

A Translation of the Nepalese Text of the *Suśrutasamhitā*

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Sūtrasthāna

Sūtrasthāna 1: The Origin of Medical Knowledge

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹

Translation

- 1 Now I shall narrate the chapter on the origin of this knowledge.²
- 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.³

¹ [HIML](#): IA, 203–204.

² Ḍalhaṇa understood the word “knowledge (*veda*)” as specifically “medical knowledge.” He said that the word “longevity” (*āyur*) had been elided. After this opening statement, later manuscripts and commentaries include the attribution, “as the venerable Dhanvantari stated.” The absence of this statement in the early Nepalese manuscripts is highly significant because it removes the outer narrative frame of the *Suśrutasaṃhitā* (Wujastyk 2013b: 148; Klebanov 2021a: § 3.1.2; Rai 2019; Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021). On the figure of Dhanvatari in medical literature, see [HIML](#): IA 358–361.

³ 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.

- 3 “O Lord, distress arose in our minds after witnessing people thrashing about with cries, assailed by different kinds of pain and injury (*vedanāb-highāta*), 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.⁴
- 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.
- 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

4 Svayambhū is another name for Brahmā, the creator.

- have been possessed by gods, their enemies,⁵ Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas,⁶ 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.⁷
- 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.”
“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),

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

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

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

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].⁸
- 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.*⁹
- 28 In this context, as far as this discipline is concerned, a human being (*puruṣa*) is called an amalgam of the five elements and the embodied soul. This is where procedures (*kriyā*) apply. This is the locus.

Why?

Because of the duality of the world, the world is twofold: the stationary and the moving. Its nature (*ātmaka*) is twofold, depending on the preponderance of Agni and Soma.¹⁰ Alternatively, it can be considered as being fivefold. The multitude of beings in it are fourfold: they are termed "sweat-born, stone-born, caul-born and egg-born".¹¹ Where they are concerned, the human being is the main thing; others are his

8 This is an expansion of the scribe's abbreviation *bha* for *bhavati cātra ślokaḥ* "There is a verse about this" (sometimes plural).

9 Note that this verse about the origin of surgery is the first place that the name 'Dhanvantari' is introduced in the Nepalese version of the work. Dhanvantari is here identified with Brahmā, the creator of the world.

10 See Wujastyk 2004.

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

- 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 (*vaiṣaṃya*) in wind, bile, phlegm and blood.¹² 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 (*bṛṇhaṇa*), 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*).¹³ 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*).¹⁴ Amongst these, the “fruit trees” have fruit but no flowers.¹⁵ The “flowering trees” have flowers and fruit. The “herbs” die when the fruit is ripe. “Shrubs”

12 Note that four humoral substances are assumed here.

13 Pāṇini 6.3.132 provides that the final vowel of the noun *oṣadhi* may be lengthened ($\rightarrow oṣadhī$) 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.

14 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.

15 The MSS agree in reading *phalavantyaḥ* “having flowers” which is grammatically non-standard. This form is also found in the *Viṣṇudharmottarapurāṇa* (1.92.27, 1.92.27 *Viṣṇudh.*: 56r).

put out shoots.

- 32 As is well known, moving remedies are also of four types: those born in in a caul (*jarāyuja*), those born from eggs (*aṇḍaja*), those born of sweat (*sveda*), and shoots (*udbhid*). Amongst these, those born in a caul include animals (*paśu*), humans, and wild animals (*vyāla*). Birds, creepy-crawlies (*sarīṣṛpa*) and snakes are “born of eggs.” Worms (*kṛmi*), small insects (*kunta*) and ants (*pipīlika*) and others are born of sweat.¹⁶ Shoots include red velvet mites (*indragopa*) and frogs (*maṇḍūka*).¹⁷
- 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*)¹⁸ are useful; among the moving remedies pelt (*carman*), hair, nails, and blood (*rudhira*) and so forth.
- 34 And earth products (*pārthiva*) include gold and silver.¹⁹
- 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 (*muḥūrta*), a day and night (*ahorātra*), a fortnight (*pakṣa*), a month (*māsa*), a season (*ṛtu*), a half-year (*ayana*), a year (*saṃvatsara*), and yuga (*yuga*).²⁰
- 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:]²¹

- 37 This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.²²

16 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).

17 On *indragopa*, see Lienhard 1978.

18 On juice extract (*svarasa*) see CS 1.1.73, 1.4.7; Ḍalhaṇa on 4.10.12 (Su 1938: 450).

19 The flow of concepts in the treatise seems to be interrupted here.

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

21 See footnote 8.

22 On the topic of the “group of four,” the commentator Ḍalhaṇa considers them to be “food, behaviour, earthen products and items created by time.” He refers to

- 38 *There are two kinds of invasive diseases. Some certainly²³ 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 (*vyādhi*),
 - 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.

[There is a verse about this:]²⁴

the author of the lost commentary entitled *Pañjikā*, and to Jejjāta (HIML: IA, 372–3, 192). In his view, these early commentators do not agree that the fourfold grouping (*caturvarga*) refers to the quartet of stationary (*sthāvara*), moving (*jaṅgama*), earthen products (*pārthiva*) and items created by time (*kālakṛta*) (Su 1938: 9a).

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

24 See footnote 8.

- 41 *This seed of medicine has been declared in brief. Its explanation will
be given in one hundred and twenty chapters.*²⁵
- 42 There are one hundred and twenty chapters in five sections (*adhyāya*).²⁶
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.²⁷
- [There is a verse about this:]²⁸
- 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.*

25 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.

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

27 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* (Su 1938: 1.3–4ab) there is indeed a statement that picks up the point about there being 120 chapters.

28 See footnote 8.

Sūtrasthāna 2: The Initiation of a Student

Literature

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

Translation

Sūtrasthāna 3: The Table of Contents

Literature

Translation

1
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Sūtrasthāna 13: On Leeches

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of studies on Indian leeches and their application.³⁰

A Persian version of this chapter of the *Suśrutasamhitā* was included in *Sikandar Shāh's Mine of Medicine* (*Ma'din al-shifā' i Sikandar-Shāhī*) composed in 1512 by Miyān Bhūwah b. *Khawāṣṣ Khān*.³¹

More recently, Brooks has explored the sense of touch in relation to leeching and patient-physician interactions.³²

Translation

- 1 And now we shall explain **the chapter** about leeches.
- 3 The leech is for the benefit of kings, rich people, delicate people, children, the elderly, fearful people and women. It is said to be the most gentle means for letting blood.
- 4 In that context, one should let blood that is corrupted by wind, bile or phlegm with a horn, a leech, or a gourd, respectively. Or, each kind can be made to flow by any of them in their particular way.³³

³⁰ *HIML*: IA, 209; IB, 324, n. 131.

³¹ Siddiqi 1959: 96–109; Azeez Pasha 1971; Storey 1971: 231–232; *HIML*: IB, 324, n. 128; Speziale 2019: 8–9.

³² Brooks 2020a,b; 2021a,b.

³³ This sentence is hard to construe grammatically, although its meaning seems clear. In place of विशेषस्तु, Cakrapāṇidatta and Ḍalhaṇa both read विशेषतस्, which helps interpretation (*Su* 1939: 95, *Su* 1938: 55). It is noteworthy that the critical syllable स्तु is smudged or corrected in both MS Kathmandu NAK 1-1079 and in 1-1146, a much later Devanāgarī manuscript.

- 5x And there are the following about this:
- 1.13.5 The horn of cows is praised for being unctuous, **smooth**, and very sweet. Therefore, when wind is troubled, that is good for bloodletting.³⁴
- 1.13.5a Having a length of seven fingers and a large body the shape of a half moon, should first be placed into a cut. A strong person should suck with the mouth.³⁵
- 6 A leech lives in the cold, is sweet and is born in the water. So when someone is afflicted by bile, they are suitable for bloodletting.³⁶
- 7 A gourd is well known for being pungent, dry and sharp. So when someone is afflicted by phlegm it is suitable for bloodletting.
- 8 In that context, at the scarified location one should let blood using a horn wrapped in a covering of a thin bladder, or with a gourd with a flame inside it because of the suction.³⁷
- 9 Leeches are called “*jala-ayu-ka*” because water (*jala*) is their life (*āyur*).³⁸ “Home” (*okas*) means “dwelling;” their home is water, so they are called “water-dwellers (*jalaaukas*).”
- 10 There are twelve of them: six are venomous and just the same number are non-venomous.

There is an insertion in the text, printed in parentheses in the vulgate at 1.13.4 (Su 1938: 55) as विशेषतस्तु विस्राव्यं शृङ्गजलौकालाबुभिर्गृहीयात्. This insertion is not included in the earlier edition of the vulgate, but is replaced by स्निग्धशीतरूक्षत्वात् (Su 1931: 54). Ḍalhaṇa noted that, “this reading is discussed to some extent by some compilers (निबन्धकार), but it is definitely rejected by most of them, including Jejjhaṭa.”

- 34 The vulgate replaced “smooth” with “hot.”
- 35 This passage is not found in the vulgate, but it is similar to the passage cited by Ḍalhaṇa at 1.13.8 (Su 1938: 56) and attributed to Bhāluki. Bhāluki was the author of a *Bhālukitantra* that may have predated Jejjhaṭa and might even have been one of the sources for the *Suśrutasaṃhitā* (HIML: IA, 689–690 *et passim*). The editor Ācārya was aware of this reading in the Nepalese manuscripts; see his note 4 on 1.13.5 (Su 1938: 55, note 4).
- 36 Note that the particular qualities (*guṇas*) of the leech in this and the following verses counteract the quality of the affliction. See Brooks 2018: 113, table 1.
- 37 There are questions about the wrapping or covering of the horn. Other versions of the text, and the commentator, propose that there may be two coverings, or that cloth may be a constituent. Comparison with contemporary horn-bloodletting practice by traditional Sudanese healers suggests that a covering over the top hole in the horn is desirable when sucking, to prevent the patient’s blood entering the mouth (PBS 2020). Our understanding of this verse is that the bladder material is used to cover the mouthpiece and then to block it, in order to preserve suction in the horn for a few minutes while the blood is let.
- 38 This is a folk etymology.

11 Here is an explanation of the venomous ones, together with the therapy:

- Black (*kṛṣṇā*)
- Mottled (*karburā*)
- Sting-gush (*alagarddā*)³⁹
- Rainbow (*indrāyudhā*)
- Oceanic (*sāmudrikā*)
- **Cow-praising** (*govandanā*)⁴⁰

Amongst these,

- The one called a Black is the colour of kohl and has a broad head;
- The one called Mottled is like the Indian mottled eel, long with a segmented (*chinna*), humped belly.
- The one called Sting-gush is hairy, has large sides and a black mouth.
- The one called Rainbow is coloured like a rainbow, with vertical stripes.
- The one called Oceanic is slightly blackish-yellow, and is covered with variegated flower patterns.
- The one called Govandana is like a cow's testicles, having a bifurcated form on the lower side, and a tiny mouth.

When someone is bitten by them, the symptoms are: a swelling at the site of the bite, excessive itching and fainting, fever, a temperature, and vomiting. In that context the Great Antidote (*mahāgada*) should be applied in drinks and liniments (*ālepana*), etc.⁴¹ A bite by the Rainbow leech is not treatable. These venomous ones have been explained together with their remedies.

12 Now the ones without venom.⁴²

- Tawny (*kapilā*)
- Ruddy (*piṅgalā*)

39 Treating गर्दा as गल्दा and translating as in RV 8.1.20, with Jamison and Brereton (2014: 1023, verse 20 and cf. commentary). But if गर्द is to be taken from √गर्द् then we might have “crying from the sting.”

40 The manuscripts all read गोवन्दना against the vulgate's गोचन्दना.

41 The “Great Antidote” is described in the Kalpasthāna, at 5.5.61–63ab (Su 1938: 578). Ḍalhaṇa and the vulgate included errhines in the list of therapies, and Ḍalhaṇa added that “etc.” indicated showers and baths too.

42 The translations of the names of these leeches are slightly whimsical, but give a sense of the original; *sāvarikā* remains etymologically puzzling.

- Dart-mouth (*śaṅkumukhī*)
- Mouse (*mūṣikā*)
- Lotus-mouth (*puṇḍarikamukhī*)
- Sāvarikā (*sāvarikā*)

Amongst these,

- The one called Tawny has sides that look as if they are dyed with realgar and is the colour of glossy mung beans on the back.⁴³
- The one called Ruddy is a bit red, has a round body, is yellowish, and moves fast.
- The one called Dart-mouth is the colour of liver, drinks fast and has a long mouth.
- The one called Mouse is the colour and shape of a mouse and has an undesirable smell.
- The one called Lotus is the colour of mung beans and has a mouth that looks like a lotus.
- The one called Sāvarikā has the colour of a lotus leaf and is eighteen centimetres long. But that one is used when the purpose is an animal.

The non-venomous ones have been explained.

- 13 Their lands are Yavana, Pāṇḍya, Sahya, Potana and so on.⁴⁴ Those in

43 The compound *सिग्धमुद्गवर्णा* is supported by all the manuscript witnesses and is translated here. Nevertheless, the reading of the vulgate, that separates *सिग्धा*, f., “slimy” as an adjective for the leech, seems more plausible: “it is slimy and the colour of a mung bean.”

44 This passage is discussed by Karttunen (2015: 109–110, 388–389). At the time of the composition of the *Suśrutasaṃhitā*, Yavana would most likely have referred the Hellenistic Greek diaspora communities in Bactria and India (Law 1984: 136–137; Mairs 2013; 2014). Unproblematically, the Pāṇḍya country is the extreme south-eastern tip of the Indian subcontinent (Schwartzberg, Bajpai, et al. 1978: E8, p. 20 *et passim*), and Sahya refers to the Western Ghats (Schwartzberg, Bajpai, et al. 1978: D5–7, p. 20 *et passim*). The vulgate reading “Pautana” is not a known toponym. Potana was the ancient capital of the Aśmaka Mahājanapada mentioned in Pali sources and in inscriptions at Ajāntā and elsewhere, and identified by Law (1984: 142, 179) and P. Gupta (1989: 18) with Pratiṣṭhāna, modern Paithan on the Godavari river. The recurring ancient epithet describing the Aśmaka kingdom is that it was on the Godāvarī, and Paithan is flanked to the south west and south east by this river.

Some scholars have identified the name with modern Bodhan in Telangana (Sircar 1971: 189; Schwartzberg, Bajpai, et al. 1978: E6, p. 14, 140 *et passim*; Sen 1988: 102), but this implausible identification is traceable to a speculative suggestion by

- particular have large bodies and are strong, they drink rapidly, consume a lot, and are without venom.
- 14 In that context, the venomous leeches are those originating in decomposing venomous insects, frogs, urine, feces and in polluted water.⁴⁵ The , non-venomous ones originate in decomposing sacred lotus, blue water-lily, white water-lily, fragrant lotus, pondweed and in pure waters.
- 15 There is a verse on this:

*These ones move about in sweet-smelling habitats that are abundant with water. Traditionally, they do not behave in a confused manner or lie in the mud.*⁴⁶

- 16 They can be caught with a fresh hide or after being caught in other ways.⁴⁷
- 17 Then these should be put into a large new pot furnished with mud and the water from lakes or wells. One should provide what they need to eat. One should grind up pondweed, dried meat, and aquatic tubers, and one should give them grass and aquatic leaves to lie on, and every

Raychaudhuri (1953: 89, n. 5, 143) based on a variant form “Podana” found in some early manuscripts of the *Mahābhārata*: “This name reminds one of Bodhan in the Nizam’s dominions,” “possibly to be identified with Bodhan.”

Ḍalhaṇa on 1.13.13 (Su 1938: 57) anachronistically identified “Yavana” as the land of the Turks (तुरुष्क) and “Pautana” as the Mathurā region. He also noted, as did Cakrapāṇidatta (Su 1939: 97), that this passage was not included by some authorities on the grounds that the habitats of poisonous and non-poisonous creatures are defined by other criteria.

45 The vulgate on 4.13.14 (Su 1938: 57) includes fish in this list.

46 Ḍalhaṇa on 1.13.14 (Su 1938: 57) discussed why the leeches would not “behave in a confused manner” (सङ्कीर्णचारिन्), saying that they do not “eat a diet that is unwholesome because of poison etc.” (विषादिविरुद्धाहारभुजः). The use of विरुद्ध is odd here, but cf. Ḍalhaṇa’s suggestion at 4.23.4 (Su 1938: 485) that विरुद्ध refers to the chapter on wholesome and unwholesome foods (हिताहिताध्याय, 1.20 (Su 1938: 94–99)).

47 “Fresh hide” (आर्द्रचर्मन्) may suggest that the animal skin still includes meat or blood that is attractive to a leech.

The Nepalese witnesses all read गृहीत्वा “having (been) caught” for the vulgate’s गृहीयात् “one may grasp (by other means).” This is hard to construe clearly.

Ḍalhaṇa on 1.13.15 (Su 1938: 57) quoted “another treatise” (तन्त्रान्तरवचनात्) that said that autumn is the time to collect leeches. He also explained that “other methods” of collecting leeches included smearing a leg or other limb with cream, butter or milk, etc., or using a piece of flesh from a freshly killed animal.

three days water and food. Every week, one should transfer them into a different pot.

18 And on this:

*One should not **nurture** those that are thick in the middle, that are injured,⁴⁸ or **thin**, those that are not born in the proper habitat, those that will not attach, that drink little or those that are venomous.*

- 19 First of all, get the patient who has an ailment that is treatable by leech-bloodletting to sit or lie down. Then, dry **any diseased opening** with powders of earth and cow-dung. Then make them free from impurities, with their bodies smeared with Indian mustard and turmeric and moving about in the middle of a cup of water. After all this, the physician should make them attach to the site of the ailment. Now, for those that are not attaching, he should provide a drop of milk or a drop of blood. Alternatively, one should make some marks with a knife (*śas-trapada*).⁴⁹ And if it still will not attach, make other ones attach.
- 20 He can know that it is attached when it fixes on, hunching its neck and making a mouth like a horse's hoof. Then, he should cover it with a wet cloth and keep it there.
- 21 Now, if the physician knows, from the arising of pricking and itching at the bite, that clean blood is being taken, he should take it off. Then, if it does not release because of the scent of blood one should sprinkle its mouth with powdered rock salt.
- 22 Then he should coat it with rice-grain chaff, rub its mouth with sesame oil and salt and cause it to vomit by holding its tail in his left hand and very slowly rubbing it with the thumb and finger of his right hand in the proper direction, as far as the mouth, until it is properly purged.⁵⁰ A properly purged leech placed in a goblet of water moves about, wanting to eat. If it sinks down, not moving, it is badly purged; one should make it vomit once again.
- A badly purged leech develops an incurable disease called Indrapada.⁵¹

48 Pace Ḍalhaṇa on 1.13.18 (Su 1938: 57) who glossed अमनोज्ञदर्शन as “nasty looking.”

49 On पद as a “mark,” “imprint,” or “place of application,” cf. 4.1.29 (Su 1938: 399), 5.4.15 (Su 1938: 571), etc. See footnote 420.

50 The expression शालितण्डुलकाण्डन, “rice-grain chaff” could be read as “unhusked rice, rice grains and chaff” but this seems unlikely in the context.

51 The Nepalese witnesses read इन्द्रपद/इन्द्रापद, but the vulgate reads इन्द्रमद, a term that is found in other texts such as the *Mānasollāsa* 6.641 (vol. 1, 87), where it is a fever

One that protects its deflated head with its body, suddenly curls up and makes the water warm is traditionally said to have Indrapada.

Thus, one should keep such a one as before.⁵²

- 23 After observing the proper or improper flow of the blood, one should rub the opening made by the leech with honey.⁵³ Alternatively, one may bind it up and smear it with ointments that are astringent, sweet, oily and cold.

- 24 And about this there is the following:

When the leeches have just drunk, one should pour ghee on it. And one should pour on to the blood things that are capable of stopping the blood.

- 25 *Someone who knows habitats, the capture, feeding and bloodletting of leeches is worthy to treat a king.*

affecting fish, and the *Garuḍapurāṇa* 1.147.3 (tr. A Board of Scholars 1957: 2, 425) where it is fever affecting clouds; see further Brooks [forthcoming](#).

52 The vulgate includes “well purged” as the object in this sentence, which makes better sense.

53 In the Nepalese witnesses, the object of this passage is जलौकामुखम् “the mouth of the leech,” that we have interpreted, perhaps freely, as “opening made by the leech.” Logically and as transmitted in the vulgate, this passage should be about managing the wound on the patient that has been made by the leech.

Sūtrasthāna 14: On Blood

Previous scholarship

Meulenbeld offered both an annotated summary of this chapter as well as a study specifically on the place of blood in Ayurvedic theory.⁵⁴

Translation

- 1 Now we shall declare the chapter about blood.
- 2
- 3 Food is of four types.⁵⁵ It is endowed with six tastes and is made of the five elements.⁵⁶ It has either two or eight potencies, and is endowed with many qualities. ⁵⁷ Chyle (*rasa*) is the most intangible essence of this food that is properly transformed. It is of the nature of fire. Chyle is situated in the heart. From the heart, it enters into the twenty-four arteries—ten upward arteries, ten downward, and four

54 [HIML](#): IA, 209–201 and Meulenbeld 1991. Meulenbeld’s footnotes on this chapter in [HIML](#): IB, 325 ff. refer often to “Hoernle’s note.” This appears to be a reference to Hoernle’s copious notes to his translation of this chapter (Hoernle 1897: 87–98). Meulenbeld (1990) also discussed Sanskrit veterinary texts in the light of their standard theory of four humours, including blood.

55 Ḍalhaṇa on 1.14.3 ([Su 1938](#): 59) said that the four types of food are those that can be drunk, licked, eaten and chewed (पेयलेह्यभोज्यभक्ष्य). The main text of the *Carakasamhitā* is explicit about these categories at 4.3.4(1) ([Ca 1941](#): 308): पानाशनभक्ष्यलेह्य । “things drunk, eaten, chewed or licked.” Yagi (1994) discussed the distinction between भक्ष्य and भोज्य; for further Indological background on foods, see the studies by Olivelle (1995; 2001) and the classic reference works by Achaya (1994; 1998). The long, final adhyāya of the *Suśrutasaṃhitā*’s sūtrasthāna (ch. 46) is a treatise on food in āyurveda.

56 *Idem*, Earth, water, fire, air, space

57 Ḍalhaṇa related these qualities to the twenty standard गुण of āyurveda; see, e.g., their listing by Vāgbhaṭa, translated by Wujastyk (2003b: 207).

sideways—and doing so day after day owing to the reaction of past activities that are caused by the invisible,⁵⁸ it satisfies the entire body, enlivens it, prolongs it,⁵⁹ and makes it grow. The motion of the entity that flows throughout the body should be understood by inference. That motion causes deterioration and growth.

With regards to the chyle that flows through all the limbs, humours, body tissues, and impurities of the body, the question arises, “Is it moist or is it fiery?” It is understood to be moist because of its fluidity while flowing⁶⁰ and due to attributes such as mobility, lubrication, enlivening, satisfaction, and supporting.⁶¹

- 4 That watery chyle is then reddened after reaching the liver and spleen.
5 There are verses about this.

Experts know that blood is the untransformed fluid that is reddened by the pure fire element within the bodies of living beings.

- 6 *It is only due to chyle that women’s blood called menses exists. It increases from the twelfth year and decreases after the fiftieth year.*
7 The menstrual blood, however, is called fiery.⁶² That is due to the embryo being fiery and moist.⁶³
8 Others state that the embryo as constituted of the five elements and the preceptors call it the living blood.
9 There are verses about this.

That is because blood exhibits the qualities of earth, etc. such as a fleshy smell, fluidity, redness, pulsation and thinness.

- 58 अदृष्ट (unseen): Doing any righteous or unrighteous action produces good merit and demerit respectively. This good merit and demerit are called अदृष्ट (invisible) because it cannot be directly known but can only be assumed through logical deduction.
59 In the sense of prolonging its lifespan
60 The vulgate emends अनुसरणे to अनुसरण- against the Nepalese MSS. This is logical because mobility would seem to be one of the attributes. Although it is awkward, we read अनुसरणे as a locative absolute “while flowing.”
61 The duality being discussed here is that of the essential qualities of Fire and of Soma (agni and soma). See further discussion by Wujastyk (2004) and Angermeier (2021).
62 Ḍalhaṇa commented that this is to distinguish the menstrual blood from regular blood that is gentle.
63 Ḍalhaṇa commented here that the embryo is called such because the menstrual blood is fiery and the semen is gentle (सौम्य). On the fiery/moist distinction (आग्नेय।सौम्य), see Wujastyk 2004; Angermeier 2021.

- 10 *Blood is formed from chyle, flesh from blood, lymph from flesh, bone from lymph, marrow from bone, semen from marrow, and progeny from semen.*
- 11 There, the essence (chyle) of food and drink is the nourisher of these body tissues.
- 12 There is a verse about this.
- A living being should be known as born from chyle. One should diligently preserve⁶⁴ chyle by administering food and drink, being nicely disciplined with food⁶⁵.*
- 13 The verbal root *rasa* means movement.⁶⁶ Because it keeps moving day after day, it is called *rasa* (chyle).⁶⁷
- 14 Chyle stays in every body tissue for 2548 ((25*100)+48) *kalās* and nine *kāṣṭhas*. As such, it becomes semen after a month. For women, it becomes menses.
- 15 Here are verses about this.
- According to similar and dissimilar treatises, the quantity of kalās in this group⁶⁸ is 18,090.*
- This is the particular transformation period regarding chyle that lasts for a person with mild fire⁶⁹. For a person with developed fire, one should know it to last for the exact same time⁷⁰*
- 16 Resembling the expanse of sound, flame, and water, that entity moves along in a minute manner throughout the entire body⁷¹.

64 All three manuscripts have रक्षेत् which is an incorrect form. रक्षेत् is the correct form.

65 आहारेण - The third case is used. The semantic property of the third case used here is unclear. Unclear regarding if there is any rule in the *Aṣṭādhyāyī* justifying this usage.

66 kunj-1907

67 In the list of verbal roots of Pāṇini, the verbal root रस(*rasa*) means taste and moistening. It does not mean movement.

68 duration of chyle in all the body tissues as a whole

69 Perhaps this refers to the digestive fire.

70 Although the vulgate does not have this verse, there is an argument presented in Ḍalhaṇa's commentary on 1.14.16 (Su 1938: 63) that for a person with intense fire, chyle becomes semen after eight days, and for a person with mild fire, chyle becomes semen after a month. Ḍalhaṇa said that this opinion is refuted by Gayadāsa Ācārya in many different ways. Ḍalhaṇa continued that the proper understanding is that for a person with a strong fire, chyle becomes blood in a little less than a month, and for a person with a mild fire, chyle becomes blood in a little more than a month.

71 Ḍalhaṇa comments (Su 1938: 63) that the expanse of sound indicates the sideways

- 17 The aphrodisiac medicines, however, being used like a purgative due to their excessively strong characteristics, evacuate the semen.
- 18 Just as it cannot be said that the fragrance in a flower bud is present in it or not, but accepting that there is the manifestation of existing entities⁷², it,⁷³ however, is not experienced only due to its intangibility. That same entity is experienced at another time in the blossomed flower. In the same way regarding children also, the manifestation of semen happens because of the advancement of age⁷⁴. For women, the manifestation is different as rows of hair, menses, etc.
- 19 That very essence of food does not nourish very old people due to their decaying bodies.
- 20 These entities are called body tissues (*dhātu-s*) because they bear the body⁷⁵.
- 21 Their decay and growth are due to blood. Therefore, I will speak about blood. In that regard: The blood that is foamy, tawny, black, rough, thin, quick-moving, and non-coagulating is vitiated by air. The blood that is dark green, yellow, green, brown, sour-smelling, and unpleasant to ants and flies is vitiated by bile. The blood that is orange, unctuous, cool, dense, slimy, flowing, and resembling the colour of flesh-muscles is vitiated by phlegm. The blood having all these characteristics is vitiated by the combination of all three of them. The blood that is extremely black is vitiated by blood⁷⁶ just as bile. The blood that has the combined characteristics of vitiations of two humours is vitiated by two humours.
- 22 The blood that is of the colour of insect cochineal, not thick, and not discoloured should be understood to be in its natural state.
- 23 I will speak of the types of blood that should be let out in another sec-

movement of chyle, the expanse of flame indicates the upward movement of chyle, and the expanse of water indicates the downward movement of chyle.

72 This is the doctrine of pre-existence of the effect (सत्कार्यवाद, *satkāryavāda*) first propounded by Sāṅkhya philosophers.

73 fragrance

74 Since chyle becomes semen in a month's time, a question arises "Why then is semen absent in young children?". The reply is given in this passage.

75 The etymological meaning of the Sanskrit word धातु (*dhātu*) is "that which bears [the body]". Thus, the body tissues are called *dhātu-s* because they bear the body. This means that the body tissues are the elements that make up the body and sustain it.

76 Y. T. Ācārya and N. R. Ācārya (*Su 1938*: 64) quote Cakrapāṇidatta in a footnote: "This is the symptom when the blood vitiated in one part of the body vitiates the blood in another part."

tion.

24 Now, I speak of those that should not be let out. The swelling appearing in all the limbs of the body of a weak person that happens due to consuming sour food. The swellings of people with jaundice, piles, large abdomen, emaciation, and those of pregnant women.

26 In that regard, one should quickly insert the surgical instrument that is simple, not very close, fine, uniform, not deep, and not shallow.

26a One should not insert the instrument into the heart, lower belly, anus, navel, waist, groins, eyes, forehead, palms, and soles.

26b In the case of swellings filled with pus, one should treat them in the same way as stated earlier.

27-27a There, when the swelling is not pierced properly, when phlegm and air have not been sweated out, after having a meal, and due to thickness, the blood does not ooze out or oozes out less. Here is a verse regarding it.

28ab-cd *Blood does not ooze out of humans when in contact with air, passing stool or urine, and when intoxicated, unconscious, fatigued, sleeping, or in cold surroundings.*

29 That vitiated blood when not taken out increases the disease.

30 The blood that is let by an ignorant physician in cases of very hot surroundings, profuse perspiration, and excessive piercing, flows excessively. That profuse bleeding causes the appearance of acute headache, blindness, and partial blindness, or it quickly causes subsequent wasting, convulsions, tremors, hemiplegia, paralysis in a limb, hiccups, coughing, panting, jaundice, or death.

31ab-cd The physician should let out the blood when the weather is not very hot or cold, when the patient is not perspiring or heated up, and after the patient has had a sufficient intake of gruel.

32ab-cd After coming out properly, when the blood stops automatically, one should know that blood to be pure and drained properly.

33ab-cd The symptoms of the proper drainage of blood are the experience of lightness, alleviation of pain, a complete end of the intensity of the disease, and satisfaction of the mind.

34ab-cd Defects of the skin, tumours, swellings, and all diseases caused by blood never arise for those who regularly drain their blood.

35 When the blood does not flow out, the physician should rub cardamom and camphor on the opening of the boil with three or four or all among crêpe ginger (*Cheilocostus speciosus*), butterfly gardenia (*Ervatamia*

coronaria Stapf), velvet-leaf, deodar, embelia, leadwort, the three spices (black pepper, long pepper, and dry ginger), *āgāradhūma*, turmeric, sprouts of purple calotropis, and fruit of the Indian beech, according to availability, with excessive salt. By doing so, the blood flows out properly.

- 36 When there is an excessive flow of blood, the physician should sprinkle the opening of the boil with dry powders of lodh tree, liquorice, beautyberry, *pattāṅga*, red chalk, elixir salve, seashell, barley, green gram, wheat, and resin of the Sāla tree, and then press it with the tip of a finger. One should tightly bind it with powdered barks of Sāla, white dammer tree, arjun, white babool, *granthi*, axlewood, and *dhanvāna* (Camelthorn), or a linen cloth⁷⁷, or *vadhyāsita*, or bone of cuttlefish, or powdered lac, along with the binding materials mentioned. After the piercing, the physician should pierce it again. The physician should serve cool clothing, food, a dwelling place, a bath, cooling ointments, and plastering. Or, one can cauterize it with heat. Or, as mentioned, one should give a decoction of *kākolī*, etc. sweetened by sugar and honey to drink. Or, one should consume the blood of black buck, deer, ram, buffalo, rabbit, or pig, accompanied by milk, green gram soup and meat soup⁷⁸. The physician should treat the pains as mentioned.

36a Here are verses about this.

- 37ab-cd *When blood flows out due to the decay of body tissue, fire becomes weak⁷⁹ and the wind becomes highly agitated because of that endeavour.*
- 38ab-cd *The physician should serve the patient food that is not very cold, light in digestion, unctuous, increases blood, slightly sour or not sour at all.*
- 39ab-cd *This is the four-fold method of hindering blood: joining, coagulation, haemostasis. and cauterization.*
- 40ab-cd *The astringent substance joins the opening, the cold substance coagulates the blood, the ash stops the blood, and cauterization contracts the blood vessel.*
- 41ab-cd *If the blood does not coagulate, the physician should employ joining.*

77 Su 1938: 66 has क्षौमेण वा ध्यापितेन - "with linen reduced to ashes". Presumably, it is this ash that is also referred to in item 40.

78 Based on Ḍalhana's comment as found in Su 1938: 66

79 This refers to the digestive fire.

- If the blood does not stop by joining the opening then he should employ haemostasis.*
- 42ab-cd *The physician should endeavour by employing these three methods according to the procedure. If these methods are unsuccessful then cauterization is highly desirable.*
- 43ab-cd *If the blood remains impure, the disease does not aggravate. The physician should then make the blood pure⁸⁰ and not drain blood in excess.*
- 44ab-cd *Blood is the basis of the body. It is sustained by blood only.*
- 44ef *Blood is called life. One should therefore save blood.*
- 45ab-cd *If the air in the person who underwent blood-letting is aggravated due to a cold shower, etc., the swelling with pricking pain should be sprinkled with lukewarm clarified butter.*

Can't be
"sedation"

⁸⁰ Dalhaṇa comments (Su 1938: 66) that one should purify the blood again by sedation, etc.

Sūtrasthāna 16: Repairing Pierced Ears

Previous literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.⁸¹ A book on this topic, arising out of the present project, with edition, translation and discussion of the Nepalese transmission is published by Wujastyk, Birch, Klebanov, et al. 2023.

Translation

1 Now we shall expound the method for piercing the ear.⁸²

81 [HIML](#): IA, 211–212317.

82 The topic of piercing the ear (*kaṛṇavyadha*) 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 *Aṣṭāṅgahṛdayasamhitā* 1.26.26 ([Ah 1939](#): 321). In the versions of the text known to Ḍalhaṇa ([Su 1938](#): 76) and Cakrapāṇidatta ([Su 1939](#): 125), the heading of this chapter is “the method of piercing and joining the ear” (कर्णव्यधबन्धविधि), instead of the Nepalese version’s “the method of piercing the ear” (कर्णव्यधविधि). The topic of joining the ear (कर्णबन्ध) 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 of the text. For a discussion of the frame story in the Nepalese version, see Birch, Wujastyk, Klebanov, Parameswaran, et al. 2021.

When commenting on this statement, Ḍalhaṇa ([Su 1938](#): 76) and Cakrapāṇidatta ([Su 1939](#): 125) observed that only the ears of healthy people should be pierced, and they quoted the lost authority Bhoja to affirm this: “When piercing the ears of chil-

- 2 One may pierce a child's ears for the purpose of preserving and decorating. During the bright fortnight, when the child is in the sixth or seventh month, on renowned days, half days, hours and constellations, the physician, with a calming presence, sits the boy, who has received a benediction and the recitation of a blessing,⁸³ on the lap of a wet-nurse.⁸⁴ Then, he should pull the ear with his left hand and pierce straight through with his right hand at a naturally-occurring cleft.⁸⁵ For a boy, do the right ear first; for a girl, do the left one. Use a needle on a thin ear; an awl on a thick one.⁸⁶
- 3 One may know that it was pierced in the wrong place if there is excess blood or too much pain. The absence of side-effects is a sign that it has been pierced in the right place.⁸⁷

dren who are free of disease at these times, their ear flaps and apertures, as well as limbs, increase" (1.16.1 (Su 1938: 76)).

Some texts use the adjective कर्ण-वेधनी rather than व्यधनी.

- 83 The causative form व्यधयेत् is known in Classical Sanskrit (Whitney 1885: 166). The compound कृतमङ्गलस्वस्तिवाचनं "who has received a benediction and the recitation of a blessing" is an emendation based on the similar text at 3.2.25 (Su 1938: 346). Cf. also 3.10.8, 24 (Su 1938: 388, 390) that have slightly different formulations.
- 84 The versions of 1.16.3 known to Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76) have the additional compound कुमारधराङ्के ("on the lap of one who holds the child") after धात्र्यङ्के. The gender of कुमारधर is made clear by Ḍalhaṇa's gloss "a man who holds the child." Also, both versions add बालक्रीडनकैः प्रलोभ्य ("having enticed with children's toys") to indicate that the child should be tempted 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 भक्ष्यविशेषैर्वा ("or by special treats") before बालक्रीडनकैः, but we see no trace of these small kindnesses in our witnesses.
- 85 The versions of 1.16.3 of Cakrapāṇidatta (Su 1939: 126) and Ḍalhaṇa (Su 1938: 76) add that this naturally-occurring cleft is illuminated by a ray of sunshine (आदित्यकरावभासिते).
The syntax of this slightly long sentence is unusual because of the dual object तौ "the two (ears)" at the start of the sentence, which is remote from the main verb. The other singular accusatives referring to the ear being pierced are governed by absolutes.
- 86 Ḍalhaṇa on 1.16.3 (Su 1938: 76) clarifies that the awl is a shoe-maker's knife for piercing leather. He also cites the authority of "the notes of Lakṣmaṇa" (Lakṣmaṇaṭīpapaṇaka) on the issue of the thickness of the needle. The Notes of Lakṣmaṇa is not known from any earlier or contemporary sources and was presumably a collection of glosses on the Suśrutasaṃhitā that was available to Ḍalhaṇa in twelfth-century Bengal. See Meulenbeld (HIML: IA, 386).
- 87 At this point, MS Kathmandu KL 699 is missing a folio, so the rest of this chapter is

- 4 In this context, if an ignorant person randomly pierces a duct there will be fever, burning, swelling, pain, lumps, paralysis of the nape of the neck, convulsions, headache or sharp pain in the ear.⁸⁸
- 5 Having removed the wick (*vartti*) because of the accumulation of humours or an unsatisfactory piercing at that location,⁸⁹ he should smear it with barley, liquorice, Indian madder, and the root of the castor oil tree, thickened with honey and ghee. And when it has healed well, he should pierce it again.⁹⁰
- 6 He should treat the properly-pierced ear by sprinkling it with raw sesame oil. After every three days one should make a thicker wick and do the very same sprinkling.⁹¹
- 7 Once the ear is free from humours or side-effects, one should put in a light dilator (*pravardhanaka*) in order to enlarge it enough.⁹²

constructed on the basis of witnesses MS Kathmandu NAK 5-333 and MS Kathmandu NAK 1-1079.

- 88 This passage is significantly augmented in Cakrapāṇidatta's and Ḍalhaṇa's versions, to outline the specific problems caused by piercing three ducts called कालिका, मर्मिका and लोहितिका (1.16.4 (Su 1939: 126) and 1.16.5 (Su 1938: 77) respectively). 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: 'लोहितिका, मर्मिका 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 लोहितिका. Pain and lumps are thought to arise from piercing मर्मिका. Piercing कालिका gives rise to swelling, fever and burning.'
- 89 In addition to these reasons, Ḍalhaṇa at 1.16.6 (Su 1938: 77) added "because of piercing with a painful, crooked and unsatisfactory needle" (क्लिष्टजिह्वाप्रशस्तसूचीव्यधात्) and "because of a wick that is too thick" (गाढतरवर्तित्वात्). Ḍalhaṇa was aware of the reading in the Nepalese version because in his commentary on 1.16.6 (Su 1938: 77) he noted that some read "because of the accumulation of humours" rather than "because of piercing with a painful, crooked and unsatisfactory needle or because of a wick that is too thick." On the concept of humoral accumulation (*samudāya*), see the important analysis by Meulenbeld (1992).
- 90 The description of the drug is ambiguous: the word "root" could be taken with each plant, or just with the last. The vulgate reads just "castor oil root" so we assume that is the traditional interpretation.
- 91 Describing ear and nose operations similar to those here, Celsus described the use of a quill (Latin *pinna*) where the Sanskrit authors use a cotton wick (*De Medicina* VII ¶10–11, Spencer 1935–38: 3, 366–367).
- 92 Cakrapāṇidatta on 1.16.6 (Su 1939: 127) and Ḍalhaṇa on 1.16.8 (Su 1938: 77) pointed out that the dilator can be made of wood, such as that of the prickly chaff-flower,

- 8 A person's ear enlarged in this way can split in two, either as a result of the humours⁹³ or a blow.

Listen to me about the ways of joining it can have.

- 9 Here, there are, in brief, fifteen ways of mending the ear flap.⁹⁴ They are as follows: Rim-join (*nemīsandhānaka*), 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 (*kākausṭha*).⁹⁵

In this context, among these,

Rim-join:	both flaps are wide, long, and equal.
Lotus-splittable:	both flaps are round, long, and equal.
Dried flesh:	both flaps are short, round, and equal.
Fastening:	one flap is longer on the inside.
Cheek-ear:	one flap is longer on the outside. ⁹⁶
Take-away:	the flaps are missing, in fact, on both sides.
Ready-split:	the flaps are like a dais (<i>pīṭha</i>).
Multi-joins:	one flap is small, the other thick, one flap is equal, the other unequal.
Door-hinge:	the flap on the inside is long, the other is small.
Half door-hinge:	the flap on the outside is long, the other is small.

the neem tree and tree cotton. Ḍalhaṇa added that it can also be made of lead and should have the shape of the datura flower. The manuscripts have variant readings for लघुप्रवर्धनकमामुञ्चेत् at this point that include a scribal emendation, none of which construe plausibly. It is possible that the unusual verb form आ+√मुच् puzzled the scribes and caused the implausible scribal readings and emendations.

- 93 Ḍalhaṇa on 1.16.9 (Su 1938: 77) notes that the word दोष here can refer to either a humour, such as wind, as we have understood it, or a disease generated from a humour.
- 94 The Nepalese version uses the word सन्धान 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 बन्ध here and at the very beginning of the chapter (i.e., 1.16.1) to introduce the topic of repairing the ear.
- 95 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 2003b: 154).
- 96 For an artist's impression of this join, see Majno 1975: 291 (reproduced as Figure 3.3 in Wujastyk 2003b: 155).

These ten options for joins of the ear should be bound. They can mostly be explained as resembling their names.⁹⁷ The five from compressed (*saṃkṣipta*) on are incurable.⁹⁸ 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 flesh and the flaps are stretched thin and have stiff ducts. “Crow-lip” has a flap without flesh with compressed tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating, or swollen.⁹⁹

- 10 A person wishing to perform a join of any of these should therefore have supplies specially prepared according to the recommendations of the “Preparatory Supplies” chapter.¹⁰⁰ And in this regard, he should particularly gather¹⁰¹ top layer of fermented liquor, milk, water, fermented rice-water, and powdered earthenware crockery (*kapālacūrṇa*).¹⁰²

97 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*).

98 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.

99 The version of 1.16.11–13 known to Ḍalhaṇa (Su 1938: 78) has four verses (श्लोक) 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. He cites the verses separately in his commentary, the *Bhānumatī* (Su 1939: 128–129), introducing each one as ‘some people read’ (के चित्पठन्ति). However, in Trikamajī Ācārya’s edition of the *Sūtrasthāna* of the *Bhānumatī*, the root text is largely identical to the one commented on by Ḍalhaṇa (Su 1938), even in instances like this where Cakrapāṇidatta’s commentary indicates that he was reading a different version of the *Suśrutasamhitā*. See further the discussion on p. ?? above.

100 *Suśrutasamhitā* 1.5 (Su 1938: 18–23), probably verse 6 especially, that lists the equipment and medications that a surgeon should have ready.

101 The reading in the Nepalese manuscripts of विशेषतश्चाग्नोपहरणीयात् has been emended to विशेषतश्चात्रोपहरेत् to make sense of the list of ingredients, which is in the accusative case. Also, the repetition of अग्नोपहरणीयात् in the Nepalese version suggests that its second occurrence, which does not make good sense here, is a dittographic error.

102 The term कपालचूर्ण 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 earth-

Next, having made the woman or man tie up the ends of their hair, eat lightly and be firmly held by qualified attendants, the physician considers the joins and then applies them by means of cutting, splitting, scarification, or piercing.¹⁰³ Next, he should examine the blood of the ear to know whether it is tainted or not. If it is tainted by wind, the ear should be bathed with fermented rice-water and water; if tainted by choler, then cold water and milk should be used; if tainted by phlegm, then top layer of fermented liquor and water should be used, and then he should scarify it again.

After arranging the join in the ear so that it is neither proud, depressed, nor uneven, and observing that the blood has stopped, one should anoint it with honey and ghee, bandage each ear with tree cotton and gauze (*plota*), and bind it up with a thread, neither too tightly nor too loosely. Then, the physician should sprinkle earthenware powder on it and provide medical advice (*ācārika*). And he should supplement with food as taught in the “Two Wound” chapter.¹⁰⁴

- 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.¹⁰⁵ For when the ear is tainted by wind, then it is obstructed by blood, unhealed and will peel. When tainted with choler, it becomes pinched (*gāḍha*), septic and red. When tainted by phlegm, it will be stiff and itchy. It has excessively copious suppuration and is swollen. It has a small amount of wasted (*kṣīṇa*) flesh and it will not grow.¹⁰⁶
- 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

enware vessels.

103 There are syntactic difficulties in this sentence. We have adopted the reading in Ḍalhaṇa’s version (Su 1938: 78), which has च कृत्वा following सुपरिगृहीतं. It is likely that a verb, such as कृत्वा, dropped out of the Nepalese transmission.

104 *Suśrutasaṃhitā* 4.1 (Su 1938: 396–408).

105 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 नाशुद्ध- for नातिशुद्ध- in the Nepalese version would yield the same meaning as Ḍalhaṇa’s version.

106 In his edition of *Suśrutasaṃhitā*, 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’ (आमतैलेन त्रिरात्रं परिषेचयेत्त्रिरात्राच्च पिचुं परिवर्तयेत्).

- (*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, scavenging and seed-eating birds, and creatures that live in marshes or water,¹⁰⁷ fat, marrow, milk, and sesame oil, and white mustard oil.¹⁰⁸ Then cook the oil with an admixture of the following: purple calotropis, white calotropis, heart-leaf sida, country mallow, country sarsaparilla, Indian kudzu, liquorice, and hornwort.¹⁰⁹ This should then be deposited in a well-protected spot.
- 15 *The wise man who has been sweated should rub the massaged ear with it. Then it will be free of complications, and will enlarge properly and be strong.*¹¹⁰
- 16 *Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole, but not outside it.*¹¹¹
- 17 *In this tradition, experts know countless repairs to ears. So a physician who is very intent on working in this way may repair them.*¹¹²

107 For such classifications, see the analyses by Zimmermann (1999) and Smith (1994).

108 Ḍalhaṇa's version of 1.16.19 (Su 1938: 79) includes ghee. However, Ḍalhaṇa's remarks on this passage and Cakrapāṇidatta's on 1.16.18 (Su 1939: 130) indicate that they knew a version of this recipe, perhaps similar to the Nepalese one, that did not include ghee. Ḍalhaṇa also noted that others simply read four oils, beginning with fat and without milk, whereas Cakrapāṇidatta said that some say it is made with four oils and milk.

109 The version of of this verse known to Ḍalhaṇa (vulgate (Su 1938: 79)) adds several ingredients to this admixture, including prickly chaff-flower, Withania, milk-white, sweet plants and Indian ipecac. Also, it has beggarweed instead of Indian kudzu. When commenting on 1.16.19, Ḍalhaṇa (Su 1938: 79) noted that some do not read sweet plants and Indian ipecac. Therefore, at his time there were other versions of this recipe circulating, with fewer ingredients, as seen in the Nepalese version.

110 For these aims (i.e., healing and enlarging the ear), the text known to Ḍalhaṇa (Su 1938: 79) had an additional verse and a half describing an ointment for rubbing the ear and sesame oil cooked with various medicines for massage. Cakrapāṇidatta (Su 1939: 131) did not comment on these verses, nor verse 15 of the Nepalese version, and so the version of the *Suśrutasaṃhitā* known to him may not have included them.

111 Ḍalhaṇa's version of 1.16.23 (Su 1938: 79–80) added another hemistich that stated more explicitly that the scarification should not be done on the outside of hole as it will cause derangement.

112 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 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) stated that some read about the diseases of the ear lobes in this chapter whereas others read about them in

- 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.¹¹³
- 19 Now I shall describe the proper method of making a repair when a nose is severed. 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),¹¹⁴ with the same measurements, off the cheek, the end of the nose is then scarified.¹¹⁵ Then the undistracted physician, should quickly put it back together so that it is well joined.
- 21 Having carefully observed that it has been sewn up properly, he should then fasten it along with two tubes.¹¹⁶ Having caused it to be raised,¹¹⁷ the powder of sappanwood,¹¹⁸ liquorice and Indian barberry should be sprinkled on it.¹¹⁹
- 22 The wound should be covered properly with tree cotton 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

the chapter on various treatments (*miśrakacikitsa*) (SS 5.25), which does indeed begin with a discussion of the disease परिषोट. Ḍalhaṇa went on to say that some believe that these verses were not composed by sages and, therefore, do not read them.

- 113 The order of verses 17 and 18 is reversed in Ḍalhaṇa's version (Su 1938: 80).
- 114 The version of 1.16.28b known to Ḍalhaṇa (Su 1938: 81) reads "bound, connected (*baddham*)" instead of "slice of flesh (*vadhra*)."¹¹⁴ 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 2003b: 67–70).
- 115 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) clarified 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.
- 116 Ḍalhaṇa noted that the two tubes should be made of reed or the stalk of the leaf of the castor-oil plant (on 1.16.21 (Su 1938: 81)). They should not be made of lead or betel nut because the weight will cause them to slip down.
- 117 The Sanskrit term उन्नामयित्वा in 1.16.21 is non-Pāṇinian.
- 118 For पत्ताङ्ग (sappanwood), there are manuscript variants पत्ताङ्ग (MS Kathmandu NAK 5-333) and पत्तङ्ग (MS Kathmandu NAK 1-1079). Also, MS Kathmandu KL 699 (f. 14r:1) has पत्ताङ्ग in a verse in 1.14 (cf. 1.14.36 (Su 1938: 66)). The text known to Ḍalhaṇa has पत्तङ्ग (1.16.29 (Su 1938: 81)) and this term is propagated in modern dictionaries.
- 119 Ḍalhaṇa glossed अञ्जन as रसाञ्जन, elixir salve (Su 1938: 81).

*instructions specific to him.*¹²⁰

- 23 *And once healed and really come together, what is left of that slice of flesh (vadhra) should then be trimmed.*¹²¹ *If it is reduced, however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.*¹²²

¹²⁰ The expression स्वयथोपदेश is ungrammatical but supported in all available witnesses.

¹²¹ The vulgate transmission has lost the word वध्र and replaced it with अर्ध “half,” which makes little sense in this surgical context.

¹²² Ḍalhaṇa accepted a verse following this, 1.16.32 (Su 1938: 81), which pointed out that the procedure for joining the nose is similar to that of joining the lips without fusing the ducts. He noted that earlier teachers did not think this statement on the nose and lips was made by sages, but he included it because it was accepted by Jejjaṭa, Gayadāsa and others, although they did not comment on it because it was easy to understand. Cakrapāṇidatta also did not comment on this additional verse (Su 1939: 133).

Sūtrasthāna 28: Unfavourable Prognosis in Patients with Sores

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹²³

Goswami studied the commentaries of Ḍalhaṇa and Cakrapāṇidatta on this and the following adhyāyas up to 32, focussing on the topic of omens (*ariṣṭa*). He concluded that both authors were influenced by the Indriyasthāna of the *Carakasamhitā* in their commentaries on this topic.¹²⁴

Translation

- 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.¹²⁵

¹²³ [HIML](#): IA, 219.

¹²⁴ Goswami 2011.

¹²⁵ 1.1.28 ([Su 1938](#): 7), tr. P. V. Sharma 1999–2001: 1, 21.

Nidānasthāna

Nidānasthāna 1: The Diagnosis of Diseases Caused by Wind

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹²⁶

Translation

- 1 And now we shall explain the chapter about diagnosis of diseases caused by wind.¹²⁷
- 2
- 3 Suśruta asks after holding the feet of Dhanvantari who is the foremost of the upholders of righteousness and who emerged with nectar.
- 4 O King!¹²⁸ Divodāsa¹²⁹ the best of the orators! Let us know about the naturalized and disordered form of wind, its places in the body and types of the diseases caused by its contamination.
- 5–9ab On hearing his words, the venerable sage replied that being independent, constant and omnipresent this wind is revealed as self-born and supreme being. It is worshiped by all words and situated in the form of life-force in all beings. It is the cause of origin, continued existence and

126 HIMAL: IA, 234. (Ruben 1954b) studied the wind doctrines in the *Carakasamhitā*.

127 Present chapter describes the diseases caused by vitiated wind and its mixing with other humours. In the medical term it is known as rheumatism.

128 H and N both mss read भूपते instead of कौपनै: in the vulgate.

129 <https://doi.org/10.20935/AL2992>

destruction of beings. It is unmanifest though manifests in/through action, cold, dry, light in weight, variable, moving horizontally with two attributes i.e., sound and tangibility¹³⁰. Having all chief qualities which are sattva, rajas and tamas but predominated by rajas. It has inconceivable power. It is inducer of humours¹³¹ and distinguished in the group of diseases¹³². *It moves quickly, moves again and again*, stays in stomach and intestine.

- 9cd Now, listen to the description of wind which moves inside the body.
- 10 Unvitiated wind makes possible objects of senses connect with intellect. It maintains a state of equilibrium between the humours, semen/7 fluids? and Gastric fluid and actions done by body, speech and intellect bring to one's right place.¹³³
- 11 Just as the five types of bile have been described based on their name, place and their actions, similarly, one type of air is of five types based on name, place, action and diseases.
- 12 Five types of wind:
1. Vital wind (*prāṇa*)
 2. *udāna*
 3. *samāna*
 4. *vyāna*
 5. *apāna*

above five types of wind remain in their equilibrium and hold the body¹³⁴.

130 According to Ḍalhana, it has power to divide humours, fluids, feces etc. moving inside the body and it is the cause to the disease in the limbs. It carries humours, chyle, semen/7 fluids? and feces further in the body. The wind which is moving outside is holding the earth and body. (सा चास्य शक्तिः शरीरदोषमूत्रपुरीषादिविभागोऽवयवसंस्थानका(क)रणं दोषधातुमलसंवहनादिश्च, शरीराद्बहिस्तु संचरतो धरणीधारणादिः Su 1938:257)

131 Ḍalhana suggests नेता=प्रेरक (Su 1938:257)

132 Ḍalhana suggests राट्=राजते not राजा

133 According to Ḍalhana, सम्पत्तिः=सम्पन्नता at 1.6.3 (Su1938:23). Ḍalhana commented that Gayadāsa reads 'इन्द्रियार्थोपसंप्राप्तिः' but not written here because of being detailed. (गयदासाचार्यस्तु इमं श्लोकं 'इन्द्रियार्थोपसंप्राप्तिः' इत्यादि कृत्वा पठति, स च विस्तरभयान्न लिखितः) But H and N MSS suggest 'इन्द्रियार्थोपसम्पत्तिः'

134 Ḍalhana suggests स्थान=साम्य, यापयन्ति=धारयन्ति (The manuscripts all read प्राणोदानः समानश्च व्यानोपानस्तथैव च . against the vulgate's प्राणोदानौ समानश्च व्यानश्चापान एव च . I think प्राणोदानौ, व्यानापानौ or व्यानश्चापान एव च should be read)

- 13–14ab The wind that flows through the mouth is called the vitality (prāṇa), which holds the body. It propels down food inside the stomach and engages with the gastric fluid¹³⁵. Unvitiated Vital wind mostly causes hiccups, asthma etc. diseases.
- 14cd–15 The wind which flows upwards in the body, the best among all five winds is called udāna. Singing, speech etc. individual things done by the same wind. Unvitiated udāna wind mostly causes diseases above the collar bone e.g., nose, eyes, head and ears¹³⁶.
- 16–17ab The samāna wind flows in stomach and duodenum. It helps gastric fluids in the digestion of food and separates the substances produced from it e.g., chyle, impurities, urine and feces. Unvitiated samāna wind causes diseases like a chronic enlargement of spleen (gulma), weak digestion, and diarrhea.
- 17cd–18 The vyāna wind moves inside the whole body and circulates chyle and expels sweat and blood outside the body. It helps in the movements of limbs in every way. Contaminated vyāna wind causes all diseases occurring in the body.
- 19–20ab Staying in the abdomen, the apāna wind propels wind of body, feces, urine, semen, womb and menstruation to come out of the body at their proper time. Contaminated apāna wind causes terrible diseases that occur in the bladder and anus.
- 20cd–21ab Contaminated vyāna and apāna wind causes defect of semen and gonorrhea, while simultaneous contamination of all the five winds surely leads to death.
- 21cd–22ab I shall therefore describe all the diseases caused by the contamination of winds staying in the various places of the body.
- 22cd–24ab Contaminated wind in the stomach causes disease like vomiting, loss of consciousness, fainting, thirst, heart-seizure, pain in lateral sides of stomach. It also causes rumbling of the bowels, acute pain, inflated belly, pain while discharging urine and feces, suppression of urine and pain in the loins.
- 24cd Contaminated wind residing in the ear causes loss of function of the senses.

¹³⁵ Ḍalhaṇa suggests head, chest, throat and nose as locations of prāṇa. (Sus1938:259) Gayadāsa suggests अग्नि for प्राण.

¹³⁶ Ḍalhaṇa suggests it also causes diseases like cough etc. (चकारादन्यादपि प्राणोदानौ, व्यानापानौ कासादीन् करोति .)

- 25–29 Residing in the skin,¹³⁷ contaminated wind causes discoloration of skin, throbbing of parts of the body, dryness, numbness, itching, pricking pain, swelling. It being inherent in the flesh of body causes swelling with pain and being inherent with the fat of the body causes swelling with slight pain but do not become wound.¹³⁸
- Residing in the artery it causes acute pain, contraction and filling up of the artery.¹³⁹ It stuns, vibrates and destroys¹⁴⁰ the muscle tissues by residing in the muscle. Residing in the joints it causes pain and swelling. Residing in the bone it causes fracture and dryness of bones which also cause to acute pain and, in the marrow, it dries up marrow which may never be cured. Residing in the semen it causes non-production and distorted production of semen.¹⁴¹
- 30–31ab Contaminated wind moves from the hand, foot, head, then it may be omnipresent or pervade the entire body of men and causes stiffness, convulsion, numbness and acute pain.
- 31cd–32ab Wind (5 types) mixed with other doṣas (bile etc.) in the places mentioned above produces mixed types of pains.
- 34cd–35ab Prāṇa wind surrounded by bile causes vomiting and burning sensation, by phlegm it causes weakness, exhaustion, laziness and bad taste.
- 35cd–36ab Udāna wind surrounded by bile causes loss of consciousness, stupor, dizziness and fatigue, by phlegm it causes absence of perspiration, slowness of digestion, sensation of coldness.
- 36cd–37ab Samāna wind surrounded by bile causes perspiration, a burning sensation, heat and stupor, association with phlegm it causes erection in urine, feces and limbs.
- 37cd–38ab Apāna wind associated with bile causes a burning sensation, heat and the voiding of blood with urine, with phlegm it causes a feeling of heaviness in the lower part of the body and coldness.

137 Ḍalhaṇa and Gayadāsa both suggest त्वक्=रस. Gayadāsa explained that chyle stays in the skin and therefore, in the verse त्वक्स्थ should be read as रसस्थ as we read secondary meaning in the sentences like गङ्गायां घोषः.

138 The MS H does not read व्रणांश्च रक्तगो ग्रन्थीन् सशूलान् मांससंश्रितः . against the vulgate. (Su 1938: 261).

139 According to Ḍalhaṇa सिराकुञ्चनं is also known as कुटिला सिरा (Su 1938: 262)

140 Ḍalhaṇa and Gayadāsa both suggest the meaning of हन्ति for being not capable of both stretching and contraction. सन्धिगतः संधीन् हन्ति प्रसारणाकुञ्चनयोरसामर्थ्यं करोति (Su 1938: 262) ...

141 Ḍalhaṇa and Gayadāsa both suggest that a distorted production विकृतां प्रवृत्तिम् is too fast, too slow, knotty and discolored.

- 38cd–39ab Vyāna wind surrounded by bile causes a burning sensation, tossing of the limbs and fatigue, by phlegm it causes stiffening limbs, uddanḍaka? and pain in the swelling.
- 40–41 Persons who are of delicate nature, follow faulty diet and lifestyle, ? also afflicted with intoxicating drinks, sexual enjoyment, exercise causes vitiation of wind and blood.??
- 42 Riding elephant, horse and camel, lifting great weights, consuming vegetables which are pungent, hot, sour, alkali and being frequently distressed situation causes contamination of wind.
- 43–44 Blood flowing in the body blocks the passage of contaminated wind which moves quickly in the body. Excessively irritated wind–being contaminated by wind and dominance of wind, it is called वातरक्त Gout¹⁴².
- 45–46 Vātarakta causes – pricking pain, dryness, loos of sensation in the feet. Contaminated Bile mixed with blood causes sharp burning sensation, excessive heat and soft swelling with red color in the feet. Contaminated Phlegm mixed with the blood causes itching in the feet. It makes feet white, cold, dry, thick and hard. All defects ¹⁴³ in the blood contaminated by humours (wind, bile, phlegm) manifest their symptoms in the feet.
- 48 This disease spreads all over the body like rat poison by staying in feet or sometimes hands.
- 49 Gout spreads in the knee and the skin bursts and starts bleeding makes it incurable. It is mitigatable if it is of a year's old.
- 50–51 When vitiated wind enters in the all arteries it causes quickly convulsions again and again and because of frequent contractions (*ākṣepa*) it is called convulsions (*ākṣepaka*).
- 52–56 Because in this situation a person often sees darkness and fall, it calls spasmodic contraction (*apatānaka*) ¹⁴⁴ . If wind mixed with phlegm stays excessively in the arteries, it stiffens body like a staff and it is called दण्डापतानकः epilepsy with convulsions. Vitiated wind entered in the arteries and bends the body like a bow, it is called धनुःस्तम्भ Tetanus.

¹⁴² In the medical term वातरक्त is known as Gout. Cakrapāṇi called it आढ्यरोगः Carakas-aṃhitā sū.14.18 and ci.28.66

¹⁴³ Gayadāsa suggests सर्वे दुष्टाः शोणितं चापि nominative plural instead of locative singular.

¹⁴⁴ Gayadāsa accepted the Nepalese reading ताम्यते which vulgate does not read. Gayadāsa gives definition of अपतानक as येनापताम्यते means a situation in that a person sees the dark.

- When vitiated wind accumulated in the regions of finger, ankle, abdomen, heart, chest, and throat swiftly attack on the group of vain and ligaments, it gets a person's eyes stuck, chin stuns, side breaks and vomiting phlegm he moves inwards like a bow and this situation is known as emprosthotonos (*antarāyāma*). When vitiated wind attacks on outside ligaments, body of a person will stretch forward like a bow. In this situation, if the chest, hip or thigh break, wise men call it incurable.
- 58 Aggravated phlegm and bile mixed with wind or only vitiated wind causes fourth convulsive disease due to trauma.
- 59 Convulsions due to miscarriage, excessive bleeding, and injury are incurable ¹⁴⁵.
- 60–62 When excessively agitated and strong wind flows in the arteries which spread downward, upward, and sideways, it loses the joints and kills the other side of body. The best of physicians calls it paralysis (*pakṣāghāta*). ¹⁴⁶ Then half of his entire body becomes inefficient and unconscious. Afflicted by wind he suddenly falls or dies.
- 62.1 Bile integrates with wind causes burning sensation, affliction, and infatuation. When it integrates with phlegm causes coldness, morbid swelling, and heaviness. ¹⁴⁷.
- 63 A paralysis (*pakṣāghāta*) caused by wind ¹⁴⁸ is curable with most difficulty. It becomes curable when caused by bile and phlegm mix with the wind. It becomes incurable when caused by the loss of bodily constituents.
- 64–66 Verses from 64–66 are not found in the Nepalese manuscripts. These verses discuss the term spasmodic contradiction (*āpatantraka*) which is the same as अपतानक. Ḍalhaṇa commented on ni.1.64–66 (Su 1938:267) that because of having the similar condition in both situations, some scholars do not read the अपतन्त्रक. In the verse ni.1.59 Ḍalhaṇa commented that the आक्षेपक and अपतानक is same (Su 1938:266) and again

¹⁴⁵ According to Ḍalhaṇa convulsion (*ākṣepaka*) is also known as अपतानक (Su 1938:266). He further mentions that even if fortunately, it is cured, it cripples the limb.

¹⁴⁶ In the ca.6.28.55 पक्षाघात is described as monoplegia (*ekāṅgaroga*). In that case it damages one of the limbs. In the medical terms paralysis (*apakṣāghāta*) is known as hemiplegia.

¹⁴⁷ This verse is not available in vulgate. It deals with the symptoms when bile and phlegm mix with the wind. It is already discussed in su.2.1.38.

¹⁴⁸ Here the term शुद्धवात suggests the meaning of the wind that is devoid of bile and phlegm.

- he suggested that the अपतानक and अपतन्त्रक both are similar condition. Therefore, आक्षेपक, अपतानक and अपतन्त्रक should be the same. Gay-adāsa further commented that the Caraka has not read आक्षेपक as अपतानक and therefore described the अपतन्त्रक separately (Su 1938:267).
- 67 This verse also not found in the Nepalese Manuscripts. The verse describes rigidity of neck (*manyāsthambha*). According to Ḍalhaṇa, rigidity of neck is a prior symptom of spasmodic contradiction.
- 68–72 By speaking very loudly, eating hard foods, excessively laughing and yawning, lifting heavy loads and sleeping in an awkward position, vitiated wind lodges into face painfully and produces spasm of the jaw-bones (*ardita*) disease. In that case, half of the face and neck become curved, head trembles, speech hindrances, deformity occurs in the eyes, eyebrows and cheeks.¹⁴⁹ Experts in diseases call this disease spasm of the jaw-bones (*ardita*).
- 73 Spasm of the jawbones cannot be cured when it stays in a person for three years, who is very weak, stays without blinking, trembles, and constantly speaks gibberish.
- 74 Arteries of Heel and toes stricken by vitiated wind prevents stretching of thighs. This disease is known as sciatica (*gr̥dhrasī*).
- 75 Arteries which run to the tips of fingers from behind the roots of the upper arm affected by vitiated wind terminates all activities of arms and back. This disease is called paralysis of arms and back (*viśvañci*).¹⁵⁰
- 76 Vitiated wind and blood in the joint of knee causes synovitis of knee joint (*koṣṭukaśīrṣa*). In this extremely painful situation, the shape of swelling in knee joints seems like a head of Jackal.
- 77 Vitiated wind resides in the waist attacks on the arteries of thigh causes limpness (*khañja*) and when it attacks on both the thighs a person becomes lame (*paṅgu*).
- 78 A person who trembles at the beginning of walking or walks limping and whose foot joint has become loose is called lathyrism (*kalāyakhāñja*).
- 79 Vitiated wind residing in the ankle-joint causes pain when one steps on uneven ground. This disease occurs is called वातकण्टक.

¹⁴⁹ Ḍalhaṇa suggests नेत्रादीनाम् इत्यादि शब्दात् भूगण्डादि उपसङ्ग्रहः

¹⁵⁰ Both the MSS N and H read विश्वञ्चि instead of the vulgate reading विश्वाची. There is no such word found in other Āyurveda texts.

- 80 Vitiated wind mixed with bile and blood cause burning sensation in feet. It should be declared as burning sensation in feet (*pādadaḥa*).
- 81 A person whose feet tingle and become insensible due to vitiation of phlegm and wind is called पादहर्ष.
- 82 Vitiated wind lying in the shoulder dries the shoulder joints and it is called अंसशोष. It also bends the arteries of shoulder, and this disease is called अवबाहुक.¹⁵¹
- 83 Vitiated wind singly or mixed with phlegm cover the channel of ears causes deafness.
- 84 Vitiated wind saturated with phlegm covering the arteries which conduct the sound of speech makes a person inactive (*akriya*), dumb (*mūka*). He mumbles (*mimmira*) through the nose and stammers (*gadgad*).¹⁵²
- 85 Vitiated wind penetrating into the cheekbones, temporal bones, head and neck causes piercing pain in the ears. It is called ear-ache (*karṇaśūla*).¹⁵³
- 86–87 The pain that arises from the bladder or feces goes down as if it were breaking the rectum and..... ? is called तूनी, whereas the pain, rising upward from the rectum extending up to the region of the intestines, is called प्रतितूनी.
- 88–89 Retention of vitiated wind inside abdomen causes distension of the stomach and flatulence and intense pain and rumbling inside, is called tympanites (*ādhmāna*). Vitiated wind mixed with phlegm causes प्रत्याध्मान. It rises in the stomach and causes pain in the heart and sides.¹⁵⁴
- 90–91 A knotty stone-like tumour caused by wind appearing in the stomach having an elevated shape and stretched upward direction which obstructing the passage of faeces and urine should be known as वाताष्टीला. A tumour of similar shape rose obliquely in the abdomen obstructing the passage of wind, faeces and urine should be known as प्रत्यष्टीला.

151 Ḍalhaṇa and Gayadāsa both have defined two diseases i.e., अंसशोष and अवबाहुक respectively.

152 Nepalese Manuscripts read मिर्मिर instead of the Vulgate's reading मिन्मिण. Dictionary of MW suggests the meaning of मिर्मिर = having fixed unwinking eyes which is not relevant to the disease of tongue.

153 In the medical terms, this disease is known as Otitis.

154 There's an addition in MS N. नाभेरधस्तात् संजातः संचारी यदि वाऽचलः

Śārīrasthāna

Śārīrasthāna 2: On Semen and Menstrual Fluid

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹⁵⁵ Das (2003: chs 6–8) also studied topics of this chapter.

Conceptual background

Das (2003: ch. 13) provides an overview of the conceptual background of ayurveda on the topics discussed in this adhyāya. In brief ...

Translation

- 1 We shall now explain the anatomy that is the purification of sperm (*śukra*) and blood (*śoṇita*).
- 3 Semen (*retas*)¹⁵⁶ is incompetent to produce offspring if it is [characterized by] wind, bile, phlegm, blood (*śoṇita*),¹⁵⁷ decomposition (*kuṇapa*), lumps (*granthi*),¹⁵⁸ stinking pus (*pūtipūya*), low volume (*kṣīṇa*), urine,

¹⁵⁵ HIML: IA, 244–246.

¹⁵⁶ The Nepalese version has -रेतांसि “semen” (in the plural) as the subject of the sentence: “seeds are unable to produce offspring....” In the vulgate, -रेतसः is a masculine bahuvrīhi, making “men whose semen has...” the subject of the sentence.

¹⁵⁷ Note that the list begins with the four entities, wind, bile, phlegm and blood, perhaps hinting at a four-humour system (see Wujastyk 2000: 485–486).

¹⁵⁸ Modern Establishment Medicine (MEM) understands that normal ejaculate contains

JG could you provide a standard citation reference for this information?

or feces.

JG translation

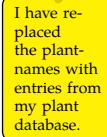
- 4 When the disfunction is caused by wind, there is a colour and a type of pain that typically goes with wind problems. If caused by bile the colour and the pain are typical of bile afflictions. If caused by phlegm the discoloration and suffering are characteristic for phlegm disease. And if caused by blood (*śonita*) there will be a coloration due to blood and a sensation of a bile affliction. Moreover, when caused by blood (*rakta*) there is the smell of decomposition (*kūṇapa*).¹⁵⁹ Phlegm with wind causes the appearance of lumps, bile with blood (*śonita*) causes the appearance of foul-smelling pus (*pūtipūya*). Bile with wind (*māruta*) cause a weakening of semen. Humoral colligation (*sannipāta*) causes the smell of urine and feces.
Cases of foul-smelling sperm, sperm with lumps, and when it reeks of pus are hard to treat.
However, when sperm contains urine or faeces there is no treatment.¹⁶⁰
- 5 Moreover, in the period of about ten days following the onset of the menses - when the woman is receptive to becoming pregnant - the sperm can be vitiated by any of the three pathologies that may occur during the first quarter of the menstrual cycle, either separately or by two or three of them or even all three together but this will not necessarily lead to subfertility. Rather it is the pain caused or the discoloration of the sperm itself that suggest one of these afflictions. Among these, the kind which shows decomposition, or coagula, or putrid pus is incurable. The other types, however, can be treated.
- 6 Such are the facts. A smart professional getting the most out of his professional competence will, normally speaking, be able to treat the first three among these sperm pathologies. What is needed therefore

coagula which, however, dissolve after about half an hour. But coagula that do not dissolve may sometimes be a sign of an underlying disorder.

159 Note that the text mentions both शोणित and रक्त. This raises the question of whether the author considered these to be different, or whether it is an artefact of textual transmission.

160 Note that the above characterizations presuppose the direct inspection of an ejaculate. The process of collection is not described in the sources.

- can be either lubrication, or making the tissues exude or any other tricks of the trade, such as something like an enemas or an instillation.
- 6A When the sperm is negatively affected by wind disorders, one should applicate an oily enema containing Bengal quince and Indian kudzu.
- 6B One could also consider administering an oily preparation, well-cooked and medicated with simple deodar drenched in honey, in the form of an enema.
- 6C One can also make the patient drink clarified butter finished with pomegranate, citron fruit, rock salt, a caustic (*kṣāra*), and two kinds of salt.
- 6D When sperm disfunction is due to bile issues, one can prescribe application of a preparation based on the milky juice of plants cooked with honey or else sharply tasting betel leaves in milk or curd.
- 6E One could apply also a salve of axlewood and sal into the vagina.
- 6F Or apply externally an oily preparation of well-cooked honey.
- 6G Of course that oily preparation could also be applied in the form of an enema.
- 6H One can also make him swallow a beverage of clarified butter finished with the “five roots”: nightshade, betel, moonseed in honey, dog’s tooth and sugarcane stalks.
- 6I If the sperm is afflicted because disturbances in phlegm, one can consider an oily ghee-based preparation with adstringent leaves of the golden shower tree.
- 6J The oil processed as a medicated decoction of long pepper, honey and false black pepper should be administered as an anointment but similarly also in the form of an enema.
- 6K One should try a solution of cooled-down clarified butter, compounded with the juice of basil, Indian gooseberry, long pepper and stone-breaker plant in case of kidney gravel disease.
- 6L Here are some more verses.
- 7 In case the sperm shows signs of decomposition, one should make the patient drink a medicated fluid containing dhātaki flowers, cutch-tree, pomegranate and arjuna tree bark.
- 8 In case of apparent disintegration of the sperm, he should drink clarified butter with heart of sāl. Moreover in case of lumps and clots, he should even eat a preparation of ashes obtained after burning of a fig-tree.
- 9 In case the sperm appears purulent, a mixture of mangrove canon ball



I have replaced the plant-names with entries from my plant database.

in some food leftovers or anything else should be prepared. When the sperm is depleted, one should perform these instructions straight away as soon as they have been explained.

- 10 One should make the patient drink ghee with citra, koshira and hingu by way of an antidote. A wise person should then perform one by one the six oleation processes on his own body.

Cikitsāsthāna

Cikitsāsthāna 4: On the Treatment of Wind Diseases

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹⁶¹

Translation

- 1 Now we shall describe the treatment of wind diseases.
- 2
- 3 When the wind enters the stomach and one vomits as a result, one should sequentially administer the six-bearing (षड्वरण) remedy with cool water for seven nights.¹⁶²
- 4 The remedy constituting of leadwort, ??, velvet-leaf, ??, Himalayan monkshood, and myrobalan cures serious diseases and is called the six-bearing (षड्वरण).
- 5 When the wind has entered the abdomen (पक्वाशय), one should treat it with evacuation of the bowels (विरेचन) using an unctuous substance. One should also treat it with cleansing enemas and excessively salty foods.¹⁶³

¹⁶¹ HIML: IA, 265–266.

¹⁶² The vulgate has the reading छर्दयित्वा which means "after making [him] vomit". Thus, vomiting is a part of the treatment. Whereas in the H manuscript, vomiting is the symptom of the ailment that needs to be cured.

¹⁶³ In H, the reading प्रासाः should be read as प्राशाः for it to mean "foods". Otherwise, प्रासाः means "throwing/discharging" or "darts/spears".

This is a change we should make in the edition.

You need not give all the grammatical details about śrotādi. Assume you are talking to knowledgeable Sanskrit scholars.

- 6 Once the wind has entered the lower belly, a cleansing enema is recommended. And, on the wind having entered the ears, etc., the wind-slayer sequence should be executed.¹⁶⁴
- 7 On the wind having entered the skin, flesh, and blood, one should rub oil on the body (अभ्यङ्ग), apply a poultice on the body (उपनाह), massage the body (मर्दन), smear ointments on the body (आलेपन), and do blood-letting (असृग्विमोक्षण).
- 8 On the wind having entered the ligaments, joints, and bones, the wise [physician] should employ the application of an unctuous poultice (स्नेहोपनाह), cauterization (अग्निकर्म), binding (बन्धन), and massage.
- 9 On the wind being concealed within the bones, it (wind) should be beaten by churning those body parts with hands. A strong physician should then insert a narrow tube within the bone and suck out the wind completely from the bone.¹⁶⁵
- 10 On the wind having entered the semen, one should perform the treatment for the defects of the semen.¹⁶⁶
- 11 The intelligent physician should conquer the wind situated within the whole body by immersion, *kuṭī*, *karṣa*, *prastara*, oil massage, enema, and blood-letting.¹⁶⁷ Or, in case of wind situated in one part of the body and

164 In the H manuscript reading "श्रोतादि...", there appears to be a double sandhi. See *Nidānasthāna* Ch. 1 verse 12 for another example of double sandhi. Furthermore, the syllable in H after "चानिल" is not clear. It could be "ह्य" or "हा" or perhaps something else. The reading in the vulgate for this syllable is "हा". Thus, the complete word becomes "अनिलहा" which means "the slayer of wind". This makes proper sense in this verse. We have considered this reading ("अनिलहा") for our translation.

165 The H manuscript has the reading अस्थिनि which is the accusative plural form of अस्थि. The accusative case does not make sense here. The vulgate has the reading अस्थनि, the locative singular form of अस्थि. This reading makes proper sense in the verse. Therefore, we have accepted the vulgate reading अस्थनि for translating this verse.

166 Ḍaḥaṇa comments (*Su* 1938: 421) that this treatment for the defects of the semen is mentioned [earlier] as the शुक्रशोणितशुद्धि, the purification of the semen and the blood. This is the *Sārīrasthāna* Ch. 2, शुक्रशोणितविशुद्धि. The second hemistich of this verse is not a part of this sentence but is a part of the sentence in the next verse. That is because the remedies described in this hemistich are appropriate for the disease described in the first hemistich of the next verse.

167 In H, the last syllable नि of the compound word does not make sense. The vulgate has the compound word ending with भि: which makes proper sense. For making a meaningful translation, we have accepted the vulgate reading here. Furthermore, Ḍaḥaṇa describes the treatments *kuṭī*, *karṣū*, and *prastara* in his commentary in (*Su* 1938: 421). Regarding blood-letting, he comments there that because the verse has the plural form

- contained within it, the intelligent physician should cure it with horns.
- 12 On the wind having mingled with phlegm, bile, and blood, the physician should treat it with non-hostile remedies. However, on the wind being inactive, the physician should perform blood-letting many times.
- 13 [On the wind being inactive], one should also lick the milk of the *pan-camūlī* accompanied with salt and ??¹⁶⁸ mixed with oil, and one should indeed consume meat soup made sour with fruit.¹⁶⁹
- 14-15 Or, one should consume cereal soup with a good amount of ghee, or the food that is beneficial and that curtails the wind. However, cottony jujube, etc.¹⁷⁰ with a wind-removing remedy combined with all sour substances and with the meat from a water body along with lots of unction, lukewarm¹⁷¹ and salty, is well known as *Sālvala*.
- 16ab For patients with diseases of the wind, one should always apply this (*sālvala*) as a poultice.
- 16cd-18ab Whether a body part has become contracted or bent, is troubled by a [wind] disease, or has become numb, one should tightly bind it with a long strap made of tree bark, cloth, or wool [after applying the *sālvala* poultice]. Or, after massaging the affected body part and applying the *śālvala*¹⁷² poultice on it, one should insert it into a sack made of the hide of a cat, mongoose, *udra*¹⁷³, or deer.
- 18cd-19 Vomiting and *nasya* done under the supervision of an expert physician alleviates the wind that has entered the chest, loins, shoulders, or the nape of the neck. *Śirobasti* and blood-letting alleviate the wind situated in the head.
- 20-21ab In that (*śirobasti*), the oil should be held carefully for a duration of one thousand *mātrās*. Enema (बस्ति) alone curtails the wind that is situated throughout the whole body or in one part. This is just as the wind [curtails] its force.¹⁷⁴

सिरामोक्षैः, five blood vessels have to be drained of blood if the wind is not pacified by oil massage, etc.

168 *Āgāradhūma* seems to be a plant as seen in Monier Williams' Sanskrit dictionary.

169 The vulgate reading दिह्यात् (should apply) totally changes the meaning.

170 For grammatical accuracy, there needs to be a *visarga* at the end of the word काकोल्यादि.

171 Perhaps सुखोष्णम् is an indeclinable. But, it could also be a grammatical inaccuracy where it should have a *visarga* at the end: सुखोष्णः.

172 This seems to be the correct spelling as against the unclarity in the earlier verses.

173 some aquatic animal

174 The last four words in H, तस्य वेगम् इवानिलः do not make sense in the context.

Perhaps
kalka here
could also
mean the
Terminalia
Bellerica
(विभीतक).

- 21cd-26 Oils, perspiration, oil massage, enema, unctuous purging of the bowels, *śirobasti*, oiling the head, unctuous smoke, gargling with lukewarm water, *nasya*, unctuous paste, milks, meats¹⁷⁵, soups, oils¹⁷⁶, any unctuous substance, unctuous and salty meals that are made sour by fruits, bathing with lukewarm water, massages, saffron, ??, cassia cinnamon, costus, cardamom, crape jasmine, garments made of silk, wool, and fur, soft cotton garments, inner rooms with sunlight, no wind flow, and a soft bed, taking the warmth of fire, and celibacy, etc. are to be collectively employed for patients with wind diseases.
- 27 One should take *akṣa* quantities of unguent pastes¹⁷⁷ of turpeth,¹⁷⁸ ??, ??, ??, ??, and embelia, a Bengal quince fruit equivalent measure of ??-root and ??, two *pātra* quantities of both *triphalā*-decoction¹⁷⁹ and yogurt, and one *pātra* measure of ghee.¹⁸⁰ One should mix these ingredients all at once and cook the mixture properly. This (resultant) is ??-ghee. Unctuous purging of bowels is prescribed for treating wind disorders.¹⁸¹ This procedure of making ??-ghee should also be referred for making ??-ghee and ??-ghee.¹⁸²
- 28 One should collect the wooden logs of the instruments that have been used for a long time for extracting oil from sesame seeds. One should then have them chopped into very tiny pieces and then pound those pieces. Next, one should put them in a big vessel, submerge them in water, and boil them. Thereafter, one should collect the oil from the surface of the water with a goblet or by hand. Thereafter, one should properly cook wind-alleviating herbs with this oil that was effectively

175 The plural indicates milk and meat from various animals.

176 This is the second occurrence of the word *सेहा*: in this sentence. This seems to be an anomaly.

177 कल्क also means an unguent paste. Refer to Apte's dictionary.

178 In H, perhaps it should have been त्रिवृद् instead of तृवृत्.

179 त्रिफलारस is here taken to mean a decoction of *triphalā*.

180 The exact measurements of *akṣa* and *pātra* are given in Ḍalhaṇa's commentary in Su 1938: 422.

181 It should be understood here that the unctuous substance to be used for purging the bowels is the ??-ghee.

182 अशोक and रम्यक are the Ashoka and Chinaberry respectively.

cooked.¹⁸³ This is the *anutaila* (अनुतैल)¹⁸⁴ that is mentioned in wind disorders. It is called *anutaila* because it is produced from tiny oily objects.¹⁸⁵

- 29 Alternatively, one should burn a great amount of ??-wood on the ground for one night. When the fire gets extinguished the ash should be removed. Then, the ground that is relieved of the fire should be soaked with a hundred pots of oil cooked with ??, ??, and other herbs, and left in that condition for one night. Thereafter, one should take all the earth that is oily¹⁸⁶ in a big vessel and totally cover it with water.¹⁸⁷ The oil that rises up in that vessel should be taken out with both hands and kept nicely covered. Thereafter, one should properly cook that oil for as long as possible¹⁸⁸ with one thousand parts of each of the following—a decoction of wind-alleviating herbs, meat soup, milk, and *kāñjika*¹⁸⁹—and thus prepare the *sahasra-pāka* (that which is cooked with thousands). The admixture added to the oil contains the *hemavata* herbs¹⁹⁰, herbs of the southern region, Withania, and other wind-alleviating herbs.

While the oil is being cooked, conchshells should be blown loudly, umbrellas should be held, huge drums should be resounded, and whisk fans should be waved.¹⁹¹ Thereafter, the perfectly cooked oil should be poured into a golden or silver pot and stored. This *sahasra-pāka* is the oil possessing undiminishing potency and is fit for

183 In H, the word दन्तप्रतीवायं in the compound word वातघ्नौषधदन्तप्रतीवायं does not appear to make sense. Perhaps the syllable य should be प, thus making the word प्रतीवापं that refers to an admixture of substances to medicines either during or after decoction. Refer to Monier-Williams's Sanskrit dictionary.

184 The न् should be read ण्.

185 The word अनु in the compound word अनुतैलद्रव्येभ्यः should be read अणु.

186 In H, the word यावन् should have been यावान्.

187 The reading in H, कटाहेभ्यः सिंचेत्, does not make sense here. Thus, we have accepted the vulgate reading कटाहे ऽभ्यासिंचेत् for the translation.

188 The phrase "यावता कालेन शक्ययात् पक्वम्" appears as a part of a new sentence in H. But, we should take it to be a part of the earlier sentence for it to make proper sense.

189 Ḍalhaṇa comments (Su 1938: 423) that the word अम्ल here means काञ्जिक which is the water drained after boiling rice and is a little fermented. Refer Monier Willams's Sanskrit Dictionary.

190 The word should be हैमवताः as in the vulgate. It means "the herbs of the snowy mountains". Ḍalhaṇa comments (Su 1938: 423) that हैमवताः refers to the herbs that grow in the northern region.

191 These activities are a symbolic way of showing reverence.

kings.

Thus, that which is cooked with a thousand parts is called *sahasra-pāka*.

- 30 One should collect fresh leaves of castor oil tree, ??, ??, weaver's beam tree, Indian beech, ??, and leadwort.¹⁹² These leaves should be completely pounded along with salt in a mortar. This mixture should be put in a pot filled with oil¹⁹³. It (pot) should be smeared¹⁹⁴ with cow-dung. Thereafter, the pot should be heated.¹⁹⁵ This (resultant) is the *patra-lavaṇa* (leaf-salt) that is mentioned in wind disorders.

- 31 In the same way, one should pound the stalks of ?? and eggplants smeared with salt and fill a pot with it.¹⁹⁶ In that pot, one should add ghee, oil, fat, and marrow. Then, one should smear it¹⁹⁷ and heat it as earlier. This (resultant) is the *sneha-lavaṇa* (fat-salt) that is mentioned in wind disorders.

- 32 One should collect the fresh fruits, roots, leaves, and branches of all the twenty [herbs]: ??, ??, Tellicherry bark, Bengal quince, purple calotropis, ??, ??, ??, ??, ??, ??, ??, ??, ??, ??, Indian beech, ??, poison berry, ??, marking-nut tree, ??, ??, One should then mix them with salt and heat them as earlier.¹⁹⁸ The oil on top should be poured out completely with the salty mixture intact [at the bottom]. This mixture should be cooked thoroughly. The admixture added to it consists of long pepper, etc. This (resultant) is the salt called *kalyāṇaka* that is mentioned in wind disorders and in meals and drinks for the patients troubled by *plihāgnisaṃga*, indigestion, loss of appetite, and piles.

Thus ends the fourth chapter on the treatment of wind diseases.

192 In H, the ending नाम् should be णाम् due to sandhi.

193 सेहघट can also mean a pot filled with ghee

194 The H or vulgate do not specify with words that it is the pot to be smeared. But, it is to be understood.

195 The word दाहयेत् usually refers to burning, but sometimes it can refer to heating.

196 In H, there should be a *visarga* after लवणा.

197 As earlier, the pot should be smeared with cow-dung.

198 It is to be understood that all these fresh branches, leaves, fruits, and roots of the herbs should be completely pounded together with salt. The mixture should then be put into a pot filled with oil or ghee. The pot should be smeared with cow-dung and then heated.

Cikitsāsthāna 5: On the Treatment of Serious Wind Diseases

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.¹⁹⁹

Translation

- 1 Now we shall describe the treatment of serious wind diseases.
- 2
- 3 One group says that the blood afflicted by wind (wind-blood) (*vāta-rakta*) is of two types: spreading out over a surface (उत्तान) and deep (अवगाढ).²⁰⁰ However, this is not correct.²⁰¹ Why? Just as leprosy, after spreading over a surface it (afflicted blood) becomes deeply situated. Therefore, its being of two different types is refuted.
- 4 When the wind is aggravated by fighting a strong person, etc.²⁰², one's corrupted blood caused by eating heavy or hot food before the last meal is digested blocks the path of the aggravated wind. It then combines with the wind and simultaneously creates pain due to the wind-blood.

¹⁹⁹ [HIML](#): IA, 266.

²⁰⁰ Ḍalhaṇa comments ([Su 1938](#): 424) that उत्तान refers to being situated in the skin and flesh, and अवगाढ refers to being situated internally.

²⁰¹ In H, the word तन् should be तत्.

²⁰² These factors that aggravate the wind are mentioned in *Nidānasthāna*, Ch. 12, text 6.

This [condition] is called wind-blood (*vāta-śoṇita*). At first, it is situated in the hands and feet.²⁰³ Later, it spreads throughout the body. Its early forms are pricking pain, burning, itching, ulcer, trembling²⁰⁴, roughness of the skin, pulsation in the blood vessels, tendons, and tubular vessels²⁰⁵, weakness of the thighs, as well as the sudden appearance of dark brown, tawny, or red spots on the soles of the feet, fingers, ankles, and wrists. The disease becomes fully manifest in the person who does not undertake the means to revert the disease or applies a wrong treatment. Its symptoms have been mentioned. Among them, weakness occurs for the one who does not counter the disease.

- 5 Generally, wind-blood occurs in those who are very delicate, those who eat the wrong foods and enjoy improperly, those who are fat, and even in those who indulge in pleasure.
- 6 In that regard, one should treat the patient who is not degenerating due to wasting of life air, thirst, fever, unconsciousness, dyspnea, trembling, and loss of appetite, is not oppressed by the contraction [of limbs], is strong, composed, and has the means.
- 7 In the treatment, at the beginning itself one should do blood-letting of the wind-affected body part little by little and more than once. That (slow blood-letting) is because of the danger of further aggravation of wind. One should avoid doing blood-letting of the part hardened or weakened by excessive wind.²⁰⁶ Thereafter, one should make the patient do the remedies of vomiting, etc. If the wind that is mixed [with blood] or separated is very aggravated then one should make him consume aged ghee or goat-milk. Or, [one can give him] half a measure of oil added with an *akṣa* of liquorice and cooked with hare foot uraria²⁰⁷, or the oil that is sweetened by sugar and honey and cooked with dried ginger and bulrush. Or, one should boil milk with an eight times volume of the decoction of the following herbs: beautyberry, ??, ??, hare foot uraria²⁰⁸, ??, wild asparagus, ??, and ??. This milk should then be used to cook oil with the admixture of pastes of ??, ??, ??, ??, deodar,

203 In H, the word तन् should be तत्.

204 In H, there should not have been the स् after स्तम्भ.

205 In addition to blood vessels, it would also include the nerves.

206 In H, the reading अम्लान does not make sense given the context. Therefore, we have accepted the vulgate reading म्लान for the translation.

207 Ḍalhaṇa glosses (Su 1938: 425) *śṛgālavinnā* as *prśniparṇī*.

208 According to Ḍalhaṇa, *śṛgālavinnā* is *prśniparṇī*.

sweet flag, and ???. This (resultant) should be utilised in drinks, etc. Or, one should use the oil that is cooked with a decoction of wild asparagus, prickly chaff-flower²⁰⁹, ??, liquorice, giant potato, heart-leaf sida, country mallow, and ???²¹⁰, with the admixture of cottony jujube, etc. Or, one should use the heart-leaf sida-oil that is cooked as *śatapāka*.²¹¹ Or, [the affected body part] should be moistened with milk that is boiled with the roots of wind-alleviating herbs, or it should be moistened with sour things.²¹² In that regard, five remedies prepared with milk are described. For preparing a poultice, milk should be cooked in ghee, oil, fat, marrow, and *dugdha*²¹³ separately with each of these powdered grains or pulses—barley, wheat, sesame, mung beans, or green gram—that is mixed with unctuous pastes of cottony jujube, purple roscoe, ??, ??, heart-leaf sida, country mallow, hare foot uraria²¹⁴, ??, ??, sugar, bulrush²¹⁵, ??, and sweet flag. Or, the essence of unctuous fruits²¹⁶ can be used as a poultice. Or, a *veśavāra*²¹⁷ prepared from the flesh of a fat *cilicima* fish²¹⁸ can be used instead. Or, [one can use] the poultice contain-

209 Ḍalhaṇa glosses (Su 1938: 425) *mayūra* as *apāmārga*.

210 Ḍalhaṇa comments (Su 1938: 425) that sacred grass, ??, ??, ??, ??, and ?? are called *ṛṇa* (grass).

211 *Śatapāka* seems to be an oil that is prepared with a hundred parts of some things similar to *sahasrapāka* that is prepared with one thousand parts of some herbs. Refer *Cikitsāsthāna* Ch. 4 text 29 for the preparation of *sahasrapāka*.

212 Ḍalhaṇa comments (Su 1938: 425) that the sour things (*amla*) are ??, ??, ??-water, etc. *Surā* is some kind of liquor, *sauvīra* is perhaps the fruit of the jujube tree, and *tuṣa* is perhaps *Terminalia Bellerica* (विभीतक).

213 In the *Suśrutasaṃhitā*, the word for milk is *kṣīra* or *payas* but not *dugdha*. Therefore, the word *dugdha* here can mean the sap of plants or something that is extracted.

214 *śṛṅgālavinnā*

215 For *kaśerukā*

216 Ḍalhaṇa comments (Su 1938: 425) that the unctuous fruits mentioned here are sesame, castor, flax, ??, etc.

217 In H, the reading वैशवारो does not make sense. It should have been वेशवारो, as shown in the vulgate, which is the reading we have accepted here.

Veśavāra is boneless meat minced, steamed, and added with spices, ghee, etc. Refer to 'Ayurveda Medical Dictionary' by Ranganayakulu Potturu.

Perhaps the word वैशवार is an earlier form of the word वेशवार.

218 H has the compound word नलपीनमत्स्य. नलमीन is a particular fish known as *cilicima* (चिलिचिमः). See *Amarakośa*. Also, if the name is नलमत्स्य then the word पीन (fat) within the name is not according to proper Sanskrit. But, it can be allowed because the word मत्स्य (fish), instead of being a part of the name, can be considered to mean fish in general and thus the word पीन becomes its modifier. Thus, नलपीनमत्स्य can mean "a

The webpage
https://hindi.shabd.in/vairagya-
shatakam-
bhag-
acharya-
arjun-
tiwari/post/117629
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ing Bengal quince-rind²¹⁹, crape jasmine, deodar, ??, ??, peas, costus, ??, liquor, yogurt, and whey. Or, [one can use] the ointment prepared by mixing citron, *amla*²²⁰, salt, and ghee with honey and horseradish tree-root. Or else, [one can use] the unctuous sesame paste.

- 8 When the [condition of wind-blood] has a predominance of bile, the patient should be made to drink a decoction of grapes, ??-fruit, Indian ipecac, liquorice, sandalwood, and white teak. This decoction is sweetened with honey and sugar before consumption. Or, the decoction of wild asparagus, pointed gourd, cassia cinnamon, *triphalā*, ??, and heart-leaved moonseed should be given. [The patient should be administered] ghee that is prepared with sweet, bitter, and astringent [remedies].²²¹

[The patient] should be sprinkled with a decoction of ??, lotus stalk, ??, and ?? mixed with goat-milk²²², or with rice water that is mixed with milk, sugarcane juice, honey, and sugar, or with whey and sour rice gruel mixed with a decoction of grapes and sugarcane. Or else, [the patient] should be sprinkled with ghee that is prepared with *jīvanīya*²²³ or sprinkled with ghee that is purified for one hundred times.

The poultice [to be applied] should be made of rice flour or of the paste of sour rice gruel mixed with ??, ??, ??²²⁴, ??, ??, turmeric, horned pondweed, sacred lotus, etc. The poultice should be mixed with ghee.

- 9 The [condition of wind-blood] with a predominance of blood should be treated in the same way. Also, blood-letting should be done repeatedly.
- 10 However, when the [condition of wind-blood] has a predominance of

fat fish that is a नल (*cilicima*)".

Ḍalhaṇa says in his comment (Su 1938: 425) that नलमीन is a type of रोहित (*rohita*). Monier Williams says that *rohita* is a kind of fish: *Cyprinus Rohitaka*. Regarding the *rohita* fish, there is a *subhāṣita*: अगाधजलसञ्चारी न गर्व याति रोहितः | अङ्गुष्ठोदकमात्रेण शफरी फर्फरायते || This indicates that *rohita* is a deep water fish.

219 The word पेसिका in H should be read पेशिका.

220 Perhaps it could mean vinegar or sour curds. Refer to Monier Williams Sanskrit Dictionary.

221 Ḍalhaṇa comments (Su 1938: 425) that the sweet remedies are cottony jujube, etc., bitter remedies are pointed gourd, etc., and astringent remedies are *triphalā*, etc.

222 The compound word ending with कषायेण is taken to be a *bahuvrīhi* for अजाक्षीरेण (goat-milk).

223 *Jīvanīya* seems to be a group of medicinal herbs. There is an Ayurvedic preparation called *jīvanīya-ghṛta*. Refer to the *Āyurvedīya Śabdakośa* vol. 1.

224 तालीस should be read तालीश

phlegm, the patient should be made to consume a decoction of emblic and turmeric that is sweetened with honey, or a decoction of *triphalā*, or a paste of liquorice, ??, chebulic myrobalan, and ??. He should be made to drink chebulic myrobalan with water mixed with a little urine. He should be sprinkled with oil, urine, salty water, and liquor that are acidic²²⁵. Or, he should be sprinkled with a decoction of golden shower tree, etc.

The patient should be massaged with ghee cooked with sour cream, urine, liquor, ??²²⁶, liquorice, ??²²⁷, and ??.

The poultice should be made of either the paste of white mustard, or the paste of sesame and Withania, or the paste of ??²²⁸, selu plum, and wood apple, or the paste of honey, horseradish tree, and hogweed,²²⁹ or the paste of dry ginger, long pepper, black pepper,²³⁰ ??, and poison berry.²³¹ These five poultices are prepared with salty water. Thus, they have been described.

- 11 In case of combined aggravation of two humours or simultaneous aggravation of all three humours, the stated methods of treating those aggravations should be combined.²³²
- 12 In all [aggravations], one should consume chebulic myrobalan with jaggery. Or, one should have a diet of rice cooked in milk for ten days and should drink a mixture of long peppers crushed in milk, with increasing by five long peppers each night. Then one should reduce them again by the order of five more [each night].²³³ In this way, one should [reduce] all the long peppers. This is called *Pippalīvarddhamānakam* (Increasing Long Peppers). It indeed cures wind-blood, intense fever,²³⁴

The provisional edition should be modified accordingly.

225 Reading the word सुक्त in H as शुक्त

226 Monier Williams states Rumex Vesicarius for śuktā

227 DCS has this entry: Cryptolepsis buechananii Roem. et Schult. (Surapāla (1988), 453)
Decalepis hamiltonii Wight et Arn. (Surapāla (1988), 453)

228 According to V. S. Apte, दारु can mean देवदारु.

229 H has a short अ at the end instead of the long आ.

230 व्योषतिक्ता refers to the group of these three pungent spices. Also see *Sūtrasthāna* 14.35.

231 In H, the Sanskrit syntax does not match up with what the author is trying to say. The name of the fifth paste should also have been in the nominative case, as the other four pastes.

232 It means that the respective methods of treating the aggravation of individual humours should be combined.

233 In H, the letter ज्ञ in भूयञ्ज should have been श्.

234 Perhaps विषमज्वर could mean irregular fever.

loss of appetite, jaundice, abdominal affection, piles, heavy breathing, cough, wasting disease, weak digestion, and heart disease.

The poultice is a paste of ??, sandalwood, ??, ??, wild asparagus, bul-rush,²³⁵ ??, ??, liquorice, ??, ??, ??, ??, heart-leaf sida, country mallow, and Holostemma creeper mixed with milk. Or it is a paste of white teak, liquorice, and ?? mixed with ghee and cream. Or it is olibanum cooked with milk that is mixed with ??, ??, ??, liquorice and the group of sweet herbs.

Old ghee that is cooked with emblic and ?? and sweetened with sugar and honey is for drinking. Old ghee that is cooked with *jīvanīya* or that is cooked with a decoction of ?? is for sprinkling. Cooked heart-leaf sida oil is for sprinkling, bathing, enema, and eating²³⁶. One should eat food preparations made of rice, ??, barley and wheat accompanied with milk, meat soup, or mung beans soup that is not sour. Blood-letting also [should be done]. The treatments of vomiting, purging of bowels, enema, and oily enema should be conducted when the humours are highly aggravated.

13

14 There are verses in this regard.²³⁷

There is immediate relief by the application of remedies such as these by which the physicians cure the chronic condition of wind-blood.

15-16 *Poultice, sprinkling [oil], plaster, oil massage,²³⁸ spacious and comfortable rooms²³⁹ with no wind, soft pillows, comfortable beds, and soft massages are recommended in the condition of wind-blood.*

17 *Exercise, mating, anger, eating hot, sour, or salty foods, sleeping during the day, and food that is slimy or heavy should be avoided.*

18 One should treat the person who is affected with spasmodic contraction,²⁴⁰ who does not have droopy eyes and crooked eyebrows, whose

235 H has कशेरुका.

236 Perhaps it means that one should eat foods cooked in that oil.

237 The word भवति in H should have been भवन्ति.

238 In H, the part व्यजनानिला: does not make proper sense in the verse. Emending it to व्यजनानि च could be a consideration, but fanning (व्यजन) a patient with wind-blood is not good, as understood from the recommendation that such a patient should stay in a non-windy room. Therefore, we have accepted the vulgate reading for the first half of this verse.

239 In H, read the स सरणानि as श.

240 In H, the reading अपताकिनम् should have been अपतानकिनम्.

fingers have not become rigid, who is not perspiring or trembling, who is not in a state of delirium, who is not bed-ridden,²⁴¹ and who is not restrained externally. There at the beginning itself,²⁴² after rubbing the patient with oil and making him perspire, one should treat him with a strong *avapīḍa*²⁴³ in order to clear his head. Then, the patient should be made to drink filtered ghee that is properly cooked with a decoction of beggarweed and other herbs, sugarcane juice, milk, and yogurt. In that way, the wind does not spread exceedingly.

Thereafter, one should gather wind-alleviating herbs such as deodar, etc. and other constituent parts, along with barley, ??, and ??, and the flesh of a freshwater aquatic creature all at one place and prepare a decoction of them. One should take this decoction and mix it properly with sour substances and milk, and then cook the *pratīvāpa*²⁴⁴ of liquorice in this mixture along with ghee, oil, body fat, and bone marrow. This is *trivṛt* that should be recommended in treatments of sprinkling, oil massage, applying a poultice, oral consumption, oily enema, and errhine for patients having spasmodic contractions.

The patient should then be made to sweat by the methods described earlier. If the wind is stronger then the patient should be immersed in [a vessel] filled with lukewarm fluid used for sprinkling (*trivṛt*). Or he should be kept in the hot fireplace of a blacksmith.²⁴⁵ Or else he should be made to sweat by [a mixture of] ??, *veśavāra*,²⁴⁶ and milk.

Oil cooked with the juice of radish, ??, ??, ??, and ?? should be used in sprinkling, etc. for patients with spasmodic contractions.²⁴⁷ Sour yogurt mixed with black pepper and drunk on an empty stomach alleviates spasmodic contractions. Or else, ghee, oil, body fat, or bone marrow

There, Dalhana comments that deliberation on *avapīḍa* had been done earlier when it was mentioned. Find that description to know more details.

241 V. S. Apte has खट्यति. The *Āyurvedīya Śabdakośa* has the entry खट्टपातिन् which means "one who is inclined to fall from bed." Perhaps the reading in H has an error of the letter या which should have been पा.

242 In H, प्रागैव should have been प्रागेव.

243 The *Āyurvedīya Śabdakośa* has the entry अवपीड that means administering an oily paste through the nose. Refer *SS Cikitsāsthāna* Ch. 40 text 44 for a better understanding of *avapīḍa*.

244 It refers to an admixture of substances to medicines either during or after decoction. Refer to Monier-Williams's Sanskrit dictionary.

245 H has the reading रथाकारचुल्लयाम् that means "fireplace shaped like a chariot", but the vulgate reading रथकारचुल्लयाम् makes more sense here. Thus, we have accepted it.

246 Refer the above text no.7 for *veśavāra*. In H, the syllable वै should have been वे.

247 The word तैलम् is not present in H but is present in the vulgate. We have accepted it.

[can be consumed on an empty stomach].

This procedure of treatment thus described is for spasmodic contractions caused only by wind. When mixed humours cause it then the treatment should also be mixed. And when the spasms subside the patient should be given *avapīḍa*-s. One should also consider the fats of cock, crab, black fish, and porpoise.²⁴⁸ Milk prepared with wind-alleviating medicines. Gruel prepared with barley, ??, ??, radish, yogurt, ghee, and oil.

One should treat this recurring spasm for ten nights with oil massage, purging of bowels, enemas, and oily enemas. One should also look up the treatment of diseases caused by wind. One should also undertake preventive measures.

- 19 One should treat the paralytic (hemiplegic) patient whose limbs are not languid, who is in pain, and who is self-composed. There, at the beginning itself the patient should be massaged with oil and made to sweat. After cleansing the patient with a mild purifier,²⁴⁹ he should be administered with an oily enema and then a non-oily enema. Then at the appropriate time, he should be treated with special enemas of the brain and the head according to the method prescribed in the treatment of *ākṣepaka*.²⁵⁰ *Anutaila* should be used for massage.²⁵¹ *Sālvala* should be used for poultice.²⁵² heart-leaf sida oil should be used for oily enema. In this way, the unremitting patient should take the treatment for three to four months.

20

21

- 22 One should treat the patient with *ardita*²⁵³ who is strong and possesses the means with the method prescribed in treating wind diseases. The unique thing is the treatment with enemas of the brain and the head, errhine, smoke, poultice, and steam bath through tubes. Then, one should take the great five roots (*pañcamūlī*) with grass and prepare its

248 H has the reading रसान् which means “juices”. It seems unrealistic that juice would be extracted by crushing these whole animals. Vulgate has the reading वसाः instead of रसान् which appears to be the more probable reading. Thus, we have accepted it.

249 According to P. V. Sharma, this refers to mild evacuatives (purgatives).

250 Refer *Nidānasthāna* 1.50-51 for *ākṣepaka*.

251 For the procedure of preparing *anutaila*, refer *Cikitsāsthāna* 4.28.

252 For the procedure of preparing *sālvala*, refer *Cikitsāsthāna* 4.14-15.

253 Refer *Nidānasthāna* 1.71-72 for *ardita*.

Search for the section where the treatment of *ākṣepaka* is described.

Make the first letter of sentence capital.

decoction in milk mixed with twice the water. Then, the decoction with the milk remaining²⁵⁴ should be brought down [the stove] and filtered. It should then be mixed with a *prastha*²⁵⁵ of oil and again placed over fire and cooked thoroughly. Then, the oil mixed with milk should be brought down [the stove] and then churned after it cools down. This is called *kṣīrataila* that should be used in drinks, etc. for patients with *ardita*.

- 23 In the diseases of *gr̥dhrasī*, *viścañcī*, *kroṣṭukaśīrṣa*, *paṅgukalāya*, lameness, *vātakāṇṭaka*, burning sensation in the foot, numbness of the foot, *avabāhuka*, deafness, and *dhamanīvāta*, one should pierce the blood vessel as described earlier and, barring the case of *avabāhuka*, one should look up the treatment for wind diseases.
- 24 However, in the case of *karṇamūla*,²⁵⁶ lukewarm juice of ??²⁵⁷ mixed with liquorice, oil, and salt should be put into the ears.²⁵⁸ Or else one can use goat urine, liquorice, and oil. Or else one can use oil that is cooked with citron, pomegranate, ?? juice, and urine.²⁵⁹ Or else one can use oil that is cooked with sour liquor, buttermilk, and urine. One should also make the patient sweat with a steam bath through tubes. One should also look up the treatment for wind diseases. More will be said later.
- 25 In the case of *tūnī* and *pratitūnī*, one should make the patient drink ghee and salt with hot water. Or else one should administer the powder of long pepper and other herbs with hot water. Or else one should make the patient drink ghee that is made thick with asafoetida and ??.²⁶⁰ One should also treat the patient with enemas.

254 It means that the water has evaporated.

255 Ḍalhana comments (*Su* 1938: 425) that a *prastha* is a measure of weight that is equal to 32 *pala*-s.

256 The vulgate has the reading कर्णशूले which appears to be a more credible reading according to the context.

257 शृङ्गवेर appears to be a name of ginger. Refer to the Sanskrit dictionary of Monier Williams.

258 In H, the reading रसैः does not seem to make sense here. Hence we have accepted the vulgate reading रसम्.

259 In H, the word तैल should have been तैलम् to make proper sense. The vulgate has this reading. Thus we have accepted it.

260 यवक्षार is an alkali prepared from the ashes of burnt green barleycorns. Refer to the Sanskrit dictionary of Monier Williams.

- 26 In the case of *ādhmāna*,²⁶¹ however, one should do *avatarpaṇa*,²⁶² heating the hands, *phalavartikriyā*,²⁶³ stimulation of digestion, and [administer] digestives. One should also employ the purging of bowels and enemas. In the case of *pratyādhmāna*,²⁶⁴ one should employ vomiting, fasting, and stimulation of digestion.
- 27 In the case of *aṣṭhīlā* and *pratyāṣṭhīlā*,²⁶⁵ the procedure is that of *gulma* and internal abscess.
- 28 The beneficial asafoetida, the three pungent spices (long pepper, black pepper, and dry ginger), sweet flag, ?? grains, ??, pomegranate, ??, velvet-leaf, leadwort, ??, rock salt, ??, ??, natron, long pepper root, ??, ??, ??, ?? (juniper berry), and ?? (cumin seeds) should be powdered. This powder should be mixed with a lot of citron juice. Then it should be made into pills each weighing one *akṣa*. Thereafter the patient of wind disease should consume one pill every morning. This medicine indeed cures *gulma*, rapid breathing, cough, loss of appetite, heart disease, *ādhmāna*, *pārsvodara*, *bastiśūla*, *anāhamūtra*, painful piles, *plīhodara*, and *pāṇḍuroga*. Also, this medicine is excessively used in cases of *tūnī* and *pratitūnī*.
- 29 There are verses in this regard.
- The wind that has entered into the body tissues should be correctly understood as either pure or vitiated by humours²⁶⁶ and should be cured accordingly.*
- 30 *The wind that is accompanied by fat causes a swelling that is painful, hard, and cold. The physician should properly treat it like a*

261 Refer to *Nidānasthāna* 1.88. V. S. Apte explains it as “swelling of the belly”. P.V. Sharma has translated it as flatulence.

262 We are unclear about its meaning. The vulgate has the reading अपतर्पण that means fasting.

263 The entry फलवर्ति has the meaning “suppository” in the Sanskrit dictionary of Monier Williams. The Cambridge dictionary explains suppository as “a small, solid pill containing a drug that is put inside the anus, where it dissolves easily.” Refer to the link <https://dictionary.cambridge.org/dictionary/english/suppository>. Last accessed 30-Oct-2023.

264 Refer to *Nidānasthāna* 1.89. According to the Sanskrit dictionary of Monier Williams, it is a kind of tympanites or wind-dropsy.

265 Refer to *Nidānasthāna* 1.90 and 1.91.

266 In H, the reading लक्षणोन्यामैश्च does not make sense. Hence I cannot translate it. Perhaps the correct reading could be लक्षणाभ्याञ्च. This would connect with the two conditions of the wind as stated in the verse.

- treating a swelling.
- 31 When the wind accompanied by phlegm and fat enters the thighs, it causes pain in and immobility of the thighs due to numbness, pain, and fever.
- 32 Also, the thighs become pained, stiff, cold, and do not quiver due to sleep. They become heavy and as if belonging to someone else.²⁶⁷
- 33 That is called ūrūstambha. Others call it āḍhyaṁvāta. In that case, one should drink the ṣaṇḍharāṇa powder with cool water.
- 34 Similarly, consuming the powder of long pepper and other herbs with hot water is beneficial. Or else, one should consume the powder of triphalā with honey and ??.
- 35-38 Or else, one should drink the best ?? or ?? with urine. Such a person cures the wind that is afflicted by phlegm and accompanied by fat, as well as heart disease, loss of appetite, gulma, and internal abscess.
- One should employ salty urine [therapy], sudation, and hard rubbing. One should also apply [the paste of] mustard and ?? fruits mixed with urine.²⁶⁸
- One should eat old ??s, ??, ??, etc. along with uncooked²⁶⁹ flesh of wild animals and unsalted vegetables that are beneficial.
- 39 When the phlegm and fat become amply reduced one should again employ the treatment of oil massage, etc. for the patient.

267 In H, the verb वर्तते should have been in the dual. Also, the word आस्थिरौ does not make sense. The vulgate has the sensible reading अस्थिरौ which we have accepted here.

268 The word दिहेत् in H is not a proper Sanskrit word. We have taken its proper form दिह्यात् as given in the vulgate.

269 The vulgate has the reading अघृतैः that means without ghee.

Cikitsāsthāna 15: On Difficult Delivery

Literature

Meulenbeld offered an annotated overview of this chapter on fetal malpresentation and a bibliography of earlier scholarship to 2002.²⁷⁰ Das made observations about the afterbirth (*aparā*) that is mentioned in 4.15.17 ([Su 1938](#): 432).²⁷¹ Selby has explored gynecological narratives in ayurveda.²⁷²

Translation

- 1 And now we shall explain the difficult delivery medically treated.
- 3 Nothing else is more difficult than the extraction of a foetus since it has to be performed in the region of vagina, liver, spleen, intestines and the uterus. Actions like pushing up, pulling down, cutting off, incising, removing, pressing and straightening must be done using one hand, without hurting the foetus or the pregnant woman, Therefore, having considered that and obtaining permission, one should proceed with care.
- 4 Eight types of the positions of difficult foetus have earlier been mentioned briefly. Even if, in the natural birth process also the large / wrong way of the head, shoulders or hips of a foetus / child cling firmly in the passage.

²⁷⁰ [HIML](#): IA, 271–272.

²⁷¹ Das [2003](#): 517.

²⁷² Selby [2005a,b](#).

- 5 In the case of a live foetus, the delivering ladies should attempt to deliver it. And, during this process, they should be made to hear the sacred verses repeatedly meant for expulsion of a foetus.

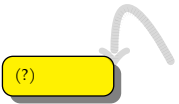
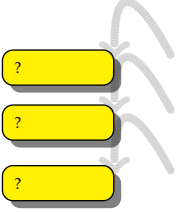
6 *O beautiful woman, may the divine nectar and the moon and the sun and Uccaiśravas reside icumbhalakan your house.*

7 *O lady, may this nectar extracted from the water release this tiny foetus of yours. May the fire, wind, sun and Indra together with the ocean bestow upon you the peace.*

- 9 And, as mentioned before (3.10.16-20) the medicine should be administered. In the case of a dead fetus, (the physician) having inserted (his) hand lubricated with the *dhanvaka*, *myttikā* – soil, the *śālmālī*- the *seemul* and ghee into the vagina of a woman lying on her back, whose thighs are bent with the elevated waist with the support of the cloth of *cumbhalaka* should take away the fetus. In the case, the fetus coming out with both the thighs, should be stretched out in a normal way. If the fetus has reached with only one thigh, spreading out its other thigh it should be taken out. If the fetus is coming out with its buttocks portion, squeezing the buttocks upward, spreading the thighs it should be taken out. A fetus having come in a transverse position like an oblique (तिर्यक्चीनस्य ?) iron club, lifting upward its half of the lower part from behind, straightening its half of the upper part, bringing it to the passage of vagina, it should be taken out. The last two positions of the dead fetus cannot be accomplished. Thus, in this state, instrument should be employed / surgery should be undertaken.

- 10 But, the live fetus should not be torn apart in any case. As, the live fetus may kill the mother and self soon.

- 12 Next, assuring safety to the lady, cutting the head of the fetus with the instrument that has disc on the top (मण्डलाग्र) or finger shaped instrument (अङ्गुलिशस्त्र); removing the skull, the fetus should be taken out holding the forceps at its chest and armpit. If the head of the fetus is not separated, the fetus should be drawn out from its orbital regions or cheek (with the forceps); if the shoulders are stuck up in the passage, the fetus should be taken out by cutting its arm / arms at the shoulder region; tearing the abdomen when bloated with wind just like a stretched leather bag used for holding water, casting off the intestine,



the loosened fetus should be taken out. Or else, if its thighs are adhered to the passage, the bones of the thighs should be cut and fetus is removed.

- 13 The fetus is adhered to the passage from whichever its body part, the physician by separating that part should remove the fetus carefully and by all means the woman should be protected.
- 14 For, irritated wind causes different movements of the fetus. In this situation, the wise physician should act intelligently.
- 15 And, the learned physician should not delay even for moment in removing the dead fetus as it kills mother in no time like a breathless animal.
If impacted with hip, the hip bones should be cut and then delivered.

Kalpasthāna

Kalpasthāna 1: Protecting the King from Poison

Introduction

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 follow: 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.²⁷³

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.²⁷⁴

The work then moves on to the various symptoms experienced by the king after being poisoned, and remedies appropriate to each case. Poison

²⁷³ *Arthaśāstra* 1.21.8 (Kangle 1969: 1, 30), translation by Olivelle (2013: 97).

²⁷⁴ Cf. *Arthaśāstra* 1.21.6, *ibid.*, Olivelle (2013: 96).

exhibits characteristic signs when added to milk and other drinks.²⁷⁵ 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.²⁷⁶ Translations of this chapter since Meulenbeld's listing have appeared by Wujastyk (2003b: 131–139), P. V. Sharma (1999–2001: 3, 1–15), and Srikantha Murthy (2000–02).²⁷⁷

Manuscript notes

- MS Kathmandu NAK 5-333 has foliation letter numerals, for example on f. 323a, that are similar to MS Cambridge Add. 1693,²⁷⁸ dated to 1165 CE noted in Bendall's chart of Nepalese letter-numerals Bendall 1883: Lithograph V, after p. 225

²⁷⁵ Cf. *Arthaśāstra* 1.21.6 again.

²⁷⁶ HIML: IA, 289–290.

²⁷⁷ For a bibliography of translations to 2002, including Latin (1847), English (1877), Gujarati (1963) and Japanese (1971), see HIML: IB, 314–315.

²⁷⁸ 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.²⁷⁹
- 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.²⁸⁰

[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.²⁸¹
- 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.²⁸²

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

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

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

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

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

- 8–11 He should employ a doctor in his kitchen (*mahānasa*) who is respected by experts, who belongs to a good family, is orthodox, sympathetic, not emaciated, and always busy.
- 12–13 The kitchen should be constructed at a recommended location and orientation. It should have a lot of light,²⁸³ have clean utensils and be staffed by men and women who have been vetted.²⁸⁴
- 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.²⁸⁵
- 18cd–19ab An expert knows people’s body language (*ingita*) 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.²⁸⁶ 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 (*abhyariga*) and combs (*avalekhana*); in dry rubs (*utsādana*) and showers, in decoctions (*kaṣāya*) and massage ointment (*anulepana*); in garlands (*sraja*), clothes, beds, armour and ornaments; in slippers and footstools, and on the backs of elephants and horses; in nasya (*snuff*), inhaled smoke (*dhūma*), eye make-up (*añjana*), etc., and any other things which are commonly poisoned. Then, I shall also explain the remedy.
- 28 Flies or crows or other creatures that eat a poisonous morsel (*bali*)

Cf.
Arthaśāstra
1.21.8.

283 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).

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

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

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

- served from the king's portion, die on the spot.
- 29 Such food makes a fire crackle violently, and gives it an overpowering colour like a peacock's throat.
- 30–33 After a chukar partridge looks at food which has poison mingled with it, its eyes are promptly drained of colour; a peacock pheasant drops dead. A koel changes its song and the common crane rises up excitedly.²⁸⁷ 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.²⁸⁸ The chital deer sheds tears and the monkey releases excrement.²⁸⁹
- 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.²⁹⁰
- 35, 36cd In such a case, an errhine and a collyrium that are costus, ??, spikenard and honey (*madhus*);²⁹¹ a paste of sandalwood on the heart may also provide relief.²⁹²

287 The verb अर्च्छति “rises up” is a rare form best known from epic Sanskrit (see Oberlies 2003: 212, §7.6.1). The transmitted form क्रौञ्च is obviously a colloquial version of Sanskrit क्रौञ्च. Commenting on 1.7.10 (Su 1938: 31), Ḍalhaṇa interestingly gives the colloquial versions of several Sanskrit bird names, even singling out pronunciation in the specific location of Kānyakubja. For क्रौञ्च he says that people pronounce it कुरञ्च and कौचि. The form क्रौञ्च is found in Pāli (see Cone 2001: 731, who notes that Ardhamāgadhi 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).

288 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.”

289 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.

290 “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).”

291 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.

292 sing-1972 discussed the difficulties in identifying लामज्ज, a plant cited more often in the *Suśrutasaṃhitā* than in the *Carakaśaṃhitā*; Ḍalhaṇa adopted the common view that

- 37 Held in the hand, it makes the hand burn, and the nails fall out. In such a case, the ointment (*pralepa*) is beautyberry, velvet-mite, soma and blue water-lily.²⁹³
- 38–39 If he eats that food, through inattention or by mistake, then his tongue will feel like a pebble (*aṣṭhīlā*) and it will lose its sense of taste. It stings and burns, and his saliva (*śleṣman*) dribbles out.²⁹⁴ In such a case, he should apply the treatment recommended above for vapour (*bāṣpa*), and what will be stated below under “toothbrush twigs”.²⁹⁵
- 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.²⁹⁶
- 41 In this case, vomiting must quickly be induced using the fruits of emetic

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.”

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

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

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

- 294 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 faciliior*), but is not attested in the Nepalese manuscripts.

- 295 Poisoned toothbrushes are discussed in verses 48 ff. below.

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

- nut, gourd, red gourd, and luffa, taken with milk and watered butter-milk, 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*).²⁹⁷
- 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.²⁹⁸
- 46 Vegetables, soups, food and meat are soggy and tasteless. They seem to go stale suddenly, and they have no aroma.
- 47 All edibles lack aroma, colour or taste. Ripe fruits rapidly rot (*prā√kuth*) and unripe ones ripen.²⁹⁹
- 48 When a toothbrush twig has poison on it, the bristles are corroded and the flesh of the tongue, gums and lips swells up.³⁰⁰
- 49 Then, once his swelling is lanced, one should rub (*pratisāraṇa*) it with fire-flame bush flowers jambul, mango stones and chebulic myrobalan fruit mixed with honey.³⁰¹
- 50 Alternatively, the rubbing (*pratisāraṇa*) can be done with either the roots of sage-leaved alangium, the bark of blackboard tree or siris

I’m still unhappy about this verse.

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

fn about sadyas+

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

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

299 The root √कुथ “stink, putrify, rot” is apparently known only from its few uses in the *Suśrutasaṃhitā*.

300 Gayadāsa and Ḍalhaṇa pointed out that “tooth socket (दन्तवेष्ट)” and “gum (दन्तमांस)” have the same meaning (2.16.14–26 (Su 1938: 331–332)).

301 This recipe is different from the vulgate.

- seeds.³⁰²
- 51ab One should give advice about a poisoned tongue-scraper or mouth-wash (*kavala*) in the same way as for a toothbrush twig.
- 51cd Massage oil that has been laced with poison is slimy, thick and discoloured.
- 52 When the massage oil has been contaminated with poison, boils arise, pain, a discharge (*srāva*), inflammation of the skin, and sweating.³⁰³ And the flesh splits open.
- 53–54 In such a case, sandalwood, crape jasmine, costus, and cuscus grass, bamboo leaves, heart-leaved moonseed and heart-leaved moonseed, white clitoria, sacred lotus, and Indian barberry should be made into an ointment (*anulepana*) for the patient, who has been sprinkled with cold water. That is also recommended as a drink with the juice and leaves of wood apple.³⁰⁴
- 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 oil massage (*abhy-aṅga*).³⁰⁵
- 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**,³⁰⁶ ghee, beautyberry,³⁰⁷ black creeper, and amaranth. Good alternatives are either the fluid extract of cow-dung, or the juice of jasmine, the juice of woodrose, or household soot.³⁰⁸

Bear's bile
instead of
deer's bile.

302 The spelling of the name अङ्गोल्ल varies अङ्गोट, अङ्गोठ, अङ्गोल (GVDB: 5); Ḍalhana noted 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 Ḍalhana in interpreting the compound to refer to the distinctive bean-like siris seeds, rather than to mung beans (5.1.50 (Su 1938: 562)).

303 The feminine स्फोट for “boils” is unattested.

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

305 See verse 52 above.

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

307 See note 292.

308 The plant identifications in this passage follow Ḍalhana’s glosses, although he noted

- 59 If either massage oil for the head, or a helmet for the head, in a wash, turban, or garlands that are contaminated with poison, then one should treat it in the same way as a comb.
- 60–61 When face make-up is poisoned, the face becomes dark and has the symptoms found with poisoned massage oil. It is covered with spots (*kaṇṭaka*) that are like lotus-spots (*padminikaṇṭaka*).³⁰⁹ In this case, the drink is honey and ghee, and the ointment (*pralepa*) is sandalwood with ghee, curds, honey, verbena, scarlet mallow and hogweed.³¹⁰
- 62–63ab Elephants and the like become ill and they dribble saliva. And the rider gets spots (*sphoṭa*) and a discharge on his scrotum, penis, and rectum. In this case, one prescribes the same therapy as for poisoned massage oil for both the rider and the mount.
- 63cd–65ab When there is poison in snuff (*nasya*) or smoke, the symptom (*liṅga*) is blood coming out of the apertures of the head (*kha*), a headache, a flow of mucus (*kapha*) and impairment of the senses. In such a case, ghee of cows etc., boiled up with their milk and Himalayan monkshood, is prescribed, with henna, as a cold drink or er-rhine.
- 65cd–66 Flowers lose their fragrance and colour, and wilt. On smelling them, he gets a headache and his eyes fill with water. In this case, the treatment is what was proposed above for vapour (*bāṣpa*) and that which is traditional for face make-up.
- 67–68 When it is in ear-oil, there is degeneration in the ear, and painful swelling. There is also a discharge from the ear and in such a case it needs to be irrigated (*pratipūrana*) promptly with ghee and honey. Extracted juice (*svarasa*) of wild asparagus and very cold juice of white cutch tree

punarnavā
in the N &
K MSS

śṛita for
śṛta

a difference of opinion on the identity of woodrose (lit. “mouse-ear”).

The expression धूमो वागारसंज्ञितः ‘...or the smoke termed “house”’ is commonly interpreted by translators and in Ayurvedic dictionaries as ‘household soot,’ and this does seem to be the meaning, in context. The term was comprehensively discussed by Meulenbeld (2008: 443). Cf. note 401, p. 123.

³⁰⁹ 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.

³¹⁰ 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 1920–25: 20, where it is the name of a constellation).

explain
more

Medical
difference
from
Sharma.

example
where the
vulgate
clarifies
that these
should be
used sep-
arately; ap-
pears to be
a gloss in-
serted into
the vulgate
text.

The two
uses of
prāpta are
hard to
translate.
prāptāḥ →
kṣiprāḥ is
an example
of the vul-
gate banal-
izing the
Sanskrit
text to
make sense
of a diffi-
cult pas-
sage.

√ vyadh
not √ vedh
(also else-
where and
for the
ears), caus-
ative optat-
ive.

are also recommended as something good.³¹¹

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.³¹²

70–71 In this case, one must immediately drink ghee and have it also in an eyewash (*tarpaṇa*) with long pepper. One should have an eye ointment (*añjana*) of the juice of periploca of the woods and have the extract (*niryāsa*) of three-leaved caper, wood apple and periploca of the woods and the flower of marking-nut tree.

72–73 Because of poisoned slippers there will definitely be a swelling, numbness (*svāpa*), a discharge (*srāva*) and an outbreak of spots (*sphoṭa*) on the feet. One should clean (*pra√sādh*) footstools together with slippers.

74 Ornaments lose their lustre, and they do not shine as they used to. They damage their respective locations with burning, sepsis (*pāka*), and fissuring (*avadāraṇa*).³¹³

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.³¹⁴

77–78ab He should prescribe it in drinks, liniments (*ālepana*), errhines (*nasya*), and in eye ointment (*añjana*). Also, he should use sharp purgatives and emetics. If bleeding is present, he should have the indicated veins pierced.

78cd–79ab If either purging nut or a fern is tied on to the King’s wrist, then all food that is mixed with poison will be rendered free of poison.³¹⁵

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

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

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

314 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.

315 In early Ayurvedic literature, the plant अजरुहा is mentioned only here and its identity

- 79cd–80 He should always guard his heart when amongst **people who are not his friends**.³¹⁶ Before eating, he should drink the kinds of ghee called “Invincible” and “Immortal”.³¹⁷ He should drink ghee (*sarpiṣ*), honey, curds (*dadhi*), milk (*payas*), or cold water.
- 81 He should consume monitor lizard, peacock, mongoose, chital deer, and blackbuck too, that destroy poison, and their juices.
- 82 As discerning person should add well-crushed black creeper,³¹⁸ liquorice, and sugar to the meats of monitor lizard, mongoose and blackbuck too.
- 83 Add sugar and Himalayan monkshood to peacock flesh, together with ginger. And for meat from a chital deer, he should add long pepper, with ginger.
- 84ab **A cold neem** broth with honey and ghee is wholesome too.
- 84cd A discerning person should partake of hard and soft foods that counteract poison.³¹⁹
- 85 If poison might have been drunk, a person who has protected his heart should make himself vomit using long pepper, liquorice, honey, sugar, sugar cane juice, and water.

The first chapter in the Kalpas.

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

³¹⁶ The *Carakasamhitā* described “protecting the heart” (हृदयावरण) as drinking several sweet, oily drinks to surround the heart and keep it safe (6.23.46 (Ca 1941: 574)). Ḍalhaṇa on 5.1.79–81 (Su 1938: 563) 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. Note that the Nepalese version reads the opposite of the vulgate: one should guard one’s heart when amongst enemies, not friends. This is far more logical; it is also the reading known to the 1.8.89a (As 1980: 79).

³¹⁷ These ghee compounds are described in later chapters: see 5.2.47–49 (Su 1938: 566) and 5.6.13 (Su 1938: 581).

³¹⁸ Ḍalhaṇa on 5.1.82 (Su 1938: 563) equated this with turpeth.

³¹⁹ On this expression, see Yagi 1994.

Kalpasthāna 2: Poisonous Plants

Introduction

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

In spite of having made the greatest effort, it has been impossible to identify these plants. In the Himalayan regions, Kirātas and Śabarās are able to identify them.³²⁰

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.³²¹ 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.³²²

³²⁰ After *Suśrutasaṃhitā*, *kalpasthāna* 2.5 (Su 1938: 564). From the view of Sanskrit authors, Kirātas and Śabarās were tribal peoples. The eleventh-century author Bhikṣu Govinda, however, cast his treatise as a dialogue with a Kirāṭa king called Madana who was a master of the alchemical art (HIML: IIA, 620).

³²¹ See Wujastyk 2003b: 80–81.

³²² Valuable reference sources on Indian plant toxicology in general include Pillay 2013: chs. 10, 11 and Barceloux 2008: parts 1.II, 3 and 4.

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.³²³

Translation

- 1 And now I shall explain **what should be known** about stationary poisons.³²⁴
- 3 It is said that there are two kinds of poisons, stationary (*sthāvara*) and mobile (*jaṅgama*). The former dwells in ten sites, the latter in sixteen places.
- 4 Traditionally, the ten are: root, leaf, fruit, flower, bark, milky sap (*kṣīra*), pith (*sāra*), resin (*niryāsa*), the elements (*dhātu*), and the tuber.
- 5 In that context,
 - the eight root-poisons are:³²⁵
 1. liquorice (?),³²⁶
 2. sweet-scented oleander,³²⁷
 3. jequirity,³²⁸
 4. **false daisy**,³²⁹

³²³ HIML: IA, 290–291.

³²⁴ 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.

³²⁵ 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).

³²⁶ Liquorice eaten in excess can be poisonous, but it is unlikely to be the plant intended here. T. B. Singh and Chuneekar (GVDB: 124) noted that the poisonous root mentioned in this passage, “remains to be identified.”

³²⁷ The roots of sweet-scented oleander are highly toxic, as are most parts of the plant (Pillay and Sasidharan 2019).

³²⁸ 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.

³²⁹ The plant is usually called just *bhaṅgurā* without the prefix *su-* “good.” However, there is no reported toxicity associated with *E. prostrata*. The vulgate reads सुगन्धा (snakeroot).

5. (?),³³⁰ and ending with
 6. ??,³³¹
 7. country sarsaparilla (?),³³² and
 8. medhshingi,³³³
- the leaf-poisons include:
 - aconite leaf (?),
 - drum-giver (?),
 - thorn apple, and
 - big thorn apple;
 - the fruits of items like: jequirity, marking-nut tree, and poison-altar (?) are
 - kumudavati (*kumadavati*)ⁱ,
 - reṇuka (?)ⁱⁱ,
 - kurūkaka (?)ⁱⁱⁱ,
 - 'little bamboo' (*veṇuka*)^{iv},³³⁴,

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

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

332 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.

333 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 (mchu-2021a; Meulenbeld 1989; Wujastyk 2002). The *Sauśrutaniḥṣaṇṭu* gives a number of synonyms for *vijayā*, almost none of which have any poisonous parts (Suvedī and Tivārī 2000: 5.77, 10.143). But one of them, *viṣāṇī* (also *meṣaśṛṅgī*), is sometimes equated with *Dolichandrone falcata* (DC.) Seemann (ADPS: 518), a plant used as an abortifacient and fish poison (nadk-1982). This identification is tenuous.

334 Not poisonous.

i unknown; see ?

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

iii ?; see ?

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

- thorn apple (*karambha*)^v,
- 'big thorn apple' (*mahākarambha*)^{vi},
- 'pleaser' (*nandanā*)^{vii},
- 'crow' (*kāka*)^{viii},
- the flower-poisons include those of:
 - rattan (*vetra*)^{ix},
 - wild chinchona (*kādamba*)^x,
 - black pepper (*vallīja* → *marica*)^{xi},
 - thorn apple (*karambha*)^{xii}, and
 - big thorn apple (*mahākarambha*)^{xiii};
- the seven bark, pith (*sāra*) and resin (*niryāsa*) poisons are:
 - 'gutboiler' (*antrapācaka*)^{xiv},
 - 'blade' (*kartarīya*)^{xv},
 - wild mustard (*sauryāka*)^{xvi},
 - emetic nut (*karaghāṭa* → *karahāṭa?* → *madana*)^{xvii},
 - thorn apple (*karambha*)^{xviii},
 - wild asparagus (*nandana* → *bahuputrā?*)^{xix}, and

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

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

vii ?; see ?

viii ?; see ?

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

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

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

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

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

xiv unknown; see ?

xv unknown; see ?

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

xvii *Randia dumetorum*, Lamk.; see NK #2091

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

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

- munj grass (*nārācaka*)^{xx,335}
- the three milky sap (*kṣīra*)-poisons are:
 - purple calotropis (*kumudaghnī* → *arka*?)^{xxi,336}
 - oleander spurge (*snuhī*)^{xxii}, and
 - ‘web-milk’ (*jālakṣīri*)^{xxiii};
- the two element (*dhātu*)-poisons are:
 - ‘foam-stone’ (*phenāśma*)^{xxiv}, and
 - orpiment (*haritāla*)^{xxv,337}
- the thirteen tuber-poisons are:
 - jequirity (*kālakūṭa*)^{xxvi,338}
 - wolfsbane (*vatsanābha*)^{xxvii},

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

336 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.

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

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

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

xx *Saccharum bengalense*, Retz.?; see NK #2184

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

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

xxiii unknown; see ?

xxiv unknown; see ?

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

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

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

- Indian mustard (*sarṣapa*)^{xxviii},
- leadwort (*pālaka* → *citraka*)^{xxix},
- ‘muddy’ (*kardama*)^{xxx}, the
- ‘Virāṭa’s plant’ (*vairātaka*)^{xxxi},
- nutgrass (*mustaka*)^{xxxii},
- atis root (*śrīgīviṣa*)^{xxxiii},
- sacred lotus (*prapuṇḍarīka*)^{xxxiv},
- radish (*mūlaka*)^{xxxv},
- ‘alas, alas’ (*hālāhala*)^{xxxvi},
- ‘big poison’ (*mahāviṣa*)^{xxxvii}, and
- galls (*karkaṭa*)^{xxxviii}.³³⁹

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,

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

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

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

xxx unknown; see ?

xxxi unknown; see ?

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

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

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

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

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

xxxvii unknown; see ?

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

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*).³⁴⁰

The milky sap (*kṣīra*)-poisons make one froth at the mouth, cause loose stool, and make the tongue feel heavy.³⁴¹ The element (*dhātu*)-poisons give one a crushing pain in the chest, make one faint and cause a burning feeling on the palate.

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

11–17 Symptoms of tuber poisoning

The tuber-poisons, though, are severe. I shall talk about them in detail. With jequirity (*kālakūṭa*)^{xxxix}, there is numbness and very severe trembling. With wolfsbane (*vatsanābha*)^{xl}, there is rigidity of the neck, and the faeces, and urine become yellow.

With sārṣapa (*sārṣapa*),³⁴² the wind becomes defective (*vātavaiguṇya*), there is constipation (*ānāha*), and lumps (*granthi*) start to appear. With leadwort (*pālaka* → *citraka*)^{xli}, there is weakness in the neck, and speech gets jumbled.³⁴³

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

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

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

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

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

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

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

With the one called ‘muddy’ (*kardama*)^{xlii}, there is a discharge (*praseka*), the faeces pour out, and the eyes turn yellow. The ‘Virāṭa’s plant’ (*vairāṭaka*)^{xliii} 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*).³⁴⁴

- 15b With great aconite (*mahāviṣa*) one’s limbs grow weak, there is a burning feeling and swelling of the belly.³⁴⁵
- 16a With puṇḍarīka (*puṇḍarīka*), one’s eyes go red, and one’s belly becomes distended.³⁴⁶
- 16b With mūlaka (*mūlaka*), one’s body is drained of colour and the limbs are paralysed.³⁴⁷
- 17a With hālāhala (*Aconite*), a man turns a dark colour (*dhyāma*), and gasps.³⁴⁸
- 17b With atis root (*śṛṅgīviṣa*)^{xliv}, one gets violent knots (*granthi*) and stabbing pains in the heart.³⁴⁹
- 18a With markāṭa (*monkey*), one leaps up, laughs, and bites.³⁵⁰

344 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.

345 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.

346 The word *puṇḍarīka* very commonly means sacred lotus, *Nelumbo nucifera*, Gaertn. The entire plant is edible and cannot be the poison intended here. T. B. Singh and Chunekar (GVDB: 252) noted that this poison is unidentified and that it is also listed as a poison in *Carakasamhitā*ci.23.12.

347 The word *mūlaka* very commonly means the radish, *Raphanus sativus*, L. The root is edible and cannot be the poison intended here. T. B. Singh and Chunekar (GVDB: 317) noted that this poison is unidentified.

348 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. (*Soḍhalanighaṇṭu* p.43). Ḍalhaṇa on 5.2.17 (Su 1938: 564) interprets our “gasps” as “the man laughs and grinds his teeth.” But this gloss is probably displaced and intended to apply to verse 2.18.

349 T. B. Singh and Chunekar (GVDB: 407) noted that *vatsanābha* and *śṛṅgīviṣa* are two different varieties of poisonous Aconites that are difficult to distinguish.

350 T. B. Singh and Chunekar (GVDB: 299) said of *markāṭa*, “an unidentified vegetable

xlii unknown; see ?

xliii unknown; see ?

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

-> ativiṣa

Look up
the ca. ref-
erence.

- 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 (*vikāśin*),
 - 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.³⁵¹
- 22 Because it is fast-acting it kills quickly, and because of its pervasiveness it affects one's whole physical constitution (*prakṛti*).³⁵² Because of its expansiveness it enters into the humour (*doṣa*)s, bodily constituents (*dhātu*)s, and even the impurities. Because it is limpid it overflows, and because it is light it is difficult to treat. Because it is indigestible it is hard to eliminate. Therefore, it causes suffering for a long time.
- 24 Any poison that is instantly lethal, whether it be stationary, mobile, or artificial, will be known to have all ten of these qualities.

Slow-acting poison

- 25cd-26 A poison that is old or destroyed by anti-toxic medicines, or else dried up by blazing fire, wind, or sunshine, or which has just lost its qualities

poison." Cf. Suvedī and Tivārī 2000: v.36 for synonyms that lead to the non-toxic jujube tree.

351 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.

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

- by itself,³⁵³ becomes a slow-acting poison (*dūṣīviṣa*).³⁵⁴ 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.³⁵⁵
- 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.³⁵⁶ 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*).³⁵⁷ 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*),³⁵⁸ **dwindling away (*kṣaya*) of flesh**, swelling of the feet, hands, and face, **the fever called *pralepaka***, vomiting and diarrhoea.³⁵⁹ 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

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

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

355 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.

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

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

358 The last ailment could perhaps be ringworm.

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

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 (*parśvabheda*), all his humours are irritated, and he also has a pain in his intestines (*pakvādhāna*).
- 39a In the sixth, he loses consciousness and he completely loses control of his bowels.
- 39b In the seventh, there are breaks in his shoulders, back and loins, and he stops breathing.³⁶⁰

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;

³⁶⁰ Here at 5.2.24 (Su 1938: 566) Ḍalhana glossed *sannirodha* as “complete cessation, i.e., of breath” (*sannirodhaḥ samyaginirodhaḥ, ucchvāsasya iti śeṣaḥ*). The manuscripts all read *skanda* where *skandha* must be intended; this confusion is known from Buddhist Hybrid Sanskrit (Edgerton 1953: 608).

- 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.³⁶¹
- 42b In the fifth, he should be prescribed the antidote together with a decoction (*kvātha*) of honey and liquorice.
- 43 In the sixth, the cure (*siddhi*) is the same as for diarrhoea. And in the seventh, he perishes.³⁶²
- 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 (*niḥk-vātha*) destroys the two poisons: luffa gourd,³⁶³ wild celery,³⁶⁴ velvet-leaf, sunflower,³⁶⁵ heart-leaved moonseed, myrobalan siris, and selu

361 At 6.52.30 (Su 1938: 769) Ḍalhaṇa noted that *sindhu* can be interpreted as salt (*saind-hava*).

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

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

363 At 4.10.8 (Su 1938: 449) Ḍalhaṇa glossed कोशवती as देवदाली and at 4.18.20 (Su 1938: 472) as कटुकोशातकी, vocabulary pointing to *Cucumis cylindrica*, *Cucumis act-angula* or *Luffa echinata*. See glossary under luffa.

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

365 At 5.2.45 (Su 1938: 566) Ḍalhaṇa said that this plant has leaves like the *paṭola*, pointed gourd, T. B. Singh and Chuneekar (GVDB: 280, 443) argued plausibly that this is a syn-

plum, white siris, **the two kinds of turmeric**,³⁶⁶ and the two kinds of poison berry,³⁶⁷ hogweed, peas, **the three heating spices**, the two kinds of Indian sarsaparilla³⁶⁸ **and blue water-lily**.

onym for *arkapuṣpī*, panacea twiner, as Ḍalhaṇa also stated in 1.45.120 (Su 1938: 206), and the leaves of *Holostemma* and *Trichosanthes* are indeed strikingly similar. The appearance of the plant, a creeper with sun-like flowers, fits the name. But there remains much controversy about the identities of these candidates (e.g., ADPS: 195–198).

366 I.e., turmeric and Indian barberry.

367 I.e., poison berry and yellow-berried nightshade.

368 I.e., country sarsaparilla and black creeper.

The invincible ghee

- 47–49 There is a famous ghee called “Invincible” (*ajeya*). It rapidly destroys all poisons but is itself unconquered. It is prepared with a mash (*kalka*) of the following plants: liquorice, crape jasmine, costus, deodar, peas, **Indian madder**, cardamom and cherry, cobra’s saffron, blue water-lily, sugar, embelia, sandalwood, cassia cinnamon, beautyberry, rosha grass, the two turmeric³⁶⁹ the two Indian nightshades,³⁷⁰ the two kinds of Indian sarsaparilla,³⁷¹ beggarweed, and **heart-leaf sida**.

Curing the ‘slow-acting’ poison

- 50–52 Someone suffering from “slow-acting poison (*dūṣīviṣa*)” should be well sweated, and purged both top and bottom. Then he should be made to drink the following **eminent** antidote which removes “slow-acting poison:”
Take long pepper, rosha grass, spikenard, **lodh tree**, **cardamom**, natron, scented pavonia, red chalk, as well as gold, and pondweed.
This antitoxin, taken with honey, eliminates slow-acting poison. It is called the “enemy of slow-acting poison (*dūṣīviṣāri*),” 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.

³⁶⁹ I.e., turmeric and Indian barberry.

³⁷⁰ I.e., poison berry and yellow-berried nightshade.

³⁷¹ I.e., country sarsaparilla and black creeper.

Kalpasthāna 3: Poisonous Insects and Animals

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.³⁷²

Translation

- 1 And now we shall explain the rule (*kalpa*) that is the required knowledge about mobile poisons.³⁷³
- 3 The full explanation about the sixteen carriers (*adhiṣṭhāna*) of the mobile poisons, that have been mentioned by me in brief, will be stated.³⁷⁴
- 4 In that context, they are:³⁷⁵
 - gaze and breath,
 - teeth, nails, and bites
 - urine and faeces,
 - **menstrual blood**,
 - semen,
 - **tail**,
 - **contact with saliva**,
 - nipping with the mouth

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

³⁷² [HIML](#): IA, 291–292.

³⁷³ In contrast to stationary, plant poisons. No reference is made to Dhanvantari (see Birch, Wujastyk, Klebanov, Parameswaran, et al. [2021](#)).

³⁷⁴ “Carrier” for base, foundation (*adhiṣṭhāna*) aims to capture the idea that the author will describe the creatures in which poisons inhere.

³⁷⁵ 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.

³⁷⁶ This interpretation comes from Ḍaḷhaṇa on 5.3.4 ([Su 1938](#): 567), but he reads विशर्चित.

- (*mukhasaṃdaṃśā*),
- fart (*avaśardhita*),³⁷⁶
- **anus**,³⁷⁷
- bones,
- bile,
- bristles (*śūka*), and
- corpses.

5 In that context,

<i>location of the poison</i>	<i>creatures</i> ³⁷⁸
in their breath and gaze	divine snakes
in their fangs	the ones on earth ³⁷⁹
in their nails, mouths and fangs	cats, dogs, monkeys, men (<i>nara</i>), ³⁸⁰ crocodiles, frogs, ‘cook-fish’ (<i>pākamatsya</i>), ³⁸¹ monitor lizards, cone snails (<i>śambūka</i>), ‘poisonous snakes’ (<i>pracalāka</i>), ³⁸² geckos (<i>grhagoḍikā</i>), ³⁸³ four-footed insects and others
in their urine and faeces	lice (<i>kiṭiṭa</i>), ‘flat insects’ (<i>picciṭā</i>), ‘orange-dwellers’ (<i>kaśāyavāsika</i>), ‘pepper snakes’ (<i>sarṣapaka</i>), ‘angry beetles’ (<i>toṭaka</i>), dung beetles (<i>varcaḥkīṭa</i>), and ‘pot insects’ (<i>kaṇḍīnya</i>)
in their semen	mice

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

378 Many of these names are mere dubious placeholders.

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

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

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

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

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

<i>location of the poison</i>	<i>creatures</i>
in their stings (<i>śūla</i>)	scorpions, 'earth scorpions' (<i>viśvambhara</i>), wasps (<i>varaki</i>), ³⁸⁴ fish, crabs (<i>uccīṭiṅga</i>), and 'wing-scorpions' (<i>patraṇṣcika</i>)
in their saliva, nails, urine, feces, blood, semen and fangs	spiders
in the bites of their mouths	flies, wasps (<i>kaṇabha</i>) and leeches
in the bites of their mouths, in their fangs, faces, †, farts, anuses and feces	'speckle-heads' (<i>citraśīrṣa</i>), 'lids' (<i>śārava</i>), 'bellied' (<i>kukṣita</i>), 'wood-enemies' (<i>dārukāri</i>), 'liquors' (<i>medaka</i>), and 'darts' (<i>śārikā</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.³⁸⁵ 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.³⁸⁶ He should try to purify that

³⁸⁴ 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."

³⁸⁵ अस normally means "tears," but rarely means "blood."

³⁸⁶ On the polysemy of elephant/snake (*nāga*), see Semeka-Pankratov 1979.

- polluted water, after curing their ailments.
- 9 And so, he should burn axlewood and garjan oil tree, as well as corky coral tree, with crimson trumpet-flower tree and small-flowered crape myrtle and weaver's beam tree, and with golden shower tree and white catch 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.³⁸⁷
- 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.³⁸⁸
*And if there exists another path, he should go by that.*³⁸⁹
- 13 When grasses and foods are polluted, people collapse, fall unconscious. And others vomit. They get loose stool (*viḍbheda*) or they die. One should apply to them the therapy as described.
- 14–15 Alternatively, one should wipe various musical instruments with antidotes that remove poison and then play them. What is called the most excellent paste for a musical instrument is certain minerals³⁹⁰ together with gold and sarsaparilla, and a portion of of nutgrass equal to that,

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

388 Our “alcoholic drinks” translates सुरा. For a discussion of this term at our period see mchu-2021a.

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

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

- together with the bile called “brown cow”.³⁹¹ 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.³⁹²
- 17 The smoke and air can be purified by putting into the air: lac, turmeric, Himalayan monkshood, and myrobalan, with Himalayan mayapple, costus, cardamom,³⁹³ and peas, and beautyberry.

write footnote: don't repeat
ativīṣā; vulgate similar to H.

The origin of poison

- 18 As it is told, the arrogant demon called Kaiṭabha created an obstacle for lotus-born Brahmā, at the very time that he was creating these creatures.³⁹⁴
- 19 Pitiless Fury took a body and burst out of the mouth of furious Brahmā's store of fiery energy.³⁹⁵
- 20 He burned that great, thundering, apocalyptic demon. Then, after bringing about the annihilation of that demon, his amazing fiery energy increased.
- 21 And so, there was a sinking down (*viṣāda*) of the Daityas. Observing that, it was named “poison (*viṣa*)” because of its ability to produce a “sinking down.”
- 22 After that, the Lord created beings and subsequently made that fury enter into creatures still and moving.
- 23–24 Water that falls from the sky to the earth has no obvious flavour. The savour of the different places it lands on enters into it. In the same way,

391 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.

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

393

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

395 “Fury” is here anthropomorphised.

- whatever substance a poison reaches, it establishes itself there and by its nature it takes on that substance's savour.³⁹⁶
- 25 Generally speaking, in a poison, all the qualities are really sharp. For this reason, every poison is known to irritate all of the humours.
- 26 Irritated and afflicted by the poison, they leave their natural functions. Poison does not get digested, so it blocks the breaths.³⁹⁷
- 27 Breathing is obstructed because its pathway is blocked by phlegm. Even if life continues, a man remains without consciousness.
- 28 Similar to semen, the poison of all angry snakes pervades the whole body, and goes to the limbs like semen because of being stirred up.
- 29 The fang of snakes is like a hook. When it gets there, it sticks inside them. That is why the unagitated poison of a snake is not released.
- 30 Sprinkling with very cold water is traditional for all cases of poisoning, because poison is declared to be extremely hot and sharp.³⁹⁸
- 31 Poison in insects is slow and not very hot, having a lot of wind and phlegm. So in cases of insect poisoning, sweating is not forbidden.
- 32cd In cases of a strike or a bite, the poison may, of its own accord, stay there.
- 33-35ab †Having come upon a body,³⁹⁹ in the case of corpses that have been pierced by a poisoned arrow and bitten by a snake, someone who eats the poisoned flesh of a recent corpse out of carelessness will suffer with illness according to the poison, or even die. And therefore, the flesh of those should not be eaten when they have just died.
- It is admissible after three quarters of an hour, but without the poisoned arrow and the snakebite.
- 35.1 [At this point an Upajāti verse is added in the margin of K but is not fully legible; the version of the text in H is also incomplete and not fully comprehensible.]⁴⁰⁰

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

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

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

399 "Having come upon" translates प्रख्याप्य, which is hard to interpret unless it is a rare form connected with the sense "to see."

400 *Mādhavanidāna*, 69.20-21 (MN₁: 480) has verses that are directly parallel to this section:

darvīkarāṇāṃ viṣam āśughāti sarvāṇi coṣṇe dviguṇībhavanti ajīrṇapittātapapīḍiteṣu bāleṣu

35.3 †When, in a wound, the poison that is connected with these qualities runs, ...Therefore, not everything that is damaged by poison and eaten causes death.

⁴⁰¹

35.1 [śloka in the MSS that aren't in the vulgate. The first line doesn't scan. Witness K adds a part of the start of this in the bottom margin. This material is repeated at 3.39.2 in MS H.]

35cd & 36cd One designates a person who has diarrhoea of feces looking like soot (*grhadhūma*) with wind,⁴⁰² and who vomits foam, as "someone who has drunk poison."

37 Therefore, fire burns a heart that is pervaded by poison. For, having pervaded of its own accord the location of consciousness, it abides.⁴⁰³

Patients beyond help

38 Patients who should not be accepted include: those who have been bitten under a peepul tree, in a temple, in a cemetery, at an ant-hill, at dawn or dusk, at a crossroads, under Yama's asterism,⁴⁰⁴ under the Great Bear and people who have been bitten in lethal spots.

39 The poison of cobras kills rapidly. They all gain twice the intensity in those who have indigestion, those who are afflicted by bile or wind, old people, children and the hungry.

39.1 In those whose who are mad or intoxicated, or who suffer from anxiety, or who are unable to tolerate its various strengths, it becomes sharp. †...

39.2

vṛddheṣu bubhukṣiteṣu 20

kṣīnakṣate mohini kuṣṭhayukte rūkṣe 'bale garbhavatīṣu cāpi

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

⁴⁰¹ At this point, witness H inserts a marginal Indravajrā verse about diseases that afflict immoral women.

⁴⁰² गृहधूम is not a plant in this context *pace* MW: 362. See the discussion in note 307, p. 99.

⁴⁰³ Ḍalhaṇa said that someone who has died from drinking poison has a heart that cannot be burned because it is pervaded by poison (5.3.37 (*Su 1938*: 570)). But the sense of the Nepalese MSS is the opposite.

⁴⁰⁴ याम्ये means "southerly" but Ḍalhaṇa on 5.3.38 (*Su 1938*: 570) interpreted it as "in Yama's direction" as "under the seventh asterism."

material corresponds to SS.1.45.205ab, where it describes how alcohol affects the body.

- 3.40cd–3.41 One should reject someone overcome by poison who **does not bleed** when cut with a knife, where weals do not appear as a result of lashes,⁴⁰⁵ or where there is no horripilation because of cold water, whose mouth is **crooked**, whose hair is falling out of his head. A man who is fatigued and those who stammer,⁴⁰⁶
- 3.42 one who has a black and red swelling at the site of the bite, with lockjaw, should be avoided. The same goes for someone who has a solid plug emerge from their mouth and someone who has blood running from above and below and
- 3.43ab The physician should also avoid a person who has fangs that have not fallen out quickly.⁴⁰⁷

405 Ḍalhana, on 5.3.40 (Su1938: 570), glossed लताभिस् “by means of whips,” as “when the body is struck by whips.”

406 nāsāvasāda & plural sakaṇṭhabhaṅgāḥ

407 The grammatical verb-form परिवर्जयित “he should avoid,” opt., 3rd, sg., is unusual. Renou (1940: 10 ff) documented such forms from the *Aitareyabrāhmaṇa* onwards. Oberlies (2003: ¶6.3.3 “Peculiar optative endings”, pp. 176–177) showed that the form is well-documented in *manuscripts* of the *Mahābhārata*, but has been edited out of the printed critical edition in almost all cases. Cf. also Kulikov 2006.

The concern about a patient who “has fangs that have not fallen out” is hard to understand. The word दंष्ट्रा does not mean human teeth (दन्त). We therefore prefer to interpret this as a patient where the fangs of a venomous creature remain in the bite-wound. This requires construing the expression as a *bahuvrīhi* compound: दंष्ट्रा or दंष्ट्र + अनिपातः.

Kalpasthāna 4: Snakes and Invenomation

Introduction

The fourth chapter of the Kalpasthāna of the *Suśrutasamhitā* addresses the topic of snake bites and snake venom. Unusually for the Nepalese version of the *Suśrutasamhitā*, the discussion is framed as a question from Suśruta to the wise Dhanvantari. Suśruta's questions are about the number of snakes, how they are classified, the symptoms of their bites and the pulses or stages of toxic shock experienced by a victim of snakebite and related topics. The taxonomy of snakes is presented in tabular form in Figures 1 and 2.⁴⁰⁸

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.⁴⁰⁹ There also exists an substantial herpetological literature from colonial India as well as more recent studies of snakes in the context of cultural and religious life.

The ophiological literature of the colonial period began in the late nineteenth century with the work of Fayrer, whose publication included striking colour paintings of snakes.⁴¹⁰ Fayrer provided a biological taxonomy

408 On the idea of notational variants in scientific translation, see Elshakry 2008; Sarukkai 2016; Wujastyk 2021a: 81–83.

409 HIML: IA, 292–294. In addition to the translations mentioned by Meulenbeld (HIML: IB, 314–315), a translation of this chapter was included in P. V. Sharma 1999–2001: 3, 35–45.

410 Fayrer 1874, first published in 1872.

of snakes as well as chapters on mortality statistics during the nineteenth century, treatment and effects of poison, and experimental data. Ewart (1878) included descriptions of appearance and behaviour of poisonous snakes and sometimes their local names and reproducing Fayrer's illustrations.⁴¹¹ Wall (1913: 75–124) provided a useful analysis of the medical effects of snake envenomation in India arranged by the varied symptomology of different snakes. He also discussed the difference between the symptoms of toxicity and fright (69–75) and also the difficulties arising out of uncertainty about the effects of snake-bite (124–126). The *Suśrutasamhitā* too recognized the emotional and somatic effects of fright (see note 422 below). Wall (1921) provided a wealth of detail of the snakes of Sri Lanka, including line drawings.

Doniger (2015) provided a good survey of snakes as protagonists in religious literature from the *Atharvaveda* through the epics, *Purāṇas* and Buddhist literature. Semeka-Pankratov (1979) traced semiotics of the term *nāga* through Vedic, Pali and Sanskrit literature. Slouber (2016: 31–33 *et passim*) discussed the *Suśrutasamhitā*'s *Kalpasthāna* as a precursor and influence on later Tantric traditions of snake-bite interpretation and therapy. In particular, the Tantric *Kriyākālaguṇottara* text that Slouber presented divided snakes into two basic categories, divine and mundane, as the *Suśrutasamhitā* does.⁴¹² But unlike the *Suśrutasamhitā*, in the *Kriyākālaguṇottara* the chief taxonomic principle for both groups is the four *varṇas*.

A discussion of this chapter specifically in the light of the Nepalese manuscripts was published by Harimoto.⁴¹³ 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.⁴¹⁴

411 Calling his work a supplement to Fayrer (1874), but also being cited by Fayrer, Ewart 1878 evidently also collected local indigenous knowledge from his “snake-man” (p. 22).

412 Slouber 2016: 144–145.

413 Harimoto 2011: 101–104.

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

Translation

- 1 Now we shall explain the procedure (*kalpa*) about what should be known concerning the venom in those who have been bitten by snakes.⁴¹⁵
- 3 Suśruta, grasping his feet, questions the wise Dhanvantari, the expert in all the sciences.
- 4 “My Lord, please speak about the number of snakes, and their divisions, the symptoms of someone who has been bitten, and the knowledge about the successive shocks (*vega*) of poisoning”.⁴¹⁶
- 5 On hearing his query, that distinguished physician spoke.
“The venerable snakes such as Vāsukī and Takṣaka are uncountable.
- 6–gab “They are snake-lords who support the earth, as bright as the ritual fire, ceaselessly roaring, raining and scorching. They hold up the earth, with its oceans, mountains and continents. If they are angered, they can destroy the whole world with a breath and a look. Honour to them. They have no role here in medicine.
“The ones that I shall enumerate in due order are those mundane ones with poison in their fangs who bite humans.⁴¹⁷
- 9cd–10 “There are eighty kinds of snakes and they are divided in five ways: Darvīkaras, Maṇḍalins, Rājīmats, and Nirviṣas. And Vaikarañjas that are traditionally of three kinds.⁴¹⁸
- 11 “Of those, there are twenty and six hooded snakes, and the same number of Maṇḍalins are known. There are thirteen Rājīmats.⁴¹⁹

415 The *Sarvāṅgasundarī*, commenting on 1.16.17 (Ah 1939: 246), glossed कल्प as प्रयोग.

416 The expression “successive shocks” translates वेग, which in other contexts may mean “(natural) urge.” Here, it is rather the discrete stages or phases of physiological reaction to envenomation. Cf. the symptoms of cobra poisoning described by Wall (1913: 80).

417 The next few verses are discussed in detail by Harimoto (2011: 101–104), who shows that in the taxonomy of snakes, the Nepalese version of the *Suśrutasaṃhitā* has greater internal coherence than the vulgate recension.

418 Harimoto (2011) translated these names as “hooded,” “spotted,” “striped,” “harmless,” and “hybrid.” Figure 1 shows the taxonomy described in the vulgate text; Figure 2 shows the different and more logical division of the Nepalese version of the *Suśrutasaṃhitā*.

419 The phrasing of this śloka is awkward.

Or “There are 20 phanins and 6 maṇḍalins. The same number are known. There are 13 Rājīmats.” Or even, “there are 20 Phanins and six of them are Maṇḍalins.” Are phanins really the same as darvīkaras?

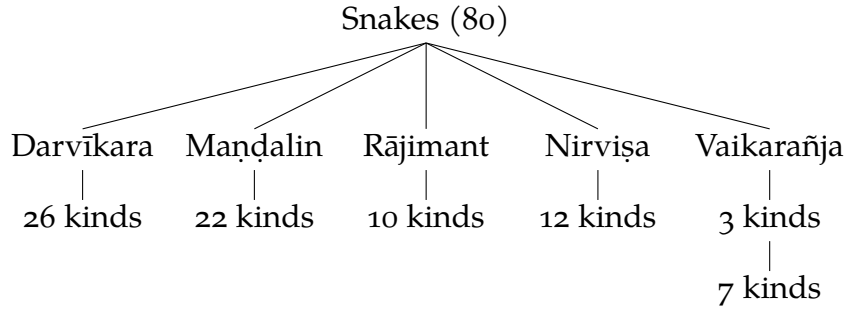


Figure 1: The taxonomy of snakes in the vulgate, 5.4.9–13ab (Su 1938: 571).

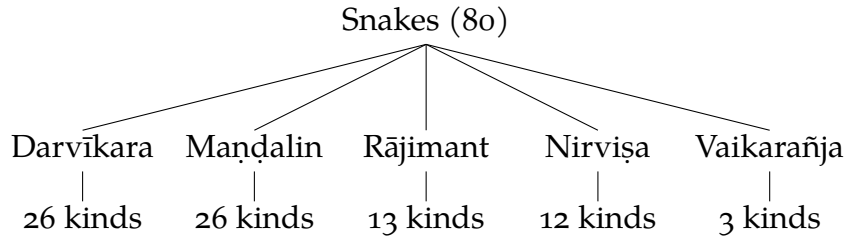


Figure 2: The taxonomy of snakes in the Nepalese version.

- 12 “There are said to be twelve Niriviṣas and, according to tradition, three Vaikarañjas.
- 13–14ef “If they are trodden on, ill-natured or provoked or even just looking for food, those very angry snakes will bite. And that is said to happen in three ways: serpented (*sarpita*), torn (*darita*) and thirdly without venom (*nirviṣa*). Some experts on this want to add “hurt by the snake’s body”.⁴²⁰
- 15–16 “The physician can recognize the following as “ophidian (*sarpita*)”: Where a rearing snake makes one, two or more puncture-marks of its teeth, when they are deep and without much blood,⁴²¹ accompanied

420 This might refer to constriction. The phrase reads like a commentarial addition rather than the main text of the *Suśrutasamhitā*.

421 The word उद्धृत “aroused” was glossed by Ḍalhaṇa at 5.4.15 (Su 1938: 571) as उन्मोद्य, a word not found as such in standard dictionaries (MW; KEWA; AyMahā; Apte). Semantic considerations suggest that the word is not related to $\sqrt{muṭ}$ “break” or *mūta*/*mūṭa* “woven basket.” Perhaps it is related to the Tamil மோதி (*mōṭi*), whose meanings include “arrogance, grandeur, display” (DED₂: #5133) or to faintly-documented forms like *moṭyate* “is twisted” (CDIAL: #10186). Ḍalhaṇa’s उन्मोद्य may thus mean “twisting up” or “making an arrogant display.”

- by a little ring of spots (*cuñcumālaka*),⁴²² lead to degeneration, and are close together and swollen.
- 17 Where there are streaks with blood, whether it be blue or white, the physican should recognize that to be “torn (*darita*),” having a small amount of venom.
- 18 The physician can recognize the locations of the bites of a person in a normal state as being free from poison, when the location is not swollen, and there is little corrupted blood.
- 19 The wind of a timid person who has been touched by a snake can get irritated by fear. It causes swelling.⁴²³ That is “hurt by a snake’s body.”
- 20 Locations bitten by sick or frightened snakes are known to have little poison. Similarly, a site bitten by very young or old snakes has little poison.
- 21 Poison does not progress in a place frequented by eagles,⁴²⁴ gods, holy sages, **spirits**, and saints, or in places full of herbs that destroy poison.⁴²⁵



Note that पद “puncture-mark” (more literally, “footprint”) is being used in the same sense as in 1.13.19 (Su 1938: 57) when describing the marks on the body where a knife scarifies the skin before leeching. See footnote 49.

422 The usual dictionary lexeme is चञ्चु, not चुञ्चु as in the Nepalese witnesses. We translate “spots” following Ḍalhaṇa and Gayadāsa on 5.4.15 (Su 1938: 571), where they described a group of spots or swellings at the site of the bite. On the history of the word मालक, see Kieffer-Pülz 1996.

423 Wall (1913: 69) remarked on the difficulty of separating toxicity symptoms from the psychosomatic effects of terror:

The gravity of symptoms due to fright does not appear to me to be sufficiently recognised, though there is no doubt in my mind that fatal cases from this cause are abundant, especially among the timid natives of this country.

Wall went on to give several case studies in which patients experienced syncope or even died as a result of bites from toxicologically harmless creatures.

424 Ḍalhaṇa on 5.4.21 (Su 1938: 571) identified the सुपर्ण as a गरुड. On the bird called सुपर्ण, Dave (1985: 72 ff, 514) too noted that it may be a synonym for Garuḍa, and in some contexts may refer to the Golden Eagle, Golden Oriole, Lammergeyer, etc. Dave (1985: 199 ff, 492) noted again that the Garuḍa is a mythical bird but may refer to the Himalayan Golden Eagle and other species of eagle. He pointed out that historically, The original physical basis for गरुड as the नागाशी (snake-eater) was most probably the Sea-Eagle who picks up sea-snakes from the sea or sand-beach and devours them on a nearby tree... (Dave 1985: 201).

Dave continued with interesting reference to Śrīharṣa’s *Nāgānanda*.

425 For “spirits” the Nepalese version has भूत while the vulgate reads यक्ष.

[Types of snake]

- 22 Darvīkara snakes are known to have hoods, to move rapidly, and to have rings, ploughs, umbrellas, crosses, and hooks on them.
- 23 Maṇḍalin snakes are known for being large and slow-moving. They are decorated with many kinds of circles. They are like a flaming fire because of their poisons.
- 24 Rājimant snakes are smooth and traditionally said to be, as it were, mottled with multicoloured streaks across and above.

[Classes of snake]

- 25 Snakes that shine like pearls and silver, and that are amber and that shine like gold, and smell sweet are traditionally thought of as being of the Brāhmaṇa caste.
- 26 Warrior snakes, however, are those that look glossy and get very angry. They have the mark of the sun, the moon, the earth, an umbrella and bitumen.
- 27 Merchant snakes may traditionally be black, shine like diamond or have a red colour or be grey like pigeons.
- 28 Any snakes that are coloured like a buffalo and a tiger, with rough skin and different colours are known as servants.⁴²⁶
- 31 All snakes that are variegated (Rājīmats) move about during the first watch of the night. The rest, on the other hand, the Maṇḍalins and the Darvīkaras, are diurnal.⁴²⁷
- 29 Wind is irritated by all hooded snakes; bile by Maṇḍalins and phlegm by those with many stripes.
- 30 Because of the two classes having greater, lesser or equal class, there is the characteristic of irritating two humours.
And he will explain the opposing view that is to be known as a result of the non-union of a male and female.⁴²⁸

⁴²⁶ Presumably “different” from the earlier-mentioned castes.

The sequence of the following three verses is slightly different from the vulgate (5.4.29–31 (Su 1938: 572)).

⁴²⁷ The readings of the vulgate, that Rājīmats are active in the early night, the Maṇḍalins in the later night, and Darvīkaras in the day, seem clearer.

⁴²⁸ The sense of the last phrase here is quite different from the vulgate, which says only that “details” will be explained below.

[Enumeration of snakes]

34.1 In that context, here are the Darvīkaras.

- | | |
|--------------------------------------------------------|-------------------------------------------|
| 1. The Black snake (<i>kṛṣṇasarpa</i>); | (<i>mahāpadma</i>); |
| 2. The Big Black (<i>mahākṛṣṇa</i>); | 16. The Grass Flower (<i>apuṣpa</i>); |
| 3. The Black Belly (<i>kṛṣṇodara</i>); | 17. The Curd Mouth |
| 4. The All Black (<i>sarvakṛṣṇa</i>); ⁴²⁹ | (<i>dadhimukha</i>); |
| 5. The White Pigeon | 18. The Lotus Mouth |
| (<i>śvetakapota</i>); ⁴³⁰ | (<i>puṇḍarikamukha</i>); |
| 6. The Rain Cloud (<i>valāhako</i>); | 19. The Brown Hut Mouth |
| 7. The Great Snake | (<i>babhrūkuṭīmukha</i>); |
| (<i>mahāsarpa</i>); | 20. The Variegated (<i>vicitra</i>); |
| 8. The Conch Keeper | 21. The Flower Sprinkle Beauty |
| (<i>śaṃkhaṭṭā</i>); | (<i>puṣpābhikīrṇābha</i>); |
| 9. The Red Eye (<i>lohitākṣa</i>); | 22. The Mountain Snake |
| 10. The Gavedhuka (<i>gavedhuka</i>); | (<i>girisarpa</i>); |
| 11. The Snake Around | 23. The Straight Snake |
| (<i>parisarpa</i>); | (<i>rjusarpa</i>); |
| 12. The Break Hood | 24. The White Rip (<i>śvetadara</i>); |
| (<i>khaṇḍaphaṇa</i>); | 25. The Big Head (<i>mahāśīrṣa</i>); |
| 13. The Kūkuṭa (<i>kūkuṭa</i>); | and |
| 14. The Lotus (<i>padma</i>); | 26. The Hungry Sting (<i>alagarda</i>); |
| 15. The Great Lotus | |

34.2 Here are the Maṇḍalins

- | | |
|------------------------------------------|------------------------------------------|
| 1. The Mirror Ring | 9. The Big Jackfruit |
| (<i>ādarśamaṇḍala</i>); | (<i>mahāpanasaka</i>); |
| 2. The White Ring | 10. The Bamboo Leaf |
| (<i>śvetamaṇḍala</i>); | (<i>veṇupatraka</i>); |
| 3. The Red Ring (<i>raktamaṇḍala</i>); | 11. The Kid (<i>śīsuka</i>); |
| 4. The Speckled (<i>prṣata</i>); | 12. The Intoxicator (<i>madanaka</i>); |
| 5. The Gift of God (<i>devadinna</i>); | 13. The Morning Glory |
| 6. The Pilindaka (<i>pilindaka</i>); | (<i>pālindaka</i>); |
| 7. The Big Cow Snout | 14. The Stretch (<i>tantuka</i>); |
| (<i>vṛddhagonasa</i>); | 15. The Pale as a Flower |
| 8. The Jackfruit (<i>panasaka</i>); | (<i>puṣpapāṇḍu</i>); |

⁴²⁹ Not in vulgate.

⁴³⁰ The vulgate adds The Big Pigeon (*mahākapota*).

- | | |
|--------------------------------------|------------------------------------------------------|
| 16. The Six Part (<i>ṣaḍaṅga</i>); | 22. The Hand Decoration |
| 17. The Flame (<i>agnika</i>); | (<i>hastābharaṇaka</i>); |
| 18. The Brown (<i>babhru</i>); | 23. The Tatra (<i>tatra</i>); ⁴³¹ |
| 19. The Ochre (<i>kaṣāya</i>); | 24. The Mark (<i>citraka</i>); |
| 20. The Khaluṣa (<i>khaluṣa</i>); | 25. The Deer Foot (<i>eṇīpada</i>). ⁴³² |
| 21. The Pigeon (<i>pārāvata</i>); | |

34.3 Here are the Rājīmats.⁴³³

- | | |
|---------------------------------------------|------------------------------------------------------|
| 1. The Lotus (<i>puṇḍarīka</i>); | 7. The Grass Drier (<i>trṇaśoṣaka</i>); |
| 2. The Stripe Speckle (<i>rājicitra</i>); | 8. The White Jaw (<i>svetahanu</i>); |
| 3. The Finger Stripe (<i>aṅgulirāji</i>); | 9. The Grass Flower |
| 4. The Two Finger Stripe | (<i>darbhapuṣpa</i>); ⁴³⁴ |
| (<i>dvyāṅgulirāji</i>); | 10. The Red Eye (<i>lohitākṣa</i>); ⁴³⁵ |
| 5. The Drop Stripe (<i>bindurāji</i>); | 11. The Ringed (<i>cakraka</i>); |
| 6. The Mud (<i>kardama</i>); | 12. The Worm Eater (<i>kikkisāda</i>); |

34.4 Here are the Nirviṣas.

- | | |
|-------------------------------------------------------|--------------------------------------------|
| 1. The Rain Cloud (<i>valāhako</i>); ⁴³⁶ | 8. The Two-day (<i>dvyāhika</i>); |
| 2. Thei Snake Flag (<i>ahipatāka</i>); | 9. The Milk Flower |
| 3. The White Leaf (<i>śukapatra</i>); | (<i>kṣīrikāpuṣpa</i>); |
| 4. The Goat Swallower | 10. The Flower All (<i>puṣpasakalī</i>); |
| (<i>ajagara</i>); | 11. The Chariot of Light |
| 5. The Stimulator (<i>dīpyaka</i>); | (<i>jyotīratha</i>); |
| 6. The Ilikinī (<i>ilikinī</i>); | 12. The Little Tree (<i>vrkṣaka</i>); |
| 7. The Year-Snake (<i>varṣāhika</i>); | |

34.5 The Vaikaraṇjas originate out of contrary unions amongst the three colours.⁴³⁷ Thus:

1. The Mākuli (*mākuli*);

431 This seems implausible, but otherwise the list of Maṇḍalins would be short.

432 The list is short by one item. Perhaps the one of the snakes named in the vulgate, *citramaṇḍala*, *gonasa* or *piṅgala*, should be considered here.

433 The following list is one item short. The vulgate text, however, has several names that do not appear in the Nepalese Rājīmat list, for example *Sarṣapaka* and *Godhūmaka*.

434 Also in the Darvīkara list.

435 Also in the Darvīkara list.

436 Also in the Darvīkara list.

437 The word *varṇa* in this chapter normally means “colour” not “class.” (“Class is expressed by “jāti.”) While *kṛṣṇasarpa* is clearly a colour-type, it is less obvious that *gonasī* is a special colour, and *rājīmat* is a group of snakes.

2. The Poṭa Throat (*poṭagala*);
3. The Oil Stripe (*snigdharāji*);

Amongst those, the Mākuli (*mākuli*); is born when a male Black Snake mates with a female Cow Snout (*gonasa*), or the reverse. The Poṭa Throat (*poṭagala*) is born when a male Rājila mates with a female Cow Snout (*gonasa*) or the reverse. The Oily Stripe (*snigdharāji*) is born when a male Black Snake mates with a female Rājimat, or the reverse. Their poison is like that of their father, because it is the superior one out of the two; but others say it is like the mother. Thus eighty of these snakes have been described.

35 Amongst them, males have large eyes, tongues and heads.⁴³⁸ Females have small eyes, tongues and heads. Neuters have both characteristics, and are slow to exert themselves or be angry.⁴³⁹

36 In that context we shall give instruction in a general way about the sign of having been bitten by any of the snakes.

For what reason?

Because poison acts quickly, like a fire with an oblation, a honed sword, or a thunderbolt.⁴⁴⁰ And ignored for even a period of time, it can drag the patient away. There is not even an opportunity to follow the literature.⁴⁴¹

And when the symptom of being bitten is stated, there will be three ways of treating it because there are three kinds of snake. Therefore we shall explain it in three ways. “For this is good for people who are ill, and it removes confusion and in this very case it prevents all symptoms”.⁴⁴²

⁴³⁸ The vulgate includes the snake’s mouth in this and the next list.

⁴³⁹ The reading मन्दचेष्टाक्रोधा is an awkward compound; possibly the original reading was मन्दचेष्टाः + अक्रोधा and sandhi was applied twice.

⁴⁴⁰ Perhaps the image suggested by “a fire with an oblation” is that of the Pravargya, in which a large flame rises suddenly from the ritual fire.

⁴⁴¹ The idea seems to be that there is no time to consult the verbose āyurvedic teachings. The “extensive meaning of the collection of statements (वाक्समूहार्थविस्तार)” is singled out as one of Āyurveda’s virtues in 5.8.142 (Su 1938: 594). Alternatively, perhaps the patient is unable to understand what the doctor is saying to him.

⁴⁴² In the next passage, the symptoms of snake poisoning are indeed explained under three headings.

[Symptoms of snakebite]

- 37 In this context, the poison of a Darvīkara causes the skin, nails, eyes, mouth, urine, feces, and the bitemark to be black; there is driness, the joints hurt and the head feels heavy; the waist, back and neck feel weak; there is yawning, the voice becomes faint, there is gurgling, paralysis, dry throat, cough, wheezing, and hiccups; the wind goes upwards, the patient convulses with sharp pain, black saliva dribbles out, foam appears, the ducts (*srotas*) are blocked and every kind of pain that is due to wind.⁴⁴³

The poison of a Maṇḍalin causes the skin, nails, eyes, teeth, mouth, urine, feces, bitemark to be yellow; there is a desire for cold, a temperature, giving off fumes,⁴⁴⁴ a burning feeling, thirst, intoxication, fainting, fever, haemorrhaging (*śonitāgamana*), and the degeneration of the flesh and fat above and below. There is swelling, suppuration of the bite, metamorphopsia (*viparītadarśana*), anger caused by the suffering, and every kind of pain that is due to bile.⁴⁴⁵

The poison of a Rājīmat causes the skin, nails, eyes, teeth, mouth, urine, feces, and bitemark to be pale; there is a cold fever, the hair stands on end, there is stiffness and swelling of the limbs including the site of the bite. There is a discharge of viscous phlegm, vomiting, itchy eyes, and a rattling sound. The breath is obstructed and there is every kind of pain due to phlegm.

- 38 In that context, “someone bitten by a male gazes upwards, by a female horizontally, and by a neuter, downwards.” One bitten by a pregnant snake has a pale face and becomes swollen (*ādhmāta*). One bitten by a recently-delivered snake is afflicted with abdominal pain and urinates

443 Cf. the similar symptoms of snake venom poisoning by the so-called Brahmin warriors of Harmatelia described by the classical author Diodorus Siculus (fl. ca. 30-60 BCE) (Eggermont 1975: 108).

444 The term “giving of fumes (परिधूपयन)” is not in MW: 596 as such, although परिधूपन, परिधूमन and परिधूमायन are cited and referred to the *Suśrutasaṃhitā*. “Giving off fumes (परिधूपन)” is listed at *Suśrutasaṃhitā* 2.6.13 (Su 1938: 291) amongst the symptoms of urinary disease caused by phlegm. The editors note a variant reading परिधूमायन but do not tell us in which manuscript (Su 1938: 291, n. 3). Ḍalhaṇa on 2.6.13 (Su 1938: 292) glossed परिधूपन as “hot all over (समन्ततस्तापः)” and in our current passage as “hot over the whole body (सर्वाङ्गसन्तापः)” (Su 1938: 573). See also AyMahā: 1, 429: धूमायन “अङ्गानां धूमोद्गमनमिव” citing the *Suśrutasaṃhitā*.

445 Ghosh et al. (2023) describes visual disturbances due to snake envenomation.

with blood. One bitten by a hungry snake craves food. Those bitten by an old snake have delayed and slow reactions. And one bitten by a young snake is fast and keen. One bitten by a non-venomous snake has the characteristic mark of non-poisoning.⁴⁴⁶ Some that are bitten by a blind snake become blind. A constrictor (*ajagara*) is deadly because it swallows, not because of poison.

[Toxic Pulses]

39 In that context, all snake toxins have seven toxic pulses (*viṣavega*).⁴⁴⁷

[**Darvīkaras**] Thus, at the first pulse of the Darvīkaras the poison corrupts the blood. That corrupted blood turns black. Because of that, blackness and a feeling of ants crawling about on the body develop.⁴⁴⁸ In the second pulse, it corrupts the flesh. That causes extreme blackness and lumps.

In the third, it corrupts the fat. That causes a discharge at the bite, heaviness of the head and an eclipse of the vision.⁴⁴⁹

In the fourth, it penetrates the trunk of the body (*koṣṭha*). From there, it irritates the humors, particularly phlegm. That causes exhaustion and oozing phlegm, and dislocation of the joints.

In the fifth pulse, it penetrates the bones. That causes breaking of the joints, hiccups and burning.

In the sixth pulse, it penetrates the marrow. That causes humours in the seat of fire in the gut (*grahaṇī*), heaviness of the limbs, diarrhoea, pain in the heart and fainting.⁴⁵⁰

In the seventh, it penetrates the semen and greatly irritates the vyāna breath (*vyāna*), and causes the phlegm (*kapha*) to run imperceptibly out of the tubes (*srotas*). That causes the appearance of mucous (*śleṣman*),

446 The grammar of अविषलिङ्गम् is not quite right; it should be a masculine or plural bahuvrīhi.

447 Cf. the same concept in the context of plants, at 113

448 Strictly, we would expect a dual verb here, instead of the plural of the witnesses.

449 Ḍalhana on 5.4.39 (Su 1938: 574) glossed the last expression as “blockage of the vision (दृष्ट्यवरोध).”

450 The “seat of fire in the gut (ग्रहणी)” is an ayurvedic organ in the digestive tract that does not correspond to any specific organ known to contemporary anatomy. For discussion, see AyMahā: v. 1, 304; Meulenbeld 1974b: 619; Das 2003: 544–545.

breaking of the hips, back and shoulders, impediment to all movements and shortness of breath.

[**Mandalins**] Thus, at the first pulse of the Mandalins, the poison corrupts the blood. Corrupted by that, it turns yellow. That causes a yellow appearance and a feeling of heat all over (*paridāha*).

In the second pulse, it corrupts the flesh. And that causes the limbs to be very yellow and an extreme feeling of heat all over (*paridāha*), and swelling at the bite.

In the third, it corrupts the fat. That causes a discharge at the black bite and sweating.

In the fourth, it penetrates as before and brings on fever.

In the fifth, it causes heat in all the limbs.

In the sixth and seventh, it is the same as before.

[**Rājīmats**] Thus, in the first pulse of the Rājīmats, the poison corrupts the blood. Corrupted by that, it turns yellow. It causes a person to have hair standing on end and a pale appearance.

In the second pulse, it corrupts the flesh. That causes him to become pale and to become extremely benumbed (*jāḍya*).

In the third, it corrupts the fat. That causes moistness of the bite and runny eyes and nose.

In the fourth, it is the same as before. After penetrating, it brings on manyāstambha (*stiffness of the neck*) and heaviness of the head.

In the fifth, speech is confused and there is a cold fever.

In the sixth and seventh, it is the same as before.

40 There are verses on this.

It is well known that there are seven layers of skin (kalā) in between the bodily tissues (dhātu). Poison passing through these one by one causes the toxic pulse (vega).⁴⁵¹

41 *The interval taken by the deadly substance (kālakaḥ), propelled (√ūh) by air (samīraṇa), to cut the layers of skin is known as the "pulse interval (vegāntara)".⁴⁵²*

451 The seven layers of skin are discussed at XXX

452 Ḍalhana on 5.4.41 (*Su* 1938: 574) glossed कालकल्प as मृत्युसदृशं विषं "the poison resembles death."

- 42 *In the first pulse, an animal has a swollen body, is distressed and broods.*⁴⁵³
- In the second, it dribbles somewhat,⁴⁵⁴ the hair stands up on its body, and it has pain ($\sqrt{pīḍ}$) in the heart.*
- 43 *The third stage brings headache and it breaks the **ears** and necks.*⁴⁵⁵
- In the fourth, the bewildered creature trembles and gnashing its teeth, it gives up life.*
- 44-45 *Some experts say that elephants have three toxic pulses.*⁴⁵⁶
- So, at the first pulse, an bird becomes bewildered and is confused from that point on. At the second, the bird is distressed and, crying out, it dies.*
- Some people claim that where birds are concerned, there is really just a single toxic pulse (vega) and that amongst animals like cats and mongooses, poison does not take much effect.*⁴⁵⁷

453 The verb $\sqrt{प्रच्यै}$ "meditate, be thoughtful, brood" is unexpected here and in the second class, an epic form. Ḍalhaṇa on 5.4.42 (Su 1938: 574) noted that some manuscripts did not include the text about animals from this point on. The fact that these verses are present in the Nepales witnesses testifies to their antiquity.

454 The Nepalese witnesses use लालि-, not लाला-, for "saliva."

455 The scribe of MS H emended the text to read कण्ठग्रीव with the vulgate. Intransitive use of pass. भञ्ज्.

456 On अन्तःस्वेद as "elephant," cf. *Arthaśāstra* 9.1.46 (Kangle 1969: v.1, 219; Olivelle 2013: 351): हस्तिनो ह्यन्तःस्वेदाः कुष्ठिनो भवन्ति ॥ ४६ ॥.

457 See on this subject: T. L. Brunton and Fayrer 1909: 39-40; S. A. Minton and M. R. Minton 1969: 88-89 (references taken from HIMAL: 1B, 399, n. 124).

Kalpasthāna 4: Therapy for those bitten by Snakes

Introduction

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.⁴⁵⁸

Translation

1

⁴⁵⁸ [HIML](#): IA, 294–295. In addition to the translations mentioned by Meulenbeld ([HIML](#): IB, 314–315), a translation of this chapter was included in P. V. Sharma [1999–2001](#): 3, 35–45.

Uttaratantra

Uttaratantra 17: Preventing Diseases of the Pupil

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.⁴⁵⁹

The history of couching in India has been discussed since the nineteenth century,⁴⁶⁰

Translation

- 1 Now I shall explain the counteraction (*pratiṣedha*) of diseases located in the pupil (*dr̥ṣṭi*).
- 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*)”.⁴⁶¹
- 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

⁴⁵⁹ HIML: IA, 305–306.

⁴⁶⁰ Scott 1817; Breton 1826; Jack 1884; Hendley 1895; Elliot 1918; Śāstrī 1940; V. Deshpande 1999; 2000; Wujastyk 2003b; Fan 2005; Leffler et al. 2020.

⁴⁶¹ 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.

where is
cutting
with a knife
related to
remov-
ing bile or
phlegm.

maṣī
burned
charcoal.
Find refs.

crucible (*puṭapāka*), together with an eyewash (*tarpaṇa*),⁴⁶² but not cutting with a blade (*śastrakṣata*).⁴⁶³

One should drink ghee (*sarpis*) prepared with the three fruits (*triphalā*) and in the first [case where the problem is bile], and prepared with turpeth (*traivṛta*) in the latter [case, of phlegm].

And ghee prepared with tilvaka (*tailvaka*) is wholesome in both cases, or else aged ghee on its own.

5cd–7ab In a collyrium, these four compounds (*yoga*) are beneficial in both cases:

- ochre (*gairika*), Sind salt (*saindhava*), long pepper (*kṛṣṇā*) and the black soot (*maṣī*) from cow's teeth;
- Cow's flesh (*gomāṃsa*), black pepper (*marica*), siris (*śirīṣa*) and red arsenic (*manaḥśilā*);
- stalk (*vṛnta*) from a wood apple (*kapittha*) with honey (*madhu*);⁴⁶⁴
- or the the fruits of the velvet bean (*svayaṃgupta*).

8 The physician should make a collyrium with ground up metal (*kupyaka*),⁴⁶⁵ 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, scrambleberry (*tālīśa*), together with gold and ochre, with the juice of cow-dung (*gośakṛt*) are for

462 These therapies are described in SS.6.18 (Su 1938: 633–640).

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

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

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

- 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*).⁴⁶⁶ 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 (*guḍīkā*), with sandalwood, is recommended: salt (*nadīja*), conch shell and the three spices, collyrium, realgar (*manaḥśilā*), the two turmeric (*rajana*)⁴⁶⁷ and liver extract (*yakṛdrasa*).⁴⁶⁸
- 16 One should grind up kohl (*srotoja*),⁴⁶⁹ 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*)⁴⁷⁰ long pepper, dried ginger (*nāgara*) and honey, the leaf of the scramberry (*tālīśapatra*), the two turmeric (*rajana*), a conch shell and liver extract (*yakṛdrasa*). Then shade-dried wicks take away illness (*ruj*).
- 18cd–19ab Wicks made of red arsenic (*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 (*triphālā*). One of these

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

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

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

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

470 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.

- should be mixed with cow urine, ghee and cuttle fish (*arṇavamala*)⁴⁷¹ 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 (*māgadhī*), the bone and the marrow of a goat, cardamom (*elā*) and liver, together with liver extract, is good for eyes afflicted by phlegm.⁴⁷²
- 24 Over a fire, one should cook the liver (*yakṛt*) of a monitor lizard (*godhā*) prepared with entrails (*antra*) and stuffed with long pepper (*māgadhī*). 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.⁴⁷³
- 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.⁴⁷⁴ In the case of diseases of blood (*śonita*) and bile (*pitta*), one should drink ghee with the three fruits; it is particularly cleansing.⁴⁷⁵ In the case of phlegm,

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

472 On the identities of *elā* and *hareṇu*, Watt ([WattComm](#): 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*. T. B. Singh and Chuneekar ([GVDB](#): 467 f) 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).

473 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.

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

475 Blood-bile (*śonita-pitta*, *rakta-pitta*) is a widely-recognized disease in ayurveda, but

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).⁴⁷⁶

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*).⁴⁷⁷

29cd Alternatively, someone afflicted by phlegm should apply them (the three fruits) mixed with oil and steeped (*pragāḍha*) in honey.

30 The very best oil, well-cooked with a decoction of cow-dung, is good in cases of partial blindness, taken as an errhine.
In cases caused by bile, ghee by itself is good, as is oil when it arises from wind and blood.

31 And in the case of wind one should apply turpeth (*trivṛt*) based on strong mallow (*atibalā*), and country mallow (*balā*) in an errhine (*nasya*).⁴⁷⁸

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 (*puṭākhya*) with Sindh salt and the product of the meat of a carnivore (*kravyabhuj*) and a deer (*eṇa*), is combined with honey and ghee.⁴⁷⁹

the compound here is definitely dual, which rules out that interpretation. One would expect blood-bile because the previous verse

476 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.

477 “Off his hand” translates the adverbial *sapāṇam*, an unusual word. Ḍalhaṇa reproduced a reading close to the Nepalese recension but says that Jejjāta rejects it and so he also does (Su 1938: 627).

478 “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.

479 Ḍalhaṇa noted (Su 1938: 628a) that *puṭāhvaya* (see verse 35 below) is a synonym for *puṭapāka*, and that the process is described in the *Kriyākālpa* 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

- Fat (*vasā*) from a horse, a vulture, a snake, and a cock (*tāmracūḍa*), combined with mahua (*madhūka*) is always good in a collyrium.⁴⁸⁰
- 33 Having prepared (*niṣevita*) a collyrium made of kohl (*srotas*) and gradually combine it with juices (*rasa*), milk and ghee.⁴⁸¹
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*).⁴⁸²
- 35 They say that ghee may be produced from that and combined with sweet herbs is good as an errhine for eye-diseases caused by bile.
And here, an eyewash (*tarpaṇa*) is good that is a combination that is the flesh of wild animals taken hot (*puṭāhvaya*).⁴⁸³
- 36 And realgar (*manahśilā*) mixed with elixir salve (*rasāñjana*) and honey is a liquid collyrium (*dravāñjana*) which is, in this case, combined with mahua (*madhūka*).⁴⁸⁴
Alternatively, experts on this say that finely ground blue vitriol (*tuttha*) extracted from a gold mine is the “same collyrium (*samāñjana*)”.⁴⁸⁵

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.

480 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.

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

482 Ḍalhaṇa described this blindness as a type of *kāca* disease caused by wind (Su 1938: 628). 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.

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

484 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.

485 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).

- 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*).⁴⁸⁶
The extracts (*rasa*) produced from aflame of the forest (*palāśa*), Rohīta tree (*rohīta*),⁴⁸⁷ 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.⁴⁸⁸
One should apply smoke of the bark of embelia (*vidaṅga*), velvet leaf (*pāthā*), white siris (*kinihī*), and desert date (*iṅgudī*); and cuscus grass (*uśīra*) alone.
- 39 A ghee that is cooked (*bhāvita*) from a decoction of a non-flowering tree (*vanaspati*)⁴⁸⁹ 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*)⁴⁹⁰ and a plentiful amount of long pepper (*māgadha*), Sindh salt and honey.
- 40 A treatment (*kriyā*) with realgar (*manahśilā*), the three spices, conch, honey, along with Sindh salt, green vitriol (*kāsīsa*) and elixir salve (*rasañjana*).⁴⁹¹
They say that an elixir salve (*rasañjana*) combined with myrobalans, treacle and dried ginger is good.⁴⁹²
- 41 Alternatively, a collyrium that has been prepared many times in the eight types of urine⁴⁹³ is put into water with the three fruits. Having

find ref.

486 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).

487 Probably *Soymida febrifuga* A. Juss.

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

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

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

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

492 We emend हिते to हितम्, against the MSS.

493 See *Suśrutasaṃhitā mūtravarga*

stored it in the mouth of a nocturnal creature (*niśācara*)⁴⁹⁴ one should place it in a conch (*salilotthita*) for two months.⁴⁹⁵

- 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*).⁴⁹⁶

- 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.⁴⁹⁷

The treatment that is good for removing watery eye (*syanda*) should be properly applied in all these humoral cases, according to the individual.⁴⁹⁸

- 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.⁴⁹⁹

- 45 Someone who uses matured ghee, the three fruits, wild asparagus, as well as mung beans, emblic and barley has nothing to fear from cases of severe blindness (*timira*).

- 46 Blindness is dispelled by milk prepared with wild asparagus or in emblics, or again cooked barley (*yavaudana*) followed by the water of three fruits with plenty of ghee.

- 47 When there is bloodshot blindness (*rāgiṇi timire*), the wise physician should not cut a vein. A humour injured (*utpīḍita*) by the instrument rapidly destroys vision.

- 48 Non-bloodshot blindness (*araga timira*) in the first layer (*paṭala*) is treat-

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

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

496 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.

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

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

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

Check out
these refs.

meaning of
kalpa

- able. And bloodshot blindness (*rāgiṇi timire*) in the second layer, with difficulty. And in the third layer it can be mitigated (*yāpya*).⁵⁰⁰
- 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.⁵⁰¹
- 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,⁵⁰² at the naturally-occurring (*daivakṛte*) opening (*chidra*) with a probe (*śalākā*) made of copper or iron, with a tip like a barley-corn, held by a steady hand with the middle finger, forefinger and thumb, the left one with the right hand and the other one contrariwise.
- When the piercing is done properly, there is the issue of a drop of liquid and a sound.⁵⁰³
- 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 tip of the probe (*śalākā*).⁵⁰⁴
- 56 Without injuring, gently pushing the phlegm in the circuit of the pupil against the nose, he should remove it by means of sniffing

500 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.

501 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.17.1–3a (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.

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

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

504 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.

- (*ucchiṅgana*).⁵⁰⁵
- 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.⁵⁰⁶
- 58 But if the humour cannot be destroyed or if it comes back, one should apply the piercing (*vyadha*) once again, with appropriate oils and so on.
- 59 Now the pupil (*dr̥ṣṭi*) shines like the sun (*hari*) in a cloudless sky; then, when objects become visible, one may slowly remove the probe (*śalākā*).⁵⁰⁷
- 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.⁵⁰⁸
- 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.⁵⁰⁹
- 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.

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

506 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 6.17.25a (As 1980: 716a), where sweating of the eye is done by means of the leaves of a castor-oil plant.

507 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.

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

509 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.⁵¹⁰
 A hard probe leads to shooting pain (*śūla*), a thin to unsteadiness of the humours (*doṣapariplava*),⁵¹¹
 65 a thick-tipped probe leads to a large wound, and a sharp one may cause harm in many ways; a very irregular one may cause a discharge of water, a rigid (*sthirā*) one brings about a loss of function (*kriyāsaṅga*).⁵¹²
 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*).⁵¹³

[Complications]

- Redness, swelling, lumps, driness (*coṣa*), bubbling (*budbuda*),⁵¹⁴ pigs' eye (*sūkarākṣitā*),⁵¹⁵ 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.

510 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.

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

512 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*).”

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

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

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

- Red chalk (*gairikaḥ*), Indian sarsaparilla (*śārivā*), panic grass (*dūrvā*), and ghee ground with barley.
- 71 This face ointment is to be used for quelling pain and redness. Or else it may be taken combined with the juice of citron (*mātulūṅga*) with sesame gently fried, mixed with white mustard (*siddhārthaka*).⁵¹⁶ This is immediately beneficial when someone is looking for relief.
- 72 A paste with Holostemma (*payasyā*),⁵¹⁷ Indian sarsaparilla (*śārivā*), cassia cinnamon (*patra*), Indian madder (*mañjiṣṭhā*), and liquorice (*madhukair*) stirred with goat's milk, pleasantly warmed, is said to be healthy.⁵¹⁸
- 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 (*prthakparṇī*),⁵¹⁹ 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.⁵²⁰ This has an admixture of cottony jujube (*kākolī*) etc., should be prescribed in all treatments.⁵²¹

⁵¹⁶ On the adverbial use of gently (*mṛdu*), see Gombrich 1979.

⁵¹⁷ The identity of *payasyā* is debated (GVDB: 538), 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 *Sauśrutaniḥaṇṭu* glosses it as *kṣīrikā* or *arkapuṣpikā* (Suvedī and Tivārī 2000: v. 307).

⁵¹⁸ 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).

⁵¹⁹ Suvedī and Tivārī 2000: 18.

⁵²⁰ Ḍalhaṇa mentioned that these drugs include Deodar (*bhadradāru*) and other wind-destroying drugs. The *vātasamśamana* group is listed in *Suśrutasaṃhitā sūtrasthāna* 1.39.7.

⁵²¹ Ḍalhaṇa noted that this would include errhines, ointments, etc.

- 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.⁵²²
- 78cd–80ab Now listen to two excellent collyriums for making the pupils clear. After grinding the flowers of perploca of the woods (*meṣaśṛṅga*), siris (*śirīṣa*), axelwood (*dhava*) royal jasmine (*jātī*), pearl and beryl (*vaiḍūrya*) with goat's milk, one should put it in a copper pot for seven days.
- 80cd–81 Having made it into wicks (*vartti*), the physician should apply it as a collyrium. Alternatively, one should make kohl (*srotoja*), coral (*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?

⁵²² 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.

Uttaratantra 38: Diseases of the Female Reproductive System

Introduction

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.

Literature

The chapter is summarized, with notes on vocabulary and references to further research literature, in [HIML](#): IA, 313. (Tivārī 1990) dedicated a monograph to this topic, and Selby (2005a,b) has explored gynecological narratives in ayurveda.

Placement of the Chapter

In the vulgate text (Su 1938) the current chapter, 6.38, is found after the *Uttaratantra*'s subsection on paediatrics, the *Kumāratantra*, see Table 3.⁵²³ But in the Nepalese version, this is chapter 6.58 of the *Uttaratantra*. And it is also counted as chapter 23 of the subsection *Kāyācikitsā*.

⁵²³ Or *Kumārabhṛtya* as this section is named in MS Kathmandu KL 699.

Table 3: Subdivisions of the Uttaratantra, in the vulgate.

Section	Chapters	Internal count
Śālakya tantra	1–26	1–26
Kumāratantra	27–38	1–12
Kāyacikitsā tantra	39–59	1–21
Bhūtavidyā tantra	60–62	1–3
Tantrabhūṣaṇādhyāya	63–66	1–4

Several things are noteworthy in this regard:

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

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 “*yonī*” in the statement “born in the womb (*yonī*) of animal and human” [in 6.37.13bc (Su 1938: 667)] and because (2) the disorders of the female reproductive system are the causes for the inborn disorders of children.⁵²⁴

- In the placement of the Nepalese version,
 - 6. *Yonivyāpatpratiṣedha* is preceded by

⁵²⁴ Ḍalhaṇa on 6.38.1 (Su 1938: 668): ग्रहोत्पत्त्यध्यायानन्तरं ‘तिर्यग्योनिं मानुषं च’ इति वचनेन योने-
र्नामसंकीर्तनात् कुमारजन्मविकारकारणत्वाच्च योनेर्व्यापञ्चिकित्सितार्थं योनिव्यापत्प्रतिषेधाध्यायारम्भो यु-
ज्यत [...]

- 6.56 *Mūtrāghātapraṭiṣedha* (6.58 in [Su 1938](#)) and
- 6.57 *Mūtrakṛcchrapraṭiṣedha* (6.59 in [Su 1938](#)), two chapters dealing with the diseases of the urinary tract.

The current chapter carries on with the topic of diseases that affect genitalia. In its Nepalese version, the chapter opens with two verses that explain the reasons for treating the particular set of diseases. These lack any reference to the inborn disorders of children, mentioned by Ḍalhaṇa, and instead highlight the importance of curing female diseases for the satisfaction of male partner.

- SS.1.3 in both [Su 1938](#) and the Nepalese version lists the chapter at the place where it is found in the vulgate.⁵²⁵
- 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 *Guhyarogapraṭiṣedha* respectively).

A close literary parallel to the first part of the chapter is found in *Mādhavanidāna* ([MN₃](#)) 62, or at least its version printed in Y. T. Ācārya ([MN₃](#): 361). The readings of the [MN₃](#) 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 [MN₃](#). This part of the text is authored by Śrīkaṇṭhadatta, who was most like a direct student of Vijarakṣita. The latter wrote the first part of the *Madhukośa*, up to chapter 32, and, what is more, can be dated to the late eleventh or early twelfth centuries.⁵²⁶

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

⁵²⁵ See 1.3.37ab ([Su 1938](#): 15): नैगमेषचिकित्सा च ग्रहोत्पत्तिः सयोनिजा ॥.

⁵²⁶ Meulenbeld [1974b](#): 22–26.

Philological notes

Metrical alterations

The first two verses in the Nepalese version, 6.38.2.1 and 6.38.4.1, are written in a classical variety of the *upajāti* metre: $\underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}} \text{ } \underline{\text{U}}$. In content, they are only approximately parallel to three hemistichs in *anuṣṭubh* metre found in the vulgate.⁵²⁷ The latter verses lack the apologetic explanation concerning the reasons for this chapter being taught.

The original opening verses

From verse *Suśrutasamhitā* 6.38.5.1 onwards, the Nepalese version of the text continues with three hemistichs in the same classical *upajāti* metre (the syllabic pattern above).⁵²⁸ By contrast, the vulgate contains two complete verses (four hemistichs) in the *anuṣṭubh* metre, again with only loosely-related content.⁵²⁹ The three final hemistichs of this group are borrowed verbatim from the *Carakasamhitā*.⁵³⁰ We can be sure of the direction of borrowing because one of these shared verses says that the twenty kinds of diseases of the female reproductive system “have already been indicated in the *Compendium of Diseases* (rogasaṃgraha)”.⁵³¹ This statement does not make any sense in the context of the *Suśrutasamhitā*, where no such Compendium exists.⁵³² By contrast, in the *Carakasamhitā* this reference points back to chapter 1.19 (*Ca* 1941: 109–112), which calls itself “The Compendium of Diseases”.⁵³³ This Compendium lists all the diseases dealt with in later sections of the text, and specifically mentions the twenty diseases of female reproductive system.⁵³⁴ Even the vocabulary and wording of this

527 *Suśrutasamhitā* 6.38.3–4ab (*Su* 1938: 668).

528 The metre of these verses is not perfect.

529 *Suśrutasamhitā* 6.38.4cd–6ab (*Su* 1938: 668).

530 *Carakasamhitā* 6.30.7cd–8 (*Ca* 1941: 634).

531 *Suśrutasamhitā* 6.38.5ab (*Su* 1938: 668): विंशतिर्व्यापदो योनेर्निर्दिष्टा रोगसंग्रहे ॥ ← *Carakasamhitā* 6.30.7cd (*Ca* 1941: 634).

532 The remark was not commented on by Ḍalhaṇa.

533 *Carakasamhitā* 1.19.9cd (*Ca* 1941: 112): रोगाध्याये प्रकाशिताः.

534 *Carakasamhitā* 1.19.3 (*Ca* 1941: 110): विंशतिर्योन्यापदः ।

passage is identical to the later verses. It is beyond doubt that this passage originated in the *Carakasamhitā* and was borrowed by the editors of the vulgate text of the *Suśrutasamhitā*.⁵³⁵

⁵³⁵ The above three hemistichs in *anuṣṭubh* are also repeated in the *MN*₃ 62.1–2ab. Given that the subsequent verses in the *MN*₃ stem from the *Suśrutasamhitā*, it is likely that *MN*₃ 62.1–2ab too was borrowed from from the *Suśrutasamhitā* and not from its original location in the *Carakasamhitā*).

Translation

- 1 And now I shall explain the countermeasures against disorders of the female reproductive system (*yonivyāpat*).⁵³⁶
- *3 Since for good men, a woman is the most pleasurable thing, therefore a physician should diligently attend to the diseases located in the female reproductive system (*yonī*), because he is entirely devoted to it (that is, to curing these diseases) for the sake of (people's) happiness.⁵³⁷
- *4 A corrupted female reproductive system (*yonī*) cannot consume semen (*bīja*), and therefore, the woman cannot take a fetus (that is, become pregnant). She gets severe prolapses (*arśas*), abdominal lump (*gulma*) and similarly many other diseases (*roga*).
- *5 Humours (*doṣa*), wind (*vāta*), etc., corrupted due to faulty medical treatment (*mithyopacāra*),⁵³⁸ sexual activity, fate, and also defects (*doṣa*) of menstrual blood (*ārtava*) and semen (*bīja*), produce various diseases in the female reproductive organ (*yonī*). These 20 diseases are taught here distinctly and one by one along with their treatment

536 On this broad understanding of the term *yonī* as “female reproductive system” see Das 2003: pp. 572–5.

537 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.’

538 In our translation of the compound मिथ्योपचार, we decided for the technical meaning of the term उपचार, that is, “medical application” or “treatment.” The combination मिथ्या+उप-√चर् is attested several times in medical literature. At least once, at *Carakasamhitā* 3.3.38 (Ca 1941: 245), it is given an explicit gloss by Cakrapāṇidatta: मिथ्योपचरितानिति असम्यक् चिकित्सितान् “... given improper therapy”. In the *Suśrutasamhitā* (Su 1938), it is used once in a passage (6.18.30 (Su 1938: 635)) where it refers specifically to the wrong application of irrigation (*tarpaṇa*) and roasting (*puṭapāka*), both of which are mentioned in the previous verse. Another use of the compound in a similar meaning is found in a citation from Bhoja’s work quoted by Gayadāsa at *Suśrutasamhitā* 2.5.17 (Su 1938: 287): श्वित्रं तु द्विविधं प्रोक्तं दोषजं व्रणजं तथा । तत्र मिथ्योपचारो व्रणस्य व्रणजं स्मृतम् ॥ “... arises from wrong treatment of the wound.” In contrast to this, the parallel verse in *Suśrutasamhitā* 6.38.5ab (Su 1938: 668) = *Carakasamhitā* 6.30.8 (Ca 1941: 634) = MN₃ 62.1 reads मिथ्याचार “wrong conduct.” All commentators (Cakrapāṇidatta on the *Carakasamhitā*, Śrīkaṇṭhadatta on the MN₃, and Ḍalhaṇa on the *Suśrutasamhitā*) explain that the wrong conduct stands here specifically for unwholesome diet. The parallel in *Aṣṭāṅgahṛdayasamhitā* 6.33.27 (Ah 1939: 895) = *Aṣṭāṅgasaṅgraha* 6.38.34a (As 1980: 829) plainly reads दुष्टभोजन “corrupted food” instead.

(*bheṣaja*), causes (*hetu*) and signs (*cihna*).

*6.1 Because of wind (*vāta*), female reproductive organ (*yonī*) 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 (*sūcīvaktṛā*),
5. Sarvātmikā (*sarvātmikā*).

Uttaratantra 65: Rules of Interpretation

Literature

Meulenbeld offered an annotated overview of this chapter and a bibliography of earlier scholarship to 2002.⁴⁵¹ Earlier explorations of this topic include Nārāyaṇa 1949; Dasgupta 1952; Oberhammer 1967–68; Muthuswami 1976; Lele 1981; Scharfe 1993; Mejer 2000; A. Singh 2003.

Preisendanz (2013:105–106, fn.109) provided further references to the discussion of *yukti* in Buddhist literatures. Manevskaia (2008) gave examples of the use of *tantrayuktis* in Buddhist commentarial literature. Chevillard (2009) discusses the translation of the *tantrayuktis* in Tamil literary tradition, with a specific focus on *Tolkāppiyam* and its commentaries.

Early Sources

An ancient tradition of enumerating the *tantrayuktis* served as a foundational source not only for medical texts but also for works in various other disciplines, including Arthaśāstra, philosophy, and even grammar. The *Suśruta Saṃhitā* stands as the earliest Āyurvedic text that presents a compilation of a list of *tantrayuktis* followed by their definitions and usage. Mentions to *Tantrayuktis* are also found in the *Caraka Saṃhitā* 8.12 (Ca 1941) which introduce four additional *tantrayuktis*. However, the *tantrayuktis* remain undefined in the *Caraka Saṃhitā*.

⁴⁵¹ HIML: IA, 331.

The enumeration and definitions of the *tantrayuktis* in the *Suśruta Saṃhitā* closely parallel their treatment in the *Arthaśāstra*. *Tantrayuktis* are discussed in the 15th (final) chapter of the *Arthaśāstra* called the *Tantrayukti*.⁴⁵² For a side-by-side comparison of the *tantrayuktis* in the *Suśruta Saṃhitā* and the *Arthaśāstra*, please refer to Table 4.

Yuktidīpikā (circa late sixth to early eighth century), an anonymous commentary on Īśvarakṛṣṇa's *Sāṅkhyakārikā*, initiates its discourse with a detailed discussion of the characteristics of a scientific treatise, some of which align with the *tantrayuktis*.⁴⁵³ In the *Yuktidīpikā*, these terms are referred to as *tantraguṇa* or *tantrasampat*. They are: (1) *sūtropapatti* (2) *pramāṇopapatti* (3) *avayavopapatti* (4) *anyūnatā* (5) *saṃśayokti* (6) *nirṇayokti* (7) *uddeśa* (8) *nirdeśa* (9) *anukrama* (10) *saṃjñā* and (11) *upadeśa*.⁴⁵⁴

Discussions on the *tantrayuktis* are also found in Tamil technical literature, the earliest of which is the *Tolkāppiyam*.⁴⁵⁵ A list of 32 *tantrayuktis*, called *utti* or *tantiravutti* in Tamil, are given in the 27th (the final) chapter titled *Marapiyal* "Chapter on conventions" of the last book called *Poruḷ* "Matters" of the *Tolkāppiyam*. There is no consensus regarding the dating of the *Tolkāppiyam*. However, if we endorse Zvelebil's view, which posits that the final redaction of the *Tolkāppiyam* occurred around the fifth century AD, it follows that this section of the *Tolkāppiyam* cannot postdate the fifth century. If we follow the dating of Zvelebil, we can safely argue that by that time, Sanskrit *tantrayuktis* had already been translated into Tamil. Nevertheless, determining the correspondence between specific *tantrayuktis* and Tamil *uttis* poses a challenge. A major factor contributing to this challenge is the disagreement between two commentators of the *Tolkāppiyam*, namely Ḹampūraṇar (11th or 12th century) and Pēraciriyar (possibly 13th century), regarding the interpretation of the list of *uttis*. It is still not clear which list of 32 *tantrayuktis* was before the author of the *Tolkāppiyam*.

After the *Tolkāppiyam*, several other Tamil texts refer to the *tantrayuktis*.

452 *Arthaśāstra*: 280–283

453 See Oberhammer 1967–68: 605–614 for a detailed discussion of the use of the *tantrayuktis* in the *Yuktidīpikā*.

454 सूत्रप्रमाणावयवोपपत्तिरन्यूनता संशयनिर्णयोक्तिः ।
उद्देशनिर्देशमनुक्रमश्च संज्ञोपदेशाविह तन्त्रसम्पत् ॥
Yuktidīpikā: 3

455 For a detailed discussion of the treatment of the *tantrayuktis* in the *Tolkāppiyam* see Chevillard 2009.

Among them the *Yāpparuṅkalam* (possibly 10th century), the *Vīracolīyam* (11th century), *Nannūl* (late 12th or early 13th century), and their commentaries hold significant importance in this context.

The third book of the *Viṣṇudharmottarapurāṇa*, believed to have been composed between the fifth and seventh centuries, includes a chapter dedicated to the *tantrayuktis*.⁴⁵⁶ Unlike the *Arthaśāstra* and the *Suśruta Saṃhitā* this chapter lacks illustrative examples of the *tantrayuktis*. The chapter lists 32 *tantrayuktis* followed by definitions. Notably, the list and definitions given here are (we are using the critical edition by Priyabala Shah) in most cases bear a striking resemblance to those found in the *Suśruta Saṃhitā*. Given the striking alignment between the list and definitions of *tantrayuktis*, one could suggest that the *Viṣṇudharmottarapurāṇa*'s chapter on *tantrayuktis* likely draws directly or indirectly from the *Suśruta Saṃhitā* or from a common source. The designations and the order of the *tantrayuktis* in the *Viṣṇudharmottarapurāṇa* are almost identical. The only differences in the order are as follows:

1. *Viparyaya* is placed after *vidhāna* whereas in the *Suśruta Saṃhitā* it follows *arthāpatti*.
2. *Anumata* is placed after *vyākhyāna* whereas in the *Suśruta Saṃhitā* follows *nirṇaya*.
3. *Anāgatāvekṣaṇa* (*anāgatāpekṣaṇa* in the Nepalese version) occurs after *atīkrāntāvekṣaṇa* (*atīkrāntāpekṣaṇa* in the Nepalese version) whereas the order is reverse in the *Suśruta Saṃhitā*.

For a side-by-side comparison of the *tantrayuktis* in the *Suśruta Saṃhitā* and the *Viṣṇudharmottarapurāṇa*, please refer to Table 4.

Table 4: *Tantrayuktis* in *Suśruta Saṃhitā* (S), *Viṣṇudharmottarapurāṇa* (V), and *Arthaśāstra* (A)

Sequence	Terms	Definitions
(S) 1.	<i>adhikaraṇa</i>	तत्र यमर्थमधिकृत्योच्यते तदधिकरणम् ।
(V) 1.	<i>adhikaraṇa</i>	तत्र यमर्थमधिकृत्योच्यते तदधिकरणम् ।
(A) 1.	<i>adhikaraṇa</i>	यमर्थमधिकृत्योच्यते तदधिकरण ।

⁴⁵⁶ Adhyāya 6, *Viṣṇudharmottarapurāṇa Khaṇḍa* 3: 13–14.

Sequence	Terms	Definitions
(S) 2.	<i>yoga</i>	येन वाक्यं युज्यते स योगः ।
(V) 2.	<i>yoga</i>	येन वाक्यार्थो युज्यते स योगः ।
(A) 3.	<i>yoga</i>	वाक्ययोजना योगः ।
(S) 3.	<i>padārtha</i>	योऽर्थोऽभिहितः सूत्रे पदे वा स पदार्थः । पदस्य पदयोः पदानां वा योऽर्थः स पदार्थः । अपरिमिताश्च पदार्थाः ।
(V) 3.	<i>padārtha</i>	योऽर्थो विधिकृतः सूत्रपदे स पदार्थः ।
(A) 4.	<i>padārtha</i>	पदावधिकः पदार्थः ।
(S) 4.	<i>hetvartha</i>	यदुक्तं साधनं भवति स हेत्वर्थः ।
(V) 4.	<i>hetvartha</i>	यदन्यद्युक्तिमदर्थस्य साधनं स हेत्वर्थः ।
(A) 5.	<i>hetvartha</i>	हेतुरर्थसाधको हेत्वर्थः ।
(S) 5.	<i>uddeśa / samuddeśa</i>	समासवचनं समुद्देशः ।
(V) 5.	<i>uddeśa</i>	समासवचनमुद्देशः ।
(A) 6.	<i>uddeśa</i>	समासवाक्यमुद्देशः ।
(S) 6.	<i>nirdeśa</i>	विस्तरवचनं निर्देशः ।
(V) 6.	<i>nirdeśa</i>	विस्तरवचनं निर्देशः ।
(A) 7.	<i>nirdeśa</i>	व्यासवाक्यं निर्देशः ।
(S) 7.	<i>upadeśa</i>	एवमित्युपदेशः ।
(V) 7.	<i>upadeśa</i>	एवमेवेत्युपदेशः ।
(A) 8.	<i>upadeśa</i>	एवं वर्तितव्यमित्युपदेशः ।
(S) 8.	<i>apadeśa</i>	अनेन कारणेनेत्युपदेशः ।
(V) 8.	<i>apadeśa</i>	अनेन कारणेनेत्युपदेशः ।
(A) 9.	<i>apadeśa</i>	एवमसावाहेत्युपदेशः ।
(S) 9.	<i>pradeśa</i>	प्रकृतस्यातिक्रान्तेन साधनं प्रदेशः ।
(V) 9.	<i>pradeśa</i>	प्रकृतस्यानागतेन साधनं प्रदेशः ।
(A) 11.	<i>predeśa</i>	वक्तव्येन साधनं प्रदेशः ।
(S) 10.	<i>atideśa</i>	प्रकृतस्यानागतेन साधनम् अतिदेशः ।
(V) 10.	<i>atideśa</i>	अतिक्रमणेन अतिदेशः ।
(A) 10.	<i>atideśa</i>	उक्तेन साधनमतिदेशः ।
(S) 11.	<i>apavarga</i>	अभिप्रमृज्यापकर्षणमपवर्गः ।
(V) 11.	<i>apavarga</i>	अभिप्रायानुकर्षणमपवर्गः ।
(A) 22.	<i>apavarga</i>	अभिप्लुतव्यपकर्षणमपवर्गः ।

Sequence	Terms	Definitions
(S) 12.	<i>vākyaśeṣa</i>	येन पदेनानुक्तेन वाक्यं समाप्यते स वाक्य- शेषः ।
(V) 12.	<i>vākyaśeṣa</i>	येनार्थः परिसमाप्यते पदेनाहार्येण स वाक्य- शेषः ।
(A) 17.	<i>vākyaśeṣa</i>	येन वाक्यं समाप्यते स वाक्यशेषः ।
(S)		
(V)		
(A) 12.	<i>upamāna</i>	दृष्टेनादृष्टस्य साधनमुपमानम् ।
(S) 13.	<i>arthāpatti</i>	यदकीर्तितमर्थादापद्यते सार्थापत्तिः ।
(V) 13.	<i>arthāpatti</i>	यदकीर्तितमर्थादापद्यते सार्थापत्तिः ।
(A) 13.	<i>arthāpatti</i>	यदनुक्तमर्थादापद्यते सार्थापत्तिः ।
(S) 14.	<i>viparyaya</i>	यद्यस्य प्रातिलोम्यं तद्विपर्ययः ।
(V) 20.	<i>viparyaya</i>	तस्य प्रातिलोम्यं विपर्ययः ।
(A) 16.	<i>viparyaya</i>	प्रतिलोमेन साधनं विपर्ययः ।
(S) 15.	<i>prasaṅga</i>	प्रकरणान्तरेण समानः प्रसङ्गः ।
(V) 14.	<i>prasaṅga</i>	प्रकरणाभिहितोऽर्थः केनचिदुपोद्धातेन पुनरु- च्यमानः प्रसङ्गः ।
(A) 15.	<i>prasaṅga</i>	प्रकरणान्तरेण समानोऽर्थः प्रसङ्गः ।
(S) 16.	<i>ekānta</i>	यदवधारणेनोच्यते स एकान्तः ।
(V) 15.	<i>ekānta</i>	यथा तथा स एकान्तः ।
(A) 26.	<i>ekānta</i>	सर्वत्रायत्तमेकान्तः ।
(S) 17.	<i>anekānta</i>	क्वचित्तथा क्वचिदन्यथा सोऽनेकान्तः ।
(V) 16.	<i>anekānta</i>	क्वचित्तथा क्वचिदन्यथाऽसावनेकान्तः ।
(A)		
(S) 18.	<i>pūrvapakṣa</i>	यस्तु निःसंशयमभिधीयते स पूर्वपक्षः । ⁴⁵⁷
(V) 17.	<i>pūrvapakṣa</i>	प्रतिषेधवचनं पूर्वपक्षः ।
(A) 24.	<i>pūrvapakṣa</i>	प्रतिषेद्धव्यं वाक्यं पूर्वपक्षः ।
(S) 19.	<i>nirṇaya</i>	तस्योत्तरं निर्णयः ।
(V) 18.	<i>nirṇaya</i>	उत्तरवचनं निर्णयः ।
(A) 25.	<i>uttarapakṣa</i>	निर्णयवाक्यमुत्तरपक्षः ।
(S) 20.	<i>anumata</i>	परमतमप्रतिषिद्धमनुमतम् ।

457 This definition of *pūrvapakṣa* in the Nepalese version is problematic.

Sequence	Terms	Definitions
(V) 25.	<i>anumata</i>	परमतमप्रतिषिद्धमनुमतम् ।
(A) 18.	<i>anumata</i>	परवाक्यमप्रतिषिद्धमनुमतम् ।
(S) 21.	<i>vidhāna</i>	प्रकरणानुपूर्व्यादभिहितं विधानम् ।
(V) 19.	<i>vidhāna</i>	प्रकरणानुपूर्वं विधानम् ।
(A) 2.	<i>vidhāna</i>	शास्त्रस्य प्रकरणानुपूर्वी विधानम् ।
(S) 22.	<i>anāgatāpekṣaṇa</i>	एवं वक्ष्यतीत्यनागतापेक्षणम् ।
(V) 22.	<i>anāgatāpekṣaṇa</i>	परत्र वक्षामीत्यनागतावेक्षणम् ।
(A) 27.	<i>anāgatāvekṣaṇa</i>	पश्चादेवं विहितमित्यनागतावेक्षणम् ।
(S) 23.	<i>atīkrāntāpekṣaṇa</i>	इत्युक्तमित्यतिक्रान्तापेक्षणम् ।
(V) 21.	<i>atīkrāntāpekṣaṇa</i>	इत्युक्तमतिक्रान्तावेक्षणम् ।
(A) 28.	<i>atīkrāntāvekṣaṇa</i>	पुरस्तादेवं विहितमित्यतिक्रान्तावेक्षणम् ।
(S) 24.	<i>saṃśaya</i>	उभयहेतुनिर्दर्शनं संशयः ।
(V) 23.	<i>saṃśaya</i>	उभयतो हेतुदर्शनं संशयः ।
(A) 14.	<i>saṃśaya</i>	उभयतो हेतुमानर्थः संशयः ।
(S) 25.	<i>vyākhyāna</i>	तत्रातिशयोपवर्णनं व्याख्यानम् ।
(V) 24.	<i>vyākhyāna</i>	तत्रातिशयवर्णनातिव्याख्यानम् ।
(A) 19.	<i>vyākhyāna</i>	अतिशयवर्णना व्याख्यानम् ।
(S) 26.	<i>svasaṃjñā</i>	अन्यशास्त्रासामान्या स्वसंज्ञा ।
(V) 26.	<i>svasaṃjñā</i>	परैरसम्मतः शब्दः स्वसंज्ञा ।
(A) 23.	<i>svasaṃjñā</i>	परैरसमितः शब्दः स्वसंज्ञा ।
(S) 27.	<i>nirvacana</i>	लोकप्रथितमुदाहरणं निर्वचनम् ।
(V) 27.	<i>nirvacana</i>	लोके प्रतीतमुदाहरणं निर्वचनम् ।
(A) 20.	<i>nirvacana</i>	गुणतः शब्दनिष्पत्तिर्निर्वचनम् ।
(S) 28.	<i>nidarśana</i>	दृष्टान्तव्यक्तिर्निर्दर्शनम् ।
(V) 28.	<i>nidarśana</i>	तद्युक्तिनिर्दर्शनं दृष्टान्तः ।
(A) 21.	<i>nidarśana</i>	दृष्टान्तो दृष्टान्तयुक्तो निर्दर्शनम् ।
(S) 29.	<i>niyoga</i>	इदमेवेति नियोगः ।
(V) 29.	<i>niyoga</i>	एवेति नियोगः ।
(A) 29.	<i>niyoga</i>	एवं नान्यथेति नियोगः ।
(S) 30.	<i>vikalpa</i>	।
(V) 30.	<i>vikalpa</i>	इदं वेदं वेति विकल्पः ।
(A) 30.	<i>vikalpa</i>	अनेन वानेन वेति विकल्पः ।

Sequence	Terms	Definitions
(S) 31.	<i>samuccaya</i>	।
(V) 31.	<i>samuccaya</i>	इदं चेदं चेति समुच्चयः ।
(A) 31.	<i>samuccaya</i>	अनेन चानेन चेति समुच्चयः ।
(S) 32.	<i>ūhya</i>	यदनिर्दिष्टं बुद्धिगम्यं तदूह्यम् ।
(V) 32.	<i>ūhya</i>	अत्र यदनिर्दिष्टं युक्तिगम्यं तदूह्यम् ।
(A)	<i>ūhya</i>	अनुक्तकरणमूह्यम् ।

Terminology

The definitions of *tantrayuktis* exhibit numerous variations across different texts. Here we will discuss each of the *tantrayuktis* that occur in the *Suśruta Saṃhitā* in comparison with their definitions in other texts.

Characteristics of the Manuscript Transmission

Translation

- 1 Now we shall explain the chapter called, “the enunciation of the logical methods of the system (*tantrayukti*).”
- 3 There are thirty-two logical methods of the system. They are as follows:

- | | |
|-------------------------------------------|------------------------------------------------|
| 1. topic (<i>adhikaraṇa</i>) | 12. ellipsis (<i>vākyaśeṣa</i>) |
| 2. construing (<i>yoga</i>) | 13. implication (<i>arthāpatti</i>) |
| 3. word meaning (<i>padārtha</i>) | 14. contraposition (<i>viparyaya</i>) |
| 4. premise (<i>hetvartha</i>) | 15. recontextualization
(<i>prasaṅga</i>) |
| 5. mention (<i>samuddēśa</i>) | 16. invariable statement (<i>ekānta</i>) |
| 6. description (<i>nirdeśa</i>) | 17. variable statement (<i>anekānta</i>) |
| 7. prescription (<i>upadeśa</i>) | 18. objection (<i>pūrvapakṣa</i>) |
| 8. statement of reason (<i>apadeśa</i>) | 19. determination (<i>nirṇaya</i>) |
| 9. indication (<i>pradeśa</i>) | 20. consent (<i>anumata</i>) |
| 10. prediction (<i>atideśa</i>) | 21. itemization (<i>vidhāna</i>) |
| 11. exception (<i>apavarga</i>) | |

- | | |
|---------------------------------------------------|-----------------------------------------|
| 22. future reference
(<i>anāgatāpekṣaṇa</i>) | (<i>svasaṃjñā</i>) |
| 23. past reference
(<i>atīkrāntāpekṣaṇa</i>) | 27. interpretation (<i>nirvacana</i>) |
| 24. doubt (<i>saṃśaya</i>) | 28. illustration (<i>nidarśana</i>) |
| 25. explication (<i>vyākhyāna</i>) | 29. compulsion (<i>niyoga</i>) |
| 26. field-specific term | 30. option (<i>vikalpa</i>) |
| | 31. aggregation (<i>samuccaya</i>) |
| | 32. deducible (<i>ūhya</i>) |

4 It is said about this, “what is the purpose of these methods?” The answer is, “construing sentences and construing meanings”.⁴⁵⁸

5-6 There are **two** verses about this:

The logical methods of the system prohibit statements employed by people who do not speak the truth. They also bring about the validity of one's own statements. And they also clarify meanings that are stated back to front, that are implicit, unclear and any that are partially stated.

8 Among them, “topic (*adhikaraṇa*)” refers to the object, with reference to which statements are made, such as flavour (*rasa*) or humour (*doṣa*).⁴⁵⁹

9 “Construing (*yoga*)” is that by which a sentence is construed, as when words that are in a reversed order, whether placed close or apart, have their meanings unified.

Sesame oil he should drink, with heart-leaved moonseed,
neem tree, **maidenhair fern**, Indrajaio, and long pepper

that is cooked with heart-leaf sida and country mallow, and
deodar, always for a benefit in the case of the disease goitre.

In this verse, one ought to say, first, “one should drink cooked....” However, the word “cooked” is used in the second line.⁴⁶⁰ Unifying the meanings of words in this way, even though they are far apart, is construing.

458 Ḍaḥaṇa on 6.65.4 (*Su 1938*: 815) explained “construing a sentence” as “connecting up a sentence that is not connected,” and “construing a meaning” as “clarifying or making appropriate a meaning that is implied or inappropriate.”

459 The idea here is that “*rasa*” may be the topic of a chapter, and statements in that chapter are all understood to be about that topic

460 The Nepalese version reads द्वितीये पादे which would properly mean the second quarter of the first line; the vulgate reads “third quarter” which seems more correct.

- 10 The meaning that is conveyed in an aphorism (*sūtra*) or a word is called word-meaning (*padārtha*). In other words, word-meaning is the meaning of one or more words. Word-meanings are unlimited. Where two or three meanings such as ‘fat,’ ‘sweat’ or ‘anointment’ appear to be possible, the valid meaning is the one that construes with prior and subsequent elements.⁴⁶¹ For example, when it is said that, “We are going to explain the chapter on the *veda*-origin” the mind may be confused about which “*veda*” will be spoken about. *Sāmaveda* and so on are the Vedas. Taking note of the prior and subsequent elements, the two roots *vind* “find” and *vid* “know” have a single meaning. Subsequently, the understanding takes place that there is a wish to talk about the origin of *āyurveda*. So that is the meaning of the word.⁴⁶²
- 11 The sense of the cause (*hetvārtha*) is a statement that is a premiss (*sādhana*). For example, just as a lump of earth is moistened by water, so a wound is moistened by substances like milk with green gram.⁴⁶³
- 12 A mention (*samuddeśa*) is a brief statement such as “spike (*śalya*)”.⁴⁶⁴
- 13 A description (*nirdeśa*) is a detailed statement. For example, “in the

See also
Dālhaṇa
at 1.1.1
(Su 1938: 1)

461 There is a dangling relative clause, यो ऽर्थः, in the Nepalese version that is avoided in the vulgate recension by the addition of स ग्रहीतव्यः.

462 The Nepalese text here is hard to follow, and the vulgate has a significantly different reading. But the problem situation seems to be as follows. The *Suśrutasaṃhitā* opens with a statement saying that it will describe the “origin of the *veda*” (*vedotpatti*). The problem is, what does this word “*veda*” refer to? Is it the Veda, as in *Sāmaveda*? Or something derived from the roots √vind or √vid? Context (“prior and subsequent elements”) can help us to know that “*veda*” means only “*āyurveda*” and that the *Suśrutasaṃhitā* is talking about the origin of *ayurveda*, specifically. This same issue is also addressed by Dālhaṇa at 1.1.1 (Su 1938: 1).

463 The way this principle is expressed here seems to be describing the application of a general principle (water makes things wet) to a specific context. We can know the moistening of a wound because we know the more general case of moistening earth. However, etymologically, हेत्वर्थ does not mean “analogy,” but rather, something like “purpose of the reason.” The phrase “the sense of cause” that we have used leans on the use of the term in commentaries on the *Aṣṭādhyāyī* (*Kaumudī* on 2.3.23). The vulgate of the *Suśrutasaṃhitā* rewrites the principle, making it clearer that the principle means “clarification by analogy.” Cf. also Cakrapāṇi’s discussion at Si.12.41 (Ca 1941: 736), where he explained the principle as using an explanation from one situation to clarify another situation. Cf. *Arthaśāstra* 5.1.13 (Olivelle 2013: 436), which is also unclear.

464 Generally, शल्य refers to any painful foreign body embedded in the flesh that requires surgical removal.

- body or exogenous".⁴⁶⁵
- 14 "Prescription (*upadeśa*)" refers to statements like "it should be this way." For example, one should not stay awake at night; one should not sleep during the day.
 - 15 "Statement of reason (*apadeśa*)" refers to statements like "this happens because of this." For example, in the sentence "Sweet substances increase phlegm," the reason is stated.⁴⁶⁶
 - 16 Substantiation of the subject matter through past evidence is "indication (*pradeśa*).". For example, he pulled out Devadatta's splinter (*śalya*), therefore he will pull out Yajñadatta's.
 - 17 Substantiation of the subject matter through a future event is "prediction (*atideśa*).". For example, if his wind moves upwards, that will cause him to have colic."⁴⁶⁷
 - 18 A deviation after generalization is exception (*apavarga*). For example, those afflicted by poison should not go through sudorific treatment other than the cases of poisoning by urinary worms.
 - 19 Ellipsis (*vākyaśeṣa*) refers to an unstated word that completes a sentence. For example, despite not mentioning the word 'person', when mentioning someone as 'the one having a head, hands, feet, flanks, and abdomen,' it's apparent that the reference is to a person.
 - 20 *arthāpatti* (*Implication*) refers to an unstated idea that becomes evident through context. For example, when one said, "We will eat rice" it becomes evident from the context that he did not wish to drink gruel.
 - 21 When there is the reversal of it it is contraposition (*viparyaya*). For example, when it is said, "Weak, dyspneic, and fearful people are difficult to treat," the converse holds true: "Those who are strong and so on are easily treatable."
 - 22 Recontextualization (*prasaṅga*) refers to a concept common to another section. For example, a concept belonging to another section is brought up by mentioning it repeatedly throughout.
 - 23 Invariable statement (*ekānta*) is one that is stated with certainty. For example, turpeth causes purgation; emetic nut induces vomiting.
 - 24 Variable statement (*anekānta*) is one that is true in one way in some cases and in another way elsewhere. For example, some teachers identify the

⁴⁶⁵ This is a reference to 1.26.4 (Su 1938: 121) where शल्य is described in more detail as being of two kinds.

⁴⁶⁶ A technical term also in Nyāyaśāstra (Jhalakīkar 1978: 54).

⁴⁶⁷ A technical term also in Nyāyaśāstra (Jhalakīkar 1978: 6–7).

- main element as substance, others as fluid, some as semen, and some as digestion.
- 25 A first point of view (*pūrvapakṣa*) is something stated with certainty. For example, how are the four types of diabetes caused by wind incurable?⁴⁶⁸
- 26 Its answer is determination. For example, afflicting the body and trickling downwards, it creates urine mixed with fat, fatty tissues, and marrow. Thus, those caused by wind are incurable.
- 28 Consent (*anumata*) refers to others' opinion that is not rejected. For example, when the assertor says that there are six flavours and that somehow gets accepted with affirmation, it is termed consent.
- 29 Itemization (*vidhāna*) refers to sequentially ordered statements within a chapter. For example, the eleven lethal points of thigh are mentioned sequentially in a chapter.
- 30 A statement like "Thus will be stated" is future reference (*anāg-atāpekṣaṇa*) such as when he says in the *Sūtrasthāna*, "I will mention it in the *Cikitsāsthāna*."
- 31 A statement like "Thus has been stated" is past reference (*atīkrāntāpekṣaṇa*) such as when one says in the *Cikitsāsthāna*, "As mentioned in the *Sūtrasthāna*...."
- 32 An indication pointing to causes on both sides is doubt (*saṁśaya*). For example, a blow to ⁴⁶⁹ is fatal, whereas cutting hands and feet is not fatal.
- 33 An elaborate description is explication (*vyākhyāna*). For example, the twenty-fifth entity, , is being explicated here. Thus, no other Āyurvedic texts discuss entities beginning with matters.
- 34 Field-specific term (*svasaṁjñā*) is uncommon in other field of studies. The term used in one's own systems is called field-specific term, such as in this system, denotes honey and ghee, and denotes ghee, sesame oil and fat.
- 35 A customary portrayal is interpretation (*nirvacana*). For example, one goes along the shade fearing heat.
- 36 Providing examples is illustration (*nidarśana*). For example, just as fire

See chapter 40 of Sūtrasthāna.

vasā / me-
das / maj-
jan

Does
bhūtādi a
compound
or it means
ahankāra or
ego?

468 The adverb निःसंशयम् is problematic: the example expresses a query or doubt, the opposite of certainty, which is answered in the next passage. It would seem to make more sense to read something like यस् तु संशयम् अभिधीयते स पूर्वपक्षः, but our manuscripts are unanimous in their reading.

469 तलहृदय is one of the muscle-group of lethal points mentioned in 3.6.7 (Su 1938: 370).

spreads rapidly in a dry forest when accompanied by wind, a wound intensifies affected by wind, bile, and phlegm.

- 37 A statement like “This is the only way...” ...compulsion (*niyoga*). For example, one should consume only a healthy diet.
- 39 A statement like “This and this...” is option (*vikalpa*). For example, in the section on meat, the major ones are blackbuck, deer, quail and part-ridge.⁴⁷⁰
- 38 A summarized statement is aggregation (*samuccaya*).⁴⁷¹ For example, let there be rice with meat broth, rice with milk, or burley with ghee.

A meaningful reading of these two rules would be

39 idaṃ vedaṃ veti vikalpaḥ / yathā rasodanaḥ kṣīrodanaḥ
saghr̥tā vā yavāgūr bhavatv iti //

38 saṃkṣepavacanam samuccayaḥ / yathā māṃsavarge eṇa-
haraṇalāvatittirāḥ pradhānā iti

- 40 What is not explicitly stated but can be understood through discernment is deducible (*ūhya*). For example, in the section on rules of foods and drinks, four types of foods and drinks are mentioned— masticable (*bhakṣya*), edible (*bhojya*), suckable (*lehya*), and drinkable (*peya*). Thus, while four types are needed to be stated, two types are actually mentioned. Here it is deducible that in the section on foods and drinks, by specifically mentioning two types, the four types are also mentioned. Furthermore, a masticable item is not excluded from the category of food because it shares the same characteristic of solidity. A suckable item is not excluded from being classified as a drink because it shares the same characteristic of liquidity. Four types of aliments are rare. They are usually just twofold. Therefore, lord Dhanvantari says “Two-fold is popular”.

470 The example here matches समुच्चय (next text), not विकल्प. There seems to have been a metathesis of terms. Y. T. Ācārya and N. R. Ācārya ([Su 1945](#):1005, footnote 6) notes that this text and the next have been swapped in the Calcutta edition that includes Hārāṇacandra’s commentary Bhaṭṭācārya 1910–17: 2, in the same way as in the Nepalese version.

471 As stated in the previous footnote, the example here is of विकल्प, not समुच्चय.

Editions and Abbreviations

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- HIML Meulenbeld, Gerrit Jan (1999–2002), *A History of Indian Medical Literature*, 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.
- IOLR Eggeling, Julius, et al. (1887–1935), *Catalogue of the Sanskrit Manuscripts in the Library of the India Office*

- (London: Secretary of State for India), [ark:/13960/s2kbb5zcrg9](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63868-p0079-9).
- KEWA Mayrhofer, Manfred (1953–72), *Kurzgefaßtes etymologisches Wörterbuch des Altindoarischen; a Concise Etymological Sanskrit Dictionary* (Heidelberg: Carl Winter, Universitätsverlag).
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- समुल्लसितम् = *Mādhavanidāna* by Mādhavakara with the Two Commentaries, *Madhukosha* by Vijayarakshita & Shrikānthadatta and *Ātankadarpaṇa* by Vāchaspati Vaidya (3rd edn., Bombay: Nirnaya Sagara Press), [ark : / 13960 / t66452x0h](https://nir.nir.org/ark:/13960/t66452x0h); Reprinted Varanasi: Chowkhambha, 1986.
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- NAK *National Archives of Kathmandu.*
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Numbers after the final colon refer to pages in this book.

aconite leaf (?) (*viṣapatrikā*) Unknown. Cf. perhaps, *vatsanābha* (wolfsbane). Cf.

GVDB: 373 : 105

‘alas, alas’ (*hālāhala*) unknown. See Cf. Soḍhalanighantu p.43 (sub bola) = stomaka = vatsanābha :

Alexandrian laurel (*punnāga*)

Calophyllum inophyllum, L. See

AVS: 1, 338, NK: 1, #425 :

amaranth (*taṇḍulīyaka*) Amaranthus hypochondriacus, L. See King 321, NK: 1, #144, Potter^{rev}: 15. Cf.

AVS: 1, 121 : 98

arjun (*arjuna*) Terminalia arjuna, Bedd. See HK: 34

ash gourd (*kūṣmāṇḍa*) → puṣpaphala. Beninkasa hispida, (Thunb.) Cogn. See AVS: 2, 1127; cf. AVS: 1, 261 :

atis root (*śṛṅgīviṣa*) Aconitum heterophyllum, Wall. ex Royle. See AVS: 1, 42, NK: 1, #39 :

axlewood (*dhava*) Anogeissus latifolia (Roxb. ex DC.) Wall. ex Guill & Perr. See AVS: 1, 163 f, Chopra: 20 : 34, 120

bamboo leaves (*veṇupatrikā*) Bambusa bambos, Druce. See NK: 1, #307 : 98

banyan (*nyagrodha*) Ficus bengalensis, L. See HK :

barley (*yava*) Hordeum vulgare, L. See HK: 79

bearded premna (*vasuka*) Premna barbata Wall. (← *vasuhatṭa*), according to

Cakrapāṇidatta. See the discussion by T. B. Singh and Chunekar

(GVDB: 362–363), where other candidate species such as Osmanthus, Calotropis, and Trianthema are discussed. T. B. Singh and Chunekar (GVDB: 363) note that when *vasuka* is mentioned with *vasira*, two varieties of salt are often meant (see *vasukavasirā*).

See also NK: #1299 who identifies it with Indigofera enneaphylla, Linn. (Birdsville Indigo), apparently without controversy :

beautyberry (*priyaṅgu*) → śyāmā.

Callicarpa macrophylla, Vahl. See

AVS: 1, 334, NK: 1, #420. Some say also Setaria italica Beauv. GVDB: 263–264.

See also GVDB: 413 : 34, 116, 121

beautyberry (*śyāmā*) Callicarpa macrophylla, Vahl. See AVS: 1, 334, NK: 1, #420 : 74, 96, 98

beggarweed (*aṃśumatī*) Desmodium gangeticum (L.) DC (Dymock: 1, 428, GJM1: 602, NK: 1, #1192; ADPS: 382, 414 and AVS: 2, 319, 4.366 are confusing) : 116

beggarweed (*vidārigandhā*) → śālapanṇī. Desmodium gangeticum (L.) DC. See Dymock: 1, 428, GJM1: 602, cf. NK: 1, #1192; ADPS: 382, 414 and AVS: 2, 319, 4.366 are confusing : 43, 79

beggarweed (*śālapanṇī*) → sthirā.

- Desmodium gangeticum (L.) DC. See *Dymock*: 1, 428, *GJM*1: 602, *NK*: 1, #1192; *ADPS*: 382, 414 and *AVS*: 2, 319, 4.366 are confusing:
- Bengal quince (*bilva*) *Aegle marmelos* (L.) Corr. See *AVS*: 1, 62, Chevallier 159, *NK*: 1, #62, (*MW*: 732a) : 63, 70, 72, 76
- 'big poison' (*mahāviṣa*) unknown. See ? :
- 'big thorn apple' (*mahākarambha*) *Datura metel*, L.?. See thorn apple (*karambha*) :
- bitumen (*adrija*) → *śilājī*. A tar-like, black, resinous rock exudate. See *AyMahā*: 1, 21 : 130
- black cardamom (*Xhareṇu*) *Amomum subulatum*, Roxb.?. See *PVS Caraka* 2.734, *AVS*: 1, 128, *NK*: 1, #154, *pace GVDB*: 467–468 :
- black creeper (*pālindī*) *Ichnocarpus frutescens*, (L.) R.Br. or *Cryptolepis buechanani*, Roemer & Schultes. See *AVS*: 3, 141, 145, 203, *NK*: 1, #1283, 1210, *ADPS*: 434. Ḍalhaṇa on SS 5.1.82 identified *pālindī* with *trivṛt* (turpeth) and T. B. Singh and Chuneekar (*GVDB*: 246) supported this as a usual identification : 98, 101, 115, 116
- black pepper (*marica*) *Piper nigrum*, L. See *ADPS*: 294, *NK*: 1, #1929 : 79
- black pepper (*vallīja*) → *marica*. *Piper nigrum*, L.?. See *NK*: 1, #1929; Rā.6.115, Dha.4.85, Dha.2.88 :
- blackboard tree (*saptachada*) *Alstonia scholaris* R. Br. *GVDB*: 420 : 97
- blackbuck (*hariṇa*) *Antelope cervicapra*, L. See *BIA*: 270 *IW*: 95, 165, *et passim* : 101
- 'blade' (*kartariya*) unknown. See ? :
- blue water-lily (*utpala*) *Nymphaea stellata*, Willd. See *GJM*1: 528, *IGP* 790; *Dutt*: 110, *NK*: 1, #1726 : 25, 96, 115, 116
- bottle gourd (*ālābūka*) *Lagenaria siceria* (Molina) Standl. See *IGP* 645, *NK*: 1, #1419 :
- bulrush (*kaṣeru*) "Two species, *Scirpus kysoor* Roxb., and *S. grossus* Linn. f. are used" *GVDB*: 85. Also *kaṣeruka* and *kaseru* : 74, 75, 78
- calamine lotion (*amṛtāsaṅga*) → *amṛtāsaṅga*. Zinc carbonate. See *NK*: 2, #56 :
- camphor (*karpūra*) → *śītaśiva*. *Cinnamomum camphora*, (L.) Sieb. See *IGP* 253 :
- cannabis (*viṇayā*) *Cannabis sativa*, L. See *AVS*: 1, 356, *NK*: 1, #442 :
- caper (*karīra*) *Capparis decidua* (Forsk.) Edgew. See *AVS*: 1, 368, (*MW*: 255b) :
- cardamom (*elā*) *Elettaria cardamomum*, Maton. See *AVS*: 2, 360, *NK*: 1, #924, *Potter_{rev}*: 66 : 70, 116, 121
- carmarī (*carmarī*) unknown. See ? :
- carray cheddie (*gāṅgerukī*) → *viśvadevā*. *Canthium parviflorum*, Lam. See *AVS*: 1, 366 f :
- cassia cinnamon (*patra*) *Cinnamomum tamala*, (Buch.-Ham.) Nees. See *AVS*: 2, 84, *NK*: 1, #589 : 70, 76, 98, 116
- castor oil tree (*gandharvahaṣṭa*) → *eraṇḍa*. *GVDB*: 135, *K&B*: 3, 2277 : 39, 72
- castor-oil (*eraṇḍa*) *Ricinus communis*, L. See *NK*: 1, #2145, *Chopra*: 214 : 44
- certain minerals (*tārāvītāra*) Unknown. It is not even certain that these are minerals. The variant reading in the vulgate, *tāraḥ sutāraḥ* was glossed by Ḍalhaṇa on 5.3.14 (*Su* 1938: 568) as follows *tāro rūpyaṃ, sutāraḥ pāradaḥ*, "tāra means silver; sutāra means mercury." : 120
- Ceylon iron wood (*kṣīrikā*) *Mimusops hexandra*, Roxb. (*GVDB*: 126–127) :
- chaff (*kāṇḍana*) The word *kāṇḍana* is not found in dictionaries; *kaṇḍana* is threshing, separating the chaff from the grain in a mortar. Cf. Hemādri's *Caturvargacintāmaṇi* (*PWK*: 2, 8) (*Śiromaṇi* 1873: 1, 138: 21, citing the *Vāyupurāṇa*) : 26, 222
- chebulic myrobalan (*harītakī*) *Terminalia chebula* Retz. *GVDB*: 466 : 77, 97
- cherry (*elavālu*) *Prunus cerasus*, L.?. See *BVDB* 58, *NK*: 1, #2037, *GVDB*: 58 : 116

- chital deer (*pr̥ṣata*) *Axis axis*, Erxleben. See [BIA](#): 292, [IW](#): 93 : 101
- ‘choice tree’ (*varadāru*) unknown. See ? :
- chukar partridge (*cakora*) *Alectoris chukar*. See [Woodcock](#) 1980: 45 :
- cinnamon (*tvac*) *Cinnamomum cassia*, Blume. See [NK](#): 1, #579 :
- citron (*mātuluṅga*) *Citrus medica*, Linn. [GVDB](#): 276, 306. Also spelled *mātuliṅga*, *mātulaṅga*, *mātulāṅga* : 63, 76, 81, 82
- cluster fig (*udumbara*) *Ficus racemosa*, L. See [ADPS](#): 487 :
- cobra’s saffron (*nāgapuṣpa*) → *nāgakeśara*. *Mesua ferrea*, L. See [NK](#): 1, #1595, [GVDB](#): 220 : 116
- common crane (*krauñca*) *Grus grus*. See [Woodcock](#) 1980: 47 :
- common mallow (*suvarcalā*) perhaps *Malva sylvestris*, L. A difficult plant to identify, see T. B. Singh and Chuneekar ([GVDB](#): 280, 440–441) :
- common mallow (*sūryāvarta*) *Malva sylvestris*, L. *Cakrapānidatta* and *Ḍalhaṇa* identify it with *suvarcalā*, itself a difficult plant to identify. Perhaps *Helianthus*, see T. B. Singh and Chuneekar ([GVDB](#): 280) :
- corky coral tree (*pāribhadra*) *Erythrina suberosa* Roxb. See [GVDB](#) 245 : 120
- costus (*kuṣṭha*) *Saussurea costus*, Clarke. See [NK](#): 1, #2239 : 70, 76, 98, 116, 121
- cottony jujube (*kākolī*) *Ziziphus mauritana*, Lam. See [IGP](#): 1233, [NK](#): 1, #2663; [IGP](#) 1233. Cf. [NK](#): 1, #1170 : 69, 75, 76
- country mallow (*atibalā*) *Abutilon indicum*, (L.) Sweet, but may be other kinds of mallow, e.g., *Sida rhombifolia*, L.. See [NK](#): 1, #11, [IGP](#): 1080, [NK](#): 1, #2300, [ADPS](#): 71, 77 : 43, 75, 78, 164
- country sarsaparilla (*anantā*) *Hemidesmus indicus*, (L.) R. Br. See [ADPS](#): 434, [AVS](#): 3, 141–5, [NK](#): 1, #1210. But see [GVDB](#): 13 for complications that may suggest that it is to be equated with *sārivā*, which may sometimes be *Cryptolepis* or *Ichnocarpus frutescens* R. Rr. ([GVDB](#): 429–431) : 43, 105, 115, 116, 120
- crape jasmine (*nata*) → crape jasmine [GVDB](#): 215 : 215, 217
- crape jasmine (*tagara*) *Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schultes. See [GJM](#)1: 557, [AVS](#): 5, 232. Synonym of crape jasmine. But some say *Valeriana jatamansi*, Jones See [GVDB](#): 173–174 for discussion (and charming comments on brain liquid testing). Some say *tagara* is Indian rose-bay or Indian valerian, but there remain many historical questions about the ancient and regional identities of this plant See, e.g., [AVS](#): 5, 334 : 70, 76, 98, 116, 215, 217
- crimson trumpet-flower tree (*pāṭalā*) *Stereospermum chelonides*, (L. f.) A. DC. See [GJM](#)1: 573, [AVS](#): 5, 192 ff, [ADPS](#): 362 f, [AVS](#): 3, 1848 f, [IGP](#) 1120, [Dymock](#): 3, 20 ff : 120
- cucumber (*trapusa*) *Cucumis sativus*, L. See [AVS](#): 2, 231, [NK](#): 1, #731 :
- cuscut grass (*uśīra*) *Andropogon murcatus*, Retz. Also “vetiver grass.” See [NK](#): 1, #180 : 98
- ‘dangling’ (*lambā*) unknown. See ? :
- datura (*dhattūra*) *Datura metel*, L. See [AVS](#): 2, 305 (cf. *Abhidhānamāñjarī*), [NK](#): 1, #796 ff. [Potter_{rev}](#): 292 f, [ADPS](#): 132 : 40
- deodar (*bhadradāru*) *Cedrus deodara*, (Roxb.ex D.Don) G. Don. See [AVS](#) 41, [NK](#): 1, #516 : 34, 74, 79, 116
- deodar (*devadāru*) *Cedrus deodara* (Roxb.) Loud. [GVDB](#): 206–207 : 63, 76, 164
- dhaman tree (*dhanvaṅga*) → *dhammaṇa*? *Grewia tiliaefolia*, Vahl. See [AVS](#): 3, 104, [IK](#), [AVS](#): 1, 386, [IGP](#) 529 (*tiliifolia*) :
- dried ginger (*śuṇṭhī*) *Zingiber officinale*,

- Roscoe. See **ADPS**: 50, **NK**: 1, #2658, **AVS**: 5, 435, **IGP**: 1232: 74
- dried meat (*vallūra*) **MW**: 929, **AyMahā**: 1, 730. The term is used, rarely, in both the CS (1.5.10) and SS (1.13. 16, 6.42.75–76). It is a Dravidian loanword and occurs in the *Arthaśāstra* etc. (**KEWA**: 3, 167): 25
- drum-giver (?) (*lambaradā*) Unknown; cf. **GVDB**: 348: 105
- elixir salve (*rasāñjana*) → *añjana*. See Indian barberry: 34, 44
- embelia (*viḍaṅga*) *Embelia ribes*, Burm. f. See **ADPS**: 507, **AVS**: 2, 368, **NK**: 1, #929, **Potter_{rev}**: 113: 34, 70, 116
- emblic (*āmālaka*) *Phyllanthus emblica*, L. See **AVS**: 4, 256: 77, 78
- emetic nut (*karaghāṭa*) Probably a synonym for *karahāṭa* (emetic nut), q.v., **GVDB**: 74: 216
- emetic nut (*karahāṭa*) *Randia dumetorum*, Lamk. See **GVDB**: 291–292 and **NK**: 1, #2091. T. B. Singh and Chuneekar (**GVDB**: 74, 77–78) noted that it may be a synonym for *karaghāṭa*, emetic nut, and pointed rather to *Gardenia turgida* Roxb. on the basis of local knowledge in U. P.: 216, 218
- emetic nut (*madana*) *Randia dumetorum*, Lamk. See **NK**: 1, #2091: 96, 166
- false daisy (*subhaṅgurā*) (su)bhaṅgura = bhṛṅga? *Eclipta prostrata* (L.) L. See **GVDB**: 288: 104
- fermented rice-water (*dhānyāmla*) → *kāñjī*, *kāñjikā*, *sauvīra*. **GVDB**: 458, **NK**: 2, appendix VI, #18: 41, 42
- fern (*ajaruhā*) *Nephrodium* species **GVDB**: 7, uncertain. Perhbaps *Christella dentata* (Forssk.) Brownsey & Jermy, which is reported to have folk applications against skin diseases in India: 100
- fire-flame bush (*dhātakī*) *Woodfordia fruticosa* (L.) Kurz. See **AVS**: 5, 412, **NK**: 1, #2626: 97
- five-leaved chaste tree (*śephālikā*) *Vitex negundo*, L. See **NK**: 1, #2603 (cf. use of leaves), **IGP**: 1210a, **MW**: 1088b:
- flax (*atasī*) *Linum usitatissimum*, L. See **NK**#1495: 75
- ‘foam-stone’ (*phenāśma*) unknown. See ?:
- fragrant lotus (*saugandhika*) A type of *kumuda* or *utpala* (**GVDB**: 457): 25
- galls (*karkaṭa*) *Rhus succedanea*, L. See **NK**: 1, #2136:
- garden pea (*kalāya*) *Pisum sativum*, L. See **AVS**: 4, 308, **IGP** 901; cf. **NK**: 1, #1940:
- garjan oil tree (*aśvakarṇa*) *Dipterocarpus turbinatus* Gaertn. f. See **GVDB**: 28, **Chopra**: 100: 120
- ‘gentle’ (*somā*) *Ruta graveolens*, L., or *Sarcostemma brevistigma*, W & A, etc. See **NK**: 1, #2179, 2228; **Potter_{rev}**: 262:
- giant potato (*kṣīravidārī*) possibly → *kṣīraśukla*. *Ipomoea mauritiana*, Jacq. See **ADPS**: 510, **AVS**: 3, 222, **AVS**: 3, 1717 ff: 75, 218, 220, 221
- ginger (*mahaśadha*) *Zingiber officinale*, Roscoe. See **ADPS**: 50, **NK**: 1, #2658, **IGP**: 1232: 101
- ‘gladdener’ (*nandana*) unknown. See ?:
- gold (*hema*) gold: 116
- 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”: 120
- golden shower tree (*rājadruma*) *rājadruma* = *āragvadha*. *Cassia fistula* L. See **GVDB** 37: 120
- golden shower tree (*āragvadha*) *Cassia fistula* L. See **GVDB** 37: 77
- gourd (*alābu*) *Lagenaria siceraria* Standl. **GVDB**: 25. Some say *Lagenaria vulgaris*, Seringe (**NK**: 1, #1419) but this is not appropriate for blood-letting: 21, 22, 97
- green gram (*māṣa*) *Vigna radiata* (L.) R.

- Wilcz. See **ADPS**: 296, **IGP** 1204 : 34, 75, 165
 'gutboiler' (*antrapācaka*) unknown. See ? :
 hare foot uraria (*prśniparṇī*) → *sahā*?
Uraría lagopoides, DC. See **GJM1**: 577, **Dymock**: 1, 426, **AVS**: 1, 750 ff, **NK**: 1, #2542; **ADPS**: 382, **AVS**: 2, 319 and **AVS**: 4, 366 are confusing : 74, 75
 heart-leaf sida (*balā*) *Sida cordifolia*, Linn. See **ADPS**: 71, **NK**: 1, #2297 : 43, 75, 78, 80, 116, 164
 heart-leaved moonseed (*amṛtavallī*) See heart-leaved moonseed (*amṛtā*) : 164
 heart-leaved moonseed (*amṛtā*) → *guḍūcī*. *Tinospora cordifolia*, (Willd.) Hook.f. & Thoms.? See **ADPS**: 38, **NK**: 1, #2472, 624, **Dastur** #229 : 98, 114, 217
 heart-leaved moonseed (*guḍūcī*) *Tinospora cordifolia* (Willd.) Miers. **GVDB**: 141–142, **NK**: 1, #624, #2472 : 76
 heart-leaved moonseed (*somavallī*) *Tinospora cordifolia* (Thunb.) Miers. **GVDB**: 456. Likely, but uncertain : 98
 heliotrope (*hastīśuṇḍa*) → *ibhagandhā*? *Heliotropium indicum*, L. See **AVS**: 3, 136, **NK**: 1, #1203 :
 henna (*madayantikā*) *Lawsonia inermis*, L. See **AVS**: 3, 303, **NK**: 1, #1448, **Potter**_{rev.} : 151 : 99
 hill myna (*sārikā*) *Acridotheres tristis tristis*, L., etc. See **Ali** #1006, **Dave** (1985: 28 ff.), **Woodcock** (1980: 119) :
 Himalayan mayapple (*vakra*) *Podophyllum emodi*, Wall. (**NK**: #1971). But perhaps a synonym of crape jasmine and crape jasmine (**GVDB**: 354) : 121
 Himalayan monkshood (*ativiṣā*) → *viṣā* *Aconitum heterophyllum* Wall. **GVDB**: 12, **NK**: 1, #39. Also "atis roots" : 67, 99, 101, 121
 Himalayan monkshood (*viṣā*) → *ativiṣā* **GVDB**: 12, 373 : 221
 hogweed (*punarnavā*) *Boerhaavia diffusa*, L. See **ADPS**: 387, **AVS**: 1, 281, **NK**: 1, #363 : 77, 99, 115
 Holostemma creeper (*jīvantī*) → *sūryavallī*? *Holostemma ada-kodien*, Schultes. See **ADPS**: 195, **AVS**: 3, 167, 169, **NK**: 1, #1242 : 78, 220
 honey (*kṣaudra*) Eight varieties of honey are described in the SS (**NK**: 2, Appendix 192). *Kṣaudra* is the product of a small bee of tawny colour, called *kṣudra* : 83, 101
 horned pondweed (*śaivāla*) also *śaivāla*, *śevāra*. *Zannichellia palustris* L. The uncertainties of this identification are discussed by T. B. Singh and Chuneekar (**GVDB**: 409). Sometimes identified with scutch grass (*dūrvā*) (**GVDB**: 409). Identified as *Ceratophyllum demersum* Linn. ("hornwort") by **AVS**: 2, 56–57x : 76, 217, 221
 hornwort (*jalanīlikā*) *Ceratophyllum demersum*, L. See **AVS**: 2, 56, **IGP** 232 :
 hornwort (*jalaśūka*) → *jalanīlikā*. *Ceratophyllum demersum*, L. See **AVS**: 2, 56, **IGP**: 232. T. B. Singh and Chuneekar (**GVDB**: 166) suggest horned pondweed. **Ḍalhaṇa** noted on 1.16.19 (**Su** 1938: 79) that some people interpret it as a poisonous, hairy, air-breathing, underwater creature : 43
 horseradish tree (*śīgru*) *Moringa oleifera* Lam. See **IGP** 759, **GJM1**: 603, **Dymock**: 1, 396 : 76, 77
 hyacinth bean (*śimbī*) *Dolichos lablab*, L. See **NK**: 1, #870 :
 Indian antelope (*eṇa*) *Antelope cervicapra*, L. See **BIA**: 70 :
 Indian barberry (*añjana*) → *rasāñjana*, *dāruharidrā*. *Berberis aristata*, DC. **Dymock**: 1, 65, **NK**: 1, #335, **GJM1**: 562, **IGP**: 141 : 44, 100, 216
 Indian barberry (*dāruharidrā*) *Berberis aristata*, DC. See **Dymock**: 1, 65, **NK**: 1, #685, **GJM1**: 562, **IGP** 141 : 115, 116
 Indian barberry (*kālīyaka*) → *dāruharidrā*, *añjana*. *Berberis aristata*, DC. See **Dymock**: 1, 65, **NK**: 1, #685, **GJM1**: 562,

- IGP: 141 : 98
- Indian beech (*naktamāla*) Pongamia pinnata, (L.) Pierre. See AVS: 4, 339, NK: 1, #2003 : 34, 72
- Indian ipecac (*payasyā*) Uncertain. Possibly Tylophora indica (Burm.f.) Merr. Perhaps a synonym of panacea twiner, giant potato, purple roscoea, and plants like asthma plant and Gulf sandmat (GVDB: 237–238). Also “curds” when not a plant : 43, 76, 220
- Indian kudzu (*vidārī*) → *payasyā*. Pueraria tuberosa (Willd.) DC. See ADPS: 510, AVS: 1, 792 f, AVS: 4, 391; not Dymock: 1, 424 f. See GJM2: 444, 451, AVS: 1, 187, but AVS: 3, 1719 = Ipomoea mauritiana, Jacq : 43, 63
- Indian laburnum (*śampāka*) Cassia fistula, L. See ADPS: 48, AVS: 2, 11 ff, AVS: 2, 854, IGP 215 :
- Indian laurel (*plakṣa*) Ficus microcarpa, L. f. See ADPS: 377 :
- Indian madder (*mañjiṣṭhā*) Rubia cordifolia, L. See IGP, Chopra: 215, GVDB: 289 : 39, 116
- Indian mottled eel (*varmimatsya*) Almost certainly the mottled eel. MW: 962c noted that the *varmi* fish “is commonly called *vāmi*.” The “vam fish,” or “বান মাছ (*bān māch*)” in Bengal, is a marine and freshwater eel, *Anguilla bengalensis*. It is the most common eel in Indian inland waters and a prized food fish (Froese and Pauly 2022). However, some NIA languages identify the “vam” fish with the Indian Pike Conger, *Congresox talabonides* (Bleeker) (Talwar and Kacker 1984: 235, 236) : 23
- Indian mustard (*sarṣapa*) Brassica juncea, Czern. & Coss. See AVS: 1, 301, NK: 1, #378 : 26
- Indian pennywort (*maṇḍūkapaṇṇī*) Centella asiatica (L.) Urban. See GVDB: 290, ADPS: 289–291 :
- Indian sarsaparilla (*sārivā*) → *anantā*. Hemidesmus indicus, (L.) R. Br. ADPS: 434, AVS: 3, 141–5, NK: 1, #1210; and black creeper, *pāṇḍī*. Ichnocarpus frutescens, (L.) R.Br. or Cryptolepis buechanani, Roemer & Schultes AVS: 3, 141, 3.145, 3.203, NK: 1, #1283, 1210, ADPS: 434 : 115, 116, 216
- Indian snakeroot (*sarpagandhā*) Rauvolfia serpentina, (L.) Benth. ex Kurz. See NK: 1, #2099, ADPS: 439, GVDB: 425; cf. SS 5.5.76–78 :
- Indian spinach (*pūtīkā*) Basella alba, L. See NK: 1, #318 (rubra), ADPS: 489, AVS: 1, 253, IGP 129b :
- indigo (*nīlinī*) Indigofera tinctoria, L. See NK: 1, #1309 :
- Indrajao (*vrkṣaka*) → *indrayava*, *indrabīja*, *kaliṅga*, and *kuṭaja*. Holarrhena antidysenterica Wall. GVDB: 376, 45 and 84 : 164
- jackfruit (*panasa*) Artocarpus heterophyllus, Lam. See NK: 1, #249, IGP 99 :
- jambul (*jambū*) Syzygium cumini, (L.) Skeels. See ADPS: 188, NK: 1, #967, Potter_{rev}: 168, Wujastyk 2003a : 97
- jasmine (*mālatī*) Jasminium grandiflorum, L. See NK: 1, #1364 : 98
- jequirity (*guñjā*) Abrus precatorius, L. See AVS: 1, 10, NK: 1, #6, Potter_{rev}: 168 : 104, 105
- jequirity (*kālakūṭa*) Abrus precatorius, L.? Cf. RRS 21.14. See AVS: 1, 10, NK: 1, #6, Potter_{rev}: 168 :
- ‘juice-cooker’ (*sārapāka*) unknown. See ? : (?) (*karaṭā*) Not in GVDB. Cf. perhaps *karahāṭa* (emetic nut) : 105
- khesari pea (*tripuṭa*) tripuṭa(kalāya). Lathyrus sativus, L. See IGP 651, NK: 1, #1439 :
- koel (*kokila*) Eudynamys scolopacea. See Woodcock 1980: 66 :
- kumudvatī (*kumudvatī*) unknown. See ? :
- lac (*jatu*) Kerria lacca (Kerr.). See <http://www.icar.org.in/ilri/default.htm> : ■

- lac (*lākṣā*) *Kerria lacca* (Kerr.). See [GJM1](#): 445, [NK](#): 2, #32. Watt ([WattComm](#): 1053–1066) is characteristically informative, and is definite about the antiquity of lac in India : 121
- lāmajja grass (*lāmajj*) *Andropogon iwarancusa*, Roxb. See [NK](#): 1, #176 :
- lāmajja grass (*uśīrabhedā*) → *lāmajja*. *Andropogon iwarancusa*, Roxb. See [NK](#): 1, #176 :
- leadwort (*agnīśikhā*) *Plumbago zeylanica* (or *rosea*?), L. See [NK](#): 1, #1966, 1967 : 219
- leadwort (*citraka*) *Plumbago zeylanica* (or *indica*?), L. See [RĀ](#). 6.124, [ADPS](#): 119, [NK](#): 1, #1966, 1967 : 34, 67, 72, 82
- leadwort (*pālaka*) → *citraka*. *Plumbago zeylanica* (*indica*? *rosea*?), L. See [RĀ](#). 6.124, [ADPS](#): 1, 119, [NK](#): 1, #1966, 1967 :
- leadwort (*vidyutśikhā*) Synonym of *agnīśikhā* (leadwort), q.v. :
- liquorice (?) (*klītaka*) *Glycyrrhiza glabra*, L.? [GVDB](#): 123–124 discuss the many difficulties in identifying this plant : 104
- liquorice (*madhuka*) see *yaṣṭīmadhuka* : 43, 74–79, 81, 101, 114, 116
- liquorice (*yaṣṭīmadhuka*) *Glycyrrhiza glabra*, L. [AVS](#): 3, 84, [NK](#): 1, #1136, [GVDB](#): 329 f. : 44
- ‘little bamboo’ (*veṇukā*) *Bambusa bambos*, Druce?. See [NK](#): 1, #307 :
- lodh tree (*lodhra*) *Symplocos racemosa*, Roxb. See [GJM1](#): 597, [ADPS](#): 279 f, [NK](#): 1, #2420. T. B. Singh and Chuneekar ([GVDB](#): 351–352) notes that there are two varieties, *S. racemosa*, qualified as *śāvara*, and *S. crataegoides* Buch.-Ham. for *paṭṭikā lodhra* : 34, 116
- lodh tree (*rodhra*) *Symplocos racemosa*, Roxb. See [ADPS](#): 279, [NK](#): 1, #2420 :
- lodh tree (*śāvara*) → *lodhra*. *Symplocos racemosa*, Roxb. See [ADPS](#): 279, [NK](#): 1, #2420 :
- long pepper (*māgadha*) *Piper longum*, L. See [NK](#): 1, #1928; but cf. [AVS](#): 3, 245 : 100
- long pepper (*pippalī*) *Piper longum*, L. See [ADPS](#): 374, [NK](#): 1, #1928 : 72, 77, 81–83, 101, 116, 164
- lotus stalk (*mṛṇālā*) “Leaf stalk of sacred lotus” [GVDB](#): 318 : 76
- luffa (*garāgarī*) → *gargaraka*? *Luffa echinata*, Roxb. See [NK](#): 1, #1517 :
- luffa (*koṣātaka*) = *koṣītakī*, luffa :
- luffa (*koṣātakya*) *Luffa cylindrica*, (L.) M. J. Roem. or *L. acutangula*, (L.) Roxb. See [ADPS](#): 252, [NK](#): 1, #1514 etc :
- luffa (*koṣītakī*) = *koṣātakī*. *Luffa cylindrica*, (L.) M. J. Roem. or *L. acutangula*, (L.) Roxb. [ADPS](#): 252–253, [NK](#): 1, #1514 etc. [GVDB](#): 121 : 97, 114, 219
- luffa gourd (*koṣavatī*) = *koṣītakī*, luffa : 114
- mahua (*madhūka*) *Madhuca longifolia*, (Koenig) Macbride. See [AVS](#): 3, 362 f :
- maidenhair fern (*haṃsāhvayā*) *Adiantum lunulatum* Burm f. [GVDB](#): 463 : 164
- mango (*āmra*) *Mangifera indica* Linn. [GVDB](#): 37 : 97
- marking-nut tree (*aruṣkara*) *Semecarpus anacardium* L. See *bhallātaka* (marking-nut tree) : 105
- marking-nut tree (*bhallātaka*) *Semecarpus anacardium*, L. See [NK](#): 1, #2269, [AVS](#): 5, 98 : 72, 100, 219
- medhshingi (*vijayā2*) *Dolichandrone falcata* (DC.) The *Sauśrutaniḥṣṇu* gives a number of synonyms for *vijayā* (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; [GVDB](#): 373 f, a plant used as an abortifacient and fish poison ([NK](#): #862) : 105
- Midday flower (*bandhūka*) *Pentapetes phoenicea*, L. See [NK](#): 1, #1836, [GVDB](#): 268 :
- migraine tree (*agnimantha*) *Premna corymbosa*, Rottl. See [AVS](#) 1927,

- ADPS: 21, NK: 1, #2025, AVS: 4, 348;
GJM1: 523: = *P. integrifolia/serratifolia*,
L: 114
- milk-white (*kṣīraśuklā*) An unidentified
plant. GVDB: 126: see purple roscoea
and giant potato: 43, 221
- mongoose (*nakula*) *nakula*. *Urva edwardsii*
or the often sympatric *U.*
auropunctatus (small Indian
mongoose, usually an eater of smaller
creatures than snakes) (BIA: ch. 5), On
mongooses and snakes, see BIA: 98–99;
IW: 112: 101
- monitor lizard (*godhā*) *Varanus*
bengalensis, Schneider. See
Reptiles: 58: 43, 101
- monkey jack (*lakuca*) *Artocarpus lakoocha*,
Roxb. ex Buch.-Ham. See GJM1: 597,
IGP 99, IPM 3.2338f., pace AVS: 1, 215:
'muddy' (*kardama*) unknown. See ?:
- mung beans (*mudga*) *Phaseolus radiatus* L.
GVDB: 310–311: 75, 78, 148
- mung beans (*māṣaka*) *Phaseolus mungo*
Linn. GVDB: 308: 98
- munj grass (*nārācaka*) *Saccharum*
bengalense, Retz.?. See NK: 1, #2184:
- myrobalan (*abhayā*) *Terminalia chebula*,
Retz. See ADPS: 172, NK: 1, #2451,
Potter_{rev}: 214: 67, 114, 121
- myrobalans (*pathyā*) *Terminalia chebula*
Retz. See NK: 1, #2451:
- natron (*suvarcikā*) Sodium carbonate.
NK: 2, #45. Ḍalhaṇa identifies *suvarcikā*
with *svarjikṣāra* 4.8.50 (Su 1938: 441):
82, 116
- neem tree (*nimba*) *Azadirachta indica* A.
Juss. GVDB: 226: 40, 164
- 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. T. B. Singh
and Chunekar (GVDB: 108) added that
it could be a variety of rice, *ṣaṣṭika*
dhānya: 120
- nutgrass (*mustaka*) *Cyperus rotundus*, L.
See ADPS: 316, AVS: 2, 296, NK: 1,
#782:
- nutgrass (*mustā*) *Cyperus rotundus*, L. See
ADPS: 316, AVS: 2, 296, NK: 1, #782:
220
- oleander spurge (*snuhī*) *Euphorbia*
neriifolia, L., or *E. antiquorum*, L. See
ADPS: 448, AVS: 2, 388, AVS: 3, 1,
NK: 1, #988, IGP 457b:
- orpiment (*haritāla*) *Arsenii trisulphidum*.
See NK v. 2, p. 20 ff:
- panacea twiner (*arkaparṇī*) See *arkapuṣpī*,
panacea twiner:
- panacea twiner (*arkapuṣpī*) → *arkaparṇī*,
Tylophora indica (Burm. f.) Merr.
GVDB: 23–24. Maybe identical to
Indian ipecac, giant potato and similar
sweet, milky plants. See GVDB: 24, 127,
238, 441, 443 for discussion. For
discussion in the context of
Holostemma creeper, see ADPS: 195
and AVS: 3, 171. The etymology of the
name suggests *Helianthus annuus* Linn.,
but this plant is native to the Americas:
115, 218, 220
- parakeet (*śuka*) *Psittacula*
krameri/eupatria/cyanocephala. See
Woodcock 1980: 64:
- peacock (*mayūra*) *Pavo cristatus*. See
Woodcock 1980: 39:
- peas (*hareṇu*) *hareṇu* = *satīna*. *Pisum*
sativum, L. T. B. Singh and Chunekar
(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: 76, 115, 116, 121
- peepul tree (*aśvattha*) *Ficus religiosa*, L.
See ADPS: 63: 123
- periploca of the woods (*meṣaśṛīga*)
Gymnema sylvestre (Retz.) R. Br. See
AVS: 3, 107, NK: 1, #1173: 100
- pheasant peacock (*jīvajīvaka*) *jīvajīvaka* ?.
See ?:
- plants like asthma plant and Gulf sandmat

- (*kṣīriṇī*) various milky plants, perhaps including *Euphorbia hirta* Linn. (asthma plant) and *E. microphylla* Heyne (Gulf sandmat) (GVDB: 127) : 218
- plumed cockscomb (*indīvara*) Uncertain; possibly *Celosia argentea* Linn. But see the useful discussion in GVDB: 44–45. Possibly another name for thorn apple (*karambha*), q.v. : 223
- pointed gourd (*paṭola*) *Trichosanthes dioica*, Roxb. GVDB: 232–233 : 76, 114
- poison berry (*brhatī*) *Solanum violaceum*, Ortega. See ADPS: 100, NK: 1, #2329, AVS: 5, 151 : 72, 77, 115, 116
- poison-altar (?) (*viṣavedikā*) Unknown. Possibly, at a guess, *viṣamuṣṭika* (strychnine tree)? GVDB: 373 Or *viṣā* (Himalayan monkshood) : 105
- pomegranate (*dādīma*) *Punica granatum* Linn. GVDB: 201–202 : 63, 81, 82
- pondweed (*paripelavā*) Normally a neuter noun. T. B. Singh and Chuneekar (GVDB: 238, 264–265, 409) argued that *plava* and *śaivāla* are the same thing, and may be either *Zannichellia palustris*, L., or *Potamogeton pectinatus*, L. : 116
- pondweed (*śevāla*) *Zannichellia palustris* L. See horned pondweed : 25
- portia tree (*pārīṣa*) *Thespesia populnea* (L.) Sol. ex. Corr. See ADPS: 352 :
- prickly chaff-flower (*apāmārga*) *Achyranthes aspera*, L. See GJM1: 524 f, AVS: 1, 39, ADPS: 44 f, AVS: 3, 2066 f, Dymock: 3, 135 : 39, 43, 75, 221
- prickly chaff-flower (*vasīra*) also *vaśīra*. Perhaps *Achyranthes aspera*, L. GVDB: 362 describes several possible identities, including *sūryāvarta*, prickly chaff-flower and *markaṭatṛṇa*. See also *vasukavasira* (GVDB: 363) : 221
- prickly chaff-flower (*vaśīra*) See prickly chaff-flower :
- prickly-leaved elephant's foot (*gojihvā*) → *gojī*. *Elephantopus scaber*, L. See AVS: 2, 357 :
- purging nut (*dravantī*) → *mūṣikaparṇī*. *Jatropha curcas*, L. See AVS: 3, 261, NK: 1, #1374 :
- purging nut (*mūṣikā*) *Jatropha curcas*, L. See AVS: 3, 261, NK: 1, #1374 : 100
- purple calotropis (*arka*) *Calotropis gigantea*, (L.) R. Br. See ADPS: 52, AVS: 1, 341, NK: 1, #427, Potter_{rev}: 57, Chopra IDG: 305–308 : 34, 43, 72
- purple calotropis (*khadyotaka*) → *arka*? *Calotropis gigantea*, (L.) R. Br. See ADPS: 52, AVS: 1, 341, NK: 1, #427, Potter_{rev}: 63 :
- purple roscoeia (*kṣīrakākoli*) GVDB: 89 notes that many physicians use *Roscoeia procera* Wall. in this context. But the identification is uncertain. Possibly connected to milk-white or giant potato : 75, 218, 220
- racket-tailed drongo (*bhr̥ṅgarāja*) *Dicrurus paradiseus*. See Woodcock 1980: 123 :
- radish (*mūlaka*) *Raphanus sativus*, L. See NK: 1, #2098 : 79, 80
- rajmahal hemp (*moraṭa*) → *mūrvī*, *Marsdenia tenacissima* (Roxb.) Wight et Arn. Good discussion at GVDB: 314–316, 324 : 114
- rajmahal hemp (*mūrvī*) → *moraṭa*, *Marsdenia tenacissima* (Roxb.) Wight et Arn. Good discussion at GVDB: 314–316, 324 :
- rattan (*vetra*) *Calamus rotang*, L. See AVS: 1, 330, NK: 1, #413 :
- red chalk (*gairika*) *gairika* : 116
- red gourd (*bimbī*) *Coccinia indica*, W. & A. See PVS 1994.4.715; NK: 1, #534 : 97
- ribbed gourd (*karkoṭaka*) *Luffa acutangula*, (L.) Roxb.? (*Mormodica cochinchinensis*, Spreng.? Cf. *Luffa tuberosa*). See AVS: 3, 347 (NK: 1, #1640 1643; NK: 1, #1520) :
- rice grains (*taṇḍula*) *Oriza sativa*, Linn. Same as unhusked rice (*śālī*) GVDB: 174; or just "grains" : 26

- rice-grain chaff (*śālitaṇḍulakāṇḍana*) See chaff: 26
- rock salt (*saindhava*) See **NK**: 2, M#48, **WattComm**: 963–971: 26, 63, 82
- rosha grass (*dhyāmaka*) *Cymbopogon martinii* (Roxb.) Wats. See **AVS**: 2, 285, **NK**: 1, #177: 116
- sacred grass (*kuśa*) *Desmostachya bipinnata*, Stapf. See **AVS**: 2, 326, Kew: 75
- sacred lotus (*kamala*) *Nelumbo nucifera* Gaertn. **GVDB**: 73–74: 219
- sacred lotus (*padma*) *Nelumbo nucifera*, Gaertn. See **NK**: 1, #1698: 25, 76, 98
- sacred lotus (*prapuṇḍarika*) *Nelumbo nucifera*, Gaertn. See Dutt 110, **NK**: 1, #1698:
- sage-leaved alangium (*aṅkolla*) *Alangium salvifolium* (Linn. f.) Wang. **GVDB**: 5–6: 97
- sage-leaved alangium (*aṅkoṭa*) *Alangium salvifolium*, (L. f.) Wang. See **AVS**: 1, 77; cf. **NK**: 1, #88:
- sal tree (*śāla*) *Shorea robusta*, Gaertn.f. See **AVS**: 5, 124:
- sandalwood (*candana*) *Santalum album*, L. See **ADPS**: 111, **NK**: 1, #2217: 76, 78, 116
- sappan wood (*pataṅga*) *Caesalpinia sappan*, L. See **AVS**: 1, 323, **AVS**: 2, 847 f:
- sappanwood (*pattāṅga*) Also *pattāṅga*. *Caesalpinia sappan*, L. **AVS**: 1, 323, **K&B**: 2, 847 f, **GVDB**: 234: 44
- scaly, red-streaked fish (*cilicima*) An unidentified fish that is absolutely not to be eaten with milk. Described in Bhela (1.12.7), Caraka (1.26.83) and Suśruta (1.20.8, 13). Circular, red streaks, round eyes and prominent scales, and "normally goes on land." : scarlet mallow (*bandhujīva*) *Pentapetes phoenicea*, L. **NK**: #1836, **GVDB**: 268: 99
- scented pavonia (*bālaka*) *Pavonia odorata*, Willd. See **ADPS**: 498, **NK**: 1, #1822: 116
- scented pavonia (*toya*) → *bālaka*? *Pavonia odorata*, Willd. **ADPS**: 498, **NK**: 1, #1822:
- scutch grass (*dūrvā*) *Cynodon dactylon* (Linn.) Pers. (**GVDB**: 205): 217
- selu plum (*śelu*) *Cordia myxa*, L. non Forssk. See **GJM1**: 529 (2), **IGP**: 291b, cf. **AVS**: 3, 1677 f; cf. **AVS**: 2, 180 (C. *dichotoma*, Forst.f.), **NK**: 1, #672 (C. *latifolia*, Roxb.): 77, 114
- sesame (*tila*) *Sesamum indicum* L. **GVDB**: 183:
- sesame oil (*taila*) *Sesamum indicum* L. **GVDB**: 183: 43
- sheep (*urabhra*) *Ovis orientalis*, Gmelin?. See BIA 249:
- silk-cotton tree (*śālmālī*) *Bombax malabarica*. See Issar: 152:
- siris (*śirīṣa*) *Albizia lebbeck*, Benth. See **AVS**: 1, 81, **NK**: 1, #91: 114
- siris seeds (*śirīṣamāṣaka*) *Albizia lebbeck*, Benth. See **AVS**: 1, 81, **NK**: 1, #91: 97
- small-flowered crape myrtle (*sidhraka*) *Lagerstroemia parviflora* Roxb. See **GVDB**: 432: 120
- 'snake mallow' (*mahābalā*) → *sahadevā*. *Sida spinosa*, L. See **NK**: 1, #2301, **ADPS**: 74, Index Kewensis:
- 'snake-killer' (*sarpaghāti*) unknown. See ?:
- snakeroot (*sugandhā*) → *sarpagandhā* *Rauvolfia serpentina* Benth. ex. Kurz. See *sarpagandhā*. But may be *Aristolochia indica* Linn. Has been identified with *nākulī*, or *gandhanākulī*. See (**GVDB**: 219, 436): 104
- soda crystals (*suvarjikā*) Sodium carbonate. See **NK**: 2, #45:
- spikenard (*jaṭāmāṃsī*) *Nardostachys jatamansi* DC **GVDB**: 163, etc:
- spikenard (*māṃsī*) *Nardostachys grandiflora*, DC. See **NK**: 1, #1691: 116
- spikenard (*nalada*) → *māṃsī*. *Nardostachys grandiflora*, DC. See **NK**: 1, #1691: 95
- spiny bitter cucumber (*karkāruka*)

- Momordica cochinchinensis (Lour.) Spreng., (Thunb.) Cogn.
See [AVS](#): 2, 1135, [IGP](#) 754 (or Beninkasa hispida? [AVS](#): 2, 1127; cf. [AVS](#): 1, 261) :
strychnine tree (*viṣamuṣṭika*) Strychnos nux vomica Linn. [GVDB](#): 373 : 221
sugar (*sitā*) Ḍalhaṇa makes this equation at 1.37.25 ([Su 1938](#): 162) : 116
sugar (*śarkara*) Saccharum officinarum, Linn. [NK](#): #2182 : 101
sugar cane (*ikṣu*) Saccharum officinarum, Linn. [NK](#): #2182 : 101
sunflower (*sūryavallī*) → *ādityavallī*, *sūryamukhī*, Helianthus annuus Linn. [GVDB](#): 35, 443 : 114
swan (*haṃsa*) haṃsa. ?. See ? :
sweet flag (*vacā*) Acorus calamus Linn. See [GVDB](#): 352–355 : 75, 82
sweet melon (*eroṃruka*) Cucumis melo, L. See [AVS](#): 2, 227; [AVS](#): 2, 1140–3, [IGP](#) 325–6, [NK](#): 1, #729 (C. momordica) :
sweet plants (*madhuravarga*) The sweet plants are enumerated at *Suśrutasaṃhitā* 1.42.11. See also [GVDB](#): 127 : 43
sweet-scented oleander (*aśvamāra*) Nerium oleander, L. See [ADPS](#): 223, [NK](#): 1, #1709 :
sweet-scented oleander (*aśvamāraka*) Nerium oleander, L. See [ADPS](#): 223, [NK](#): 1, #1709 : 104
teak (*śāka*) Tectona grandis, L.f. See [AVS](#): 5, 245, ([MW](#): 1061) :
Tellicherry bark (*kuṭaja*) Holarrhena pubescens Wall. ex G. Don, with Wrightia tinctoria and W. arborea considered [GVDB](#): 101–102, [ADPS](#): 267–270 : 72, 216
thorn apple (*karambha*) Datura metel, L. See [GVDB](#): 76 for useful discussion. Also, [AVS](#): 2, 305 (cf. Abhidhānamajjari), [NK](#): 1, #796 ff. [Potter](#)_{rev.}: 292 f, [ADPS](#): 132. Possibly the same plant as plumed cockscomb (*indīvara*) ([GVDB](#): 76, 44–45) : 105, 214, 221
three heating spices (*tryūṣaṇa*) śuṇṭhī (Dried ginger) Zingiber officinale, Roscoe. [ADPS](#): 50, [NK](#): 1, #2658, [AVS](#): 5, 435, [IGP](#) 1232, pippalī (long pepper) Piper longum, L. [ADPS](#): 374, [NK](#): 1, #1928, and marica (black pepper) Piper nigrum, L. [ADPS](#): 294, [NK](#): 1, #1929 : 115
three-leaved caper (*varuṇa*) Crataeva magna (Lour.) DC. See [AVS](#): 2, 202; cf. [NK](#): 1, #696 : 100
top layer of fermented liquor (*surāmaṇḍa*) [K&B](#): 2, 502, [NK](#): 2, appendix VI, #49, McHugh 2021: 39 : 41, 42
tree cotton (*kārpāsa*) G. arboreum L. [ADPS](#): 231. Pace the identifications of T. B. Singh and Chuneekar ([GVDB](#): 92, 247), since G. barbadense L. is native to South America and G. herbaceum L. which is native to Africa : 40, 223
tree cotton (*picu*) See tree cotton (*kārpāsa*) : 42, 44
turmeric (*gaurī*) Curcuma longa, L. See [ADPS](#): 169, [AVS](#): 2, 259, [NK](#): 1, #750 : 76
turmeric (*haridrā*) Curcuma longa Linn. [GVDB](#): 465 : 77, 115, 121
turmeric (*rajanī*) Curcuma longa, L. [ADPS](#): 169, [AVS](#): 2, 259, [NK](#): 1, #750 : 26, 116
turpeth (*trivṛt*) → *trivṛtā*. Operculina turpethum (Linn.) Silva Manso = Ipomoea turpethum R. Br. [GVDB](#): 197 : 70, 101, 166, 214
two kinds of salt (*vasukavasira*) See the discussion by T. B. Singh and Chuneekar ([GVDB](#): 362–363), who note that when *vasuka* is mentioned together with *vasira*, two varieties of salt are often meant (see *vasukavasirā*) : 63
unhusked rice (*śālī*) Oriza sativa, Linn. [GVDB](#): 395–396 : 26, 221
various kinds of honey (*madhuvarga*) *Suśrutasaṃhitā*'s eight categories of honey. See *Suśrutasaṃhitā* 1.45.132 and

- Dutt: 278–279:
 velvet-leaf (*pāṭhā*) *Cissampelos pariera*, L.
 See ADPS: 366, NK: 1, #592, GJM1: 573,
 AVS: 1, 95; cf. AVS: 2, 277: 34, 67,
 82, 114
 velvet-mite (*indragopa*) *Kerria lacca*
 (Kerr.). Lienhard 1978: 96
 verbena (*bhāṅgī*) → *phañjī*.
Clerodendrum serratum, L. See
 AVS: 2, 121, ADPS: 87:
 verbena (*phañjī*) *Clerodendrum serratum*,
 L. See AVS: 2, 121, ADPS: 87: 99
 ‘Virāṭa’s plant’ (*vairāṭaka*) unknown. See ?:
 watered buttermilk (*udaśvit*) MW: 183: 97
 watermelon (*kāṇḍaka*) *Citrullus lanatus*
 (Thunb.) Matsum & Nak. See IGP
 257, NK: 1, #596, AVS: 2, 1149:
 weaver’s beam tree (*muṣkaka*) *Schrebera*
swietenoides, Roxb. See AVS: 5, 88,
 Lord, NK: 1, #2246: 72, 120
 ‘web-milk’ (*jālakṣīri*) unknown. See ?:
 wheat (*godhūma*) *Triticum vulgare*, L. See
 HK:
 white babool (*arimeda*) *Acacia*
leucophloea, (Roxb.) Willd. See
 AVS: 1, 23: 34
 white calotropis (*alarka*) *Calotropis*
procera, (Ait.) R. Br. See NK: 1, #428,
 Chopra: 46b, Chopra IDG: 305–308: 43
 white clitoria (*Xsitā*) → *śvetā*? *Clitoria*
ternatea, L. See AVS: 2, 129, NK: 1,
 #621:
 white clitoria (*giryāhvā*) → *śvetā*. *Clitoria*
ternatea, L. See AVS: 2, 129, NK: 1,
 #621:
 white clitoria (*śvetā*) → *giryāhvā*. *Clitoria*
ternatea, L. See AVS: 2, 129, NK: 1,
 #621: 98
 white cutch tree (*somavalka*) *Acacia*
polyacantha, Willd. See AVS: 1, 30, IGP
 7, GJM1: 602, AVS: 2, 935; pace NK: 1,
 #1038: 99, 120
 white dammer tree (*sarja*) *Vateria indica*,
 L. See NK: 1, #2571, AVS: 5, 349 f,
 AVS: 1, 292 f, Chopra: 253a: 34
 white siris (*kiñihī*) *Albizia procera*, (Roxb.)
 Benth. See GVDB 98, NK: 1, #93: 115
 white teak (*kāśmarī*) → *madhuparnī*.
Gmelina arborea, Roxb. See GJM1: 543,
 Trees: 51, ADPS: 240: 76, 78
 white water-lily (*kumuda*) *Nymphaea alba*,
 Linn. GVDB: 105: 25
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Asparagus racemosus, Willd. See
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 wild asparagus (*śatāvarī*) *Asparagus*
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 AVS: 1, 218, NK: 1, #264, IGP: 103,
 AVS: 4, 249 ff, Dymock: 3, 482 ff:
 74–76, 78, 148, 224
 wild celery (*agnika*) → may be *bhallātaka*,
lāṅgalī, *ajamodā*, *moraṭa*, or *agnimantha*,
 GVDB: 4. Uncertain: 114
 wild celery (*ajamodā*) *Apium graveolens*,
 L.: 114
 wild chinchona (*kādamba*) *Anthocephalus*
cadamba, Miq. See NK: 1, #204:
 wild mustard (*saurīyaka*) *Cleome viscosa*,
 L.? (cf. Rā.4.144). See AVS: 2, 116,
 NK: 1, #615:
 Withania (*aśvagandhā*) *Withania somnifera*
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 Dymock: 2, 566 f., Chevallier 150: 43,
 71, 77
 wolfsbane (*vatsanābha*) *Aconitum*
napellus, L. See AVS: 1, 47, NK: 1, #42,
 Potter_{rev}: 4 f. Or *Aconitum*
chasmanthum Stapf ex Holmes,
 GVDB: 357: 213
 wood apple (*kapittha*) *Limonia acidissima*,
 L. See AVS: 3, 327, NK: 1, #1021: 77,
 98, 100
 woodrose (*mūṣikakarṇī*) *Jatopha curcas*, L.
 AVS: 3, 261, NK: 1, #1374. GVDB: 317;
 ADPS: 23–25 discuss this issue well:
 98, 99
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yāpya (can be mitigated): 151
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yāvāgū (gruel): 114
yavaudana (cooked barley): 150
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yoga (compounds): 144
yoga (construing): 164
yoni (female reproductive organ): 163
yoni (female reproductive system): 162
yoni (female reproductive organ): 162
yoni (female reproductive system): 162
yoni (womb): 158
yoniivyāpat (disorders of the female
 reproductive system): 162
yuga (yuga): 14
yuga (*yuga*): 14
 "invincible" (*ajeya*): 116

Todo list

■ Can't be "sedation"	35
■ JG could you provide a standard citation reference for this information?	61
■ I have replaced the plant-names with entries from my plant database.	63
■ This is a change we should make in the edition.	67
■ You need not give all the grammatical details about śrotādi. Assume you are talking to knowledgeable Sanskrit scholars.	68
■ Perhaps <i>kalka</i> here could also mean the <i>Terminalia Bellerica</i> (विभीतक).	70
■ Euphorbia Antiquorum (Antique spurge)	72
■ The webpage https://hindi.shabd.in/vairagya-shatakam-bhagacharya-arjun-tiwari/post/117629 says that this verse belongs to the <i>Nītiratna</i> . I could not find this text.	75
■ The provisional edition should be modified accordingly.	77
■ There, Ḍalhaṇa comments that deliberation on <i>avapīḍa</i> had been done earlier when it was mentioned. Find that description to know more details.	79
■ Search for the section where the treatment of <i>ākṣepaka</i> is described.	80
■ Make the first letter of sentence capital.	80
■ ?	86
■ ?	86
■ ?	86
■ (?)	86
■ Cf. Arthaśāstra 1.21.8.	94
■ I'm still unhappy about this verse.	97
■ Mention this in the introduction as an example of the scribe knowing the vulgate.	97
■ fn about sadyas+	97

■ Bear's bile instead of deer's bile.	98
■ punarṇavā in the N & K MSS	99
■ śrita for śṛta	99
■ explain more	100
■ Medical difference from Sharma.	100
■ example where the vulgate clarifies that these should be used separately; appears to be a gloss inserted into the vulgate text.	100
■ 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.	100
■ √ vyadh not √ vedh (also elsewhere and for the ears), causative optative.	100
■ -> ativiṣa	110
■ Look up the ca. reference.	110
■ Come back to the issue of "kalpa". Look up passages in the Kośa.	117
■ write footnote: don't repeat ativiṣā; vulgate similar to H.	121
■ material corresponds to SS.1.45.205ab, where it describes how alcohol affects the body.	123
■ Or "There are 20 phaṇins and 6 maṇḍalins. The same number are known. There are 13 Rājīmats." Or even, "there are 20 Phaṇins and six of them are Maṇḍalins." Are phaṇins really the same as darvīkaras?	127
■ grammar	129
■ ri- ṛ-?	131
■ varṇa means "colour" elsewhere?	132
■ kalā doctrine; see SS śārīra 4.4	136
■ where is cutting with a knife related to removing bile or phlegm.	144
■ maṣī burned charcoal. Find refs.	144
■ find ref.	149
■ Check out these refs.	150
■ meaning of kalpa	150
■ or a dual?	155
■ Footnote here about who is speaking to whom.	143
■ a kind of asthma?	149
■ Not happy with the last part.	149
■ connecting with the previous pāda?	149
■ (atyartha? excessive?)	150
■ for...dvādaśādhikāḥ? not clear to me, is it dvādaśādhikāḥ?	150

■ (any better medical terms for them?)	150
■ (since the word lagha is not clear to me)	151
■ (Not too happy with it.)	151
■ (not sure about it)	151
■ (Not in vulgate)	151
■ (I am looking for a better translation)	151
■ (I'd need to rework on it).	152
■ (I'd need to rework on it and think about the sequencing of the number).	152
■ (āmadoṣa? Not too sure)	152
■ (2nd hemistich is incomplete)	152
■ (not too sure about the meaning of vyapada)	152
■ not so sure about sodāvarte	152
■ not so sure about it, MW mentions others like Cordia Myxa and Alangium hexapetalum	153
■ not sure about it	153
■ (sāmāhāya- any better word?)	153
■ Not so happy with this translation	154
■ (Not happy with it)	155
■ (the second hemistich is incomplete)	155
■ can śṛta mean here boiled milk? Not happy with the last part . . .	155
■ the rest of the text is unclear to me	155
■ (not so sure about it). [ghṛtābhyaṅgonavasthāsu should it be like ghṛtābhyaṅgo 'navasthāsu?, svedā lepaḥ ghṛtābhyaṅgonavas- thāsu ca yojayet] (Not so happy with the translation)	156
■ See also Ḍalhaṇa at 1.1.1 (Su 1938: 1)	165
■ See chapter 40 of Sūtrasthāna.	167
■ vasā / medas / majjan	167
■ Does bhūtādi a compound or it means ahaṅkāra or ego?	167

