Cakrapāṇidatta's commentary on 1.16.4 (Su 1939: 126) cites several verses attributed to Bhoja on the problems caused by piercing these three ducts in the ear flap: 'Lohitikā, marmikā and the black ones are the ducts situated in the earflaps. Listen in due order to the problems that arise when they are pierced. Paralysis of the nape of the neck and convulsions, or sharp pain arise from piercing *lohitikā*. Pain and lumps are thought to arise from piercing *marmikā*. Piercing *kālikā* gives rise to swelling, fever and burning.'

55 In addition to these reasons, 1.16.6 of Ḍalhaṇa's (Su 1938: 77) adds *kliṣṭajihmāpraśastasūcīvyadhāt* ('because of piercing with a painful, crooked and unrecommended needle') and *gāḍhataravartitvāt* ('because of a wick that is too thick'). Ḍalhaṇa was aware of the reading in the Nepalese version because he notes in his commentary on 1.16.6 (Su 1938: 77) that some read 'because of the accumulation of humours' rather than 'because of piercing with a painful, crooked and unrecommended needle or because of a wick that is too thick.' On the meaning of *samudāya*, see ?? and Meulenbeld 1992: 1–5 (ADD PRIMARY REF).

56 The manuscripts support the reading *sthūlatarīm* that is either a non-standard form or a scribal error.

57 Cakrapāṇidatta on 1.16.6 (Su 1939: 127) and Ḍalhaṇa on 1.16.8 (Su 1938: 77) point out that the dilator can be made of wood, such as that of the prickly chaff flower (*apāmarga*), the neem tree (*nimba*) and the cotton plant (*kārpāsa*). Ḍalhaṇa adds that it can also be made of lead

- 8 A person's ear enlarged in this way can split in two, either as a result of the humours⁵⁸ or a blow. Listen to me about the joins (*sandhāna*) it can have.
- 9 Here, there are, in brief, fifteen ways of mending the ear flap.⁵⁹ They are as follows: Rim-join (*nemīsandhānakaḥ*), Lotus-splittable (*utpalabhedyaka*), Dried Flesh (*vallūraka*), Fastening (*āsaṅgima*), Cheek-ear (*gaṇḍakarṇa*), Take away (*āhārya*), Ready-Split (*nirvedhima*), Multi-joins (*vyāyojima*), Door-hinge (*kapāṭasandhika*), Half door-hinge (*ardhakapāṭasandhika*), Compressed (*saṃkṣipta*), Reduced-ear (*hīnakarṇa*), Creeper-ear (*vallīkarṇa*), Stick-ear (*yaṣṭīkarṇa*), and Crow's lip (*kākauṣṭha*).⁶⁰
- In this context, among these,
- “Rim-join” (*nemīsandhānaka*): both flaps are wide, long, and equal.
- “Lotus-splittable” (*utpalabhedyaka*): both flaps are round, long, and equal.
- “Dried flesh” (*vallūraka*): both flaps are short, round, and equal.
- “Fastening” (*āsaṅgima*): one flap is longer on the inside.
- “Cheek-ear” (*gaṇḍakarṇa*): one flap is longer on the outside.⁶¹
- “Take-away” (*āhārya*): the flaps are missing, in fact, on both sides.
- “Ready-split” (*nirvedhima*): the flaps are like a dais (*pīṭha*).
- “Multi-joins” (*vyāyojima*): one flap is small, the other thick, one flap is equal, the other unequal.
- “Door-hinge” (*kapāṭasandhika*): the flap on the inside is long, the other is small.
- “Half door-hinge” (*ardhakapāṭasandhika*): the flap on the outside is long, the other is small.

(*sīsaka*) and should have the shape of the datura flower (*dhattūrapuṣpa*).

- 58 Ḍalhaṇa on 1.16.9 (*Su* 1938: 77) notes that the word *doṣa* here can refer to either a humour, such as wind (*vāta*), as we have understood it, or a disease generated from a humour.
- 59 The Nepalese version uses the word *sandhāna* to refer to joining a split in an ear flap, which is consistent with the terminology in the verse cited above (8). However, 1.16.10 of Ḍalhaṇa's version (*Su* 1938: 77) uses the term *bandha* here and at the very beginning of the chapter (i.e., 1.16.1) to introduce the topic of repairing the ear.
- 60 For an artist's impression of these different kinds of joins in the ear flap, see Majno 1975: 290 (reproduced as Figure 3.2 in Wujastyk 2003: 154).
- 61 For an artist's impression of this join, see Majno 1975: 291 (reproduced as Figure 3.3 in Wujastyk 2003: 155).

‘These ten options (*vikalpa*) for joins (*sandhi*) of the ear should be bound. They can mostly be explained as resembling their names.⁶² The five from compressed (*saṃkṣipta*) on are incurable.⁶³ Among these, “compressed” has a dry ear canal and the other flap is small. “Reduced ear” has flaps that have no base and have wasted flesh on their edges. “Creeper-ear” has flaps that are thin and uneven. “Stick-ear” has lumpy (*granthita*) flesh and the flaps are stretched thin and have stiff (*stabdha*) ducts (*sirā*). “Crow-lip” has a flap without flesh with compressed (*saṃkṣipta*) tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating (*srāva*), or swollen.⁶⁴

- 10 A person wishing to perform any of these joins should therefore gather together the supplies prepared according to the recommendations of the ‘Preparatory Supplies’ chapter.⁶⁵ And in particular, he should gather decanted liquor (*surāmaṇḍa*), milk, water, fermented rice-water (*dhānyāmla*), and powdered earthenware crockery (*kapālacūrṇa*).⁶⁶

Next, he should prepare the woman or man, who have had the ends of their hair tied up, have eaten lightly, and are firmly supported by qualified attendants.

Then, he should ready the bindings (*bandha*) and carry out the procedure with cutting (*chedya*), splitting (*bhedya*), scarification (*lekhyā*), or piercing (*vyadhana*). Then, he should examine the blood of the ear to know whether it is tainted (*duṣṭa*) or not. If it is tainted by wind, the ear should be bathed with fermented rice-water (*dhānyāmla*) and water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then decanted liquor

62 Cakrapāṇidatta on 1.16.9–13 (Su 1939: 128–129) and Ḍalhaṇa on 1.16.10 (Su 1938: 77–78) provide examples of how the names of these joins describe their shapes. For example, the rim-join (*nemīsandhānaka*) is similar to the join of the rim of a wheel (*cakradhārā*).

63 Ḍalhaṇa on 1.16.10 (Su 1938: 77–78) mentions that some do not read the statement that only five are incurable, and they understand the causes of unsuccessful joins given below (i.e., heat, inflammation, suppuration and swelling) as also pertaining to the first ten when they do heal.

64 The version of 1.16.11–14 known to Ḍalhaṇa (Su 1938: 78) has four verses (*śloka*) at this point that are not in the Nepalese manuscripts. The additional verses iterate the types of joins required for ear flaps that are missing, elongated, thick, wide, etc. All four verses were probably absent in the version of the *Suśrutasamhitā* known to Cakrapāṇidatta. See the introduction for a discussion of this. [CROSS REF?]

65 *Suśrutasamhitā* 1.5 (Su 1938: 18–23).

66 The term *kapālacūrṇa* is unusual. Ḍalhaṇa (Su 1938: 79) defines it as the powder of fragments of fresh earthen pots and Cakrapāṇidatta (Su 1939: 129) as the powder of earthenware vessels.

(*surāmaṇḍa*) and water should be used, and then he should scarify it again. Then, arranging the join in the ear so that it is neither proud, depressed, nor uneven, one should make the join. Having seen that the blood has stopped, one should anoint it with honey and ghee, bandage each ear with cotton (*picu*) and gauze (*prota*), and bind it up with a thread, neither too tightly nor too loosely. Then, the earthenware powder should be sprinkled on, and medical advice (*ācārika*) given. And he should supplement with food as taught in the ‘Two Wound’ chapter.⁶⁷

- 11 One should avoid rubbing, sleeping during the day, exercise, overeating, sex, getting hot by a fire, or the effort of speaking.
- 12 One should not make a join when the blood is too pure, too copious, or too thin.⁶⁸ For when the ear is tainted by wind, then it is obstructed by blood (*raktabaddha*), unhealed and will peel. When tainted with choler, it becomes pinched (*gāḍha*), septic (*pāka*) and red. When tainted by phlegm, it will be stiff (*stabdha*) and itchy. It has excessively copious suppuration (*srāva*) and is *śopha* (*puffed up*). It has a small amount of wasted (*kṣīṇa*) flesh and it will not grow.⁶⁹
- 13 When the ear is properly healed and there are no complications, one may very gradually start to expand it. Otherwise, it may be inflamed (*saṃrambha*), burning, septic or painful. It may even split open again.
- 14 Now, massage for the healthy ear, in order to enlarge it.
One should gather as much as one can the following: a monitor lizard (*godhā*⁷⁰), scavenging (*pratuda*) and seed-eating (*viṣkira*) birds, and creatures that live in marshes or water,⁷¹ fat, marrow, milk, and sesame oil, and white mustard oil.⁷² Then cook the oil with an admixture (*prativāpa*) of the

67 *Suśrutasamhitā* 4.1 (Su 1938: 396–408).

68 1.16.17 of Ḍalhaṇa’s version (Su 1938: 79) reads “impure” for the Nepalese “too pure,” which would appear to make better medical sense. Emending the text to *nāsuddha*- for *nātiśuddha*- in the Nepalese recension would yield the same meaning as the Ḍalhaṇa’s version.

69 In his edition of *Suśrutasamhitā*, Ācārya (Su 1938: 79 n. 1) includes in parentheses the following treatment for these conditions, which according to a footnote is not found in the palm-leaf manuscript he used: ‘One should sprinkle it with raw sesame oil for three days and one should renew the cotton bandage after three days’ (*āmatailena trirātram pariṣecayet trirātrāc ca picum parivartayet*).

70 *Varanus bengalensis*, Schneider (Daniel 1983:58)

71 For such classifications, see Zimmermann (1999) and Smith (1994).

72 1.16.19 of Ḍalhaṇa’s version (Su 1938: 79) includes ghee (*sarpis*). However, Ḍalhaṇa’s remarks on 1.16.19 and Cakrapāṇidatta’s on 1.16.18 (Su 1939: 130) indicate that they knew a version of this recipe (perhaps, similar to the Nepalese) that does not have ghee. Ḍalhaṇa

following: purple calotropis (*arka*⁷³), white calotropis (*alarka*⁷⁴), country mallow (*balā*⁷⁵), ‘strong Indian mallow’ (*atibalā*⁷⁶), country sarsaparilla (*anantā*⁷⁷) beggarweed (*vidāri*⁷⁸), liquorice (*madhuka*), hornwort (*jalaśūka* → *jalanīlikā*⁷⁹), items having the ‘sweet’ savour (*madhuravarga*⁸⁰) and ‘milk flower’ (*payasyā* → *vidāri*⁸¹). This should then be deposited in a well-protected spot.

- 15 The wise man who has been sweated should rub the massaged (*mardita*) ear with it. Then it will be free of complications, and will enlarge properly and be strong.⁸²
- 16 Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole (*apāṅga*), but not outside it.⁸³
- 17 In this tradition, experts know countless repairs to ears. So a physician who is very intent (*suniviṣṭa*) on working in this way may repair (*yojayed*) them.⁸⁴

also notes that others simply read four oils, beginning with fat and without milk, whereas Cakrapāṇidatta says some read that it is made with four oils and milk.

- 73 *Calotropis gigantea*, (L.) R. Br. (ADPS 52, AVS 1.341, NK #427, Potter 57, ID 306)
- 74 *Calotropis procera*, (Ait.) R. Br. (NK #428, GIMP 46b, ID 306)
- 75 *Sida cordifolia*, L. (ADPS 71, NK #2297)
- 76 *Abutilon indicum*, (L.) Sweet; *Sida rhombifolia*, L.? (NK #11, IGP ,4 1080; NK #2300)
- 77 *Hemidesmus indicus*, (L.) R. Br. (ADPS 434, AVS 3.141–5, NK #1210)
- 78 *Desmodium gangeticum* (L.) DC (Dymock 1.428, GJM 602, cf. NK #1192; ADPS 382, 414 and IMP 2.319, 4.366 are confusing)
- 79 *Ceratophyllum demersum*, L. (IMP 2371, AVS 2.56, IGP 232). This name is not certain. In fact, Ḍalhaṇa on 1.16.19 (Su 1938: 79) notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.
- 80 The items which exemplify the ‘sweet’ savour (*madhuravarga*) are enumerated at SS.1.42.11.
- 81 *Pueraria tuberosa* (Willd.) DC. (ADPS 510, IMP 1.792f., AVS 4.391; not Dymock 1.424f. See GJM supplement 444, 451, IMP 1.187, but IMP 3.1719 = *Ipomoea mauritiana*, Jacq.). The version of 1.16.19 known to Ḍalhaṇa (Su 1938: 79) adds several ingredients to this admixture, including *apāmārga*, *aśvagandhā*, *kṣīraśūklā*, *madhuravarga* and *payasyā*. Also, it has *vidārigandhā* instead of *vidāri*. When commenting on 1.16.19, Ḍalhaṇa (Su 1938: 79) notes that some do not read *madhuravarga* and *payasyā*. Therefore, there were probably other versions of this recipe with fewer ingredients, as seen in the Nepalese version.
- 82 For these aims (i.e., healing and enlarging the ear), the text known to Ḍalhaṇa (Su 1938: 79) has an additional verse and a half describing an ointment for rubbing the ear (*udvartana*) and sesame oil (*taila*) cooked with various medicines for massage. Cakrapāṇidatta (Su 1939: 131) does not comment on these verses, nor verse 15 of the Nepalese version, and so the version of the *Suśrutasamhitā* known to him may not have included them.
- 83 Ḍalhaṇa’s version of 1.16.23 adds another hemistich that states more explicitly that the scarification should not be done on the outside of hole as it will cause derangement.
- 84 After verse 17, the 1938 edition of Ācārya (Su 1938: 80) has in parentheses nineteen verses on diseases of the ear lobes, treatments and complications. It is possible that these verses were

- 18 If an ear has grown hair, has a nice hole, a firm join, and is strong and even, well-healed, and free from pain, then one can enlarge it slowly.⁸⁵
- 19 Now I shall describe the proper method of repairing a severed nose. First, take from the trees a leaf the same size as the man's nose and hang it on him.
- 20 Next, having cut a slice of flesh (*vadhra*)⁸⁶ with the same measurements off the cheek, the end of the nose is then scarified.⁸⁷ Then the undistracted (*apramatta*) physician, should quickly put it back together so that it is well joined (*sādhubaddha*).
- 21 Having carefully observed that it has been well sown up, two tubes should be fixed in place.⁸⁸ Then, having lifted them up,⁸⁹ the powder of sappanwood (*pattāṅga*⁹⁰), liquorice (*yaṣṭimadhuka*⁹¹), and Indian barberry⁹² should be applied to it.

añjana

in some of the witnesses used by Ācārya to construct the text as they occur in other manuscripts, such as MS Hyderabad Osmania 137-3 (b). However, Cakrapāṇidatta (Su 1939: 132) and Ḍalhaṇa (Su 1938: 80) state that some read about the diseases of the ear lobes in this chapter whereas others read about them in the chapter on various treatments (*miśrakacikitsa*) (SS 5.25), which does indeed begin with a discussion of the disease *paripoṭa*. Ḍalhaṇa goes on to say that some believe that these verses were not composed by sages and, therefore, do not read them.

- 85 The order of verses 17 and 18 are reversed in Ḍalhaṇa's version (Su 1938: 80).
- 86 The version of 1.16.28b known to Ḍalhaṇa (Su 1938: 81) reads bound, connected (*baddham*) instead of slice of flesh (*vadhra*). This is a critical variant from the surgical point of view. If the slice remains connected, it will have a continuing blood supply. This is one of the effective techniques that so astonished surgeons witnessing a similar operation in Pune in the eighteenth century (see Wujastyk 2003: 67–70).
- 87 Or 1.16.20 could be mean, '... off the cheek, it is fixed to the end of the nose, which has been scarified.' Unfortunately, the Sanskrit of the Nepalese version is not unambiguous on the important point of whether or not the flap of grafted skin remains connected to its original site on the cheek. However, Ḍalhaṇa (Su 1938: 81) clarifies the meaning of the vulgate here by stating that one should supply the word 'flesh' when reading 'connected,' thus indicating that he understood the flesh to be connected to the face.
- 88 Ḍalhaṇa on 1.16.21 (Su 1938: 81) notes that the two tubes should be made of reed (*nala*) or the stalk of the leaf of castor oil plant (*eraṇḍapatranāla*). They should not be made of lead or betel nut because the weight will cause them to slip down.
- 89 The Sanskrit term *unnāmayitvā* in 1.16.21 is non-Pāṇinian.
- 90 *Caesalpinia sappan*, L. (AVS 1.323, IMP 2.847f.). For *pattāṅga* there are manuscript variants *pattrāṅga* (MS H) and *pattaṅga* (N). Also, MS K (f. 14r:1) has *pattrāṅga* in a verse in 1.14 (cf. 1.14.36, Su 1938: 66). In the text known to Ḍalhaṇa (Su 1938: 81), 1.16.29 has *pataṅga*, and this term is propagated in modern dictionaries.
- 91 *Glycyrrhiza glabra*, L. (AVS 3.84, NK #1136)
- 92 *Berberis aristata*, DC (Dymock 1.65, NK #685, GJM 562, IGP 141). Ḍalhaṇa (Su 1938: 81) understands it as Elixir salve (*rasāñjana*).

- 22 The wound should be covered properly with cotton (*picu*) and should be moistened repeatedly with sesame oil. Ghee should be given to the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions specific to him.⁹³
- 23 And once healed and really come together, what is left of that slice of flesh (*vadhra*) should then be trimmed. If it is reduced (*hīna*), however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.⁹⁴

93 The expression *svayathopadeśa* is ungrammatical but supported in all available witnesses.

94 Ḍalhaṇa ([Su 1938](#): 81) accepts a verse following this, which points out that the procedure for joining the nose is similar to that of joining the lips without fusing the ducts. He notes that earlier teachers did not think this statement on the nose and lips was made by sages, but includes it because it was accepted by Jejjāṭa, Gayadāsa and others. However, Cakrapāṇidatta ([Su 1939](#): 133) does not comment on this additional verse, which suggests that either he did not know of it or was not inclined to accept it.

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.⁹⁵

95 1.1.28 (Su 1938: 7), tr. P. V. Sharma 1999–2001*b*: 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.⁹⁶

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.⁹⁷

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.⁹⁸ 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.⁹⁹ Translations of this chapter since 2000 have appeared by Wujastyk (2003: 131–139), P. V. Sharma (1999–2001b: 3, 1–15), and Srikantha Murthy (2000–2).¹⁰⁰

⁹⁶ *Arthaśāstra* 1.21.8 (Kangle 1969: 1, 30), translation by Olivelle (2013: 97).

⁹⁷ Cf. *Arthaśāstra* 1.21.6, *ibid.*, Olivelle (2013: 96).

⁹⁸ Cf. *Arthaśāstra* 1.21.6 again.

⁹⁹ *HIML*: IA, 289–290.

¹⁰⁰ For a bibliography of translations to 2002, including Latin (1847), English (1877), Gujarati (1963) and Japanese (1971), see *HIML*: IB, 314–315.

More recently, a discussion of the fourth chapter of this section in the light of the Nepalese manuscripts was published by Harimoto.¹⁰¹ 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.¹⁰²

Manuscript notes

- MS Kathmandu NAK 5-333 has foliation letter numerals, for example on f. 323a, that are similar to MS Cambridge Add. 1693,¹⁰³ dated to 1165 CE noted in Bendall’s chart of Nepalese letter-numerals Bendall 1883: Lithograph V, after p. 225

101 Harimoto 2011: 101–104.

102 The two editions that Harimoto noted, Su 1938 and Su 1889, present identical texts.

103 Scan at 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.¹⁰⁴
- 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.¹⁰⁵

[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.¹⁰⁶
- 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.¹⁰⁷
- 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.

¹⁰⁴ 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 *Suśrutasamhitā* 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 *Suśrutasamhitā* that names Dhanvantari and integrates him into the narrative of the *Suśrutasamhitā* 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 *Suśrutasamhitā* 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).

¹⁰⁵ 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). Ḍalhana 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.”

¹⁰⁶ Verses about the use of Venomous Virgins as a weapon do not appear in the Nepalese manuscripts. Cf. Wujastyk 2003: 81 f., 132. This material is present in the commentary of Gayadāsa.

¹⁰⁷ The verb √ śvas is conjugated as a first class root in the Nepalese manuscripts.

- 12–13 The kitchen should be constructed at a recommended location and orientation. It should have a lot of light,¹⁰⁸ have clean utensils and be staffed by men and women who have been vetted.¹⁰⁹
- 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.¹¹⁰
- 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.¹¹¹ 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 (*abhyaṅga*) and combs (*avalekhana*); in dry rubs (*utsādana*) and showers, in decoctions (*kaṣāya*) and massage ointment (*anulepana*); in garlands (*sraṇi*), 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*) 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

Cf.
Arthaśāstra
1.21.8.

108 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).

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

110 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 *Bodhāyanīyagrhyasūtra* 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).

111 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).

- changes its song and the common crane rises up excitedly.¹¹² 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.¹¹³ The chital deer sheds tears and the monkey releases excrement.¹¹⁴
- 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.¹¹⁵
- 35, 36cd In such a case, an errhine and a collyrium that are costus, lāmajja grass (*lāmajja*), spikenard (*nalada*) and honey (*madhus*);¹¹⁶ a paste of sandalwood on the heart may also provide relief.¹¹⁷
- 37 Held in the hand, it makes the hand burn, and the nails fall out. In such a case, the ointment (*pralepa*) is beautyberry (*śyāmā*), velvet-mite (*indragopa*), soma and water-lily (*utpala*).¹¹⁸
- 38–39 If he eats that food, through inattention or by mistake, then his tongue will

112 The verb अर्च्छति “rises up” is a rare form best known from epic Sanskrit (see Oberlies 2003: 212, §7.6.1). The transmitted form क्रोञ्च 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 क्रोञ्च is found in Pāli (see Cone 2001: 731, who notes that Ardhamaḡadhī 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).

113 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.”

114 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.

115 “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).”

116 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.

117 **sing-1972empty citation** discussed the difficulties in identifying लामज्ज, a plant cited more often in the *Suśrutasaṃhitā* than in the *Carakasamhitā*; Ḍalhaṇa adopted the common 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.”

118 “Beautyberry” (*Callicarpa macrophylla* Vahl.) is one identification of श्यामा, but vaidyas and commentators have different ideas about the plant’s identity (see **sing-1972AVS**: 1: 334; Nadkarni 1954: #420).

- feel like a pebble (*aṣṭhīlā*) and it will lose its sense of taste. It stings and burns, and his saliva (*śleṣman*) dribbles out.¹¹⁹ In such a case, he should apply the treatment recommended above for vapour (*bāṣpa*), and what will be stated below under “toothbrush twigs”.¹²⁰
- 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.¹²¹
- 41 In this case, vomiting must quickly be induced using the fruits of emetic nut (*madana*), bitter gourd (*alābu*), red gourd (*bimbī*), and luffa (*koṣṭakī*), taken with milk and watered buttermilk (*udaśvit*), 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*).¹²²

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 2003: 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 Wren 1956: 262; not found in Osbaldeston and Wood 2000).

119 The word अष्टीला 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 facillior*), but is not attested in the Nepalese manuscripts.

120 Poisoned toothbrushes are discussed in verses 48 ff. below.

121 I translate मूर्च्छा in the light of the metaphors discussed by Meulenbeld (2011), that include thickening and losing consciousness.

122 The ‘slow-acting poison’ is discussed at 5.2.25 ff. (Su 1938: 565).

- 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.¹²³
- 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 (*pra√kuth*) and unripe ones ripen.¹²⁴
- 48 When a toothbrush twig has poison on it, the bristles are corroded and the flesh of the tongue, gums and lips swells up.¹²⁵
- 49 Then, once his swelling is lanced, one should rub (*pratisāraṇa*) it with fire-flame bush flowers (*dhātakīpuṣpa*), jambul (*jambū*), mango stones (*āmrāsthī*) and chebulic myrobalan (*harītakī*) fruit mixed with honey.¹²⁶
- 50 Alternatively, the rubbing (*pratisāraṇa*) can be done with either the roots of sage-leaved alangium (*aṅkolla*), the bark of blackboard tree (*saptachada*) or siris seeds (*śirīṣamāṣaka*).¹²⁷
- 51ab One should give advice about a poisoned tongue-scraper or mouthwash (*ka-vaḷa*) 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.¹²⁸ And the flesh (*māṃsa*) splits open.

I'm still unhappy about this verse.

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

fn about sadyas+

123 Both Nepalese witnesses read विकृत (distorted) twice, which is tautologous. In the first occurrence both read विकृता 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*.

124 The root *√कुथ* “stink, putrify, rot” is apparently known only from its few uses in the *Suśruta-saṃhitā*.

125 Gayadāsa and Ḍalhaṇa point 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)).

126 This recipe is different from the vulgate.

127 The spelling of the name अङ्गोल्ल varies अङ्गोट, अङ्गोठ, अङ्गोल (sing-1972); Ḍalhaṇa notes 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 (माषक) (5.1.50 (Su 1938: 562)).

128 The feminine स्फोट for “boils” is unattested.

- 53–54 In such a case, sandalwood, Indian rose-bay (*tagara*),¹²⁹ costus, and vetiver grass (*uśīra*), bamboo leaves (*veṇupatrikā*), heart-leaved moonseed (*somavallī*) and calamine (*amṛtā*), white clitoria (*śvetā*), sacred lotus (*padma*), and Indian barberry (*kālīyaka*) 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 (*kapittha*).¹³⁰
- 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*).¹³¹
- 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,¹³² ghee, beautyberry (*śyāmā*),¹³³ black creeper (*pālindī*) and amaranth (*tanḍulīyaka*). Good alternatives are either the fluid extract of cowdung, or the juice of jasmine (*mālatī*), the juice of woodrose (*mūṣikakarṇī*), or household soot.¹³⁴
- 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 (*padminīkaṇṭaka*).¹³⁵ In this case, the drink is honey and ghee, and the ointment (*pralepa*) is sandalwood with ghee, curds (*payasyā*),

Bear's bile
instead of
deer's bile.

129 Some say तगर is Indian valerian, but there remain many historical questions about the ancient and regional identities of this plant (**sing-1972**)[334]avs.

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

131 See verse 52 above.

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

133 See note 118.

134 The plant identifications in this passage follow Ḍalhaṇa's glosses, although he noted a difference of opinion on the identity of mouse-ear (*mūṣikakarṇī*). **sing-1972ADPS**: 23–25 discussed this issue well.

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).

135 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.

- honey, verbena (*phañjī*), scarlet mallow (*bandhujīva*) and hogweed (*punar-navā*).¹³⁶
- 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 atis roots (*ativiṣā*), is prescribed, with henna (*madayantikā*), as a cold drink or errhine.
- 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 (*bahuputrā*) and very cold juice of white cutch tree (*soma-alka*) are also recommended as something good.¹³⁷
- 69 When poison is mixed in with eye make-up (*añjana*), he gets tears and rheum (*upadeha*), with a burning feeling, pain, faulty vision (*dr̥ṣṭivibhrama*), and possibly even blindness.¹³⁸
- 70–71 In this case, one must immediately drink ghee and have it also in an eyewash (*tarpaṇa*) with long pepper (*māgadha*). One should have an eye ointment (*añjana*) of the juice of periploca of the woods (*meṣaśṛṅga*) and have the extract (*niryāsa*) of three-leaved caper (*varuṇa*), wood apple (*kapittha*) and periploca of the woods (*meṣaśṛṅga*) and the flower of marking-nut tree (*bhallātaka*).
- 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.

punarṇavā
in the N & K
MSS

śrita for śṛta

explain more

Medical dif-
ference from
Sharma.

example
where the
vulgate cla-
rifies that
these should
be used sepa-
rately; ap-
pears to be a
gloss inser-
ted into the
vulgate text.

¹³⁶ 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).

¹³⁷ The syntax of the Nepalese version is slightly unclear, but the vulgate has smoothed out the difficulties.

¹³⁸ The term translated as “faulty vision” could also mean “rolling eyes.”

- 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 fissuring (*avadāraṇa*).¹³⁹
- 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.¹⁴⁰
- 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 (*mūṣikā*) or a fern (*ajaruhā*) is tied on to the King’s wrist, then all food that is mixed with poison will be rendered free of poison.¹⁴¹
- 79cd–80 He should always keep his heart protected (*hṛdayāvāraṇa*) when amongst people who are not his friends.¹⁴² Before eating he should drink the kinds of ghee called ‘Invincible’ and ‘Immortal’.¹⁴³ He should drink ghee (*sarpiṣ*), honey, curds (*dadhi*), milk (*payas*), or cold water.
- 81 He should consume monitor lizard, peacock, mongooses, chital deer (*prṣata*), and blackbuck (*hariṇa*) too, that destroy poison, and their juices.

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

140 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.

141 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 **sing-1972empty citation**. Ḍalhaṇa (5.1.78 (Su 1938: 563)) cited a description of the two plants from the little-known authority Uśanas (HIML: IA, 660 et passim) that 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.

142 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)). Ḍalhaṇa 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).

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

The two uses of *prāpta* are hard to translate. *prāptāḥ* → *kṣiprāḥ* 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.

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

- 82 As discerning person should add well-crushed black creeper (*pālindī*),¹⁴⁴ liquorice (*madhuka*), and sugar to the meats of monitor lizard (*godhā*), mon-goose and blackbuck (*hariṇa*) too.
- 83 Add sugar and atis root (*ativiṣā*) to peacock flesh, together with ginger (*mahauṣadha*) And for meat from a chital deer (*pārṣata*), he should add long peppers (*pippalī*), with ginger (*mahauṣadha*).
- 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.¹⁴⁵
- 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.

Medical difference.

The first chapter in the Kalpas.

¹⁴⁴ Or some say turpeth.

¹⁴⁵ On this expression, Yagi, T. 1994. A Note on bhojya- and bhakṣya-. In: A Study of the Nilamata. Aspects of Hinduism in Ancient Kashmir. Y. Ikari (ed.).

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 Śābaras are able to identify them.¹⁴⁶

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.¹⁴⁷ 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.¹⁴⁸

Translation

- 1 And now I shall explain **what should be known** about stationary poisons.¹⁴⁹
- 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,

¹⁴⁶ After *Suśrutasaṃhitā*, *kalpasthāna* 2.5 (Su 1938: 564). From the view of Sanskrit authors, Kirātas and Śābaras 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).

¹⁴⁷ See Wujastyk 2003: 80–81.

¹⁴⁸ Valuable reference sources on Indian plant toxicology in general include Pillay 2013: chs. 10, 11 and Barceloux 2008: parts 1.II, 3 and 4.

¹⁴⁹ 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.

- the eight root-poisons are:¹⁵⁰
 1. ??,¹⁵¹
 2. ??,¹⁵²
 3. ??,¹⁵³
 4. ??,¹⁵⁴
 5. *karaṭā*,¹⁵⁵ and ending with
 6. leadwort (*vidyutśikhā* → *agni- or rakta-śikhā*?)^{i, 156}
 7. country sarsaparilla (?),¹⁵⁷ and
 8. ??,¹⁵⁸

¹⁵⁰ 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).

¹⁵¹ Liquorice eaten in excess can be poisonous, but it is unlikely to be the plant intended here. **sing-1972empty citation** noted that the poisonous root mentioned in this passage, “remains to be identified.”

¹⁵² The roots of sweet-scented oleander are highly toxic, as are most parts of the plant (Pillay and Sasidharan 2019).

¹⁵³ 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.

¹⁵⁴ The plant is usually called just *bhaṅgurā* without the prefix *su-* “good.” However, there is no reported toxicity associated with *E. prostrata*.

¹⁵⁵ 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 *karaṭa* (mn.) with safflower (*Carthamus tinctorius*, L.), but this plant does not have a poisonous root.

¹⁵⁶ The roots of both rose and white leadwort are very toxic.

¹⁵⁷ 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.

¹⁵⁸ 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 *Sauśrutaniḥaṇṭu* gives a number of synonyms for *vi-jayā*, 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 (Nadkarni 1982a: #862). This identification is tenuous.

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

- the leaf-poisons include:
 - ‘poison-leaf’ (*viṣapatrikā*)ⁱⁱ,
 - ‘drum-giver’ (*lambaradā*)ⁱⁱⁱ,
 - thorn apple (*karambha*)^{iv}, and
 - ‘big thorn apple’ (*mahākarambha*)^v;
- the fruits of items like: jequirity (*guñjā*)^{vi}, rūṣkara ()^{vii}, viṣa ()^{viii}, and vedikā ()^{ix}, are
 - *kumudavati* (*kumadavati*)^x,
 - *reṇuka* (?)^{xi},
 - *kurūkaka* (?)^{xii},
 - ‘little bamboo’ (*veṇuka*)^{xiii}, 159,
 - thorn apple (*karambha*)^{xiv},
 - ‘big thorn apple’ (*mahākarambha*)^{xv},
 - ‘pleaser’ (*nandanā*)^{xvi},
 - ‘crow’ (*kāka*)^{xvii},
- the flower-poisons include those of:
 - rattan (*vetra*)^{xviii},
 - wild chinchona (*kādamba*)^{xix},

159 Not poisonous.

ii unknown; see ?

iii unknown; see ?

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

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

vi ; see

vii ; see

viii ; see

ix ; see

x unknown; see ?

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

xii ?; see ?

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

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

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

xvi ?; see ?

xvii ?; see ?

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

xix *Anthocephalus cadamba*, Miq.; see NK #204

- black pepper (*vallīja* → *marica*)^{xx},
- thorn apple (*karambha*)^{xxi}, and
- big thorn apple (*mahākarambha*)^{xxii};
- the seven bark, pith (*sāra*) and resin (*niryāsa*) poisons are:
 - ‘gutboiler’ (*antrapācaka*)^{xxiii},
 - ‘blade’ (*kartarīya*)^{xxiv},
 - wild mustard (*saurīyaka*)^{xxv},
 - emetic nut (*karaghāṭa* → *karahāṭa?* → *madana*)^{xxvi},
 - thorn apple (*karambha*)^{xxvii},
 - wild asparagus (*nandana* → *bahuputrā?*)^{xxviii}, and
 - munj grass (*nārācaka*)^{xxix, 160};
- the three milky sap (*kṣīra*)-poisons are:
 - purple calotropis (*kumudaghnī* → *arka?*)^{xxx 161},
 - oleander spurge (*snuhī*)^{xxxi}, and
 - ‘web-milk’ (*jālakṣīri*)^{xxxii};
- the two element (*dhātu*)-poisons are:

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

161 The name of this poison, *kumuda-ghnī*, 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.

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

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

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

xxiii unknown; see ?

xxiv unknown; see ?

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

xxvi Randia dumetorum, Lamk.; see NK #2091

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

xxviii Asparagus racemosus, Willd.; see ADPS 441, AVS 1.218, NK #264, IGP 103, IMP 4.2499ff., Dymock 482ff.

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

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

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

xxxii unknown; see ?

- ‘foam-stone’ (*phenāśma*)^{xxxiii}, and
- orpiment (*haritāla*)^{xxxiv, 162}
- the thirteen tuber-poisons are:
 - jequirity (*kālakūṭa*)^{xxxv, 163},
 - wolfsbane (*vatsanābha*)^{xxxvi},
 - Indian mustard (*sarṣapa*)^{xxxvii},
 - leadwort (*pālaka* → *citrika*)^{xxxviii},
 - ‘muddy’ (*kardama*)^{xxxix}, the
 - ‘Virāṭa’s plant’ (*vairāṭaka*)^{xl},
 - nutgrass (*mustaka*)^{xli},
 - atis root (*śṛṅgīviṣa*)^{xlii},
 - sacred lotus (*prapuṇḍarīka*)^{xliii},
 - radish (*mūlaka*)^{xliv},
 - ‘alas, alas’ (*hālāhala*)^{xlvi},
 - ‘big poison’ (*mahāviṣa*)^{xlvi}, and

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

163 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 ‘*kākacāñcu*’ 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.

xxxiii unknown; see ?

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

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

xxxvi *Aconitum napellus*, L.; see AVS 1.47, NK #42, Potter 4 f.

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

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

xxxix unknown; see ?

xl unknown; see ?

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

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

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

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

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

xlvii unknown; see ?

- galls (*karkaṭa*)^{xlvi. 164}

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*). 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*).¹⁶⁵

The milky sap (*kṣīra*)-poisons make one froth at the mouth, cause loose stool, and make the tongue feel heavy.¹⁶⁶ 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.

¹⁶⁴ 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. Agrawala (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.

¹⁶⁵ At 1.2.6 (Su 1938: 11), Ḍalhaṇa glosses hoarseness (*pāruṣya*) as *vāgrūṣatā*, “a rough, dry voice.”

¹⁶⁶ At 6.54.10 (Su 1938: 773), Ḍalhaṇa glosses loose stool (*viḍbheda*) as *dravapurīṣatā*, “having liquid stool.”

xlviRhus succedanea, L.; see NK #2136

With jequirity (*kālakūṭa*)^{xlvi}, there is numbness and very severe trembling. With wolfsbane (*vatsanābha*)^{xlix}, there is rigidity of the neck, and the faeces, and urine become yellow.

With sārṣapa (*sārṣapa*),¹⁶⁷ the wind becomes defective (*vātavaiguṇya*), there is constipation (*ānāha*), and lumps (*granthi*) start to appear. With leadwort (*pālaka* → *citraka*)^l, there is weakness in the neck, and speech gets jumbled.¹⁶⁸ With the one called ‘muddy’ (*kardama*)^{li}, there is a discharge (*praseka*), the faeces pour out, and the eyes turn yellow. The ‘Virāṭa’s plant’ (*vairāṭaka*)^{lii} causes pain in the body and illness in the head. Paralysis of one’s arms and legs and trembling are said to be caused by mustaka (*mustaka*).¹⁶⁹

- 15b With great aconite (*mahāviṣa*) one’s limbs grow weak, there is a burning feeling and swelling of the belly.¹⁷⁰
- 16a With puṇḍarika (*puṇḍarika*), one’s eyes go red, and one’s belly becomes distended.¹⁷¹
- 16b With mūlaka (*mūlaka*), one’s body is drained of colour and the limbs are paralysed.¹⁷²

-> ativiṣa

Look up the ca. reference.

- 167 *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.
- 168 The verse in the Nepalese version ends with a plural verb that does not agree with the dual of the sentence subject.
- 169 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.
- 170 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.
- 171 The word *puṇḍarika* very commonly means sacred lotus, *Nelumbo nucifera*, Gaertn. The entire plant is edible and cannot be the poison intended here. **sing-1972empty citation** noted that this poison is unidentified and that it is also listed as a poison in *Carakasamhitā*ci.23.12.
- 172 The word *mūlaka* very commonly means the radish, *Raphanus sativus*, L. The root is edible and cannot be the poison intended here. **sing-1972empty citation** noted that this poison is unidentified.

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

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

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

li unknown; see ?

lii unknown; see ?

- 17a With *hālāhala* (*Aconite*), a man turns a dark colour (*dhyāma*), and gasps.¹⁷³
- 17b With *atis* root (*śṛṅgīviṣa*)^{liii}, one gets violent knots (*granthi*) and stabbing pains in the heart.¹⁷⁴
- 18a With *markaṭa* (*monkey*), one leaps up, laughs, and bites.¹⁷⁵
- 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:
- 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.¹⁷⁶
- 22 Because it is fast-acting it kills quickly, and because of its pervasiveness it affects one's whole physical constitution (*prakṛti*).¹⁷⁷ Because of its expansiveness it enters into the humour (*doṣa*)s, bodily constituents (*dhātu*)s, and

173 Identification of *hālāhala* is uncertain. It may simply be a mythical poison, or its specific identity may have been lost over the centuries. Late *nighaṇṭus* identify it as *stomaka* = *vatsanābha*, i.e., *Aconitum napellus*, L. (*Soḍhalanighantu* 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.

174 **sing-1972empty citation** noted that *vatsanābha* and *śṛṅgīviṣa* are two different varieties of poisonous Aconites that are difficult to distinguish.

175 **sing-1972empty citation** said of *markaṭa*, “an unidentified vegetable poison.” Cf. Suvedi and Tivārī 2000: v.36 for synonyms that lead to the non-toxic jujube tree.

176 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.

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

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

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,¹⁷⁸ becomes a slow-acting poison (*dūṣīviṣa*).¹⁷⁹ 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.
- 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.¹⁸⁰
- 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.¹⁸¹ 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*).¹⁸² 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*),¹⁸³ **dwindling away (*kṣaya*) of flesh,**

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

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

180 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.

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

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

183 The last ailment could perhaps be ringworm.

swelling of the feet, hands, and face, the fever called *pralepaka*, vomiting and diarrhoea.¹⁸⁴ 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.

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 (*pa-rśvabheda*), 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.¹⁸⁵

¹⁸⁴ The *pralepaka* fever was described by Ḍaḷhaṇa, at 6.39.52 (Su 1938: 675), as an accumulation of phlegm in the joints. Its symptoms are described in 6.39.54

¹⁸⁵ Here at 5.2.24 (Su 1938: 566) Ḍaḷhaṇa glossed *sannirodha* as “complete cessation, i.e., of breath” (*sannirodhaḥ samyannirodhaḥ, ucchvāsasya iti śeṣaḥ*). The manuscripts all read *skanda* where *skandha* must be intended; this confusion is known from Buddhist Hybrid Sanskrit (Edgerton 1953: 608).

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 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.¹⁸⁶
- 42b In the fifth, he should be prescribed the antidote together with a decoction (*kvātha*) of honey and liquorice (*madhuka*)^{liv}.
- 43 In the sixth, the cure (*siddhi*) is the same as for diarrhoea. And in the seventh, he perishes.¹⁸⁷
- 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: gourd (*kośavatī*),¹⁸⁸ wild celery (*agnika*),¹⁸⁹

¹⁸⁶ At 6.52.30 (Su 1938: 769) Ḍalhaṇa noted that *sindhu* can be interpreted as salt (*saindhava*).

¹⁸⁷ 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 अवपीडश. 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 rājimat (*striped snake*) snake. 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 2003: 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 in the Nepalese version. Perhaps the therapy migrated into the *Suśrutasamhitā* from the *Carakasamhitā* (6.23.66–67 (Ca. 1941: 574)).

¹⁸⁸ At 4.10.8 (Su 1938: 449) Ḍalhaṇa glosses *kośavatī* as *devadālī* and at 4.18.20 (Su 1938: 472) as *kaṭukośātakī*, vocabulary pointing to *Cucumis cylindrica*, *Cucumis actangula* or *Luffa echinata* (sing-1972ADPS: 252–253).

¹⁸⁹ A plant often cited in *Suśrutasamhitā*, but rarely in *Carakasamhitā* (sing-1972). Ḍalhaṇa glossed it here, 5.2.45 (Su 1938: 566), as wild celery (*ajamodā*), *Apium graveolens*, L., but noted

liv *Glycyrrhiza glabra*, L.; see AVS 3.84, NK #1136

velvet-leaf (*pāṭhā*),¹⁹⁰ ‘sun-creeper’ (*sūryavallī*),¹⁹¹ heart-leaved moonseed (*a-mṛtā*),¹⁹² myrobalan (*abhayā*),¹⁹³ siris (*śirīṣa*)¹⁹⁴, and selu plum (*śelu*)¹⁹⁵ white siris (*kiṇiḥi*),¹⁹⁶ the two turmeric (*haridrā*),¹⁹⁷ and the two Indian nightshades (*bṛhatī*),¹⁹⁸ ??, peas, the ??, the Indian sarsaparillas (*sārive*)¹⁹⁹ and water-lily (*utpala*).²⁰⁰

that others consider it to be *moraṭa*, *Marsdenia tenacissima* (Roxb.) Wight et Arn. There is considerable complexity surrounding the identification of *moraṭa*/*mūrvā* and related synonyms (**sing-1972**). Taking *agnika* as a short reference to *agnimantha*, often identified with *Premna corymbosa*, Rottl., might be plausible, since that is antitoxic or anti-inflammatory (ADPS: 21; Nadkarni 1954: #2025; AVS: 4, 348), but such a short reference is not known elsewhere.

- 190 *Cissampelos pariera*, L., ADPS: 366; Nadkarni 1954: #592**sing-1972**; AVS: 2.277.
- 191 At 5.2.45 (Su 1938: 566) Ḍalhaṇa said that this plant has leaves like the *paṭola*, *Trichosanthes dioica* Roxb. **sing-1972** empty citation argued plausibly that this is a synonym for *arkapūṣpī*, *Holostemma ada-kodien*, (Roxb.) Schult., 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).
- 192 *Tinospora cordifolia*, (Willd.) Hook.f. & Thoms. (**sing-1972**ADPS: 38–40)Nadkarni 1954: #2472 and #624.
- 193 *Terminalia chebula*, Retz. (ADPS: 172; Nadkarni 1954: #2451**sing-1972**).
- 194 *Albizia lebbeck*, Benth. (AVS: 1.81; Nadkarni 1954: #91**sing-1972**).
- 195 *Cordia myxa*, L. non Forssk. (AVS: 2.180; Nadkarni 1954: #672**sing-1972**).
- 196 *Albizia procera*, (Roxb.) Benth. (Nadkarni 1954: #93**sing-1972**).
- 197 *haridrā* and *dāruharidrā* **sing-1972**.
- 198 Poison berry (*bṛhatī*), *Solanum violaceum*, Ortega, and yellow-berried nightshade (*kṣudrā*), *Solanum virginianum*, L. (**sing-1972**ADPS: 100; Nadkarni 1954: #2329; AVS: 5.151, 164).
- 199 country sarsaparilla (*anantā*) *Hemidesmus indicus*, (L.) R. Br. ADPS 434, AVS 3.141–5, NK #1210 and black creeper (*pālindī*) *Ichnocarpus frutescens*, (L.) R.Br. or *Cryptolepis buehneri*, Roemer & Schultes AVS 3.141, 3.145, 3.203, NK #1283, #1210, ADPS 434.
- 200 *Nymphaea stellata*, Willd. GJM 528, IGP 790; Dutt 110, NK #1726. Ḍalhaṇa was aware of this reading 5.2.46 (Su 1938: 566).

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: ??, crape jasmine, costus, ??, peas, ??, cardamom and ??, ??, ??, ??, ??, ??, ??, beautyberry, ??, the two turmeric, ²⁰¹ the two Indian nightshades, ²⁰² Indian sarsaparilla and ??, and ??.

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 ??, ??, ??, ??, cardamom, ??, ??, ??, as well as ??, and ??
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.

²⁰¹ ?? and ??.

²⁰² ?? and ??.

Kalpasthāna, adhyāya 3

Introduction

Translation

- 1 And now we shall explain the rule (*kalpa*) that is the required knowledge about mobile poisons.²⁰³
- 3 The full explanation about the sixteen carriers (*adhiṣṭhāna*) of the mobile poisons, that have been mentioned by me in brief, will be stated.²⁰⁴
- 4 In that context, they are:²⁰⁵
- gaze and breath, *khasaṃdaṃśā*,
 - teeth, nails, and bites • fart (*avaśardhita*),²⁰⁶
 - urine and faeces, • **anus**,²⁰⁷
 - **menstrual blood**, • bones,
 - semen, • bile,
 - **tail**, • bristles (*śūka*), and
 - **contact with saliva**, • corpses.
 - nipping with the mouth (*mu-*
- 5 In that context,

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

location of the poison	creatures
in their breath and gaze	divine snakes
in their bite	the ones on earth ²⁰⁸

203 In contrast to stationary, plant poisons. No reference is made to Dhanvantari (see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021).

204 "Carrier" for base, foundation (*adhiṣṭhāna*) aims to capture the idea that the author will describe the creatures in which poisons inhere.

205 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.

206 This interpretation comes from Ḍalhaṇa on 5.3.4 (Su 1938: 567), but he reads विशर्धित.

207 Ḍalhaṇa on 5.3.4 (Su 1938: 567) noted this reading.

208 Ḍalhaṇa on 5.3.5 (Su 1938: 567) cited the otherwise unknown authority Sāvitra on the topic of poisonous snakes.

<i>location of the poison</i>	<i>creatures</i>
in their nails, mouths and bites	cats, dogs, monkeys, men (<i>nara</i>), crocodiles, frogs, cook-fish (<i>pākamatsya</i>), monitor lizards, snails (<i>śambuka</i>), Prachalāka (<i>pracalāka</i>), house-lizard (<i>gṛhagodhikā</i>), four-footed insects and others
in their urine and faeces	lice (<i>kiṭiṭa</i>), Picciṭā (<i>picciṭā</i>), Kaṣāyavāsika (<i>kaṣāyavāsika</i>), Pepperito (<i>sarṣapaka</i>), Toṭaka (<i>toṭaka</i>), dung beetles (<i>varcaḥkīṭa</i>), and Kauṇḍinyas (<i>kaunḍinya</i>)
in their semen	mice
in their sting (<i>śūla</i>)	scorpions, Vishvambharas (<i>viśvambhara</i>), wasps (<i>varaki</i>), ²⁰⁹ fish, Uccitingas (<i>uccitiṅga</i>), wing-scorpions (<i>patravṛścika</i>)

Table 2: Passage 5, expressed in tabular format.

- 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.²¹⁰ 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.²¹¹ He should try to purify that polluted water,

209 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.”

210 अस्त्र normally means “tears,” but rarely means “blood.”

211 On the polysemy of elephant/snake (*nāga*), see Semeka-Pankratov 1979.

- 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.²¹²
- 12 In that situation, he should grind up **country sarsaparilla** together with all the aromatic items, with alcoholic drinks. And then he should sprinkle the paths that need to be used with waters mixed with mud.²¹³ **And if there exists another path, he should go by that.**²¹⁴
- 13 When grasses and foods are polluted, people collapse, fall unconscious. And others vomit. They get loose stool (*vidbheda*) 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**²¹⁵ together with **gold and sarsaparilla**, and a portion of of **nutgrass** equal to that, together with the bile

212 “Swells up” translates an unclear reading that was probably शूलति, which may be an irregular form of √शू, श्वा, श्वि (see Whitney 1885: 175–176).

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

214 Ḍalhana 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.”

215 “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, Ḍalhana on 5.3.14 (Su 1938: 568) identified these as “silver” and “mercury.” This is highly unlikely to be a correct understanding of the *Suśrutasaṃhitā* passage. Historically, mercury is not naturally present in the South Asian peninsula (Watt 1889–96: v. 5, 233), and the word पारद that Ḍalhana 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 *Suśrutasaṃhitā*. 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*).

- called “brown cow”.²¹⁶ 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.²¹⁷
- 17 The smoke and air can be purified by putting into the air: lac, turmeric, Himalayan monkshood, and myrobalan, with Himalayan mayapple, costus, cardamom,²¹⁸ and peas, and beautyberry.
- 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.²¹⁹
- 19 Pitiless Fury took a body and burst out of the mouth of furious Brahmā’s store of fiery energy.²²⁰
- 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 (*viśāda*) of the Daityas. Observing that, it was named “poison (*viṣa*)” because of it’s 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, when a poison reaches this or that substance and establishes itself there, it naturally takes on that substance’s savour.²²¹
- 25 Generally speaking, in a poison, all the qualities are really sharp. For this reason, every poison is known to inflame all of the humours.
- 26 Inflamed and afflicted by the poison, they leave their natural functions. Poison does not get digested, so it blocks the breaths.

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

²¹⁶ 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.

²¹⁷ The syntax of this verse is somewhat loose; the vulgate has regularized it, smoothing out the difficulties.

²¹⁸

²¹⁹ At this point, the text seems to make a new beginning to the topic of toxicology, as if starting a new chapter.

²²⁰ “Fury” is here anthropomorphised.

²²¹ The scribal emendation in MS NAK 5-333 of नियच्छति to निगच्छति suggests that the scribe had more than one manuscript before him.

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; Deshpande 1999; 2000; Wujastyk 2019; Leffler et al. 2020; Wujastyk 2003: 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*)”.²²²
- 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*),²²³ but not cutting with a blade (*śastrakṣata*).²²⁴ 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 (*trivṛta*) 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;
 - Cow’s flesh (*gomāṃsa*), black pepper (*marica*), siris (*śirīṣa*) and red arsenic (*manahśilā*);

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

maṣī burned charcoal. Find refs.

²²² 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.

²²³ These therapies are described in SS.6.18 ([Su 1938](#): 633–640).

²²⁴ Dalhaṇa interpreted this as blood-letting (*sirāvedha*), which is discussed in SS.1.14 ([Su 1938](#)).

- stalk (*vr̥nta*) from a wood apple (*kapittha*) with honey (*madhu*);²²⁵
 - or the the fruits of the velvet bean (*svayaṃgupta*).
- 8 The physician should make a collyrium with ground up metal (*kupyaka*),²²⁶ Asoka tree (*aśoka*), Sal tree (*śālā*), mango (*amra*), beautyberry (*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, scramberry (*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*).²²⁷ 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 the three spices, collyrium, realgar (*manaḥśilā*), the two turmeric (*rajana*)²²⁸ and liver extract

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

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

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

228 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.

- (*yakṛdrasa*).²²⁹
- 16 One should grind up kohl (*srotoja*),²³⁰ 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 (*kālānusāriva*)²³¹ long pepper, dried ginger (*nāgara*) and honey, the leaf of the scrambling (*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 (*manaḥśilā*), 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 (*dhātrī*) 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*)²³² with long pepper, honey and box myrtle (*kaṭphala*). 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 (*māgadhi*), the bone and the marrow of a goat, cardamom (*elā*) and liver, together with liver extract, is good for eyes afflicted by phlegm.²³³

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

230 Glossed by Ḍalhaṇa as a kind of collyrium. Cf. Nadkarni 1954: 2.M13 and P. V. Sharma 1982: 197–198

231 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.

232 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.

233 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).

- 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.²³⁴
- 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.²³⁵ In the case of diseases of blood (*śonita*) and bile (*pitta*), one should drink ghee with the three fruits; it is particularly cleansing.²³⁶ 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).²³⁷
- 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*). A man who is suffering from partial blindness should lick the finely-ground three fruits mixed with ghee off his hand (*sapāṇa*).²³⁸
- 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

234 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.

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

236 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

237 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.

238 “Off his hand” translates the adverbial *sapāṇam*, an unusual word. Ḍalhaṇa reproduced a reading close to the Nepalese recension but says that Jejjaṭa rejects it and so he also does (*susr-trikamjī3*).

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 (*nasya*).²³⁹
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.²⁴⁰
Fat (*vasā*) from a horse, a vulture, a snake, and a cock (*tāmracūḍa*), combined with mahua (*madhūka*) is always good in a collyrium. †²⁴¹
- 33 Having prepared (*niṣevita*) a collyrium made of kohl (*srotas*) and gradually combine it with juices (*rasa*), milk and ghee.²⁴²
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*).²⁴³
- 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

239 “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.

240 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 *Suśrutasamhitā*, 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 *Suśrutasamhitā* 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.

241 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.

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

243 Ḍalhaṇa described this blindness as a type of *kāca* disease caused by wind (**susr-trikamjī**). 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.

- of wild animals taken hot (*puṭāhvaya*).²⁴⁴
- 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*).²⁴⁵
- Alternatively, experts on this say that finely ground blue vitriol (*tuttha*) extracted from a gold mine is the “same collyrium (*samāñjana*)”.²⁴⁶
- 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*).²⁴⁷
- The extracts (*rasa*) produced from aflame of the forest (*palāśa*), Rohita tree (*rohita*),²⁴⁸ 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*) to pacify eye diseases caused by phlegm.²⁴⁹
- One should apply smoke of the bark of embelia (*vidāṅga*), 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 (*vanaspatī*)²⁵⁰ 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*)²⁵¹ and a plentiful amount of long pepper (*māgadha*), Sindh salt and honey.

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

245 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.

246 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).

247 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).

248 Probably *Soymida febrifuga* A. Juss.

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

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

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

- 40 A treatment (*kriyā*) with realgar (*manahṣilā*), the three spices, conch, honey, along with Sindh salt, green vitriol (*kāsīsa*) and elixir salve (*rasāñjana*).²⁵² They say that an elixir salve (*rasāñjana*) combined with myrobalans, treacle and dried ginger is good.²⁵³
- 41 Alternatively, a collyrium that has been prepared many times in the eight types of urine²⁵⁴ is put into water with the three fruits. Having stored it in the mouth of a nocturnal creature (*niśācara*)²⁵⁵ one should place it in a conch (*salilotthita*) for two months.²⁵⁶
- 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 (*mlāyin*).²⁵⁷
- 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.²⁵⁸
- The treatment that is good for removing watery eye (*syanda*) should be properly applied in all these humoral cases, according to the individual.²⁵⁹
- 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.²⁶⁰
- 45 Someone who uses matured ghee, the three fruits, wild asparagus (*śatāvarī*), as well as mung beans (*mudga*), emblic and barley has nothing to fear from cases of severe blindness (*timira*).

find ref.

Check out these refs.

meaning of kalpa

252 Ḍaḥaṇa glossed treatment (*kriyā*) specifically as inspissation (*rasakriyā*) (Su 1938: 629).

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

254 See SS *mūtravarga*

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

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

257 The vulgate follows Ḍaḥaṇa 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.

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

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

260 Ḍaḥaṇa noted that *Kalpa* means the Uttarantra adhyāya 18 (Su 1938: 633 ff).

- 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*).²⁶¹
- 49 I shall explain the therapy for success when there is a cataract (*liṅganāśa*) 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.²⁶²
- 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 (*kṛṣṇa*) and from the outer corner of the eye (*apāṅga*). Then he should press (*pīḍ-*) properly into the eye,²⁶³ at the naturally-occurring (*dai-vakṛte*) 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.²⁶⁴
- 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 (*drṣṭimaṇḍala*) with the

261 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.

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

263 We understand the locative *naṇane* 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.

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

- tip of the probe (*śalākā*).²⁶⁵
- 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*).²⁶⁶
- 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.²⁶⁷
- 58 But if the humour cannot be destroyed or if it comes back, one should apply the piercing (*vyadhā*) once again, with appropriate oils and so on.
- 59 Now the pupil (*dr̥ṣṭi*) shines like the sun (*hari*) in a cloudless sky; then, when objects become visible, one may slowly remove the probe (*śalākā*).²⁶⁸
- 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.²⁶⁹
- 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.²⁷⁰
- 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 (*dr̥ṣṭi*) and also he should take light food in measure.

265 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.

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

267 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.

268 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.

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

270 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).

[Complications]

- 64 When there is a misshapen eyeball (*vilocana*), the eye may fill because of the release of blood from a vein.²⁷¹
A hard probe leads to shooting pain (*śūla*), a thin to unsteadiness of the humours (*doṣapariplava*),²⁷²
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 (*sthira*) one brings about a loss of function (*kriyāsaṅga*).²⁷³
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 (*śātakumbhī*).²⁷⁴

[Complications]

- Redness, swelling, lumps, driness (*coṣa*), bubbling (*budbuda*),²⁷⁵ pigs' eye (*sūkarākṣitā*),²⁷⁶ 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.

271 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.

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

273 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 as moving (*gamanādikriyāvināśakarī*).”

274 The vulgate reads “copper (*tāmra*)” in place of “silver.”

275 Ḍalhaṇa glossed “bubbling (*budbuda*)” as “prolapse (*māṃsanirgama*) that looks like bubbles.”

276 The expression “pigs’ eye” appears to be a *hapax*. It was glossed as “downward vision (*adhodrṣṭitva*)” by Ḍalhaṇa.

- 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*).²⁷⁷ This is immediately beneficial when someone is looking for relief.
- 72 A paste with Holostemma (*payasyā*),²⁷⁸ Indian sarsaparilla (*śārivā*), cassia cinnamon (*patra*), Indian madder (*mañjiṣṭhā*), and liquorice (*madhukair*) stirred with goat's milk, pleasantly warmed, is said to be healthy.²⁷⁹
- 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*),²⁸⁰ 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.²⁸¹ This has an admixture of cottony jujube (*kākolī*) etc., should be prescribed in all treatments.²⁸²
- 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.²⁸³
- 78cd–80ab Now listen to two excellent collyriums for making the pupils clear. After

²⁷⁷ On the adverbial use of gently (*mṛdu*), see Gombrich 1979.

²⁷⁸ 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 *kṣīrakākolī*, 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).

²⁷⁹ 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).

²⁸⁰ Suvedī and Tivārī 2000: 18.

²⁸¹ Ḍalhaṇa mentioned that these drugs include Deodar (*bhadradāru*) and other wind-destroying drugs. The *vātasamśamana* group is listed in *Suśrutasamhitā sūtrasthāna* 1.39.7.

²⁸² Ḍalhaṇa noted that this would include errhines, ointments, etc.

²⁸³ 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.

grinding the flowers of periploca 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 (*vidruma*), cuttlefish bone (*phena*), and realgar (*manaḥśilā*) and peppers 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.

or a dual?

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 (*Kumāratāntra*, 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 *Kumāratāntra*. 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.²⁸⁴

²⁸⁴ Ḍalhaṇa on SS.6.38.1: *grahotpattyadhyāyanantaram 'tityagyoniṃ mānuṣaṃ ca' iti vacanena yoner nāmasaṃkirtanāt kumārajanmavikārakāraṇatvāc ca, yonivyāpaccikitsitārthaṃ*

- In the placement of the Nepalese version, *Yonivyāpatpratiṣedha* is preceded by 6.56 *Mūtrāghātapratiṣedha* (6.58 in [Su 1938](#)) and 6.57 *Mūtrakṛcchrpratiṣedha* (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 Dalhaṇa, 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 grahotpattiḥ sayonijāḥ*).
- Parallel chapters in the *Aṣṭāṅgasamgraha* and the *Aṣṭāṅgahrdayasamhitā* 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 *Aṣṭāṅgahrdayasamhitā* 6.33 and 6.34 (*Guhyarogavijñāna* and *Guhyarogapratīṣedha* respectively).

A close literary parallel to the first part of the chapter is found in *Mādhavanidāna* (MN) 62, or at least its version printed in Y. T. Ācārya (MN: 361). The readings of the MN 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. This part of the text is authored by Śrīkaṇṭhadatta, who was most like a direct student of Vi-jaraṣita. 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.²⁸⁵

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

Translation

- 1 And now I shall explain the countermeasures against disorders of the female reproductive system (*yonivyāpat*).²⁸⁶

yonivyāpatpratiṣedhādhyāyārambho yuyjate [...]/

²⁸⁵ Meulenbeld 1974: 22–26.

²⁸⁶ On this broad understanding of the term *yonī*, see Das 2003: pp. 572–5

- *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 (*yoni*), because he is entirely devoted to it (that is, to curing these diseases) for the sake of (people's) happiness.²⁸⁷
- *₄ A corrupted female reproductive system (*yoni*) 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:

_ _ _ _ _

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*),²⁸⁸ sexual activity, fate, and also defects (*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*).

²⁸⁷ 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.'

²⁸⁸ 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: "*śvitraṃ tu dvividhaṃ proktaṃ doṣajaṃ vranajaṃ tathā/ tatra mithyopacārād dhi vranasya vranajaṃ smṛtam //* ...". In contrast to this, the parallel verse in [Su 1938](#) = CS Ci.30.7 = [MN 62.1](#) reads *mithyācāra* 'wrong conduct'. All commentators (Cakrapāṇidatta on the CS, Śrīkaṇṭhadatta on the [MN](#), 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.

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 62.1–2ab](#). Given that all following verses stem from the SS, it is likely that [MN 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
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 (*sūcīvākrā*),
5. Sarvātmikā (*sarvātmikā*).

Editions and Abbreviations

Ah 1939	Kuṃṭe, Aṇṇā Moreśvara, Navare, Kṛṣṇaśāstrī, and Parādkar, Hariśāstrī (1939) (eds.), श्रीमद्वाग्भटविरचितम् अष्टाङ्गहृदयम्, श्रीमदरुणदत्तविरचितया सर्वाङ्गसुन्दराख्यया व्याख्यया, हेमाद्रिप्रणीतया आयुर्वेद-सायनाह्वया टीकया च समुल्लसितम् = <i>The Astāṅgahṛidaya</i> (6th edn., Mumbayyām: Nirṇayasāgara Press), ark:/13960/t3tt6967d .
Anup	<i>Anup Sanskrit Library</i> (n.d.).
Anup	<i>Anup Sanskrit Library</i> (n.d.).
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> (n.d.).
As 1980	Āṭhavale, Ananta Dāmodara (1980) (ed.), <i>Aṣṭāṅgasaṅgrahaḥ. Śrīmad Vṛddhāvāgbhaṭaviracitaḥ Induvyākhyāsahitaḥ</i> (Pune: Maheśa Ananta Āṭhavale, Śrīmad Ātreya Prakāśanam), ark:/13960/t9773bb9z .
Bhela 1921	Mookerjee, Ashutosh and Ananta Krishna Shastri, Vedantabisharad (1921) (eds.), <i>The Bhela Samhita. Sanskrit Text</i> (Calcutta: University of Calcutta), ark:/13960/t3sv3157j ; 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-saṃhitā. Text with English Translation, Commentary and Critical Notes</i> (Haridas Ayurveda Series, 8; Varanasi: Chaukhambha Visvabharati).
BL	<i>British Library</i> (n.d.).
Ca. 1941	Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता (3rd edn., Mumbayyām: Nirṇaya Sagara Press), URL , accessed 01/01/2018.
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).
KL	<i>Kaiser Library</i> (n.d.).
MN	Ācārya, Yādavaśarma Trivikrama (1932) (ed.), महामतिश्रीमाधवकरप्रणीतं माधवनिदानम् श्रीविजयरक्षित-श्रीकण्ठदत्ताभ्यां विरचितया मधुकोश-ख्यव्याख्या, श्रीवाचस्पतिवैद्यविरचितया आतङ्कदर्पणव्याख्याया विशिष्टांशेन च समुल्लसितम् = <i>Mādhavanidāna by Mādhavakara with the Two Commentaries, Madhukosha by Vijayarakshita & Shrikanthadatta and Ātānkadarpaṇa by Vāchaspati Vaidya</i> (3rd edn., Bombay: Nirnaya Sagara Press), ark:/13960/t66452x0h ; 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> (n.d.).
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.
NGMCP	NGMCP (2014), “Nepal-german Manuscript Cataloguing Project. Online Title List and Descriptive Catalogue,” Universität Hamburg and Deutsche Forschungsgemeinschaft, URL .
RORI	<i>Rajasthan Oriental Research Institute</i> (n.d.).
Su 1889	Bhaṭṭācāryya, Jivānanda Vidyāsāgara (1889) (ed.), सुश्रुतः. सूत्र-निदान-शारीर-चिकित्सा-कल्पोत्तर-तन्त्र-कल्पित आयुर्वेद. भगवता धन्वन्तरिणोपदिष्टः सुश्रुतनामधेयेन तच्छिष्येण विरचितः (3rd edn., Calcutta: Saratī Press), ark:/13960/t1nh6j09c ; HIMAL: IB, 311, edition b.

- Su 1915 Ācārya, Yādavaśarma Trivikrama (1915) (ed.), सुश्रुतसंहिता, सुश्रुतेन विरचिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasamhita of Sushruta, the Nibandhasangraha Commentary of Shri Dalhaṇāchārya* (Mumbayyām: Nirṇaya-sāgaramudrāyantrālaye), [ark : / 13960 / t3sv0mt50](https://nirayasaagara.org/ark:/13960/t3sv0mt50), accessed 29/07/2020; [HIML](https://nirayasaagara.org/HIML): 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 = *The Sushruta-samhitā of Sushruta with the Nibandhasangraha Commentary of Shree Dalhaṇāchārya* (2nd edn., Mumbayyām: Pāṇḍuraṅga Jāvajī at the Nirṇayasāgaramudrāyantrālaye), [ark : / 13960 / t9j41sg94](https://nirayasaagara.org/ark:/13960/t9j41sg94), accessed 09/06/2020; [HIML](https://nirayasaagara.org/HIML): IB, 312 edition *v.
- Su 1938 Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदान-स्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press), [ark : / 13960 / t09x0sk1h](https://nirayasaagara.org/ark:/13960/t09x0sk1h); [HIML](https://nirayasaagara.org/HIML): IB, 313, edition cc ('the vulgate').
- Su 1938² Ācārya, Yādavaśarma Trivikrama and Ācārya, Nārāyaṇa Rāma (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता (Vārāṇasī: Caukhambhā Kṛṣṇadāsa Akādamī); Reprint of the third, 1938 edition (Su 1938).
- Su 1939 Ācārya, Yādavaśarma Trivikrama and Śarman, Nandakiśora (1939) (eds.), सुश्रुतसंहितायाः सूत्रस्थानम्. श्रीचक्रपाणिदत्तविरचितया भानुमतीव्याख्याया समेतम् = *Sushrut-saṅhitā (sūtra Sthān) with Bhānumatī Commentary by Chakrapāṇi Datta with Introduction by Gaṇanāth Sen* (Śrīsvāmī Lakṣmīrāma Nidhi Granthamālā = Shri Swāmī Lakshmī Rām Trust Series, 1; [Jaipur]: Śyāmasundara Śarman), [ark : / 13960 / t54g0d12m](https://nirayasaagara.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 संवलिता = <i>the Suśrutasaṃhitā of Suśruta with Various Readings, Notes and Appendix etc.</i> (Mumbāi: Nirṇayasāgarākhyamudraṇālaye), URL .
TMSSML	Tanjore Maharaja Serfoji Saraswati Mahal Library (n.d.).
Viṣṇudh.	Śarman, Madhusūdana and Śarman, Mādhavaprasāda (1912) (eds.), विष्णुधर्मोत्तरपुराणम् = [Viṣṇudharmottarapurāṇa] (Mumbai: Khemarāja Śrīkrṣṇadāsa at the Śrīveṅkaṭeśvara Steam Press), ark : / 13960 / t6qz6fr23 ; Lithograph format. Edited on the basis of a manuscript belonging to the astrologer Śudhākaraśarman of the Varanasi Sanskrit Pāṭhaśālā.

Index of Manuscripts

The numbers after the colon refer to pages in this document.

Bikaner Anup 4390, 5

Bikaner RORI 5157, 33

Cambridge Add. 1693, 29

Kathmandu KL 699, 20, 32, 68

Kathmandu NAK 1-1079, 12, 20

Kathmandu NAK 5-333, 7, 9, 12, 20, 29, 34

London BL H. T. Colebrooke 908, 7

Mumbai AS B.D.109, 5

Mumbai AS B.I.3, 5

NAK 5-333, 45, 55

Thanjavur TMSSML 10773, 73

References

Ācārya, Yādavaśarma Trivikrama (1941) (ed.), महर्षिणा पुनर्वसुनोपदिष्टा, तच्छिष्येणाग्निवेशेन प्रणीता, चरकदृढबलाभ्यां प्रतिसंस्कृता चरकसंहिता, श्रीचक्रपाणिदत्तविरचितया आयुर्वेददीपिकाव्याख्यया संवलिता (3rd edn., Mumbayyām: Nirnaya Sagara Press), [URL](#), accessed 01/01/2018.

- Ācārya, Yādavaśarma Trivikramācārya and Ācārya, Nārāyaṇa Rāma (1945) (eds.), *महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (मूलमात्रा). पाठान्तर-परिशिष्टादिभिः संवलिता = the Suśrutasaṃhitā of Suśruta with Various Readings, Notes and Appendix etc.* (Mumbāi: Nirṇayasāgarākhyamudraṇālaye), [URL](#).
- Adriaensen, Rob, Barkhuis, Roelf, and Ruijters, Jean-Louis (1984), “An English Translation of Suśrutasaṃhitā, Nidānasthāna 1, 1–39, Together with Gayadāsa’s Nyāyacandrikā,” in Gerrit Jan Meulenbeld (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 277–310.
- Adriaensen, Rob C. R., Barkhuis, Roelf, and Ruijters, Jean-Louis (1984), “An English Translation of Suśrutasaṃhitā, Nidānasthāna 1, 1–39, Together with Gayadāsa’s Nyāyacandrikā,” in Gerrit Jan Meulenbeld (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 277–310.
- Agrawala, V. S. (1963), *India As Known to Pāṇini: A Study of the Cultural Material in the Aṣṭādhyāyī* (2nd edn., Varanasi: Prthvi Prakashan); First published in 1953.
- Angermeier, Vitus (2020), *Regenzeiten, Feuchtgebiete, Körpersäfte. Das Wasser in der klassischen indischen Medizin* (Wien: Österreichische Akademie der Wissenschaften).
- Baber, Zaheer (1996), *The Science of Empire: Scientific Knowledge, Civilization, and Colonial Rule in India* (Albany: State University of New York Press).
- Bakker, Hans T. (2019), “Some Methodological Considerations with Respect to the Critical Edition of Puranic Literature,” in *Holy Ground: Where Art and Text Meet* (Leiden: Brill), 175–84. DOI: [10.1163/9789004412071_010](#).
- Barceloux, Donald G. (2008), *Medical Toxicology of Natural Substances. Foods, Fungi, Medicinal Herbs, Plants, and Venomous Animals* (Hoboken, NJ, etc.: John Wiley & Sons), 1196 pp., ISBN: 047172761X, [URL](#).
- Bausi, Alessandro et al. (2015), *Comparative Oriental Manuscript Studies. An Introduction* (Hamburg: Tredition). DOI: [10.5281/ZENODO.46784](#).
- Bendall, Cecil (1883), *Catalogue of the Buddhist Sanskrit Manuscripts in The University Library, Cambridge: With Introductory Notices and Illustrations of the Palaeography and Chronology of Nepal and Bengal* (Cambridge: University Press), [ark:/13960/t03x8vz7b](#).

- Bhaṭṭācārya, Candrakānta (1910–7) (ed.), सुश्रुतसंहिता प्रथमखण्डम् सूत्रस्थानात्मकम् हाराणचन्द्रचक्रवर्तिकविराजविरचितसुश्रुतार्थसन्दीपनभाष्य-समेतम्...चन्द्रकान्त भट्टाचार्य-प्रमुखैः संशोधितम् = [The *Suśrutasamhitā* with the Commentary *Suśrutārthasandīpanabhāṣya* by *Hārāṇacandra Cakravartī*] (Kalikātā: Satya Press); Edition "t" in [HIML](#): IB, 312.
- Bhattarai, Bidur (2020), *Dividing Texts. Conventions of Visual Text-Organisation in Nepalese and North Indian Manuscripts* (Studies in Manuscript Cultures; Berlin/Boston: de Gruyter), 388.
- Birch, Jason, Wujastyk, Dominik, Klebanov, Andrey, Parameswaran, Madhu K., et al. (2021), "Further Insight into the Role of Dhanvantari, the Physician to the Gods, in the *Suśrutasamhitā*," *Academia Letters*. DOI: [10.20935/AL2992](#).
- Birch, Jason, Wujastyk, Dominik, Klebanov, Andrey, Rimal, Madhusudan, et al. (2021), "Ḍalhaṇa and the Early 'Nepalese' Version of the *Suśrutasamhitā*." DOI: [10.20935/a13733](#).
- Bollée, Willem (2010), "Remarks on the Cultural History of the Ear in India," in Nalini Balbir (ed.), *Svasti: Essays in Honour of Professor Hampa Nagarajaiah for His 75th Birthday* (Bangalore: K. S. Mudappa Smaraka Trust), 141–67, [URL](#), accessed 23/01/2022.
- Breton, P. (1826), "On the Native Mode of Couching," *Transactions of the Medical and Physical Society of Calcutta*, 2: 341–82, [ark:/13960/t3dz8nn5t](#), [URL](#), accessed 02/06/2021.
- Bronkhorst, Johannes (2016), *How the Brahmins Won: From Alexander to the Guptas* (Leiden: Brill). DOI: [10.1163/9789004315518](#).
- (2021), "Patañjali's Āryāvarta = Śuṅga realm?," *Academia Letters*. DOI: [10.20935/a1291](#); Article 291.
- Bronner, Yigal (2021) (ed.), "The Pandit Project" (30 Sept.), [URL](#).
- 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](#), [URL](#), accessed 12/12/2017.
- (2017), "Textual Variants," in Marjorie Burghart, James Cummings, and Elena Pierazzo (eds.), *Digital Editing of Medieval Texts: A Textbook* (DEMM), [URL](#), accessed 04/07/2021.

- Burnell, Arthur Coke (1880), *A Classified Index to the Sanskrit Mss. in the Palace at Tanjore* (London: Trübner), [ark:/13960/t4xh86j61](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63862-p0086-8); Bheḷasaṃhitā described on pp. 67 ff.
- Carpue, J. C. (1816), *An Account of Two Successful Operations for Restoring a Lost Nose from the Integuments of the Forehead...Including Descriptions of the Indian and Italian Methods* (London: Longman et al.), [ark:/13960/t2q57fn42](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63862-p0086-8), accessed 20/03/2019.
- Cone, Margaret (2001), *A Dictionary of Pāli* (Oxford: The Pali Text Society), ISBN: 0 86013 394 x.
- Cordier, P. (1903), “Récentes découvertes de mss. médicaux sanscrits dans l’Inde (1898–1902),” *Muséon, Nouvelle Série*, 4: 321–52, [ark:/13960/t26b2j457](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63862-p0086-8), accessed 02/01/2020; Reprinted in Roṣu 1989: 539–70.
- Coult, Ro. (1731), “An Account of the Diseases of Bengall,” in *Indian Science and Technology in the Eighteenth Century* (Impex India), 141 f., 276.
- Crawford, D. G. (1930), *Roll of the Indian Medical Service, 1615–1930* (London, Calcutta, Simla: Thacker).
- Das, Rahul Peter (2003), *The Origin of the Life of a Human Being. Conception and the Female According to Ancient Indian Medical and Sexological Literature* (Indian Medical Tradition; Delhi: Motilal Banarsidas), ISBN: 81-208-1998-5.
- Dave, K. N. (1985), *Birds in Sanskrit Literature* (Delhi: Motilal Banarsidass), ISBN: 0-89581-676-8, [ark:/13960/t2c94cv80](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63862-p0086-8).
- Deshpande, Vijaya (1999), “Indian Influences on Early Chinese Ophthalmology: Glaucoma As a Case Study,” *Bulletin of the School of Oriental and African Studies*, 62: 306–22. DOI: [10.1017/S0041977X00016724](https://doi.org/10.1017/S0041977X00016724).
- (2000), “Ophthalmic Surgery: A Chapter in the History of Sino-indian Medical Contacts,” *Bulletin of the School of Oriental and African Studies*, 63/3: 370–88, ISSN: 0041-977X. DOI: [10.1017/s0041977x00008454](https://doi.org/10.1017/s0041977x00008454).
- Dimitrov, Dragomir and Tamot, Kashinath (2007), “Kaiser Shamsheer, His Library and His Manuscript Collection,” *Kaiser Shamsheer, His Library and His Manuscript Collection*, 3 (Jan.): 26–36, [URL](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63862-p0086-8).
- Edgerton, Franklin (1939), “The Epic Triṣṭubh and Its Hypermetric Varieties,” *Journal of the American Oriental Society*, 59/2: 159–74. DOI: [10.2307/594060](https://doi.org/10.2307/594060).

- Edgerton, Franklin (1953), *Buddhist Hybrid Sanskrit Grammar and Dictionary. Vol. 2: Dictionary* (William Dwight Whitney Linguistic Series; New Haven: Yale University Press).
- Eggeling, Julius et al. (1887–1935), *Catalogue of the Sanskrit Manuscripts in the Library of the India Office* (London: Secretary of State for India).
- Elliot, Robert Henry (1918), *The Indian Operation of Couching for Cataract: Incorporating the Hunterian Lectures Delivered before the Royal College of Surgeons of England on February 19 and 21, 1917* (London: H. K. Lewis).
- Emeneau, M. B. (1969), “Sanskrit Syntactic Particles – ”kila, khalu, nūnam”,” *Indo-Iranian Journal*, 11/4: 241–68.
- Falk, Harry (1991), “Silver, Lead and Zinc in Early Indian Literature,” *South Asian Studies*, 7/1: 111–7. DOI: [10.1080/02666030.1991.9628430](https://doi.org/10.1080/02666030.1991.9628430).
- Fan, Ka Wai (2005), “Couching for Cataract and Sino-indian Medical Exchange From the Sixth to the Twelfth Century Ad,” *Clinical and Experimental Ophthalmology*: 188–90. DOI: [10.1111/j.1442-9071.2005.00978.x](https://doi.org/10.1111/j.1442-9071.2005.00978.x); Unaware of Deshpande 1999; 2000.
- Fitzgerald, James L. (2009), “A Preliminary Study of the 681 Triṣṭubh Passages of the Mahābhārata,” in Robert P. Goldman and Muneo Tokunaga (eds.), *Epic Undertakings* (Papers of the 12th World Sanskrit Conference; Delhi: Motilal Banarsidass Publishe), 95–117.
- Gaṇapatiśāstrī, T. (1920–5), *Āryamañjuśrīmūlakalpaḥ* (Trivandrum Sanskrit Series, 70; Anantaśayane: Rājākīyamudraṇayantrālaye), [ark : / 13960 / t4pk5sj0j](https://nbn-resolving.org/urn:nbn:in:csir-sanskrit-13960-t4pk5sj0j).
- Gode, P. K. and Karve, C. G. (1957–9) (eds.), *Revised and Enlarged Edition of Prin. V. S. Apte’s the Practical Sanskrit-English Dictionary* (Poona: Prasad Prakashan), [ark : / 13960 / t3gx47212](https://nbn-resolving.org/urn:nbn:in:csir-sanskrit-13960-t3gx47212), accessed 20/10/2017.
- Gombrich, Richard (1979), “‘He cooks softly’: dverbs in Sanskrit grammar,” *Bulletin of the School of Oriental and African Studies*, 42/2 (June): 244–56. DOI: [10.1017/s0041977x0014580x](https://doi.org/10.1017/s0041977x0014580x).
- Gupta, Sri Madhusudana (1835–6) (ed.), *Āyur-veda-prakāśa [also Called Suśruta-saṃhitā]* by Suśruta. *the Suśruta, or System of Medicine, Taught by Dhanwantari, and Composed by His Disciple Suśruta*, 2 vols. (Calcutta: Education Press and Baptist Mission Press), [ark : / 13960 / t6841qw6x](https://nbn-resolving.org/urn:nbn:in:csir-sanskrit-13960-t6841qw6x).

- Harimoto, Kengo (2011), “In Search of the Oldest Nepalese Manuscript,” *Rivista degli Studi Orientali*, 84/1–4: 85–106, ISSN: 0392-4866, [URL](#), accessed 08/09/2019.
- (2014), “Nepalese Manuscripts of the Suśrutasamhitā,” *Journal of Indian and Buddhist Studies (Indogaku Bukkyogaku Kenkyu)*, 62/3: 23–29 (1087-1093). DOI: [10.4259/ibk.62.3_1087](#), [URL](#), accessed 08/09/2019.
- (pre-published), “[Preliminary Edition of the Nepalese MSS of the Suśruta-samhitā, adhyāyas 1.1–3, 6.4]”; Unpublished document dated 2010.
- Hayashi, Takao (2017), “The Units of Time in Ancient and Medieval India,” *History of Science in South Asia*, 5/1: 1–116. DOI: [10.18732/h2ht0h](#).
- Hemarāja Śarman (1938) (ed.), काश्यपसंहिता (वृद्धजीवकीयं तन्त्रं वा) महर्षिणा मारीचक-श्यपेनोपदिष्टा ... हेमराजशर्मणा लिखितेन विस्तृतेन उपोद्धातेन सहिता ... सत्यपाल भिषगा कृतया विद्योतिनी हिन्दीव्याख्यया ... समुल्लसिता (1st edn., Mumba: Nirṇayasāgara Press), [URL](#), accessed 02/02/2018.
- Hendley, T. Holbein (1895), *A Medico-topographical Account of Jeypore, Based on the Experience of Twenty Years’ Service As a Residency Surgeon and Thirteen As Superintendent of Dispensaries at Jeypore, Rajputana* (Calcutta: Calcutta Central Press Company).
- Hessler, Franciscus (1844–55), *Suśrutas Ayurvédas: id est Medicinae Systema a Venerabili D’hanvantare Demonstratum a Susruta Discipulo Compositum; Nunc Primum Ex Sanskrita in Latinum Sermonem Vertit, Introductionem, Annotationes Et Rerum Indice Franciscus Hessler* (Erlangen: Ferdinandum Enke), [URL](#), accessed 04/11/2017.
- Hoernle, A. F. Rudolf (1893–1912) (ed.), *The Bower Manuscript: Facsimile Leaves, Nagari Transcript, Romanised Transliteration and English Translation with Notes* (New Imperial Series, 22; Calcutta: Government of India and under the patronage of the Bengali Government, Archaeological Survey of India), [ark:/13960/t05z1bg4q](#).
- (1897), *Suśrutasamhitā = The Suśruta-Samhitā or the Hindū System of Medicine According to Suśruta Translated from the Original Sanskrit* (Bibliotheca Indica, 911; Calcutta: Asiatic Society), [ark:/13960/t8pd1kw9r](#), accessed 03/01/2018; No more published; Hoernle does not state which edition he is translating, but it includes the “Dhanvantari phrase”.

- Hoernle, A. F. Rudolf (1906a), “Studies in Ancient Indian Medicine I: The Commentaries on Suśruta,” *Journal of the Royal Asiatic Society of Great Britain and Ireland*: 283–302, [URL](#), accessed 26/06/2019.
- (1906b), “Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms,” *Journal of the Royal Asiatic Society of Great Britain and Ireland*, 4: 915–41, [URL](#), accessed 25/06/2019.
- (1907a), “Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms (Continued from the the Journal, 1906, p. 941),” *Journal of the Royal Asiatic Society of Great Britain and Ireland*: 1–18, [URL](#), accessed 25/06/2019.
- (1907b), *Studies in the Medicine of Ancient India: Osteology or the Bones of the Human Body* (Oxford: Clarendon Press), [ark:/13960/t1pg9cq8b](#).
- Hofer, Theresia (2007), “Swami Laxmi Ram’s Ayurvedic Pharmacy in Jaipur, India,” *Wellcome History*, 34: 2–3, [URL](#), accessed 01/07/2021.
- Holwell, J. Z. (1767), *An Account of the Manner of Inoculating for the Small Pox in the East Indies With...Observations on The...Mode of Treating That Disease in Those Parts* (London: T. Becket & P. A. de Hondt), [ark:/13960/t3ws9h63c](#).
- Jack, David Morton (1884), “A Thesis on Cataract in India: Its Pathology and Treatment,” Wellcome Library, London, MS.3007, [URL](#), accessed 02/06/2021.
- Jośī, Veṇīmādhavaśāstrī and Jośī, Nārāyaṇa Harī (1968), *Āyurvedīya Mahākośaḥ arthāt Āyurvedīya Śabdakośaḥ Saṃskṛta–Saṃskṛta* (Mumbai: Mahārāṣṭra Rājya Sāhitya āṇi Saṃskṛti Maṇḍala), [URL](#).
- Kangle, R. P. (1969), *The Kauṭīliya Arthaśāstra* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 81-208-0042-7, [ark:/13960/t3gz6qh1s](#), accessed 23/09/2021.
- Keith, Arthur Berriedale (1908), review of A. F. Rudolf Hoernle (1907), “Studies in Ancient Indian Medicine II: On Some Obscure Anatomical Terms (Continued from the the Journal, 1906, p. 941),” *Journal of the Royal Asiatic Society of Great Britain and Ireland*: 1–18, [URL](#), accessed 25/06/2019, in *Zeitschrift Der Deutschen Morgenländischen Gesellschaft*, 1/62: 134–9, [URL](#), accessed 17/04/2021.
- Klebanov, Andrey (2010), “The *Nepalese Version of the Suśrutasaṃhitā and Its Interrelation with Buddhism and the Buddhists,” MA thesis (Hamburg: Hamburg University, Sept.), [URL](#), accessed 08/09/2019.

- Klebanov, Andrey (2021a), “On the Textual History of the Suśrutasaṃhitā (1): A Study of Three Nepalese Manuscripts,” *eJIM: Electronic Journal of Indian Medicine*, 12/1: 1–64. DOI: [10.21827/ejim.12.1.37385](https://doi.org/10.21827/ejim.12.1.37385).
- (2021b), “On the Textual History of the Suśrutasaṃhitā, (2): An Anonymous Commentary and its Identified Citations,” in Toke Lindegaard Knudsen, Jacob Schmidt-Madsen, and Sara Speyer (eds.), *Body and Cosmos: Studies in Early Indian Medical and Astral Sciences in Honor of Kenneth G. Zysk* (Leiden, Boston: Brill), 110–39.
- Kuist, James M. (1982), *The Nichols File of The Gentleman’s Magazine* (Madison: University of Wisconsin Press), ISBN: 0-299-08480-9, [ark :/ 13960 / t53g2ct2z](https://ark:/13960/t53g2ct2z).
- Lariviere, Richard W. (2003), *The Nāradaśmṛti. Critically Edited with an Introduction, annotated Translation, and Appendices* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 8120818040; First edition: Philadelphia, 1989.
- Leffler, Christopher T. et al. (2020), “The History of Cataract Surgery: From Couching to Phacoemulsification,” *Annals of Translational Medicine*, 8/22: 1551–97, ISSN: 2305-5847. DOI: [10.21037/atm-2019-rct-04](https://doi.org/10.21037/atm-2019-rct-04), URL, accessed 02/11/2020.
- Lienhard, Siegfried (1978), “On the Meaning and Use of the Word Indragopa,” *Indologica taurinensis*, 6: 177–88, URL, accessed 06/02/2021; The indragopa is a ‘red velvet mite’.
- Longmate, Barak (1794), “A Curious Chirurgical Operation,” *The Gentleman’s Magazine and Historical Chronicle*, 64.4 (Oct.): 883, 891, 892; I am grateful to the late John Symons of the Wellcome Library who identified the author ‘B. L.’ as the journalist Barak Longmate. See also Kuist 1982: 87.
- Majno, Guido (1975), *The Healing Hand. Man and Wound in the Ancient World* (Cambridge, MA: Harvard University Press), URL, accessed 26/08/2021.
- Malamoud, Charles (1996), “Paths of the Knife: Carving up the Victim in Vedic Sacrifice,” in *Cooking the World: Ritual and Thought in Ancient India. Translated from the French by David White* (Delhi, Bombay, etc.: Oxford University Press), 169–80.
- Manucci, Niccolò (1907–8), *Storia Do Mogor or, Mogul India, 1653–1708 by Niccolao Manucci, Venetian; Translated with Introduction and Notes, by William Irvine* (The Indian Texts Series; London: J. Murray), URL, accessed 04/10/2021.

- Masai, François (1950), “Principes et conventions de l’édition diplomatique,” *Scriptorium*, 4: 177–93. DOI: [10.3406/scrip.1950.2294](https://doi.org/10.3406/scrip.1950.2294).
- Mayrhofer, Manfred (1953–72), *Kurzgefaßtes etymologisches Wörterbuch des Altindoarischen; a Concise Etymological Sanskrit Dictionary* (Heidelberg: Carl Winter, Universitätsverlag).
- (1986–2001), *Etymologisches Wörterbuch des Altindoarischen* (Heidelberg: Carl Winter, Universitätsverlag), ISBN: 3-533-03826-2.
- McHugh, James (2021), *An Unholy Brew: Alcohol in Indian History and Religions* (New York: Oxford University Press), 416 pp., ISBN: 9780199375936, [URL](#).
- Meulenbeld, Gerrit Jan (1974), *The Mādhavanidāna and Its Chief Commentary: Chapters 1–10. Introduction, Translation, and Notes* (Leiden: Brill), ISBN: 978-90-04-03892-9; Meulenbeld provided a supplement to his 1974 listing of plant identities as an appendix in Das [2003](#).
- (1984), “The Surveying of Sanskrit Medical Literature,” in id. (ed.), *Proceedings of the International Workshop on Priorities in the Study of Indian Medicine* (Groningen: Forsten), 37–56.
- (1989), “The Search for Clues to the Chronology of Sanskrit Medical Texts As Illustrated by the History of Bhaṅgā (cannabis Sativa Linn.),” *Studien zur Indologie und Iranistik*, 15: 59–70.
- (1992), “The Characteristics of a Doṣa,” *Journal of the European Āyurvedic Society*, 2/1: 1–5, [URL](#), accessed 31/08/2021.
- (2008), *The Mādhavanidāna with ”Madhukośa,” the Commentary by Vijayarakṣita and Śrīkaṇṭhadatta (Ch. 1-10). Introduction, Translation, and Notes* (Delhi: Motilal Banarsidass); Meulenbeld provided a supplement to his 1974 listing of plant identities as an appendix in Das [2003](#).
- (2011), “The Relationships between Doṣas and Dūṣyas: A Study on the Meaning(s) of the Root Murch-/mūrch,” *eJournal of Indian Medicine*, 4/2: 35–135, [URL](#), accessed 13/10/2017.
- Miles, M. (1999), “Personal Communication,” Mar.; Letter of 4 March.
- 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.

- Mukhopādhyāya, Girindranāth (1913), *The Surgical Instruments of the Hindus, with a Comparative Study of the Surgical Instruments of the Greek, Roman, Arab, and the Modern European (sic) Surgeons* (Calcutta: Calcutta University), [ark : 13960 / t1zd2pq29](#), accessed 29/01/2018; Vol.2: [ark:/13960/t9r25qd8m](#). Reprinted as a single volume, New Delhi, 1987.
- Nadkarni, K. M. (1954), *Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes*, ed. A. K. Nadkarni, 2 vols. (3 ed., revised by A. K. Nadkarni, Bombay: Popular Prakashan), [ark:/13960/t6rz4h160](#).
- (1982a), *Dr. K. M. Nadkarni's Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes*, ed. A. K. Nadkarni, 2 vols. (3 ed., revised and enlarged by A. K. Nadkarni, Bombay: Popular Prakashan), ISBN: 8171541429, [URL](#).
- Narayana, Ala and Thrigulla, Saketh Ram (2011), “Tangible Evidences of Surgical Practice in Ancient India,” *Journal of Indian Medical Heritage*, 16: 1–18, [URL](#), accessed 02/06/2021.
- NGMCP (2014), “Nepal-german Manuscript Cataloguing Project. Online Title List and Descriptive Catalogue,” Universität Hamburg and Deutsche Forschungsgemeinschaft, [URL](#).
- Oberlies, Thomas (2003), *A Grammar of Epic Sanskrit* (Indian Philology and South Asian Studies, 5; Berlin: De Gruyter), ISBN: 9783110144482. DOI: [10.1515/9783110899344](#).
- Olivelle, Patrick (2005), *Manu's Code of Law: A Critical Edition and Translation of the Manava-dharmasastra*, With the editorial assistance of Suman Olivelle (South Asia research; New York: Oxford University Press), ISBN: 0195171462.
- (2013), *King, Governance, and Law in Ancient India: Kauṭilya's Arthaśāstra. a New Annotated Translation* (New York: Oxford University Press), ISBN: 9780199891825. DOI: [10.1093/acprof:osobl/9780199891825.003.0001](#).
- Osbaldeston, Tess Anne and Wood, R. P. A. (2000), *Dioscorides. De Materia Medica. Being an Herbal with Many Other Medicinal Materials Written in Greek in the First Century of the Common Era. a New Indexed Version in Modern English* [Introductory Notes by R. P. Wood] (Johannesburg: IBIDIS Press), ISBN: 0-620-23435-0, [URL](#).

- Pandey, Anshuman (2012), "Proposal to Encode the Newar Script in ISO/IEC 10646," [URL](#).
- Pass, Gregory (2003), *Descriptive Cataloging of Ancient, Medieval, Renaissance, and Early Modern Manuscripts* (Chicago: American Library Association), ISBN: 0-8389-8218-2, [URL](#).
- Pillay, V. V. (2013), *Modern Medical Toxicology* (New Delhi: Jaypee Brothers Pvt. Ltd), ISBN: 9789350259658.
- Pillay, Vijay V. and Sasidharan, Anu (2019), "Oleander and Datura Poisoning: An Update," *Indian Journal of Critical Care Medicine*, 23/Supplement 4: 5250–5. DOI: [10.5005/jp-journals-10071-23302](#).
- Preisendanz, Karin (2007), "The Initiation of the Medical Student in Early Classical Āyurveda: Caraka's Treatment in Context," in Birgit Kellner et al. (eds.), *Pramāṇakīrtiḥ. Papers Dedicated to Ernst Steinkellner on the Occasion of His 70th Birthday. Part 2*, ii, 2 vols. (Wiener Studien zur Tibetologie und Buddhismuskunde, 70.2; Wien: Arbeitskreis für Tibetische Und Buddhistische Studien Universität Wien), 629–68, ISBN: 9783902501097, [URL](#).
- 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](#), [URL](#), accessed 04/07/2021.
- Rai, Saurav Kumar (2019), "Invoking 'Hindu' Ayurveda: Communalisation of the Late Colonial Ayurvedic Discourse," *The Indian Economic & Social History Review*, 56/4: 411–26. DOI: [10.1177/0019464619873820](#); Online first.
- Rama Rao, B. et al. (2005), *Sanskrit Medical Manuscripts in India* (New Delhi: Central Council for Research in Ayurveda & Siddha), [ark:/13960/t88h7763b](#).
- Rây, Priyadarajan, Gupta, Hirendra Nath, and Roy, Mira (1980), *Suśruta Saṃhita (a Scientific Synopsis)* (New Delhi: Indian National Science Academy), [ark:/13960/t64511t6v](#), accessed 13/09/2019.
- Rhys Davids, Thomas William and Stede, William (1921–5), *The Pali Text Society's Pali-English Dictionary* (London: The Pali Text Society), [URL](#).
- Rimal, Madhusudana and Wujastyk, Dominik (2022), "MS Kathmandu NAK 1/1146," Pandit Project (18 May), [URL](#).

- Roşu, Arion (1989), *Un demi-siècle de recherches āyurvédiques. Gustave Liétard et Palmyr Cordier: Travaux sur l'histoire de la médecine indienne* (Paris: Institut de Civilisation Indienne).
- Saha, Mridula (2015), *The History of Indian Medicine Based on the Vedic Literature Satapatha Brahmana* (Kolkata: The Asiatic Society), ISBN: 978-9381574294.
- Sarukkai, Sundar (2016), "Translation As Method: Implications for History of Science," in Bernard Lightman, Gordon McOuat, and Larry Stewart (eds.), *The Circulation of Knowledge Between Britain, India and China* (Leiden: BRILL), 309–29. DOI: [10.1163/9789004251410_014](https://doi.org/10.1163/9789004251410_014).
- Sastri, Hrishikesh and Gui, Siva Chandra (1895–1917), *A Descriptive Catalogue of Sanskrit Manuscripts in the Library of Calcutta Sanskrit College* (Calcutta: Baptist Mission Press).
- Sastri, P. P. S. (1933), *A Descriptive Catalogue of the Sanskrit Manuscripts in the Tanjore Maharaja Serfoji's Sarasvati Mahal Library Tanjore: Natya, Sangita, Kamasastra, Vaidya & Jyotisa, nos. 10650 – 11737* (Srirangam: Sri Vani Vilas Press), [ark:/13960/t3nw8bc12](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-3960-t3nw8bc12).
- Śāstrī, Vardhamāna Pārśvanātha (1940) (ed.), *उग्रादित्याचार्यकृत कल्याणकारक (राष्ट्रभाषानुवादसहित) = The Kalyāṇa-kāraṇam of Ugrādityacharya, Edited with Introduction, Translation, Notes, Indexes and Dictionary* (Sakhārāma Nemacāṇḍa Gramthamālā, 129; Solāpura: Seṭha Govindajī Rāvajī Dośī), [ark:/13960/t2q617g4d](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-3960-t2q617g4d).
- Scott, H. (1817), "Some Remarks on the Arts of India, with Miscellaneous Observations on Various Subjects," *Journal of Science and the Arts*, 2: 67–72, ill. after 133, [ark:/13960/t9870jt4g](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-3960-t9870jt4g); Breton 1826: 358–363 cites Scott's description of cataract couching.
- Semeka-Pankratov, Elena (1979), "A Semiotic Approach to the Polysemy of the Symbol *nāga* in Indian Mythology," in Irene Portis Winner and Jean Umiker-Sebeok (eds.), *Semiotics of Culture* (Approaches to Semiotics, 53; The Hague, Paris, NY: Mouton), 237–90. DOI: [10.1515/9783110823134-009](https://doi.org/10.1515/9783110823134-009); The contents of this volume were published simultaneously in *Semiotica* (1/3) 1979 (**seme-1979b**).
- Sena, Gaṅgāprasād et al. (1886–93) (eds.), *सुश्रुतसंहिता...दल्लनाचार्य-कृत-निबन्ध-संग्रह, चक्रपाणिदत्त-कृत-भानुमती-टीका...वङ्गानुवाद...इंरेजि प्रतिशब्द* (Calcutta: Manirāma Press); Edition "g" in [HIML](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-3960-t3nw8bc12): IB, 311.

- Sharma, Har Dutt (1939), *Descriptive Catalogue of the Government Collections of Manuscripts Deposited at the Bhandarkar Oriental Research Institute, Vol. XVI, Part I, Vaidyaka* (Descriptive Catalogue of Manuscripts in the Government Manuscripts Library, XVI.I; Pune: Bhandarkar Oriental Research Institute), [ark:/13960/t0ms6rc70](https://n2t.net/ark:/13960/t0ms6rc70), accessed 23/10/2019.
- Sharma, Priya Vrat (1972), *Indian Medicine in the Classical Age* (Varanasi: Chowkhamba Sanskrit Series Office).
- (1975), *Āyurved Kā Vaijñānik Itihās* (Jayakṛṣṇadāsa Āyurveda Granthamālā; Vārāṇasī: Caukhambā Orientalia).
- (1982), *Ḍalhaṇa and his Comments on Drugs* (Delhi: Munshiram Manoharlal).
- (1999–2001a), *Suśruta-Saṃhitā, with English Translation of Text and Ḍalhaṇa's Commentary Alongwith (sic) Critical Notes*, 3 vols. (Haridas Ayurveda Series, 9; Varanasi: Chaukhambha Visvabharati).
- (1999–2001b), *Suśruta-Saṃhitā, with English Translation of Text and Ḍalhaṇa's Commentary Alongwith (sic) Critical Notes*, 3 vols. (Haridas Ayurveda Series, 9; Varanasi: Chaukhambha Visvabharati).
- Shastri, R. Shama (1920) (ed.), *बोधायनगृह्यसूत्रम् The Bodhāyana Grihyasutra* (Mysore: University of Mysore), [ark:/13960/t2t492622](https://n2t.net/ark:/13960/t2t492622).
- Singhal, G. D. et al. (1972–82), *Diagnostic [and Other] Considerations in Ancient Indian Surgery* (Varanasi: Singhal Publications); A translation of the *Suśruta-saṃhitā* in 10v.
- Sircar, Dinesh Chandra (1987), “6. Rākshaskhālī (Sundarban) Plate; Śaka 1118,” *Epigraphia Indica* (1953–54), 30: 42–3.
- Sleeman, W. H. (1893), *Rambles and Recollections of an Indian Official* (London: Constable), [ark:/13960/t22c4bx7w](https://n2t.net/ark:/13960/t22c4bx7w), accessed 14/03/2018; V. 2 at <http://n2t.net/ark:/13960/t2s52bq7w>.
- Smith, Brian K. (1994), *Classifying the Universe: The Ancient Indian Varṇa System and the Origins of Caste* (New York, Oxford: Oxford University Press), ISBN: 0-19-508498-5.
- Spink, M. S. and Lewis, G. L. (1973) (eds.), *Albucasis on Surgery and Instruments: A Definitive Edition of the Arabic Text with English Translation and Commentary* (London: Wellcome Institute of the History of Medicine).

Srikantha Murthy, K. R. (2000–2), *Illustrated Suśruta Saṃhitā: Text, English Translation, Notes, Appendices and Index* (Jaikrishnadas Ayurveda Series, 102; 1st edn., Varanasi: Chaukhambha Orientalia).

Steingass, F. (1930), *A Comprehensive Persian-English Dictionary Including the Arabic Words and Phrases to Be Met with in Persian Literature* (London: Kegan Paul, Trench, Trubner), [ark:/13960/s25bwz0337d](#); Reprint, Delhi: Oriental Reprint, 1973.

Strauss, Bettina (1934), “Das Giftbuch des Śānāq: eine Literaturgeschichtliche Untersuchung,” *Quellen und Studien zur Geschichte der Naturwissenschaften und der Medizin*, 4/2: [89]–[152] followed by Arabic text.

Suvedī, K. S. and Tivārī, N. (2000) (eds.), *Sauśrutanighaṇṭuḥ: granthādau viśṛtena granthavaśiṣṭyaprakāśakenopodghātena avasāne ca dravyāṇām anekabhāsanām āvalī-paryāya-saṅgrahābhyaṁ samalankṛtaḥ Suśrutasaṃhitāyāṁ prayuktānām auśadhadravyāṇām paryāya-guṇākarmavarṇātmaḥ pūrvagaranthaḥ* (Belajhuṇḍī, Ḍāñ: Mahendrasaṃskṛtaviśvavidyalayaḥ).

Tavernier, Jean-Baptiste (1684), *Collections of Travels through Turkey (sic), into Persia, and the East-Indies* (London: M. Pitt).

The Unicode Consortium (1991–2020), “The Unicode Standard 13.0, NewaRange: 11400–1147F,” [URL](#), accessed 20/07/2021.

Thorburn, S. S. (1876), *Bannu; or Our Afghan Frontier* (London: Trübner & Co.), [URL](#), accessed 10/09/2019; Reprinted Lahore: Niaz Ahmad, 1978.

UNESCO (2013), “International Memory of the World Register Susruta Samhita (Nepal),” UNESCO, [URL](#), accessed 11/09/2019.

Unschuld, Paul Ulrich (1984), *Medicine in China: A History of Ideas* (Berkeley: University of California Press), ISBN: 0520050231.

Valiathan, M. S. (2007), *The Legacy of Suśruta* (Hyderabad, Chennai, etc.: Orient Longman).

Velankar, H. D (1925–30), *Descriptive Catalogue of the Sanskr̥ta and Prākṛta Manuscripts in the Library of the Bombay Branch of the Royal Asiatic Society* (Bombay: Royal Asiatic Society, Bombay), [ark:/13960/t53g00h0n](#); Biswas #0115.

Watt, George (1889–96). *A Dictionary of the Economic Products of India* (Calcutta: Dept. Revenue and Agriculture, Government of India), [URL](#), accessed 28/04/2021.

- Watt, George (1908), *The Commercial Products of India, Being an Abridgement of "the Dictionary of the Economic Products of India"* (London: John Murray), [ark:/13960/t8cg7dm79](https://nbn-resolving.org/urn:nbn:uk:2019-01-13960-t8cg7dm79).
- Whitney, William Dwight (1885), *The Roots, Verb-forms, and Primary Derivatives of the Sanskrit Language. A Supplement to his Sanskrit Grammar* (Leipzig: Breitkopf and Härtel), [ark:/13960/t3qv3p906](https://nbn-resolving.org/urn:nbn:uk:2019-01-13960-t3qv3p906).
- Wilson, H. H. (1823), "On the Medical and Surgical Sciences of the Hindus," *The Oriental Magazine and Calcutta Review*, 1: 207–12, 349–56, [URL](#).
- Wren, R. C. (1956), *Potter's New Cyclopaedia of Botanical Drugs and Preparations*, ed. R. W. Wren (Rustington, Sussex: Health Science Press), [ark:/13960/t14n65c9g](https://nbn-resolving.org/urn:nbn:uk:2019-01-13960-t14n65c9g).
- Wujastyk, Dagmar (2012), *Well-mannered Medicine: Medical Ethics and Etiquette in Classical Ayurveda* (New York: Oxford University Press). DOI: [10.1093/acprof:oso/9780199856268.001.0001](https://doi.org/10.1093/acprof:oso/9780199856268.001.0001).
- (2013a), "Perfect Medicine. Mercury in Sanskrit Medical Literature," *Asian Medicine: Tradition & Modernity*, 8/1 (Sept.): 15–40, ISSN: 1573-4218. DOI: [10.1163/15734218-12341278](https://doi.org/10.1163/15734218-12341278).
- (2019), "Iron Tonics: Tracing the Development from Classical to Iatrochemical Formulations in Ayurveda," *HIMALAYA, the Journal of the Association for Nepal and Himalayan Studies*, 39/1, ISSN: 2471-3716, [URL](#), accessed 23/07/2019.
- Wujastyk, Dominik (1993), "Indian Medicine," in W. F. Bynum and Roy Porter (eds.), *Companion Encyclopedia of the History of Medicine*, i (London: Routledge), chap. 33, 755–78, ISBN: 0-415-04771-4, [URL](#).
- (2002), "Cannabis in Traditional Indian Herbal Medicine," in Ana Salema (ed.), *Āyurveda at the Crossroads of Care and Cure. Proceedings of the Indo-European Seminar on Ayurveda held at Arrábida, Portugal, in November 2001* (Lisbon: Centro de História de Além-Mar, Universidade Nova de Lisboa), 45–73, ISBN: 972-98672-5-9, [URL](#), accessed 27/05/2019.
- (2003), *The Roots of Ayurveda: Selections from Sanskrit Medical Writings* (Penguin Classics; 3rd edn., London, New York, etc.: Penguin Group), ISBN: 0-140-44824-1.
- (2004), "Agni and Soma: A Universal Classification," *Studia Asiatica: International Journal for Asian Studies*, IV–V, ed. Eugen Ciurtin: 347–70, ISSN: 1582-9111, [URL](#).

- Wujastyk, Dominik (2013*b*), “New Manuscript Evidence for the Textual and Cultural History of Early Classical Indian Medicine,” in *Medical Texts and Manuscripts in Indian Cultural History*, ed. Dominik Wujastyk, Anthony Cerulli, and Karin Preisendanz (New Delhi: Manohar), 141–57, [URL](#).
- (2021*a*), “A New Translation of Carakasamhitā, Vimānasthāna, Chapter 1, Based on the Vienna Critical Edition,” in Toke Lindegaard Knudsen, Jacob Schmidt-Madsen, and Sara Speyer (eds.), *Body and Cosmos. Studies in Early Indian Medical and Astral Sciences in Honor of Kenneth G. Zysk* (Leiden, Boston: Brill), chap. 6, 77–109. DOI: [10.1163/9789004438224_007](#).
- (2021 *b*), “MS London BL H. T. Colebrooke 908,” [URL](#).
- Wujastyk, Dominik, SKSEC Team, and Kessler, O. (2020), “Suśrutasamhitā,” PanditProject (6 Oct.), [URL](#), accessed 14/09/2022.
- Yano, Michio (1986), “A Comparative Study of *Sūtrasthānas*: Caraka, Suśruta, and Vāgbhaṭa,” in Teizo Ogawa (ed.), *History of Traditional Medicine: Proceedings of the 1st and 2nd International Symposia on the Comparative History of Medicine—East and West* (Osaka: Division of Medical History, the Taniguchi Foundation), 325–44.
- Zimmermann, F. (1983), “Suśrutasamhita. Essay review,” *Bulletin of the History of Medicine*, 57/2: 291–3, ISSN: 00075140, [URL](#).
- Zimmermann, Francis (1999), *The Jungle and the Aroma of Meats* (2nd edn., Delhi: Motilal Banarsidass), ISBN: 8120816188.
- Zysk, Kenneth G. (1984), “An Annotated Bibliography of Translations into Western Languages of Principle Sanskrit Medical Treatises,” *Clio Medica*, 19/3–4: 281–91.
- (1985), *Religious Healing in the Veda: With Translations and Annotations of Medical Hymns from the Rgveda and the Atharvaveda and Renderings from the Corresponding Ritual Texts* (Transactions of the American Philosophical Society; Philadelphia: American Philosophical Society), ISBN: 0871697572.
- (1986), “The Evolution of Anatomical Knowledge in Ancient India with Special Reference to Cross-cultural Influences,” *Journal of the American Oriental Society*, 106: 687–705. DOI: [10.2307/603532](#).
- (2000), *Asceticism and Healing in Ancient India: Medicine in the Buddhist Monastery* (Indian Medical Tradition; 2nd edn., Delhi: Motilal Banarsidass); First published 1991. Reprint of 1998 edition.

Lexical Index

- ‘sun-creeper’
sūryavallī, 50
 “invincible”
ajeya, 51
- abdominal lump
gulma, 70
- abhayā*
 chebulic myrobalan,
 58
 myrobalan, 50
- abhramukta*
 free from clouds, 64
- abhyaṅga*
 massage, 35
 massage oil, 31, 37
- ācāra*
 regimen, 14
- ācārika*
 medical advice, 23
- accumulation
sañcaya, 15
- Aconite*
hālāhala, 46
- adhīmantha*
 irritation, 65
- adhiṣṭhāna*
 base, foundation, 52
 carriers, 52
 located, 14
- ādhmāna*
 distension, 44
- adhodṛṣṭitva*
 downward vision, 65
- adhyāya*
 sections, 17
- admixture
prativāpa, 23
- affliction
upasarga, 37
- agada*
 antidote, 49
- āgantū*
 external factors, 16
- agnika*
 wild celery, 49
- agra*
 supernatant layer, 61
- agramukta*
 free from the point,
 64
- āhāra*
 diet, 14
- āhārya*
 take away, 21
- ahorātra*
 day and night, 15
- aids
aṅga, 59
- ajākṣirārdita*
 stirred with goat’s
 milk, 66
- ajamodā*
 wild celery, 49
- ajaruḥā*
 fern, 37
- ajeya*
 invincible, 37
 “invincible”, 51
- akhiladehavyāptirūpam*
 takes the form of
 pervading the whole
 body, 46
- alābu*
 bitter gourd, 33
- ālepa*
 liniment, 56
- ālepana*
 liniments, 37
- alleviated
yāpya, 59
- alleviation
pratīkāra, 15
- along these lines
evam, 16
- āmalaka*
 emblic, 57
- amaranth
taṇḍulīyaka, 35
- āmāśaya*
 stomach, 47, 48
- amra*
 mango, 57
- āmrāsthī*
 mango stones, 34
- amṛtā*
 calamine, 35
 heart-leaved
 moonseed, 50
 immortal, 37
- ānāha*
 constipation, 45, 48,
 51
- anantā*
 country sarsaparilla,
 50
- aṇḍaja*
 born from eggs, 15
- aṇḍīnī*
 with testicles, 72
- aṅga*
 aids, 59
 parts, 16
- aṅgamarda*
 bruising of the limbs,
 47
- anger
krodha, 14
- animals
paśu, 15
- añjana*
 application of
 collyrium, 56, 61
 eye make-up, 31, 36
 eye ointment, 36, 37
 eye salve, 49
 stibnite, 61
- aṅkolla*
 sage-leaved
 alangium, 34

<i>annamada</i>	menstrual blood, 70	<i>dhava</i> , 67
intoxication from	<i>asādhya</i>	<i>ayana</i>
food, 47	incurable, 56	half-year, 15
antidote	untreatable, 63	<i>āyatta</i>
<i>agada</i> , 49	<i>āsaṅgima</i>	depends on, 14
<i>antra</i>	fastening, 21	<i>āyur</i>
entrails, 59	<i>aśoka</i>	life, longevity, 11
gut, 48	asoka tree, 57	<i>āyurveda</i>
ants	grief, 14	the science of life, 11
<i>pipīlika</i> , 15	asoka tree	<i>baddham</i>
<i>anulepana</i>	<i>aśoka</i> , 57	bound, connected, 25
massage ointment,	<i>āśrayin</i>	<i>bahuputrā</i>
31, 35	substrate, 14	wild asparagus, 36
ointment, 35	<i>asthi</i>	<i>balā</i>
<i>apāmarga</i>	bones, 16	country mallow, 60
prickly chaff flower,	<i>aṣṭhīlā</i>	strength, 14
20	pebble, 33	<i>bali</i>
<i>apāṅga</i>	<i>asūyā</i>	morsel, 31
edge of the hole, 24	jealousy, 14	bamboo leaves
outer corner of the	<i>atibalā</i>	<i>veṇupatrikā</i> , 35
eye, 63	strong mallow, 60	<i>bandha</i>
<i>apatānaka</i>	atis root	bindings, 22
convulsions, 20	<i>ativiṣā</i> , 38	<i>bandhujīva</i>
apertures of the head	atis roots	scarlet mallow, 36
<i>kha</i> , 36	<i>ativiṣā</i> , 36	base, foundation
application of collyrium	<i>ativiṣā</i>	<i>adhiṣṭhāna</i> , 52
<i>añjana</i> , 56, 61	atis root, 38	<i>bāṣpa</i>
<i>apramatta</i>	atis roots, 36	vapour, 32, 33, 36
undistracted, 25	<i>ātmaka</i>	be exhausted
<i>ārā</i>	nature, 14	<i>sāda</i> , 48
awl, 19	<i>āṭopa</i>	bearers
<i>araga timira</i>	flatulence, 33	<i>voḍhāra</i> , 31
non-bloodshot	<i>atyānandā</i>	beauty berry
blindness, 63	extremely excited, 71	<i>priyaṅgu</i> , 61
<i>ardhakaṇṭhasandhika</i>	<i>avadāraṇa</i>	beautyberry
half door-hinge, 21	fissuring, 37	<i>priyaṅgu</i> , 57
arid-land animals	<i>avalekhana</i>	<i>śyāmā</i> , 32, 35
<i>jāṅgala</i> , 61	combs, 31	bellyache
<i>arṇavamala</i>	<i>āvarta</i>	<i>jaṭhara</i> , 51
cuttle fish, 58	spiral, 63	bent brow and eye
<i>arocaka</i>	<i>avaśardhita</i>	<i>vakrabhrūnetra</i> , 65
loss of appetite, 47	fart, 52	beryl
<i>arśas</i>	awl	<i>vaiḍūrya</i> , 67
prolapses, 70	<i>ārā</i> , 19	<i>bhadradāru</i>
<i>ārtava</i>	axelwood	deodar, 66

bhallātaka
 marking-nut tree, 36
bhaṅga
 leaves, 64
bhavet
 it may be, 63
bhāvita
 cooked, 61
 infused, 57
bhedya
 splitting, 22
bheṣaja
 treatment, 70
bhramaraka
 drongo, 32
bhṛṅgarāja
 racket-tailed drongo,
 32
bīja
 semen, 70
 bile
pitta, 59
 bilious / choleric
pittalā, 71
bimbī
 red gourd, 33
 bindings
bandha, 22
 bitter gourd
alābu, 33
 black creeper
pāṇḍī, 35, 38, 50
 black drongo
dhūmyāṭa, 32
 black part
kṛṣṇa, 63
 black pepper
marica, 56
 black soot
maṣī, 56
 blackboard tree
saptachada, 34
 blackbuck
harīṇa, 37, 38
 blessings pronounced

svastivācana, 19
 blindness
timira, 62
 blink of the eye
nimeṣa, 15
 blood
rudhira, 15
śonita, 59
 blood-bile
śonita-pitta,
rakta-pitta, 59
 blood-letting
sirāvedha, 56
 bloodshot blindness
rāgin timira, 60
rāgiṇi timire, 63
 blue dot cataract
mlāyin, 62
 blue lotus
utpala, 57
 blue vitriol
tuttha, 61
 bodily constituents
dhātu, 46
 body language
inḡita, 31
 body tissue
dhātu, 48
 bones
asthi, 16
 born from eggs
aṇḍaja, 15
 born in in a caul
jarāyuja, 15
 born of sweat
svedaja, 15
 bound, connected
baddham, 25
 box myrtle
kaṭphala, 58
bṛhati
 indian nightshades,
 50
 poison berry, 50
 bristles

śūka, 52
br̥mhaṇa
 nourishment, 14
 bruising of the limbs
aṅgamarda, 47
 bubbling
budbuda, 65
budbuda
 bubbling, 65
 bulbs
kanda, 15
 bull
vṛṣabha, 32
cakradhārā
 rim of a wheel, 22
cala
 liquid, 64
 calamine
amṛtā, 35
 can be mitigated
yāpya, 63
caraṇī
caraṇī, 71
caraṇī
caraṇī, 71
 cardamom
elā, 58
carman
 pelt, 15
 carnivore
kravyabhuj, 60
 carriers
adhiṣṭhāna, 52
 cassia cinnamon
patra, 35, 66
 castor oil
pañcāṅgulataila, 59
 castor oil tree
gandharvahasta, 20
cāsyāt
 from his mouth, 33
 cataract
liṅganāśa, 63
caturvarga
 fourfold grouping, 16

catuṣṭaya
 four factors, 16
 caused by wind
pavanodbhava, 59
 causes
hetu, 70
 causing a fall
sraṃsanī, 71
 causing the destruction of
 actions such as
 moving
gamanādikriyāv-
ināśakārī, 65
 chebulic myrobalan
abhayā, 58
harītakī, 34
chedya
 cutting, 22
 excision, 16
 cheek-ear
gaṇḍakarṇa, 21
 chest
hr̥d, 48
chidra
 opening, 63
 child bearing
kaumārabhṛtya, 68
 child-murderess
putraghnī, 71
 chital deer
pr̥ṣata, 32
 chital deer
pr̥ṣata, 37
 choler
pitta, 71
 chyle
rasa, 47
cihna
 signs, 70
 circuit of the pupil
dr̥ṣṭīmaṇḍala, 63
 citron
mātulūṅga, 66
 clean
pra√ sādḥ, 37

clusters
samplava, 15
 cock
tāmracūḍa, 60
 collection
varga, 16
 collection of diseases
rogasamgraha, 71
 combined
upahita, 59
 combs
avalekhana, 31
 comfort
sukha, 16
 complexion
varṇa, 14, 27
 compounds
yoga, 56
 compressed
saṃkṣipta, 21
 compressed
saṃkṣipta, 22
 conch
salilotthita, 62
 congested humours
sannipāta, 16
 constipation
ānāha, 45, 48, 51
 contamination dropsy
duṣyodara, 47
 convulsions
apatānaka, 20
 cooked
bhāvita, 61
 cooked barley
yavaudana, 63
 cook-fish
pākamatsya, 53
 copper
tāmra, 65
 coral
vidruma, 67
coṣa
 driness, 65
 cotton

picu, 23
 cotton plant
kārpāsa, 20
 cottony jujube
kākolī, 66
 counteraction
pratiṣedha, 56
 country mallow
balā, 60
 country sarsaparilla
anantā, 50
 cow-dung
gośakṛt, 57
 cow's flesh
gomāṃsa, 56
 cow's urine
gomūtra, 58
 creeper-ear
vallīkarṇa, 21
 creepy-crawlies
sarīsr̥pa, 12, 15
 crow's foot
kākapada, 49
 crow's lip
kākauṣṭha, 21
 curable
sādhya, 56
 curds
dadhi, 33, 37
payasyā, 35
 cure
siddhi, 49
 cured
sādhya, 51
 cuscus grass
uśīra, 61
 cutting
chedya, 22
 cutting with a blade
śastrakṣata, 56
 cuttle fish
aṇṇavamala, 58
 cuttlefish bone
phena, 67
samudraphena, 58

dadhi
 curds, 33, 37
dainya
 misery, 14
dais
pīṭha, 21
daivakṛte
 naturally-occurring,
 63
dantamāmsa
 flesh of the tooth, 34
dantaveṣṭa
 enclosure of a tooth,
 34
 dark colour
dhyāma, 46
dārvī
 tree turmeric, 57
datta
 given, 32
 datura flower
dhattūrapuṣpa, 21
 day and night
ahorātra, 15
 decanted liquor
surāmaṇḍa, 22, 23
 decoction
kvātha, 49
 decoctions
kaṣāya, 31, 64
 deer
eṇa, 60
 defects
doṣa, 70
 delirium
moha, 44
 demons
graha, 68
 demons
graha, 68
 deodar
bhadradāru, 66
 depends on
āyatta, 14
 depression

viśāda, 14
 desert date
iṅgudī, 61
 desire
icchā, 14
dhānyāmla
 fermented
 rice-water, 22
dhātakīpuṣpa
 fire-flame bush
 flowers, 34
dhātrī
 emblic, 58
dhattūrapuṣpa
 datura flower, 21
dhātu
 bodily constituents,
 46
 body tissue, 48
 element, 39, 42, 44
dhava
 axelwood, 67
dhūma
 inhaled smoke, 31
dhūmadarśin
 seeing smoke, 56
dhūmyāṭa
 black drongo, 32
dhyāma
 dark colour, 46
 grimy, 31
 diet
āhāra, 14
 dilator
pravardhanaka, 20
 discharge
praseka, 45
srāva, 34, 36
 disease
vyadhi, 16
 diseases
roga, 70
 disjunction
viśleṣa, 47

disorders of the female
 reproductive system
yonivyāpat, 69
 distension
ādhmāna, 44
 door-hinge
kapāṭasandhika, 21
doṣa
 defects, 70
 humour, 46, 63
 humours, 70
 humours, 15
doṣapariplava
 unsteadiness of the
 humours, 65
 double
yamalā, 34
 downward vision
adhodṛṣṭitva, 65
drākṣā
 grapes, 66
dravāñjana
 liquid collyrium, 61
dravya
 substance, 27
 dried flesh
vallūraka, 21
 dried ginger
nāgara, 58
 driness
coṣa, 65
 drongo
bhramaraka, 32
drṣṭi
 pupil, 56, 64
drṣṭimanḍala
 circuit of the pupil,
 63
drṣṭivibhrama
 faulty vision, 36
 dry
rūkṣa, 46
 dry rub
utsādana, 35
 dry rubs

utsādana, 31
 duct
 sirā, 20
 ducts
 sirā, 16, 22
duḥkha
 suffering, 14
 dung beetles
 varcaḥkīṭa, 53
dūrvā
 panic grass, 65
dūṣiṣa
 slow-acting poison,
 51
dūṣi-viṣa
 slow-acting poison,
 48
dūṣiṣāri
 enemy of
 slow-acting poison, 51
 slow-acting poison
 antidote, 33
duṣṭa
 tainted, 22
duṣyodara
 contamination
 dropsy, 47
dveṣa
 hatred, 14
 dwindling away
 kṣaya, 47
 earthen products
 pārthiva, 15, 16
 edge of the hole
 apāṅga, 24
elā
 cardamom, 58
 element
 dhātu, 39, 42, 44
 elephant/snake
 nāga, 53
 elixir salve
 rasāñjana, 25
 elixir salve
 rasāñjana, 57, 61, 62

elixir-salve
 rasāñjana, 57
 elixir-salve
 śīta, 57
 embelia
 vidaṅga, 61
 emblic
 āmalaka, 57
 dhātrī, 58
 emetic nut
 madana, 33
eṇa
 deer, 60
 enclosed roasting
 puṭākhyā, 60
 puṭapāka, 61
 enclosure of a tooth
 dantaveṣṭa, 34
 ends
 vaktra, 65
 enemy of slow-acting
 poison
 dūṣiṣāri, 51
 energy
 ojas, 27
 entrails
 antra, 59
 envy
 īrṣyā, 14
eraṇḍapatranāla
 stalk of the leaf of
 castor oil plant, 25
 errhine
 nasya, 60
 errhines
 nasya, 37
 essence
 sāra, 15
evam
 along these lines, 16
 excision
 chedya, 16
 expansive
 vikāsin, 46
 expressed juice

svarasa, 57
 external factors
 āgantū, 16
 extract
 niryāsa, 36
 extract of rohu carp
 rauhita, 57
 extracted juice
 svarasa, 36
 extracts
 rasa, 61
 extremely excited
 atyānandā, 71
 eye make-up
 añjana, 31, 36
 eye ointment
 añjana, 36, 37
 eye salve
 añjana, 49
 eyewash
 tarpaṇa, 36, 56, 60, 61
 fart
 avaśardhita, 52
 fastening
 āsaṅgima, 21
 fat
 vasā, 60
 faulty medical treatment
 mithyopacāra, 70
 faulty vision
 dṛṣṭivibhrama, 36
 female reproductive
 organ
 yoni, 70, 71
 female reproductive
 system
 yoni, 70, 71
 fermented rice-water
 dhānyāmla, 22
 fern
 ajaruhā, 37
 filaments
 kiṅjalka, 57
 fire-flame bush flowers
 dhātakipuṣpa, 34

fissuring
 avadāraṇa, 37
 flame of the forest
 palāśa, 61
 flatulence
 āṭopa, 33
 flavours
 rasa, 14, 27
 flesh
 māṃsa, 16, 34
 flesh of the tooth
 dantamāṃsa, 34
 flooded
 pariplutā, 71
 flowering trees
 vrkṣa, 14
 flowers
 puṣpa, 15
 follicles
 kha, 35
 fortnight
 pakṣa, 15
 four factors
 catuṣṭaya, 16
 fourfold grouping
 caturvarga, 16
 free from clouds
 abhramukta, 64
 free from the point
 agramukta, 64
 frogs
 maṇḍūka, 15
 from his mouth
 cāsyāt, 33
 fruit trees
 vanaspati, 14
 fruits
 phala, 15

gāḍha
 pinched, 23
gairika
 ochre, 56, 57
gairikaḥ
 red chalk, 65
gamanādikriyāvināśakārī

 causing the
 destruction of actions
 such as moving, 65
gaṇḍakārṇa
 cheek-ear, 21
gandharvahasta
 castor oil tree, 20
 garlands
 sraja, 31
 gauze
 prota, 23
 general rule
 paribhāṣā, 61
 gently
 mṛdu, 66
 ghee
 sarpis, 23, 37, 56
 ginger
 mahaṣadha, 38
 given
 datta, 32
 glassy opacity
 kāca, 61
godhā
 monitor lizard, 38, 59
 gold
 śātakumbhī, 65
gomāṃsa
 cow's flesh, 56
gomūtra
 cow's urine, 58
gośakṛt
 cow-dung, 57
 juice of cow-dung,
 57
 gourd
 kośavatī, 49
graha
 demons, 68
 demons, 68
granthi
 knots, 46
 lumps, 20, 35, 45
granthita
 lumpy, 22

grapes
 drākṣā, 66
 great aconite
 mahāviṣa, 45
 great fragrance
 mahāsugandha, 37
 great poison
 mahāviṣa, 45
 greed
 lobha, 14
 green vitriol
 kāsīsa, 62
grhagodhikā
 house-lizard, 53
 grief
 āśoka, 14
 grimy
 dhyāma, 31
 gruel
 yavāgū, 49
guḍikā
 pill, 57
gulma
 abdominal lump, 70
guṇa
 qualities, 46
 gut
 antra, 48

hālāhala
 Aconite, 46
 half door-hinge
 ardhakaṇṭha-
 andhika, 21
 half-year
 ayana, 15
 hare foot uraria
 prthakparṇī, 66
 hareṇu
 hareṇu, 57, 58
hari
 sun, 64
haridrā
 turmeric, 61
 turmeric, 50
hariṇa

blackbuck, 37, 38
harītakī
 chebulic myrobalan,
 34
harṣa
 horripilation, 47
 overexcitement, 14
 hatred
dveṣa, 14
 heart protected
hṛdayāvaraṇa, 37
 heart-leaved moonseed
amṛtā, 50
somavallī, 35
 henna
madayantikā, 36
 herbs
oṣadhi, 14
hetu
 causes, 70
 himalayan cherry
padmaka, 66
hīna
 reduced, 26
hīnakarṇa
 reduced-ear, 21
 hoarseness
pāruṣya, 44
 hogweed
punarnavā, 36
 holostemma
payasyā, 66
 honey
kṣaudra, 57
madhu, 57
madhus, 32
 honey collyrium
kṣaudrāñjana, 58
 horripilation
harṣa, 47
 horseradish tree
śigru, 62
 house-lizard
grhagodhikā, 53
hṛd

chest, 48
hṛdayāvaraṇa
 heart protected, 37
 huge
mahatī, 72
 human being
puruṣa, 13, 14, 16
 humour
doṣa, 46, 63
 humours
doṣa, 70
 humours
doṣa, 15
icchā
 desire, 14
 if, then not
na ced, 63
 illness
ruj, 58
 immortal
amṛta, 37
 impotent
śaṇḍhī, 72
 in those cases
tatra, 59
 incurable
asādhya, 56
 indian barberry
kālīyaka, 35
 indian lotus
nalina, 57
 indian madder
mañjiṣṭhā, 20, 66
 indian nightshades
brhatī, 50
 indian rose-bay
tagara, 35
 indian sarsaparilla
kālānusāriva, 58
sāriva, 58, 65, 66
 indian sarsaparillas
sārive, 50
 indigo
nīlī, 33
indragopa

red velvet mites, 15
 velvet-mite, 32
 infertile
vandhyā, 71
 inflamed
saṃrambha, 23
vidagdha, 56
 infused
bhāvita, 57
īṅgita
 body language, 31
īṅgudī
 desert date, 61
 inhaled smoke
dhūma, 31
 inherent
svābhāvika, 14
 inherent factors
svabhāva, 16
 injured
utpīḍita, 63
 inspissation
rasakriyā, 62
 intended
vyākhyāta, 16
 intestines
pakvādhāna, 48
pakvāśaya, 33, 47
 intoxication from food
annamada, 47
 invincible
ajeya, 37
 irregularities
vaiṣamya, 14
 irrigated
pratipūraṇa, 36
 irrigation
seka, 56
tarpaṇa, 70
 irritation
adhimantha, 65
prakopa, 15
īrṣyā
 envy, 14
 it may be

bhāvet, 63
 items created by time
kālakṛta, 15, 16

jambu
jambū, 57
jambū
jambu, 57
jambul, 34
jambul
jambū, 34
jāṅgala
 arid-land animals, 61
jāṅgama
 mobile, 39
 moving, 14, 16
jarāyuja
 born in in a caul, 15
jasmine
mālatī, 35
jaṭhara
 bellyache, 51
jātī
 royal jasmine, 67
jealousy
asūyā, 14
joins
sandhāna, 21
sandhi, 22
joints
sandhi, 16
juice extract
svarasa, 15
juice of cow-dung
gośakṛt, 57
juices
rasa, 60

kāca
 glassy opacity, 61
kākapada
 crow's foot, 49
kākauṣṭha
 crow's lip, 21
kākolī
 cottony jujube, 66

kalā
 minutes, 15
kālakṛta
 items created by
 time, 15, 16
kālānusāriva
 indian sarsaparilla,
 58
kālīyaka
 indian barberry, 35
kalka
 mash, 51
kalpa
 rule, 52
kāma
 lust, 14
kanda
 bulbs, 15
kaṇṭaka
 spots, 35
kapālacūrṇa
 powdered
 earthenware
 crockery, 22
kapāṭasandhika
 door-hinge, 21
kapha
 mucus, 36
 phlegm, 44, 47, 48, 71
kapittha
 wood apple, 57
 wood apple, 35, 36,
 57
karma
 regimen, 64
karman
 therapies, 16
kaṇṇavyadhā
 piercing the ear, 19
kaṇṇinī
 protuberant, 71
kārpāsa
 cotton plant, 20
kārśmarī
 white teak, 57

kaṣāya
 decoctions, 31, 64
kaṣāyavāsika
kaṣāyavāsika, 53
kaṣāyavāsika
kaṣāyavāsika, 53
kāśīpati
 lord of kāśī, 30
kāsisa
 green vitriol, 62
kāṣṭhā
 trice, 15
kaṭphala
 box myrtle, 58
kaumārabhṛtya
 child bearing, 68
kaunḍinya
kaunḍinyas, 53
kaunḍinyas
kaunḍinya, 53
kavala
 mouthwash, 34
kha
 apertures of the
 head, 36
 follicles, 35
khara
 rough, 65
kiṇihi
 white siris, 50, 61
kiṇjalka
 filaments, 57
kitchen
mahānasa, 30
kiṭīpa
 lice, 53
knots
granthi, 46
knowledge
veda, 11
kohl
srotas, 60
srotoja, 58, 67
kośavati
 gourd, 49

koṣṭakī
 luffa, 33
koṭha
 skin disease, 47
kravyabhuj
 carnivore, 60
kṛccra
 with difficulty, 63
kriyā
 procedures, 13, 16
 treatment, 16, 62
kriyākāla
 the time for
 therapies, 16
kriyāsaṅga
 loss of function, 65
kṛmi
 worms, 15
krodha
 anger, 14
kṛṣṇa
 black part, 63
 long pepper, 56
kṛtamaṅgala
 received a
 benediction, 19
kṣaṇadāndhya
 night blindness, 58
kṣāraka
 lye, 60
kṣaudra
 honey, 57
kṣaudrāñjana
 honey collyrium, 58
kṣaya
 dwindling away, 47
kṣīṇa
 wasted, 23
kṣīra
 milky sap, 39, 42, 44
 sap, 15
kṣudrā
 yellow-berried
 nightshade, 50
kunta

small insects, 15
kupyaka
 metal, 57
kuśa
 kuśa grass, 60
 kuśa grass
kuśa, 60
kuṣṭha
 pallid skin disease,
 48
kvātha
 decoction, 49
 lac
lākṣā, 66
lākṣā
 lac, 66
lāmajja
 lāmajja grass, 32
 lāmajja grass
lāmajja, 32
 layer
paṭala, 63
 lead
sīsaka, 21
 leaves
bhaṅga, 64
patra, 15
lekhaṇa
 scarification, 14
lekhyā
 scarification, 22
 lice
kiṭīpa, 53
 life, longevity
āyur, 11
 limpid
viśada, 46
liṅga
 symptom, 36
 symptoms, 47
liṅganāśa
 cataract, 63
 liniment
ālepa, 56
 liniments

ālepana, 37
 liquid
cala, 64
 liquid collyrium
dravāñjana, 61
 liquorice
madhuka, 38, 57
madhukair, 66
 liver
yakṛt, 58, 59
 liver extract
yakṛdrasa, 58
lobha
 greed, 14
 located
adhiṣṭhāna, 14
 lodh tree
lodhra, 57, 61
lodhra
 lodh tree, 57, 61
 long pepper
kṛṣṇā, 56
māgadha, 36, 61
māgadhī, 58–60
pippali, 57
 long peppers
pippalī, 38
 loose stool
viḍbheda, 44, 54
 lord of kāsī
kāśīpati, 30
 loss of appetite
arocaka, 47
 loss of function
kriyāsaṅga, 65
 lotus-splittable
utpalabhedyaka, 21
 lotus-spots
padminikaṇṭaka, 35
 luffa
koṣṭakī, 33
 lumps
granthi, 20, 35, 45
 lumpy
granthita, 22

lust	prolapse, 65	<i>mātuluṅga</i>
<i>kāma</i> , 14	<i>manaḥśilā</i>	citron, 66
<i>lūtā</i>	realgar, 57, 61, 62, 67	matured
spiders, 12	red arsenic, 56, 58	<i>vipakva</i> , 57
lye	<i>mānasa</i>	may repair
<i>kṣāraka</i> , 60	mental, 14	<i>yojayed</i> , 24
<i>madana</i>	<i>maṇḍala</i>	meat from a chital deer
emetic nut, 33	round blotches, 47	<i>pārṣata</i> , 38
<i>madayantikā</i>	<i>maṇḍuka</i>	medical advice
henna, 36	frogs, 15	<i>ācārika</i> , 23
<i>madhu</i>	mango	medicines cooked in a
honey, 57	<i>amra</i> , 57	crucible
<i>madhūka</i>	mango stones	<i>puṭapāka</i> , 56
liquorice, 38, 57	<i>āmrāsthī</i> , 34	men
mahua, 60–62	<i>mañjiṣṭhā</i>	<i>nara</i> , 53
<i>madhukair</i>	indian madder, 20, 66	menstrual blood
liquorice, 66	<i>manyāstambhā</i>	<i>ārtava</i> , 70
<i>madhus</i>	paralysis of the nape	mental
honey, 32	of the neck, 20	<i>mānasa</i> , 14
<i>madirā</i>	<i>mardita</i>	<i>meṣaśṛṅga</i>
spirits, 58, 61	massaged, 24	periploca of the
<i>māgadha</i>	<i>marica</i>	woods, 36
long pepper, 36, 61	black pepper, 56	periploca of the
<i>māgadhi</i>	markaṭa	woods, 67
long pepper, 58–60	<i>monkey</i> , 46	<i>meṣaviṣāṇa</i>
<i>mahānasa</i>	marking-nut tree	periploca of the
kitchen, 30	<i>bhallātaka</i> , 36	woods, 59
<i>mahāsugandha</i>	<i>māsa</i>	metal
great fragrance, 37	month, 15	<i>kupyaka</i> , 57
<i>mahatī</i>	<i>māṣaka</i>	milk
huge, 72	mung beans, 34	<i>payas</i> , 37
<i>mahauṣadha</i>	mash	milky sap
ginger, 38	<i>kalka</i> , 51	<i>kṣīra</i> , 39, 42, 44
<i>mahāviṣa</i>	<i>maṣī</i>	minutes
great aconite, 45	black soot, 56	<i>kalā</i> , 15
great poison, 45	massage	misery
mahua	<i>abhyaṅga</i> , 35	<i>dainya</i> , 14
<i>madhūka</i> , 60–62	massage oil	<i>miśrakacikitsa</i>
<i>mālatī</i>	<i>abhyaṅga</i> , 31, 37	various treatments,
jasmine, 35	massage ointment	25
malice	<i>anulepana</i> , 31, 35	misshapen eyeball
<i>mātsarya</i> , 14	massaged	<i>vilocana</i> , 65
<i>māṃsa</i>	<i>mardita</i> , 24	<i>mithyopacāra</i>
flesh, 16, 34	<i>mātsarya</i>	faulty medical
<i>māṃsanirgama</i>	malice, 14	treatment, 70

mitigatable		<i>daivakṛte</i> , 63
<i>yāpya</i> , 56		nature
<i>mlāyin</i>		<i>ātmaka</i> , 14
blue dot cataract, 62		needle
mobile		<i>sūcī</i> , 64
<i>jaṅgama</i> , 39		neem tree
<i>moha</i>		<i>nimba</i> , 20
delirium, 44		<i>nemīsandhānaka</i>
monitor lizard		rim-join, 22
<i>godhā</i> , 38, 59		<i>nemīsandhānakaḥ</i>
monkey		rim-join, 21
markaṭa, 46		night blindness
month		<i>kṣaṇadāndhya</i> , 58
<i>māsa</i> , 15		<i>niḥkvātha</i>
morsel		stewed juice, 49
<i>bali</i> , 31		<i>nīlī</i>
mouse-ear		indigo, 33
<i>mūṣikakarṇī</i> , 35		<i>nimba</i>
mouthwash		neem tree, 20
<i>kavala</i> , 34		<i>nimeṣa</i>
moving		blink of the eye, 15
<i>jaṅgama</i> , 14, 16		nipping with the mouth
<i>mṛdu</i>		<i>mukhasaṃdaṃśā</i> , 52
gently, 66		<i>nirvedhima</i>
mucus		ready-split, 21
<i>kapha</i> , 36		<i>niryāsa</i>
<i>mudga</i>		extract, 36
mung beans, 62		resin, 15, 39, 42, 44
<i>muhūrta</i>		<i>niśācara</i>
three-quarters of an		nocturnal creature,
hour, 15		62
<i>mukhasaṃdaṃśā</i>		<i>niṣevita</i>
nipping with the		prepared, 60
mouth, 52		used, 59
<i>muktā</i>		<i>nivāta</i>
pearl, 63		no wind, 15
<i>muktvā</i>		no wind
separate, 63		<i>nivāta</i> , 15
<i>mūla</i>		nocturnal creature
root, 14		<i>niśācara</i> , 62
roots, 15		non-bloodshot blindness
<i>mūlaka</i>		<i>araga timira</i> , 63
<i>mūlaka</i> , 45		non-flowering tree
multi-joins		<i>vanaspati</i> , 61
<i>vyāyojima</i> , 21		nourishment
	mung beans	
	<i>māṣaka</i> , 34	
	<i>mudga</i> , 62	
	<i>mūrcchā</i>	
	stupor, 33	
	<i>mūṣikā</i>	
	purgings nut, 37	
	rodents, 12	
	<i>mūṣikakarṇī</i>	
	mouse-ear, 35	
	woodrose, 35	
	<i>mustā</i>	
	nutgrass, 66	
	mustaka	
	<i>mustaka</i> , 45	
	myrobalan	
	<i>abhayā</i> , 50	
	<i>pathyā</i> , 57	
	<i>na ced</i>	
	if, then not, 63	
	<i>nadīja</i>	
	salt, 57	
	<i>nāga</i>	
	elephant/snake, 53	
	<i>nāgara</i>	
	dried ginger, 58	
	<i>nala</i>	
	reed, 25	
	<i>nalada</i>	
	spikenard, 32, 61	
	<i>nalina</i>	
	indian lotus, 57	
	<i>nara</i>	
	men, 53	
	nasal medicine	
	<i>nasya</i> , 49	
	nasal medicines	
	<i>nasya</i> , 56	
	<i>nasya</i>	
	errhine, 60	
	errhines, 37	
	nasal medicine, 49	
	nasal medicines, 56	
	<i>snuff</i> , 31, 36	
	naturally-occurring	

br̥mhaṇa, 14
 numbness
 svāpa, 36
 nutgrass
 mustā, 66
 obstructed by blood
 raktabaddha, 23
 ochre
 gairika, 56, 57
 off his hand
 sapāṇa, 59
 oil
 sneha, 15
 ointment
 anulepana, 35
 pralepa, 32, 35
 ointment for rubbing the
 ear
 udvartana, 24
ojas
 energy, 27
 vital energy, 14
 opening
 chidra, 63
 options
 vikalpa, 22
 or not distorted
 vāvikṛtā, 34
oṣadhi
 herbs, 14
 remedies, 16
oṣadhī-
 remedies, 14
 outer corner of the eye
 apāṇga, 63
 overexcitement
 harṣa, 14
 pacification
 saṃśamana, 14
 upaśama, 15
padma
 sacred lotus, 35
padmaka
 himalayan cherry, 66

padminīkaṇṭaka
 lotus-spots, 35
 pain
 śūla, 48
 pain and injury
 vedanābhigāta, 11
pāka
 sepsis, 37
 septic, 23
pākamatsya
 cook-fish, 53
pakṣa
 fortnight, 15
pakvādhāna
 intestines, 48
pakvāśaya
 intestines, 33, 47
palāśa
 flame of the forest,
 61
pālindī
 black creeper, 35, 38,
 50
pallava
 shoots, 64
 pallid skin disease
 kuṣṭha, 48
pañcāṅgulataila
 castor oil, 59
 panic grass
 dūrvā, 65
 paralysis of the nape of
 the neck
 manyāstambhā, 20
paribhāṣā
 general rule, 61
pariplutā
 flooded, 71
parīṣeka
 shower, 35
pārṣata
 meat from a chital
 deer, 38
parśvabheda
 ribs crack, 48

pārthiva
 earthen products, 15,
 16
 partial blindness
 timira, 59
 particulars
 vikalpa, 16
 parts
 aṅga, 16
pāruṣya
 hoarseness, 44
paśu
 animals, 15
paṭala
 layer, 63
pāthā
 velvet leaf, 61
 velvet-leaf, 50
pathyā
 myrobalan, 57
patra
 cassia cinnamon, 35,
 66
 leaves, 15
patravṛścika
 wing-scorpions, 53
pavanodbhava
 caused by wind, 59
payas
 milk, 37
payasyā
 curds, 35
 holostemma, 66
 pearl
 muktā, 63
 pebble
 aṣṭhīlā, 33
 pelt
 carman, 15
 pepperito
 sarṣapaka, 53
 periploca of the woods
 meṣaśṛṅga, 36
 meṣaviṣāṇa, 59
 periploca of the woods

meṣaśṛṅga, 67
 pervasive
 vyavāyin, 46
phala
 fruits, 15
phañjī
 verbena, 36
phena
 cuttlefish bone, 67
 phlegm
 kapha, 44, 47, 48, 71
 phlegmatic
 śleṣmalā, 71
 physical
 śārīravat, 16
picciṭā
 picciṭā, 53
picciṭā
 picciṭā, 53
picu
 cotton, 23
pīḍ-
 press, 63
 piercing
 vyadha, 64
 vyadhana, 22
 piercing the ear
 kaṇnavyadha, 19
 pigs' eye
 sūkarākṣitā, 65
 pill
 guḍikā, 57
 pinched
 gāḍha, 23
pipilika
 ants, 15
pippali
 long pepper, 57
 long peppers, 38
 pith
 sāra, 39, 42, 44
pīṭha
 dais, 21
pitta
 bile, 59

choler, 71
pittalā
 bilious / choleric, 71
plihan
 spleen, 59
plutā
 sprung, 71
 poison berry
 brhatī, 50
 powdered earthenware
 crockery
 kapālacūrṇa, 22
pra√sādh
 clean, 37
prabha
 shine, 63
pracalāka
 prachalāka, 53
 prachalāka
 pracalāka, 53
 practical purposes
 prayojanavat, 15
pragāḍha
 steeped, 59
prakopa
 irritation, 15
prakṛti
 temperament, 14
pra√kuth
 rot, 34
pralāpa
 ranting, 44
pralepa
 ointment, 32, 35
praseka
 discharge, 45
pratikāra
 alleviation, 15
 remedy, 56
pratipūraṇa
 irrigated, 36
pratisāraṇa
 rub, 34
 rubbing, 34
pratiṣedha

counteraction, 56
prativāpa
 admixture, 23
pratuda
 scavenging, 23
pravardhanaka
 dilator, 20
prayojanavat
 practical purposes,
 15
 prepared
 niṣevita, 60
 prepared with tilvaka
 tailvaka, 56
 prepared with turpeth
 traivṛta, 56
 press
 pīḍ-, 63
 prickly chaff flower
 apāmarga, 20
priyaṃgu
 beautyberry, 57
priyaṅgu
 beauty berry, 61
 probe
 śalākā, 63, 64
 procedures
 kriyā, 13, 16
 prolapse
 māṃsanirgama, 65
 prolapses
 arśas, 70
prota
 gauze, 23
 protuberant
 karṇinī, 71
prṣata
 chital deer, 32
 chital deer, 37
prṥhakparṇī
 hare foot uraria, 66
puffed up
 śopha, 23
punarnavā
 hogweed, 36

punḍarika	with bloodloss, 71	remedies
<i>punḍarika</i> , 45	ranting	<i>oṣadhi</i> , 16
pupil	<i>pralāpa</i> , 44	<i>oṣadhī-</i> , 14
<i>drṣṭi</i> , 56, 64	rarified	remedy
purging nut	<i>sūkṣma</i> , 46	<i>pratikāra</i> , 56
<i>mūṣikā</i> , 37	<i>rasa</i>	resin
purification	chyle, 47	<i>niryāsa</i> , 15, 39, 42, 44
<i>saṃśodhana</i> , 14	extracts, 61	restrictions
<i>puruṣa</i>	flavours, 14, 27	<i>yantraṇā</i> , 64
human being, 13, 14,	juices, 60	rheum
16	the blood of birds	<i>upadeha</i> , 36
<i>puṣpa</i>	and animals, 57	ribs crack
flowers, 15	<i>rasakriyā</i>	<i>parśvabheda</i> , 48
<i>puṭāhvaya</i>	inspissation, 62	rigid
taken hot, 61	<i>rasāñjana</i>	<i>sthirā</i> , 65
<i>puṭākhyā</i>	elixir salve, 25	rim of a wheel
enclosed roasting, 60	elixir salve, 57, 61, 62	<i>cakradhārā</i> , 22
putapāka	elixir-salve, 57	rim-join
enclosed roasting, 61	<i>rauhita</i>	<i>nemīsandhānakah</i> ,
medicines cooked in	extract of rohu carp,	21
a crucible, 56	57	rim-join
<i>putapāka</i> , 70	ready-split	<i>nemīsandhānaka</i> , 22
<i>putraghñi</i>	<i>nirvedhima</i> , 21	rodents
child-murderess, 71	realgar	<i>mūṣika</i> , 12
qualities	<i>manaḥśilā</i> , 57, 61, 62,	<i>roga</i>
<i>guṇa</i> , 46	67	diseases, 70
racket-tailed drongo	received a benediction	<i>rogasaṃgraha</i>
<i>bhṛṅgarāja</i> , 32	<i>kṛtamaṅgala</i> , 19	collection of
<i>rāgin timira</i>	red arsenic	diseases, 71
bloodshot blindness,	<i>manaḥśilā</i> , 56, 58	<i>rohita</i>
60	red chalk	<i>rohita</i> tree, 61
<i>rāgiṇi timire</i>	<i>gairikaḥ</i> , 65	rohita tree
bloodshot blindness,	red gourd	<i>rohita</i> , 61
63	<i>bimbī</i> , 33	root
rainy seasons	red velvet mites	<i>mūla</i> , 14
<i>varṣā</i> , 15	<i>indragopa</i> , 15	roots
<i>rajana</i>	reduced	<i>mūla</i> , 15
turmeric, 57, 58	<i>hīna</i> , 26	rot
rājimat	reduced-ear	<i>pra√kuth</i> , 34
<i>striped snake</i> , 49	<i>hīnakarṇa</i> , 21	rough
<i>raktabaddha</i>	reed	<i>khara</i> , 65
obstructed by blood,	<i>nala</i> , 25	round blotches
23	regimen	<i>maṇḍala</i> , 47
<i>raktakṣayā</i>	<i>ācāra</i> , 14	royal jasmine
	<i>karma</i> , 64	<i>jāti</i> , 67

<i>rtu</i>	season, 15	<i>śambuka</i>	snails, 53	creepy-crawlies, 12, 15
rub		same collyrium		<i>sāriva</i>
	<i>pratisāraṇa</i> , 34	<i>samāñjana</i> , 61		indian sarsaparilla,
rubbing		<i>saṃkṣipta</i>	compressed, 21	58, 65, 66
	<i>pratisāraṇa</i> , 34		compressed, 22	<i>sārive</i>
<i>rudhira</i>	blood, 15	<i>samplava</i>		indian sarsaparillas,
			clusters, 15	50
<i>ruj</i>	illness, 58	<i>saṃrambha</i>		<i>sarpis</i>
<i>rūkṣa</i>	dry, 46		inflamed, 23	ghee, 23, 37, 56
rule		<i>saṃśamana</i>		<i>sārṣapa</i>
	<i>kalpa</i> , 52		pacification, 14	<i>sārṣapa</i> , 45
sacred lotus		<i>saṃśodhana</i>		<i>sarṣapaka</i>
	<i>padma</i> , 35		purification, 14	pepperito, 53
<i>sāda</i>	be exhausted, 48	<i>samudraphena</i>		sarvātmikā
			cuttlefish bone, 58	<i>sarvātmikā</i> , 72
<i>sādhubaddha</i>	well joined, 25	<i>saṃvatsara</i>		<i>sarvātmikā</i>
			year, 15	sarvātmikā, 72
<i>sādhya</i>		<i>sañcaya</i>		<i>śastrakṣata</i>
	curable, 56		accumulation, 15	cutting with a blade,
	cured, 51	sandal		56
sage-leaved alangium		<i>sugandhi</i> , 59		<i>śātakumbhī</i>
	<i>aṅkolla</i> , 34	<i>sandhāna</i>		gold, 65
<i>saindhava</i>			joins, 21	<i>śatāvarī</i>
	salt, 49	<i>śaṇḍhī</i>		wild asparagus, 62
	sind salt, 56, 58		impotent, 72	<i>sauvīraka</i>
	sindh salt, 60		joins, 22	stibnite, 57
sal tree			joints, 16	scarification
	<i>śālā</i> , 57	<i>sannipāta</i>		<i>lekhaṇa</i> , 14
<i>śālā</i>	sal tree, 57		congested humours,	scarification
			16	<i>lekhyā</i> , 22
<i>śālākā</i>		sap		scarlet mallow
	probe, 63, 64	<i>kṣīra</i> , 15		<i>bandhujīva</i> , 36
<i>salilotthita</i>		<i>sapāṇa</i>		scavenging
	conch, 62		off his hand, 59	<i>pratuda</i> , 23
	water-born, 62	<i>saptachada</i>		scramberry
saliva			blackboard tree, 34	<i>tālīśa</i> , 57
	<i>śleṣman</i> , 33	<i>sāra</i>		<i>tālīśapatra</i> , 58
salt			essence, 15	season
	<i>nadīja</i> , 57		pith, 39, 42, 44	<i>rtu</i> , 15
	<i>saindhava</i> , 49	<i>śārīravada</i>		sections
<i>samāñjana</i>			physical, 16	<i>adhyāya</i> , 17
	same collyrium, 61	<i>sarīrpa</i>		seed-eating
				<i>viṣkira</i> , 23
				seeing smoke

dhūmadarśin, 56
seka
 irrigation, 56
śelu
 selu plum, 50
 selu plum
śelu, 50
 semen
bija, 70
 separate
muktvā, 63
 sepsis
pāka, 37
 septic
pāka, 23
 sesame oil
taila, 24
 shine
prabha, 63
 shooting pain
śūla, 65
 shoots
pallava, 64
udbhid, 15
 shower
parīṣeka, 35
 shrubs
vīrudh, 14
siddhārthaka
 white mustard, 66
siddhi
 cure, 49
 side-effects
upadrava, 37, 51
 signs
cihna, 70
śigru
 horseradish tree, 62
 sind salt
saindhava, 56, 58
 sindh salt
saindhava, 60
 sinews
snāyu, 16
sirā

duct, 20
 ducts, 16, 22
sirāvedha
 blood-letting, 56
 siris
śirīṣa, 50, 56, 67
 siris seeds
śirīṣamāṣaka, 34
śirīṣa
 siris, 50, 56, 67
śirīṣamāṣaka
 siris seeds, 34
sīsaka
 lead, 21
sitā
 elixir-salve, 57
 white sugar, 66
 skin
tvak, 15, 16
 skin disease
koṭha, 47
 sleep
svāpa, 44
śleṣmalā
 phlegmatic, 71
śleṣman
 saliva, 33
 slice of flesh
vadhra, 25, 26
 slow-acting poison
dūṣīviṣa, 51
dūṣī-viṣa, 48
 slow-acting poison
 antidote
dūṣīviṣāri, 33
 small insects
kunta, 15
 snails
śambuka, 53
snāyu
 sinews, 16
sneha
 oil, 15
 sniffing
ucchiṅgana, 64

snuff
 nasya, 31, 36
 solid
styāna, 64
 soma creeper
somalatā, 33
somalatā
 soma creeper, 33
somavalka
 white cutch tree, 36
somavalli
 heart-leaved
 moonseed, 35
sonita
 blood, 59
sonita-pitta, *rakta-pitta*
 blood-bile, 59
sonitena
 with blood, 65
śopha
puffed up, 23
sphoṭa
 spots, 36
 spiders
lūtā, 12
 spikenard
nalada, 32, 61
 spiral
āvarta, 63
 spirits
madirā, 58, 61
 spleen
plīhan, 59
 splitting
bhedya, 22
 spots
kaṇṭaka, 35
sphoṭa, 36
 sprung
plutā, 71
sraj
 garlands, 31
sraṃsanī
 causing a fall, 71
srāva

discharge, 34, 36
 suppurating, 22
 suppuration, 23
śreyas
 welfare, 11
srotas
 kohl, 60
srotoja
 kohl, 58, 67
stabdha
 stiff, 22, 23
 stalk
vr̥nta, 57
 stalk of the leaf of castor
 oil plant
eraṇḍapatranāla, 25
 stationary
sthāvara, 14, 16, 39
 steeped
pragāḍha, 59
 stewed juice
niḥkvātha, 49
sthāvara
 stationary, 14, 16, 39
sthirā
 rigid, 65
 stibnite
añjana, 61
sauvīraka, 57
 stick-ear
yaṣṭīkarṇa, 21
 stiff
stabdha, 22, 23
 sting
śūla, 53
 stirred with goat's milk
ajākṣīrārdita, 66
 stomach
āmāśaya, 47, 48
 strength
bala, 14
striped snake
rājimat, 49
 strong mallow
atibalā, 60

stupor
mūrcchā, 33
styāna
 solid, 64
 substance
dravya, 27
 substrate
āśrayin, 14
sūcī
 needle, 64
sūcīvaktrā
 with a needle-like
 opening, 72
 suffering
duḥkha, 14
sugandhi
 sandal, 59
śūka
 bristles, 52
sūkarākṣitā
 pigs' eye, 65
sukha
 comfort, 16
sūkṣma
 rarified, 46
śūla
 pain, 48
 shooting pain, 65
 sting, 53
 sun
hari, 64
suniviṣṭa
 very intent, 24
 supernatant layer
agra, 61
 suppurating
srāva, 22
 suppuration
srāva, 23
surāmaṇḍa
 decanted liquor, 22,
 23
sūryavallī
 'sun-creeper', 50
svabhāva

inherent factors, 16
svābhāvika
 inherent, 14
svāpa
 numbness, 36
 sleep, 44
svarasa
 expressed juice, 57
 extracted juice, 36
 juice extract, 15
śvāsa
 wheezing, 44
svastivācana
 blessings
 pronounced, 19
svayaṃgupta
 velvet bean, 57
śvayathu
 swelling, 20
sveda
 born of sweat, 15
śvetā
 white clitoria, 35
 swelling
śvayathu, 20
śyāmā
 beautyberry, 32, 35
syanda
 watery eye, 62
 symptom
liṅga, 36
 symptoms
liṅga, 47
tagara
 indian rose-bay, 35
taila
 sesame oil, 24
tailasugandhi
 the fragrant one in
 oil, 59
tailvaka
 prepared with
 tilvaka, 56
 tainted
duṣṭa, 22

take away	<i>varuṇa</i> , 36	watered buttermilk,
<i>āhārya</i> , 21	three-quarters of an hour	33
taken hot	<i>muhūrta</i> , 15	udāvartā
<i>puṭāhvaya</i> , 61	<i>timira</i>	<i>udāvartā</i> , 71
takes the form of	blindness, 62	<i>udbhid</i>
pervading the whole	partial blindness, 59	shoots, 15
body	toṭaka	<i>udvartana</i>
<i>akhilade-</i>	<i>toṭaka</i> , 53	ointment for rubbing
<i>havyāptirūpam</i> , 46	<i>toṭaka</i>	the ear, 24
<i>tālīśa</i>	<i>toṭaka</i> , 53	<i>udveṣṭana</i>
scramberry, 57	<i>traivṛta</i>	writhing, 44
<i>tālīśapatra</i>	prepared with	undistracted
scramberry, 58	turpeth, 56	<i>apramatta</i> , 25
<i>tāmra</i>	treatable	unsteadiness of the
copper, 65	<i>yāpya</i> , 51	humours
<i>tāmracūḍa</i>	treatment	<i>doṣapariplava</i> , 65
cock, 60	<i>bheṣaja</i> , 70	untreatable
<i>taṇḍulīyaka</i>	<i>kriyā</i> , 16, 62	<i>asādhya</i> , 63
amaranth, 35	tree turmeric	<i>upadeha</i>
<i>tarpaṇa</i>	<i>dārvī</i> , 57	rheum, 36
eyewash, 36, 56, 60,	trice	<i>upadrava</i>
61	<i>kāṣṭhā</i> , 15	side-effects, 37, 51
irrigation, 70	<i>triphalā</i>	<i>upahita</i>
<i>tatra</i>	the three fruits, 61	combined, 59
in those cases, 59	three fruits, 56, 58	<i>upāsama</i>
temperament	<i>trivṛt</i>	pacification, 15
<i>prakṛti</i> , 14	turpeth, 59, 60	<i>upasarga</i>
the blood of birds and	turmeric	affliction, 37
animals	<i>haridrā</i> , 61	used
<i>rasa</i> , 57	turmeric	<i>niṣevita</i> , 59
the fragrant one in oil	<i>haridrā</i> , 50	<i>uśīra</i>
<i>tailasugandhi</i> , 59	<i>rajana</i> , 57, 58	cuscus grass, 61
the science of life	turpeth	vetiver grass, 35
<i>āyurveda</i> , 11	<i>trivṛt</i> , 59, 60	<i>utpala</i>
the three fruits	<i>tuttha</i>	blue lotus, 57
<i>triphalā</i> , 61	blue vitriol, 61	water-lily, 32, 50
the three spices	<i>tvak</i>	<i>utpalabhedyaka</i>
<i>vyoṣa</i> , 58	skin, 15, 16	lotus-splittable, 21
the time for therapies	<i>ucchiṅgana</i>	<i>utpīḍita</i>
<i>kriyākāla</i> , 16	sniffing, 64	injured, 63
therapies	ucchitingas	<i>utsādana</i>
<i>karman</i> , 16	<i>ucciṅga</i> , 53	dry rub, 35
three fruits	<i>ucciṅga</i>	dry rubs, 31
<i>triphalā</i> , 56, 58	ucchitingas, 53	<i>vadhra</i>
three-leaved caper	<i>udaśvit</i>	slice of flesh, 25, 26

vaiḍūrya
 beryl, 67
vaiṣamya
 irregularities, 14
vakrabhrūnetra
 bent brow and eye,
 65
vaktra
 ends, 65
vallikarṇa
 creeper-ear, 21
vallūraka
 dried flesh, 21
vāmini
 vomiting, 71
vanaspati
 fruit trees, 14
 non-flowering tree,
 61
vandhyā
 infertile, 71
vapour
bāṣpa, 32, 33, 36
varaki
 wasps, 53
varcaḥkīṭa
 dung beetles, 53
varga
 collection, 16
 various treatments
miśrakacikitsa, 25
varṇa
 complexion, 14, 27
varṣā
 rainy seasons, 15
varti
 wick, 20
vartti
 wicks, 67
varuṇa
 three-leaved caper,
 36
vasā
 fat, 60
vāta

wind, 21, 70, 71
vātalā
 windy, 71
vāvikṛtā
 or not distorted, 34
veda
 knowledge, 11
vedanābhaghāta
 pain and injury, 11
 velvet bean
svayaṃgupta, 57
 velvet leaf
pāthā, 61
 velvet-leaf
pāthā, 50
 velvet-mite
indragopa, 32
veṇupatrikā
 bamboo leaves, 35
 verbena
phañjī, 36
 very intent
suniviṣṭa, 24
 vetiver grass
uśīra, 35
vidagdha
 inflamed, 56
vidaṅga
 embelia, 61
viḍbheda
 loose stool, 44, 54
vidruma
 coral, 67
vikalpa
 options, 22
 particulars, 16
vikāsin
 expansive, 46
vilocana
 misshapen eyeball,
 65
vipakva
 matured, 57
vīrudh
 shrubs, 14

viśada
 depression, 14
 limpid, 46
 vishvambharas
viśvambhara, 53
viṣkira
 seed-eating, 23
viśleṣa
 disjunction, 47
viśvambhara
 vishvambharas, 53
 vital energy
ojas, 14
voḍhāra
 bearers, 31
 vomiting
vāmini, 71
vṛkṣa
 flowering trees, 14
vṛnta
 stalk, 57
vṛṣabha
 bull, 32
vyadha
 piercing, 64
vyadhana
 piercing, 22
vyadhi
 disease, 16
vyākhyāta
 intended, 16
vyāla
 wild animals, 15
vyavāyīn
 pervasive, 46
vyāyojima
 multi-joins, 21
vyoṣa
 the three spices, 58
 wasps
varaki, 53
 wasted
kṣīṇa, 23
 water-born
salilotthita, 62

watered buttermilk <i>udaśvit</i> , 33	<i>ajamodā</i> , 49	double, 34
water-lily <i>utpala</i> , 32, 50	wind <i>vāta</i> , 21, 70, 71	<i>yantraṇā</i> restrictions, 64
watery eye <i>syanda</i> , 62	windy <i>vātalā</i> , 71	<i>yāpya</i> alleviated, 59 can be mitigated, 63 mitigatable, 56 treatable, 51
welfare <i>śreyas</i> , 11	wing-scorpions <i>patravṛścika</i> , 53	<i>yaṣṭikarṇa</i> stick-ear, 21
well joined <i>sādhubaddha</i> , 25	with a needle-like opening <i>sūcīvaktrā</i> , 72	<i>yavāgū</i> gruel, 49
wheezing <i>śvāsa</i> , 44	with blood <i>śonitena</i> , 65	<i>yavaudana</i> cooked barley, 63
white clitoria <i>śvetā</i> , 35	with bloodloss <i>raktakṣayā</i> , 71	year <i>saṃvatsara</i> , 15
white cutch tree <i>somavalka</i> , 36	with difficulty <i>kṛcchra</i> , 63	yellow-berried nightshade <i>kṣudrā</i> , 50
white mustard <i>siddhārthaka</i> , 66	with testicles <i>aṇḍinī</i> , 72	<i>yoga</i> compounds, 56
white siris <i>kiṇihi</i> , 50, 61	womb <i>yoni</i> , 68	<i>yojayed</i> may repair, 24
white sugar <i>sitā</i> , 66	wood apple <i>kapittha</i> , 57	<i>yoni</i> female reproductive organ, 70, 71 female reproductive system, 70, 71 womb, 68
white teak <i>kārśmarī</i> , 57	wood apple <i>kapittha</i> , 35, 36, 57	<i>yonivyāpat</i> disorders of the female reproductive system, 69
wick <i>varti</i> , 20	woodrose <i>mūṣikakarṇī</i> , 35	yuga <i>yuga</i> , 15
wicks <i>vartti</i> , 67	worms <i>kṛmi</i> , 15	
wild animals <i>vyāla</i> , 15	writhing <i>udveṣṭana</i> , 44	
wild asparagus <i>bahuputrā</i> , 36	<i>yakṛdrasa</i> liver extract, 58	
<i>śatāvarī</i> , 62	<i>yakṛt</i> liver, 58, 59	
wild celery <i>agnika</i> , 49	<i>yamalā</i>	

Botanical Reference Works

ADPS Sivarajan, V. V. and Balachandran, Indira (1994), *Ayurvedic Drugs and Their Plant Sources* (New Delhi, Bombay, Calcutta: Oxford & IBH Publishing).

- AVS Warrier, P. K., Nambiar, V. P. K., and Ramankutty, C. (1994–6) (eds.), *Indian Medicinal Plants: A Compendium of 500 Species*. Vaidyaratnam P. S. Varier’s Arya Vaidya Sala, Kottakal (Madras: Orient Longman).
- Chopra Chopra, R. N., Nayar, S. L., and Chopra, I. C. (1956), *Glossary of Indian Medicinal Plants* (3rd reprint, 1992, New Delhi: Council of Scientific and Industrial Research); vol. 2: R. N. Chopra, I. C. Chopra, and Varma ([Chopra suppl.](#)).
- Chopra suppl. Chopra, R. N., Chopra, I. C., and Varma, B. S. (1969), *Supplement to Glossary of Indian Medicinal Plants* (Reprint 1986, New Delhi: National Institute of Science Communication), ISBN: 8185038872.
- CIPP Pillay, V. V. (2010), “Common Indian Poisonous Plants,” in D. A. Warrell, T. M. Cox, and J. D. Firth (eds.), *Oxford Textbook of Medicine* (5th edn., Oxford University Press), 1371–5. DOI: [10.1093/med/9780199204854.003.090302](https://doi.org/10.1093/med/9780199204854.003.090302).
- Dutt Dutt, Uday Chand (1922), *The Materia Medica of the Hindus...with a Glossary of Indian Plants by George King. Revised Edition...by Binod Lall Sen and Ashutosh Sen and Pulin Krishna Sen* (Krishnadas Sanskrit Studies; 3rd edn., Calcutta: Madan Gopal Dass for the Adi-Ayurveda Machine Press), [URL](#), accessed 04/10/2017; Reprinted Varanasi: Chowkhamba Saraswatibhavan, 1980.
- GVDB Singh, Thakur Balwant and Chuneekar, K. C. (1972), *Glossary of Vegetable Drugs in Brhatrayi* (Varanasi: Chowkhamba Sanskrit Series Office).
- IGP Griffiths, Mark (1994), *The New Horticultural Society Index of Garden Plants* (London: Macmillan).
- NK Nadkarni, K. M. (1982a), *Dr. K. M. Nadkarni’s Indian Materia Medica, with Ayurvedic, Unani-tibbi, Siddha, Allopathic, Homeopathic, Naturopathic & Home Remedies, Appendices & Indexes ... in Two Volumes*, ed. A. K. Nadkarni, 2 vols. (3 ed., revised and enlarged by A. K. Nadkarni, Bombay: Popular Prakashan), ISBN: 8171541429, [URL](#).

Glossary and Index of Medical Substances

- axlewood (*dhava*) *Anogeissus latifolia* (Roxb. ex DC.) Wall. ex Guill & Perr. See [AVS](#): v. 1, 163 f, [Chopra](#): 20, 4
- beautyberry (*priyangu*) ← *śyāmā*. *Callicarpa macrophylla*, Vahl. See [AVS](#): v. 1, 334, [NK](#): #420. Some say also *Setaria italica* Beauv. [GVDB](#): 263–264. See also [GVDB](#): 413, 5
- cardamom (*elā*) *Elettaria cardamomum*, Maton. See [AVS](#): v. 2, 360, [NK](#): #924, Potter 66, 5
- certain minerals (*tārāvitāra*) 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 rūpyam*, *sutāraḥ pāradah*, “tāra means silver; sutāra means mercury”, 4
- corky coral tree (*pāribhadra*) *Erythrina suberosa* Roxb. See [GVDB](#) 245, 4
- costus (*kuṣṭha*) *Saussurea costus*, Clarke. See [NK](#): #2239, 5
- country sarsaparilla (*anantā*) *Hemidesmus indicus*, (L.) R. Br. See [ADPS](#): 434, [AVS](#): v. 3, 141–5, [NK](#): #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. R. ([GVDB](#): 429–431), 4
- crape jasmine (*tagara*) *Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schultes. See GJM 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), 27
- crimson trumpet-flower tree (*pātālā*) *Stereospermum chelonides*, (L. f.) A. DC. See GJM 573, [AVS](#): v. 5, 192 ff, [ADPS](#): 362 f, [AVS](#): v. 3, 1848 f, [IGP](#) 1120, Dymock et al. 1890: v. 3, 20 ff, 4
- garjan oil tree (*aśvakarṇa*) *Dipterocarpus turbinatus* Gaertn. f. See [GVDB](#): 28, [Chopra](#): 100, 4
- 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”, 4
- golden shower tree (*rājadruma*) *rājadruma* = *āragvadha*. *Cassia fistula* L. See [GVDB](#) 37, 4
- Himalayan mayapple (*vakra*) *Podophyllum emodi*, Wall. ([NK](#): #1971). But perhaps a synonym of *crape jasmine* and ?? ([GVDB](#): 354), 5
- Himalayan monkshood (*ativīṣā*) *Aconitum heterophyllum* Wall. [GVDB](#): 12, [NK](#): #39, 5
- Indian sarsaparilla (*sārivā*) → *anantā* (*Hemidesmus indicus*, (L.) R. Br. [ADPS](#): 434, [AVS](#): v. 3, 141–5, [NK](#): #1210) and black creeper (*pālindī*. *Ichnocarpus frutescens*, (L.) R.Br. or *Cryptolepis buchanani*, Roemer & Schultes [AVS](#): v. 3, 141, 3.145, 3.203, [NK](#): #1283, #1210, [ADPS](#): 434), 27
- lac (*lākṣā*) *Kerria lacca* (Kerr.). See Meulenbeld 1974: 445, [NK](#): v. 2, #32. Watt (1908: 1053–1066) is characteristically informative, and is definite about the antiquity of lac in India, 5
- myrobalan (*abhayā*) *Terminalia chebula*, Retz. See [ADPS](#): 172, [NK](#): #2451, Potter 214, 5
- 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*, 5
- nutgrass (*mustā*) *Cyperus rotundus*, L. See [ADPS](#): 316, [AVS](#): v. 2, 296, [NK](#): #782, 27
- 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, 5

small-flowered crape myrtle (*sidhraka*)
 Lagerstroemia parviflora Roxb. See
 GVDB: 432, 4

Tellicherry bark (*kuṭaja*) Holarrhena
 pubescens Wall. ex G.Don, with Wrightia
 tinctoria and W. arborea considered
 GVDB: 101–102, ADPS: 267–270, 27

turmeric (*haridrā*) Curcuma longa Linn.
 GVDB: 465, 5

weaver's beam tree (*muṣkaka*) Schrebera
 swietenoides, Roxb. See AVS: v. 5, 88,
 Lord, NK: #2246, 4

white cutch tree (*somavalka*) Acacia
 polyacantha, Willd. See AVS: v. 1, 30, IGP
 7, GJM 602, AVS: v. 2, 935; *pace* NK: #1038,
 4

Todo list

■ añjana	25
■ Cf. Arthaśāstra 1.21.8.	31
■ I'm still unhappy about this verse.	34
■ Mention this in the introduction as an example of the scribe knowing the vulgate.	34
■ fn about sadyas+	34
■ Bear's bile instead of deer's bile.	35
■ punarṇṇavā in the N & K MSS	36
■ śrita for śṛta	36
■ explain more	36
■ Medical difference from Sharma.	36
■ example where the vulgate clarifies that these should be used separately; appears to be a gloss inserted into the vulgate text.	36
■ 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.	37
■ √ vyadh not √ vedh (also elsewhere and for the ears), causative optative.	37
■ opposite of the vulgate Same as 1.8.89 (As 1980: 79).	37
■ Medical difference.	38
■ -> ativiṣa	45
■ Look up the ca. reference.	45
■ Come back to the issue of "kalpa". Look up passages in the Kośa.	52
■ write footnote: don't repeat ativiṣā; vulgate similar to H.	55
■ where is cutting with a knife related to removing bile or phlegm.	56
■ maṣī burned charcoal. Find refs.	56
■ find ref.	62
■ Check out these refs.	62
■ meaning of kalpa	62
■ or a dual?	67

