

A Translation of the New Edition of the *Suśrutasaṃhitā*

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

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The Manuscripts used in the Vulgate editions by Yādavaśarma Trivikrama Ācārya

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

The 1915 edition was based on three manuscripts. The 1931 edition used another nine. For his final 1938 edition, Ācārya used a further three.¹

The manuscripts of the 1915 edition

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

The manuscripts of the 1931 edition

- 1 Vārāṇasī, professor of literature, the great Gaurīnāthapāthaka. With the *Nibandhasaṅgraha*. Covers the nidānasthāna and uttaratantra.
- 2 Ahmedabad. My friend Sva. Vā. Vaidya Raṇachōḍalāla Motīlālaśarman. With the *Nibandhasaṅgraha*. Covers the śārīrasthāna.
- 3 From the library of my great friend Sva. Vā. Vaidya Murārājīśarman. Extremely old. No commentary. Covers the śārīrasthāna.
- 4 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Covers the śārīrasthāna.²
- 5 Puṇe, BORI library. With the *Nibandhasaṅgraha*. Complete. With some damaged folia.

¹SS 1938: 22.

²Not one of the three MSS of the *śārīrasthāna* described in **shar-void**.

6 Bombay, Asiatic Society. Incomplete.³

7

8

9

The manuscripts of the 1938 edition

1

2

3

edition sthāna	Manuscripts											
	1915			1935								
	1	2	3	1	2	3	4	5	6	7	8	9
<i>sū.</i>	●							●	?		●	● ¹⁻⁴³
<i>nī.</i>	●			●				●	?		●	
<i>śā.</i>	●				●	●	●	●	?		●	
<i>cī.</i>		●						●	?	●	●	
<i>ka.</i>	●							●	?		●	
<i>utt.</i>		●	●	●				●	?		●	

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

Sūtrasthāna, adhyāya 1

- 1 Now I shall narrate the chapter on the origin of this knowledge.⁴
- 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.⁵
- 3 “O Lord, distress arose in our minds after witnessing people thrashing about with cries, assailed by different kinds of pain and injury (*vedanā-bhigāta*), feeling helpless in spite of having friends, because of diseases arising from the body, the mind and external sources.
- 4 “To quell the illnesses of those who seek happiness and for our own purpose of prolonging life, we desire the science of life (*āyurveda*) that is being taught. Welfare, both in this world and in the next, depends upon it. Therefore, we have come to the Lord in pupillage.”
- 5 The Lord said to them:
“Welcome to you! My children, all of you are beyond reproach and worthy to be taught.
- 6 “As is well known, Ayurveda is the name of what is said to be the subsidiary part of the Atharvaveda. Before creating people, Svayambhū composed it in hundreds of thousands of verses and a thousand chapters and, after observing the short lifespan and low intelligence of people, he presented it again in eight parts.⁶
- 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.

⁴Ḍalhaṇa 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 MSS is highly noteworthy because it removes the outer narrative frame of the *Suśrutasaṃhitā* (Wujastyk 2013: 148; Klebanov 2021a: § 3.1.2). On the figure of Dhanvatari in medical literature, see HIML: IA 358–361.

⁵On these persons, see HIML: IA 361–363, 369 ff. The authority Bhoja does not appear in the list as published in the vulgate edition (SS 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.

⁶Svayambhū is another name for Brahmā, the creator.

- 8 “Now, a collection of the characteristics of each component of Āyurveda.
- 9 “Among them, [the component] called surgery has the goal of extracting various grasses, wood, stone, dust, iron (?), soil, bone, hair, nails, discharge of pus, malignant wounds and foreign bodies inside the womb, and of determining the application of surgical instruments, knives, caustics and fire by means of sixty definitions.
- 10 “[The component] named the doctrine of treating body parts above the clavicles has the aim of curing diseases situated above clavicles that is, diseases located in ears, eyes, mouth, nose and so on.
- 11 “[The component] called general medicine has the goal of curing illnesses established in the whole body and [diseases] such as fever, tumour, swelling, hemorrhagic disorders, insanity, epilepsy, urinary diseases, diarrhoea and the like.
- 12 “[The component] called knowledge of spirits is for appeasing demons by pacification rites and making food offerings for those whose minds have been possessed by gods, their enemies,⁷ Gandharvas, Yakṣas, demons, deceased ancestors, Piśācas, Vināyakas, ⁸ 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.⁹
- 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

⁷Dānavas. The insertion marks (*kākapadas*) below the text at this point appears to be by the original scribe.

⁸The vulgate doesn’t have *vināyakas* but does add *asuras*, probably under the influence of Ḍalhaṇa. Cite Paul Courtright, Ganesha book.

⁹The 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 N and H include spiders (*lūtā*) and creepy-crawlies (*sarīsrpa*) in the list, it does seem that MS K had a shorter list, and the vulgate edition adds rodents (*mūṣika*).

- whose semen is minimal, bad, depleted, and dry [respectively] and for inducing an erection.
- 17 "Thus, this Āyurveda is taught with eight components."
 "Among these [components], tell us which is for whom."
- 18 They said, "After you have conveyed the knowledge of surgery, teach us everything."
- 19 He said, "so be it."
- 20 They then said, "Having considered the view of all of us, when we are unanimous, Suśruta will question you. We too will learn what is being taught to him."
- 21 He said, "so be it."
- 22 "Now, as is well-known, the aim of Āyurveda is eliminating the disease of one who have been assailed by disease and protecting the healthy; āyurveda is [that knowledge] in which they find a long life, or that by which long life is known. Learn its best component (i.e., surgery), which is being taught in accordance with tradition, perception, inference and analogy.
- 23 "For this component is first, the most important, because it is referred to first; it cures wounds and joins together the most important thing, Yajña's head. For, just as it has been said of old, 'the head that had been cut off by Rudra was joined again by the two Aśvins.'
- 24 "And also, of the eight disciplines of Āyurveda, [surgery] alone is the best because of the quick action of its procedures (*kriyā*), its application of blunt instruments, knives, caustics and fire, and it is common to all disciplines.
- 25 "Therefore, [surgery] is eternal, meritorious, leads to heaven, brings renown, bestows a long life, and affords a livelihood.
- 26 "Brahmā said this, 'Prajāpati learned it. From him, the Aśvins. From the Aśvins, Indra. From Indra, I. In this world, I will transmit to those who desire it for the benefit of people.'
 [There a verse about this].¹⁰
- 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.*

¹⁰This is an expansion of the scribe's abbreviation *bha* for *bhavati cātra ślokaḥ* "There is a verse about this" (sometimes plural).

- 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.¹¹ 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”.¹² Where they are concerned, the human being is the main thing; others are his support. Therefore, the human being (*puruṣa*) is the locus.

- 29 Diseases are said to be the conjunction of the person and suffering (*duḥkha*). There are four of them: invasive, bodily, mental and inherent. The invasive ones are caused by an injury. The bodily ones are based on food, caused by irregularities (*vaiṣamya*) in wind, bile, phlegm and blood.¹³

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

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

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

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

- 30 Furthermore, food is the root (*mūla*) of living beings as well as of strength (*bala*), complexion (*varṇa*) and vital energy (*ojas*). It depends on (*āyatta*) the six flavours (*rasa*). Flavours, furthermore, have substances as their substrate (*āśrayin*). And substances are remedies (*oṣadhī-*).¹⁴ There are two types: stationary (*sthāvara*) and moving

¹¹See Wujastyk 2004.

¹²This fourfold classification of beings is paralleled with closely-related vocabulary in *Bhelasamhitā* 4.4.4 (Bhela 2000: 206; Bhela 1921: 81).

¹³Note that four humoral substances are assumed here.

¹⁴Pāṇini 6.3.132 provides that the final vowel of the noun *oṣadhi* may be lengthened (→*oṣadhī*) under certain conditions. These conditions require that the word be used in a Vedic mantra and not in the nominative. Neither condition is met in this passage, yet the

- (*jaṅgama*).
- 31 Of these, there are four types of stationary ones: fruit trees (*vanaspati*), flowering trees (*vrkṣa*), herbs (*oṣadhi*) and shrubs (*vīrudh*).¹⁵ Amongst these, the “fruit trees” have fruit but no flowers.¹⁶ The “flowering trees” have flowers and fruit. The “herbs” die when the fruit is ripe. “Shrubs” put out shoots.
- 32 As is well known, moving remedies are also of four types: those born in in a caul (*jarāyuja*), those born from eggs (*aṇḍaja*), those born of sweat (*svedaaja*), and shoots (*udbhid*). Amongst these, those born in a caul include animals (*paśu*), humans, and wild animals (*vyāla*). Birds, creepy-crawlies (*sarīsrpa*) and snakes are “born of eggs.” Worms (*kṛmi*), small insects (*kunta*) and ants (*pipīlika*) and others are born of sweat.¹⁷ Shoots include red velvet mites (*indragopa*) and frogs (*maṇḍūka*).¹⁸
- 33 In this context, among the stationary remedies, skin (*tvak*), leaves (*pa-tra*), flowers (*puṣpa*), fruits (*phala*), roots (*mūla*), bulbs (*kanda*), sap (*kṣīra*), resin (*niryāsa*), essence (*sāra*), oil (*sneha*), and juice extract (*sva-rasa*)¹⁹ are useful; among the moving remedies pelt (*carman*), hair, nails, and blood (*rudhira*) and so forth.
- 34 And earthen products (*pārthiva*) include gold and silver.²⁰
- 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 fort-

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.

¹⁵Ca.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.

¹⁶The 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 [Viṣṇu-dharmottarapurāṇa](#): 56r).

¹⁷The 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).

¹⁸On *indragopa*, see Lienhard 1978.

¹⁹On juice extract (*svarasa*) see CS 1.1.73, 1.4.7; SS 4.10.12.

²⁰The flow of concepts in the treatise seems to be interrupted here.

- night (*pakṣa*), a month (*māsa*), a season (*rtu*), a half-year (*ayana*), a year (*saṃvatsara*), and yuga (*yuga*).²¹
- 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:]²²
- 37 *This fourfold category is taught by physicians as a cause for the agitation and quelling of bodily diseases.*²³
- 38 *There are two kinds of invasive diseases. Some certainly²⁴ affect (nipat-) the mind, others the body. Their treatment (kriyā) is of two kinds too.*
- 39 *For those that affect the body there is physical (śārīravat) therapy, whereas for those that affect the mind there is the collection (varga) of desirable sensory experiences like sound that bring comfort (sukha).*
- 40 Along these lines (*evam*), this brief explanation of the four factors (*catuṣṭaya*) is given:
- human being (*puruṣa*),
 - disease (*vyadhi*),
 - remedies (*oṣadhi*),
 - the time for therapies (*kriyākāla*).

In this context,

- from the mention of the word “human,” the collection of substances that arise from it, such as the elements, and the particulars (*vikalpa*) of its major and minor parts (*aṅga*) such as skin (*tvak*), flesh (*māṃsa*), ducts (*sirā*), sinews (*snāyu*), bones (*asthi*) and joints (*sandhi*) are meant.

²¹These units are presented at SS 1.6.5 and discussed by Hayashi (2017: § 59).

²²See footnote 10.

²³On the topic of the “group of four,” the commentator Ḍalhaṇa considers them to be “food, behaviour, earthen products and items created by time.” He refers to the author of the lost commentary entitled *Pañjikā*, and to Jejjāṭa (HIML: IA, 372–3, 192). In his view, these early commentators do not agree that the fourfold grouping (*caturvarga*) refers to the quartet of stationary (*sthāvara*), moving (*jaṅgama*), earthen products (*pārthiva*) and items created by time (*kālakṛta*) (SS 1938²: 9a).

²⁴The text uses an archaic interjection here, *ha*.

- 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:]²⁵

41 *This seed of medicine has been declared in brief. Its explanation will be given in one hundred and twenty chapters.*²⁶

42 There are one hundred and twenty chapters in five sections (*adhyāya*).²⁷
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 Uttarantra.²⁸

[There is a verse about this:]²⁹

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.*

²⁵See footnote 10.

²⁶This 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 *Uttarantra* has 66 chapters.

²⁷On *viṃśa* in the sense of “greater by 20” see P.5.2.46 *śadantaviṃśateś ca*.

²⁸The 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 Uttarantra (SS 1938: 1.3–4ab) there is indeed a statement that picks up the point about there being 120 chapters.

²⁹See footnote 10.

Sūtrasthāna, adhyāya 16

- 1 Now we shall expound the method for the piercing of the ear.
- 2 One may pierce a child's ears for the purpose of preserving and decorating.
During the first half of the sixth or seventh lunar month, during a renowned day, half day, hour and constellation the child who has received a benediction (*kṛtamaṅgala*), – blessings pronounced (*svastivācana*) – should be placed on the lap of a wet-nurse.³⁰ For a boy, do the right one first; for a girl do the left one. Use a needle on a thin ear; an awl (*ārā*) on a thick one.
- 3 If there is excess blood or pain one should know that it was pierced in the wrong place. The absence of side-effects is a sign that it has been pierced in the right place.³¹
- 4 In this context, if an ignorant person accidentally pierces a duct (*sirā*) there will be fever, burning, swelling (*śvayathu*), pain, lumps (*granthi*), paralysis of the nape of the neck (*manyāstambhā*), convulsions (*apatānaka*), headache or pain in the ear.
- 5 Having removed the wick (*varti*) in it, one should smear it with a paste of the roots of barley, liquorice, Indian madder (*mañjiṣṭhā*), and the castor oil tree (*gandharvahasta*), thickened with honey and ghee.
When it has healed well, one should pierce it again.
- 6 One should treat the properly-pierced ear by sprinkling it raw sesame oil. After every three days one should apply a thicker wick (*varti*) and sprinkle oil right on it.³²
- 7 Once the ear is free from humours or side-effects, one should loosen it with a light dilator (*pravardhanaka*) in order to enlarge it.
- 8 *An person's ear enlarged in this way can split in two, either as a result of the humours or as a result of a blow.*
Listen to me about the joins (sandhāna) it can have.

³⁰The syntax here is unclear. The expression *svastivācana* may have been a gloss inserted into the text at an earlier period to clarify *maṅgala*. But as it stands, it is not syntactically connected to the rest of the sentence. The Vulgate records a reading in which the words are united in a compound that reads more naturally.

³¹From here on, witness K is missing a folio, so the text is constructed on the basis of witnesses N and H.

³²The manuscripts support the reading *sthūlatarīm* that is either a non-standard form or a scribal error.

Here, there are, in brief, fifteen ways of mending the ear. They are as follows: Rim-join, Lotus-splittable, Dried Flesh, Fastening, Cheek-ear, Take away, Ready-Split, Multi-joins, Door-hinge, Half door-hinge, Compressed (*saṃkṣipta*), Reduced-ear, Creeper-ear, Stick-ear, and Crow's lip.

In this context, among these,

“Rim-join” (*nemīsandhānaka*): both flaps are wide, long, and equal.

“Lotus-splittable” (*utpalabhedyaka*): both flaps are round, long, and equal.

“Dried flesh” (*vallūraka*): both flaps are short, round, and equal.

“Fastening” (*āsaṅgima*): one flap is longer on the inside.

“Cheek-ear” (*gaṇḍakarṇa*): one flap is longer on the outside.³³

“Take-away” (*āhārya*): the flaps are missing, in fact, on both sides.

“Ready-split” (*nirvedhima*): the flaps are like a dais (*pīṭha*).

“Multi-joins” (*vyāyojima*): one flap is small, the other thick, one flap is equal, the other unequal.

“Door-hinge” (*kapāṭasandhika*): the flap on the inside is long, the other is small.

“Half door-hinge” (*ardhakapāṭasandhika*): the flap on the outside is long, the other is small.

“These ten options (*vikalpa*) for joins (*sandhi*) of the ear should be bound. They can mostly be explained as resembling their names.³⁴

The five below are not so successful:

The five from compressed (*saṃkṣipta*) on are incurable. Among these, “compressed” has a dry ear canal and the other flap is small. “Reduced ear” has flaps that have no base and have wasted flesh on their edges. “Creeper-ear” has flaps that are thin and uneven. “Stick-ear” has lumpy (*granthita*) flesh and the flaps are stretched thin and have stiff (*stabdha*)

³³See fig. ??.

³⁴This is an odd assertion, given the strangeness of the names.

ducts (*sirā*). “Crow-lip” has a flap without flesh with compressed (*saṃkṣipta*) tips and little blood. Even when they are bound up, they do not heal because they are hot, inflamed, suppurating (*srāva*), or swollen.

- 10 A person wishing to perform any of these joins should therefore gather together the supplies prepared according to the recommendations of the ‘Preparatory Supplies’ chapter.³⁵ And in particular, he should gather *surāmaṇḍa* (*decanted liquor*), milk, water, *dhānyāmla* (*fermented rice-water*), and powdered earthenware crockery (*kapālacūrṇa*).

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

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

Then, arranging the join in the ear so that it is neither proud, depressed, nor uneven, one should make the join. Next, after anointing it with honey and ghee, each ear should be bandaged with *picu* (*cotton*) and *prota* (*gauze*), and bound up with a thread, neither too tightly nor too loosely. Then the earthenware powder should be sprinkled on, and *ācārika* (*medical advice*) should be given. And he should supplement with food as taught in the ‘Two Wound’ chapter.³⁶

- 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.³⁷ For when the ear is tainted by wind, then it is obstructed by blood (*raktabaddha*), unhealed and will peel. When tainted with choler, it becomes pinched (*gāḍha*), septic (*pāka*) and red. When tainted by phlegm, it will be stiff (*stabdha*) and itchy. It has excessively copi-

³⁵SS.1.5.

³⁶SS.4.1.

³⁷The vulgate reads “impure” for the Nepalese “too pure,” which would appear to make better medical sense. Emending the text to *nāśuddha*- for *nātīśuddha*- in the Nepalese recension would yield the same meaning as the vulgate.

- ous suppuration (*srāva*) and is śopha (*puffed up*). It has it has a small amount of wasted (*kṣīṇa*) flesh and it will not grow.³⁸
- 13 When the ear is properly healed and there are no complications, one may very gradually start to expand it. Otherwise, it may be angry (*saṃrambha*), burning, septic or painful. It may even be split open again.
- 14 Now, massage for the healthy ear, in order to enlarge it. One should gather as much as one can of the following: a monitor lizard (*godhā*³⁹), pratuda (*scavenging*) and viṣkīra (*seed-eating*) birds, and creatures that live in marshes or water,⁴⁰ fat, marrow, milk, and sesame oil, and white mustard oil. Then cook the oil with an admixture (prativāpa) of the following: purple calotropis (*arka*⁴¹), white calotropis (*alarka*⁴²), country mallow (*balā*⁴³), ‘strong Indian mallow’ (*atibālā*⁴⁴), country sarsaparilla (*anantā*⁴⁵) beggarweed (*vidāri*⁴⁶), liquorice (*madhuka*), hornwort (*jalaśūka* → *jalanīlikā*⁴⁷),⁴⁸ items having the ‘sweet’ savour (*madhuravarga*),⁴⁹ and ‘milk flower’ (*payasyā* → *vidārī*⁵⁰). This should then be deposited in a well-protected spot.
- 15 *The wise man who been sweated should rub the massaged (mardita) ear with it. Then it will be free of complications, and will enlarge properly and be strong.*
- 16 Ears which do not enlarge even when sweated and oiled, should be scarified at the edge of the hole (*apāṅga*), but not outside it.
- 17 In this tradition, experts know countless repairs to ears. So a physi-

³⁸This passage exemplifies numerous small changes

³⁹Varanus bengalensis, Schneider (Daniel 1983:58)

⁴⁰For such classifications, see **zimm-jung** and **smit-clas**.

⁴¹Calotropis gigantea, (L.) R. Br. (ADPS 52, AVS 1.341, NK #427, Potter 57, ID 306)

⁴²Calotropis procera, (Ait.) R. Br. (NK #428, GIMP 46b, ID 306)

⁴³Sida cordifolia, L. (ADPS 71, NK #2297)

⁴⁴Abutilon indicum, (L.) Sweet; Sida rhombifolia, L.? (NK #11, IGP ,4 1080; NK #2300)

⁴⁵Hemidesmus indicus, (L.) R. Br. (ADPS 434, AVS 3.141–5, NK #1210)

⁴⁶Desmodium gangeticum (L.) DC (Dymock 1.428, GJM 602, cf. NK #1192; ADPS 382, 414 and IMP 2.319, 4.366 are confusing)

⁴⁷Ceratophyllum demersum, L. (IMP 2371, AVS 2.56, IGP 232)

⁴⁸This name is not certain: in fact, the commentator Ḍalhaṇa notes that some people interpret it as a poisonous, hairy, air-breathing, underwater creature.

⁴⁹The items which exemplify the ‘sweet’ savour (*madhuravarga*) are enumerated at SS.1.42.11.

⁵⁰Pueraria tuberosa (Willd.) DC. (ADPS 510, IMP 1.792f., AVS 4.391; not Dymock 1.424f. See GJM supplement 444, 451, IMP 1.187, but IMP 3.1719 = Ipomoea mauritiana, Jacq.)

- cian who is very intent (*suniviṣṭa*) on working in this way may repair (*yojayed*) them.
- 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.
- 19 Now I shall describe the proper method of repairing a severed nose. First, take from the trees a leaf the same size as the man's nose and hang it on him.
- 20 Next, having cut a slice of flesh (*vadhra*) with the same measurements off the cheek, the end of the nose is then scarified.⁵¹ Then the diligent (*apramatta*) physician, should quickly put it back together (*pratisandhā-*) so that it is well joined (*sādhubaddha*).⁵²

Having carefully observed that it has been well sown up, two tubes should be fixed in place. Then, having lifted them up,⁵³ the powder of sappanwood (*pattāṅga*⁵⁴),⁵⁵ liquorice (*yaṣṭimadhuka*⁵⁶), and Indian barberry (*añjana*⁵⁷) should be applied to it.

añjana

- 22 The wound should be covered properly with cotton (*picu*) and should be moistened repeatedly with sesame oil. Ghee should be given to the man to drink. His digestion being complete, he should be oiled and purged in accordance with the instructions specific to him.⁵⁸
- 23 And once healed and really come together, what is left of its flesh (*vadhra*) should then be trimmed. If it is reduced (*hīna*), however, one should make an effort to stretch it, and one should make its overgrown flesh smooth.

⁵¹The vulgate reads bound, connected (*baddham*) for slice of flesh (*vadhra*). This is a critical variant from the surgical point of view. If the slice remains connected, it will have a continuing blood supply. This is one of the effective techniques that so astonished surgeons witnessing a similar operation in Pune in the eighteenth century (**wuja-roots3**).

⁵²Or '... off the cheek, it is fixed to the end of the nose, which has been scarified'. The Sanskrit text is unfortunately not unambiguous on the important point of whether or not the flap of grafted skin remains connected to its original site on the cheek.

⁵³The Sanskrit here, *unnāmayitvā* is non-Pāṇinian.

⁵⁴*Caesalpinia sappan*, L. (AVS 1.323, IMP 2.847f.)

⁵⁵For *pattāṅga* there are manuscript variants *pattrāṅga* (MS H) and *pattaṅga* (N). We read with H and K (f. 14r:1) on Y. T. Ācārya and N. R. Ācārya (SS 1938²:1.14.36). The vulgate reads *pataṅga* and this reading is propagated in modern dictionaries.

⁵⁶*Glycyrrhiza glabra*, L. (AVS 3.84, NK #1136)

⁵⁷*Berberis aristata*, DC. (Dymock 1.65, NK #685, GJM 562, IGP 141)

⁵⁸The expression *svayathopadeśa* is ungrammatical but supported in all available witnesses.

Uttaratantra, adhyāya 17

- 1 Now I shall explain the counteraction (*pratiṣedha*) of diseases located in the pupil (*drṣṭi*).
- 2 There are three curable (*sādhya*), three incurable (*asādhya*), and six mitigatable (*yāpya*) diseases located in peoples eyes. Among these, three are curable (*sādhya*). Amongst these three, the remedy (*pratīkāra*) has been stated for the one called “seeing smoke (*dhūmadarśin*)”.⁵⁹
- 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*), collyrium (*añjana*), liniment (*ālepa*), and medicines cooked in a crucible (*puṭa-pāka*), together with a balm (*tarpaṇa*),⁶⁰ but not cutting with a blade (*śastrakṣata*).⁶¹
- 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*);⁶²
 - or the the fruits of the velvet bean (*svayamgupta*).
- 8 The physician should make a collyrium with ground up metal (*kupyaka*),⁶³ Asoka tree (*aśoka*), Sal tree (*śālā*), mango (*amra*), beautyberry

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

maṣī burned charcoal. Find refs.

⁵⁹This disease and its cure are described earlier (SS.6.7.39 and SS.6.10.16 (SS 1938²: 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.

⁶⁰These therapies are described in SS.6.18 (SS 1938²: 633–640).

⁶¹Dalhaṇa interprets this as blood-letting (*sirāvedha*), which is discussed in SS.1.14 (SS 1938²).

⁶²wood apple (*kapittha*) in this verse is ablative singular or accusative plural, neither of which construe obviously.

⁶³A metal other than gold or silver, according to V. Joṣī and N. H. Joṣī 1968: 1.217. Perhaps lead, which is used in making contemporary collyrium.

- (*priyaṅgu*), Indian lotus (*nalina*), blue lotus (*utpala*), together with hareṇu (*hareṇu*), emblic (*āmalaka*), myrobalan (*pathyā*), long pepper (*pippali*). It should be combined with ghee and honey (*kṣaudra*).
- 9–10 Also, when bile and phlegm have developed, the physician should apply hareṇu (*hareṇu*) with the expressed juice (*svarasa*) of the flowers from mango (*amra*) and Jambu (*jambū*) trees. Then this collyrium, matured (*vipakva*) with ghee and honey (*kṣaudra*), should then be applied.
- 10–11ab Filaments (*kiñjalka*) of Indian lotus (*nalina*) and blue lotus (*utpala*), with ochre (*gairika*), and the juice of cow-dung (*gośakṛt*) are a collyrium in the form of a pill (*guḍikā*). This is good for both day and night blindness.
- 11cd–12ab Elixir-salve (*rasāñjana*), honey (*kṣaudra*), ghee, scrambleberry (*tālīśa*), together with gold and ochre, with the juice of cow-dung (*gośakṛt*) are for an eye afflicted with bile.
- 12cd–13 Alternatively, wise physician should first grind together elixir-salve (*śīta*) and fermented barley (*sauvīraka*), infused (*bhāvita*) with the blood of birds and animals (*rasa*).⁶⁴ Then he mixes it with the bile of a tortoise or with extract of rohu carp (*rauhita*). It should always be used with powdered collyrium to quell the bile.
- 14 Thus, a collyrium of white teak (*kārśmarī*) flowers, liquorice (*madhuka*), tree turmeric (*dārvī*), lodh tree (*lodhra*) and elixir salve (*rasāñjana*) is always good as a collyrium in this case.
- 15 Alternatively, for those who cannot see during the day, this pill (*guḍikā*), with sandalwood, is recommended: salt (*nadīja*), conch shell and the three spices, collyrium, realgar (*manaḥśilā*), the two turmeric (*rajana*)⁶⁵ and liver extract (*yakṛdrasa*),
- 16 One should grind up kohl (*srotoja*),⁶⁶ and Sind salt (*saindhava*) and long pepper and also hareṇu (*hareṇu*). Such wicks with goats urine are good in a collyrium for night blindness (*kṣaṇadāndhya*).
- 17–18ab Alternatively, in such a case, grind together Indian sarsaparilla (*kālā-*

⁶⁴This is Ḍalhaṇa's preferred interpretation of *rasa* "juice" in this context. He also notes that some take elixir-salve (*śīta*) to be camphor.

⁶⁵Turmeric (*Curcuma longa* Linn.) and tree turmeric (*Berberis aristata* DC). The term *rajana* is unusual; the normal term is *rajanī*. *Rajana* occurs in *Suśrutaniḥṣaṇṭu* 158 in the sense of *Ferula asafoetida*, Linn.

⁶⁶Glossed by Ḍalhaṇa as a kind of collyrium. Cf. Nadkarni 1954: 2.M13 and Sharma 1982: 197–198

nusāriva)⁶⁷ 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 (*maṇḥṣilā*), 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 (*mādirā*), liver (*yakṛt*), and emblic (*dhātrī*) or else in the juice of the liver (*yakṛt*) of something different, or else with the extract of the three fruits (*triphalā*). One of these should be mixed with cow urine, ghee and cuttle fish (*aṇṇavamala*)⁶⁸ with long pepper, honey and box myrtle (*kaṭphala*). It is placed in sea salt and stored in a bamboo tube.
- 21cd–22 One should cook the liver of a sheep, the ghee of a goat, with long pepper and Sindh salt, honey and the juice of emblics. Then one should store it properly in a catechu box. Prepared thus, the honey collyrium is good.
- 23 Alternatively, a collyrium that is hareṇu (*hareṇu*) mixed with long pepper (*māgadhi*), the bone and the marrow of a goat, cardamom (*elā*) and liver, together with liver extract, is good for eyes afflicted by phlegm.⁶⁹

⁶⁷There 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 (1994: 434–438) for a clear discussion.

⁶⁸At SS 6.12.31, Ḍalhaṇa glossed *aṇṇavamala* as cuttlefish bone (*samudraphena*). It may be worth considering whether the unusual term *aṇṇavamala* “ocean-filth” might refer to ambergris.

⁶⁹On the identities of *elā* and *hareṇu* Watt (1908: 511 ff) described the former as “true” or “lesser” or “Malabar” cardamom, *Elettaria cardamomum*, Maton & White, in contrast to the “greater” cardamom is *Amomum subulatum* (that he discusses on p. 65) that is commonly used as an inferior substitute for *E. cardamomum*. Singh and Chuneekar (1972: 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).

Sūtrasthāna, adhyāya 28

- 1 Thus, living creatures and their strength, complexion (*varṇa*) and energy (*ojas*) are rooted in food. That (food) depends on the six flavours (*rasa*). Thus, the flavours depend on substance (*dravya*), and substances depend on medicinal herbs. There are two kinds of them (herbs): stationary and mobile.⁷⁰

⁷⁰SS 1.1.28 Sharma 1999–2001: I, 21, SS 193⁸²: 7.

Abbreviations

Bhela 1921	Mookerjee, A. and Ananta Krishna Shastri, V. (1921) (eds.), <i>The Bhela Samhita. Sanskrit Text</i> (Calcutta: University of Calcutta), ark : / 13960 / t3sv3157j ; Based on two copies made of the Thanjavur codex unicus (MS Thanjavur TMSSML 10773, Burnell 1880: 63–4, Sastri 1933: #11085).
Bhela 2000	Krishnamurthy, K. H. (2000), <i>Bhela-saṃhitā. Text with English Translation, Commentary and Critical Notes</i> (Haridas Ayurveda Series, 8; Varanasi: Chaukhambha Visvabharati).
HIML	Meulenbeld, G. J. (1999–2002), <i>A History of Indian Medical Literature</i> , 5 vols. (Groningen: E. Forsten), ISBN: 9069801248.
SS 1931	Ācārya, Y. T. (1931) (ed.), सुश्रुतसंहिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, महर्षिणा सुश्रुतेन विरचिता, सूत्र-निदान-शारीर-चिकित्सा-कल्पस्थानोत्तरतन्त्रात्मकः. आचार्योपाह्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = <i>The Sushrutasamhitā of Sushruta with the Nibandhasangraha Commentary of Shree Dalhanāchārya</i> (2nd edn., Mumbayyām: Pāṇḍuraṅga Jāvajī at the Nirṇayasāgarāmudrāyantrālaye), ark : / 13960 / t9j41sg94 , accessed 09/06/2020; HIML:IB, 312 edition *v.
SS 1938	Ācārya, Y. T. and Ācārya, N. R. (1938) (eds.), श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता (3rd edn., Bombay: Nirṇayasāgara Press); HIML:IB, 313 edition cc.

- SS1938² Ācārya, Y. T. and Ācārya, N. R. (2004) (eds.), महर्षिणा सुश्रुतेन विरचिता सुश्रुतसंहिता, श्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया निदानस्थानस्य श्रीगयदासाचार्यविरचितया न्यायचन्द्रिकाख्यपञ्जिकाव्याख्यया च समुल्लसिता (Vārāṇasī: Caukhambhā Kṛṣṇadāsa Akādamī); Reprint of the third, 1938 edition (SS1938), with changed pagination.
- SS1915 Ācārya, Y. T. (1915) (ed.), सुश्रुतसंहिता, सुश्रुतेन विरचिता, वैद्यवरश्रीडल्हणाचार्यविरचितया निबन्धसंग्रहाख्यव्याख्यया समुल्लसिता, आचार्योपाद्वेन त्रिविक्रमात्मजेन यादवशर्मणा संशोधिता = *The Sushrutasaṃhita of Sushruta, the Nibandhasaṅgraha Commentary of Shri Dalhaṇāchārya* (Mumbayyāṃ: Nirṇayasāgaramudrāyantrālaye), [ark : / 13960 / t3sv0mt50](#), accessed 29/07/2020; HIML: IB, 312 edition *v.
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Glossary

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