

# A Translation of the Nepalese Text of the *Suśrutasamhitā*

Jason Birch      Dominik Wujastyk      Andrey Klebanov  
Lisa A. Brooks      Paras Mehta      Madhusudan Rimal  
Deepro Chakraborty      Harshal Bhatt      Jane Allred  
et alii

Draft of 22nd November 2023  
© The Authors



# Contents

<b>Sūtrasthāna</b>	<b>7</b>
<b>Sūtrasthāna 1: The Origin of Medical Knowledge</b>	<b>9</b>
Literature . . . . .	9
Translation . . . . .	9
<b>Sūtrasthāna 2: The Initiation of a Student</b>	<b>17</b>
Literature . . . . .	17
Translation . . . . .	17
<b>Sūtrasthāna 3: The Table of Contents</b>	<b>19</b>
Literature . . . . .	19
Translation . . . . .	19
<b>Sūtrasthāna 13: On Leeches</b>	<b>21</b>
Literature . . . . .	21
Translation . . . . .	21
<b>Sūtrasthāna 14: On Blood</b>	<b>29</b>
Previous scholarship . . . . .	29
Translation . . . . .	29
<b>Sūtrasthāna 16: Repairing Pierced Ears</b>	<b>37</b>
Previous literature . . . . .	37
Translation . . . . .	37
<b>Sūtrasthāna 28: Unfavourable Prognosis in Patients with Sores</b>	<b>47</b>
Literature . . . . .	47
Translation . . . . .	47

<b>Nidānasthāna</b>	<b>49</b>
<b>Nidānasthāna 1: The Diagnosis of Diseases Caused by Wind</b>	<b>51</b>
Literature . . . . .	51
Translation . . . . .	51
 <b>Śārīrasthāna</b>	 <b>59</b>
<b>Śārīrasthāna 2: On Semen and Menstrual Fluid</b>	<b>61</b>
Literature . . . . .	61
Conceptual background . . . . .	61
Translation . . . . .	61
JG translation . . . . .	62
 <b>Cikitsāsthāna</b>	 <b>65</b>
<b>Cikitsāsthāna 4: On the Treatment of Wind Diseases</b>	<b>67</b>
Literature . . . . .	67
Translation . . . . .	67
 <b>Cikitsāsthāna 5: On the Treatment of Serious Wind Diseases</b>	 <b>73</b>
Literature . . . . .	73
Translation . . . . .	73
 <b>Cikitsāsthāna 15: On Difficult Delivery</b>	 <b>85</b>
Literature . . . . .	85
Translation . . . . .	85
 <b>Kalpasthāna</b>	 <b>89</b>
<b>Kalpasthāna 1: Protecting the King from Poison</b>	<b>91</b>
Introduction . . . . .	91
Literature . . . . .	92
Manuscript notes . . . . .	92
Translation . . . . .	93
[Threats to the king] . . . . .	93

<b>Kalpasthāna 2: Poisonous Plants</b>	<b>103</b>
Introduction . . . . .	103
Literature . . . . .	104
Translation . . . . .	104
The effects of poisons . . . . .	108
Slow-acting poison . . . . .	111
The invincible ghee . . . . .	116
Curing the 'slow-acting' poison . . . . .	116
<b>Kalpasthāna 3: Poisonous Insects and Animals</b>	<b>117</b>
Literature . . . . .	117
Translation . . . . .	117
The origin of poison . . . . .	121
Patients beyond help . . . . .	123
<b>Kalpasthāna 4: Snakes and Invenomation</b>	<b>125</b>
Introduction . . . . .	125
Literature . . . . .	125
Translation . . . . .	127
[Types of snake] . . . . .	130
[Symptoms of snakebite] . . . . .	134
<b>Uttaratantra</b>	<b>137</b>
<b>Uttaratantra 17: Preventing Diseases of the Pupil</b>	<b>139</b>
Literature . . . . .	139
Translation . . . . .	139
[Complications] . . . . .	149
[Characteristics of the probe] . . . . .	149
[Complications] . . . . .	149
<b>Uttaratantra 38: Diseases of the Female Reproductive System</b>	<b>153</b>
Introduction . . . . .	153
Literature . . . . .	153
Placement of the Chapter . . . . .	153
Parallels . . . . .	155
Philological notes . . . . .	156

Metrical alterations . . . . .	156
The original opening verses . . . . .	156
Translation . . . . .	158
<b>Uttaratantra 39: On Fevers and their Management [draft]</b>	<b>143</b>
Literature . . . . .	143
Remarks on the Nepalese version . . . . .	143
Translation . . . . .	143
<b>Uttaratantra 65: Rules of Interpretation</b>	<b>157</b>
Literature . . . . .	157
Early Sources . . . . .	157
Terminology . . . . .	161
Characteristics of the Manuscript Transmission . . . . .	161
Translation . . . . .	161
<b>Editions and Abbreviations</b>	<b>169</b>
<b>Index of Manuscripts</b>	<b>175</b>
<b>Bibliography</b>	<b>177</b>
<b>Materia Medica Reference Works</b>	<b>203</b>
<b>Materia Medica</b>	<b>207</b>
<b>Glossary</b>	<b>219</b>

# **Sūtrasthāna**







**Nidānasthāna**



# Śārīrasthāna



**Cikitsāsthāna**







# Kalpasthāna



# 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.<sup>406</sup>

## Literature

A brief survey of this chapter's contents and a detailed assessment of the existing research on it to 2002 was provided by Meulenbeld.<sup>407</sup> 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.<sup>408</sup> Fayrer provided a biological taxonomy

---

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

407 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.

408 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.<sup>409</sup> 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 421 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.<sup>410</sup> 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.<sup>411</sup> After a close comparative reading of lists of poisonous snakes, Harimoto concluded that, “the Nepalese version is internally consistent while the [vulgate] editions are not.” Harimoto showed how the vulgate editions had been adjusted textually to smooth over inconsistencies, and gave insights into these editorial processes.<sup>412</sup>

409 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).

410 Slouber 2016: 144–145.

411 Harimoto 2011: 101–104.

412 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.<sup>413</sup>
- 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”.<sup>414</sup>
- 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.<sup>415</sup>
- 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.<sup>416</sup>
- 11 “Of those, there are twenty and six hooded snakes, and the same number of Maṇḍalins are known. There are thirteen Rājīmats.<sup>417</sup>

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

414 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).

415 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.

416 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*.

417 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?

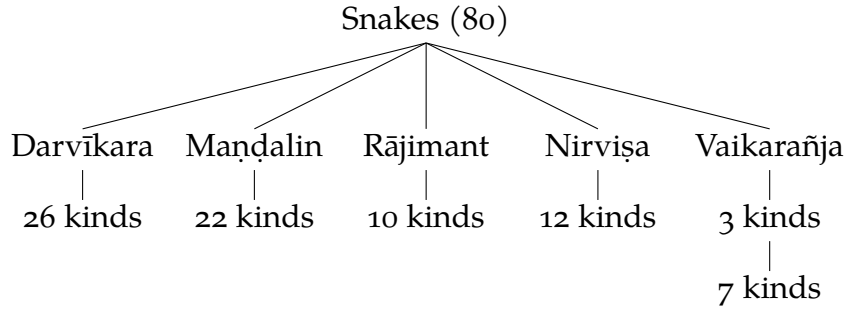


Figure 1: The taxonomy of snakes in the vulgate, 5.4.9–13ab (Su 1938: 571).

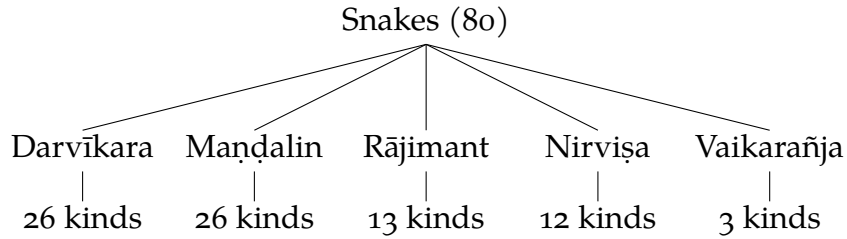


Figure 2: The taxonomy of snakes in the Nepalese version.

- 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”.<sup>418</sup>
- 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,<sup>419</sup> accompanied

<sup>418</sup> This might refer to constriction. The phrase reads like a commentarial addition rather than the main text of the *Suśrutasamhitā*.

<sup>419</sup> 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” (DED<sub>2</sub>: #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*),<sup>420</sup> 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.<sup>421</sup> 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,<sup>422</sup> gods, holy sages, **spirits**, and saints, or in places full of herbs that destroy poison.<sup>423</sup>

grammar

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.

420 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.

421 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.

422 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*.

423 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.<sup>424</sup>
- 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.<sup>425</sup>
- 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.<sup>426</sup>

<sup>424</sup> 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)).

<sup>425</sup> 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.

<sup>426</sup> 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> ); <sup>427</sup> | ( <i>dadhimukha</i> );                    |
| 5. The White Pigeon                                    | 18. The Lotus Mouth                       |
| ( <i>śvetakapota</i> ); <sup>428</sup>                 | ( <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> );                   |

<sup>427</sup> Not in vulgate.

<sup>428</sup> 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> ); <sup>429</sup>       |
| 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> ). <sup>430</sup> |
| 21. The Pigeon ( <i>pārāvata</i> );  |  |

34.3 Here are the Rājīmats.<sup>431</sup>

- |   |  |
|---|--|
| 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> ); <sup>432</sup>               |
| ( <i>dvyāṅgulirāji</i> );                   | 10. The Red Eye ( <i>lohitākṣa</i> ); <sup>433</sup> |
| 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                        | 7. The Year-Snake ( <i>varṣāhika</i> );    |
| ( <i>valāhako</i> ); <sup>434</sup>      | 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>vṛkṣaka</i> );    |

34.5 The Vaikaraṇjas originate out of contrary unions amongst the three colours.<sup>435</sup> Thus:

1. The Mākuli (*mākuli*);

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

430 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.

431 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*.

432 Also in the Darvīkara list.

433 Also in the Darvīkara list.

434 Also in the Darvīkara list.

435 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.<sup>436</sup> Females have small eyes, tongues and heads. Neuters have both characteristics, and are slow to exert themselves or be angry.<sup>437</sup>

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.<sup>438</sup> And ignored for even a period of time, it can drag the patient away. There is not even an opportunity to follow the literature.<sup>439</sup>

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”.<sup>440</sup>

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

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

438 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.

439 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.

440 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.<sup>441</sup>

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,<sup>442</sup> 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.<sup>443</sup>

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

441 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).

442 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*.

443 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.<sup>444</sup> 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 impulses (*viṣavega*).

[**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.<sup>445</sup> In the second pulse, it corrupts the flesh. That causes lumps having extreme blackness.

In the third, it corrupts the fat. That causes a discharge at the bite, heaviness of the head and a seizure of the eyes.<sup>446</sup>

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.<sup>447</sup>

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*),

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

445 Strictly, a dual verb would be expected here.

446 Ḍalhana on 5.4.39 (Su 1938: 574) glossed the last expression as “blocking the vision (दृष्ट्यवरोध).”

447 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 enters into these one by one and causes the toxic pulse (vega).*

41 There is a Traditionally, that is the “pulse interval (*vegāntara*)”

42

43

44

45

# **Uttaratantra**





# Todo list

■ Can't be "sedation" . . . . .	35
■ JG in the light of your reflections, I removed "women's fertile". I've put śārīram back in. . . . .	61
■ 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 <a href="https://hindi.shabd.in/vairagya-shatakam-bhagacharya-arjun-tiwari/post/117629">https://hindi.shabd.in/vairagya-shatakam-bhagacharya-arjun-tiwari/post/117629</a> 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
■ where is cutting with a knife related to removing bile or phlegm. . . .	140
■ maṣi burned charcoal. Find refs. . . . .	140
■ find ref. . . . .	145
■ Check out these refs. . . . .	146
■ meaning of kalpa . . . . .	146
■ or a dual? . . . . .	151
■ 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) . . . . .	163
■ See chapter 40 of Sūtrasthāna. . . . .	165
■ vasā / medas / majjan . . . . .	165
■ Does bhūtādi a compound or it means ahaṅkāra or ego? . . . . .	165

